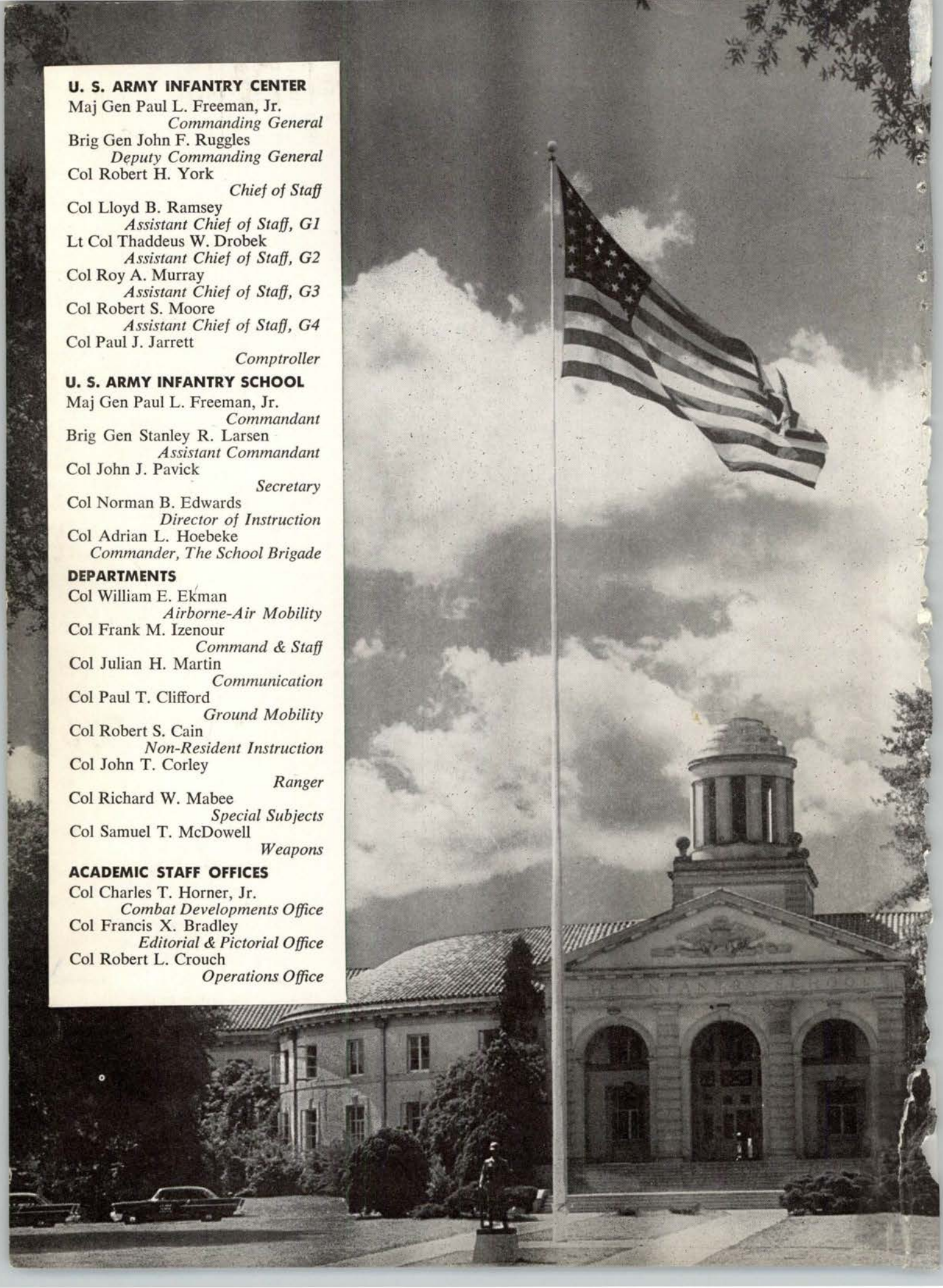
Infantry

The Professional Journal for Infantrymen

Jan-Mar 1959



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THE COVER

The Infantry must combine its traditional foot mobility with that of fast, light, mechanized carriers and "flying jeeps." While the Infantryman will continue to destroy the enemy by ground combat he must reach the point of ultimate decision by rapid movement over or above any kind of terrain. Cover photo furnished by the 10th (now the 2d) Infantry Division.

Infantry

The Professional Journal for Infantrymen

OFFICIAL PUBLICATION

UNITED STATES ARMY INFANTRY SCHOOL

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Dear Infantryman:

I wish to take this opportunity to express to all Infantry Officers the deep personal interest which I and the other members of the Infantry Branch of the Officers Assignment Division have in your individual and collective welfare. Starting with this issue of *Infantry* we shall provide, on a regular basis, information which we hope will help you to pursue a more interesting, a more satisfying and a more productive Infantry career.

While most of the procedures and policies which govern Department of the Army personnel actions are covered by current regulations or circulars, I realize that it is difficult for many officers to keep up with or interpret all of the things which could affect their careers. The need for additional information is reflected in the number and variety of questions we receive daily either in letters or from officers who visit the Infantry Branch.

In each issue of *Infantry* we shall attempt to provide answers to some of the queries we receive most frequently. At the same time we shall bring to your attention areas in which you may be able to help us do a better job for you, and we shall point out some of the things you can do personally to advance your own career.

I consider the last item especially important, for the thing we are dealing with is *your* career. You, more than anyone else, can make it what you want it to be. There is so much that you can do—more than many officers realize—to make it successful. The manner in which you perform your duties is, of course, paramount. It is a part of your official record. The steps you take toward self-improvement and professional growth are also important and should be included in your files. It is wise to review your records in our office periodically so you will know how you look to those who take personnel actions which affect your career. I suggest also that you work on any weak points which are reflected in your records and that you discuss your problems, your strong points and your desires with us. Actively seek assignments which will utilize your special capabilities and which will be in the best interests of the service. Don't let your career drift; take a positive interest in it and work at it. I can assure you that Infantry Branch will help you in every way possible.

FROM CHIEF, INFANTRY BRANCH

R. H. Tucker

R. H. TUCKER
Brigadier General, USA
Chief, Infantry Branch, OAD

THE EDITOR SAYS

DEAR READER:

The Infantry is pressing and will continue to press for increased ground and air mobility. Conferees at the recent World-Wide Infantry Conference — an assembly of the best thinking on Infantry from all segments of the Army — concluded that the "mach .004 foot-speed" of the Infantry soldier is too slow for the nuclear battlefield.

For the present and the immediate future, the Conference called for mechanization of the Infantry with light, fast personnel carriers and weapons platforms, supplemented with increased battlefield airlift capabilities of rotary- and fixed-wing Army aircraft. For the future, it established requirements for zero-ground-pressure, terrain-hugging vehicles operating on "flying jeep" or more advanced principles.

At the same time the Conference called for increased physical capabilities in the Infantry soldier which will permit faster movement, over greater distances, on foot.

These two demands — mechanization and increased foot mobility—are not incongruous. Actually, they are complementary, for mobility in combat is relative. Our ability to move over the battlefield, under any conditions of terrain, climate, weather or visibility must match or exceed that of the enemy, irrespective of the means employed.

The Soviets have put vehicles under their 175 Army divisions. Their Infantry is mechanized. We cannot hope to achieve on foot the rapid concentration and dispersion of forces required by nuclear weapons. Nor can we conduct offensive and defensive operations on the wide frontages and depths prescribed by current and proposed doctrine with foot mobility, particularly when the enemy is mounted.

Yet, since mobility *is* relative, we must not only retain but increase our ability to move on foot when terrain or other factors deny the use of mechanized mobility. And we must always have the stamina and ability to *fight* on foot no matter how we move to the point of ultimate decision.

Few persons question the Infantry's historic and continuing requirement for foot mobility but some ask, "How can we afford to mechanize the Infantry?" A better question is, "How can we afford *not* to?"

EDITOR

LETTERS TO THE EDITOR

6th Infantry Photo

Sir:

Congratulations on your "king sized" *Infantry*. I want to join with Infantrymen everywhere in applauding the outstanding contributions that your magazine is making to the Infantry and to the Army.

As I read the [July-September 1958] issue, my attention was particularly drawn to the article, "Infantry Intern," by Lt Col Alden P. Shipley. I was pleased to note that the photograph selected to headline this fine article is one taken over a hundred miles "behind the Iron Curtain."

The picture shows Lieutenant Malone and Private First Class Dingman of the 6th Infantry Regiment in Berlin. This regiment was recently reorganized to form the 2d and 3d Battle Groups of the 6th Infantry. . . .

We are proud of the realistic type of training in which our troops are able to participate, maintaining our high state of combat readiness which is proof for friend and foe alike that the 2d Battle Group, 6th Infantry, is "on guard" in Berlin.

WILLIAM K. KERNAN
Col, Infantry
2d Battle Group, 6th Infantry
APO 742, New York

Patience and Courage

Sir:

The new format and size of *Infantry* are most impressive. It has really taken on the dignity it so richly deserves, representing as it does the man with the rifle. . . .

My reason for this letter is to comment on the article by Lt Col John M. Hinman in the July-September issue. Two points are brought out in his article that we should all remember and apply. I refer to patience and courage—patience enough to let one's juniors make their own mistakes and thereby learn on their own; courage enough to permit one's senior to observe the honest errors of these juniors who are learning and accepting the responsibilities of their rank and assignment.

The greatest compliment a senior commander can hope to receive from his juniors is, "You did your job and you let me do mine."

L. H. JOHNSON, JR.
Lt Col, Infantry
N. G. Advisor Group
Hawaii

Lack "Fire"

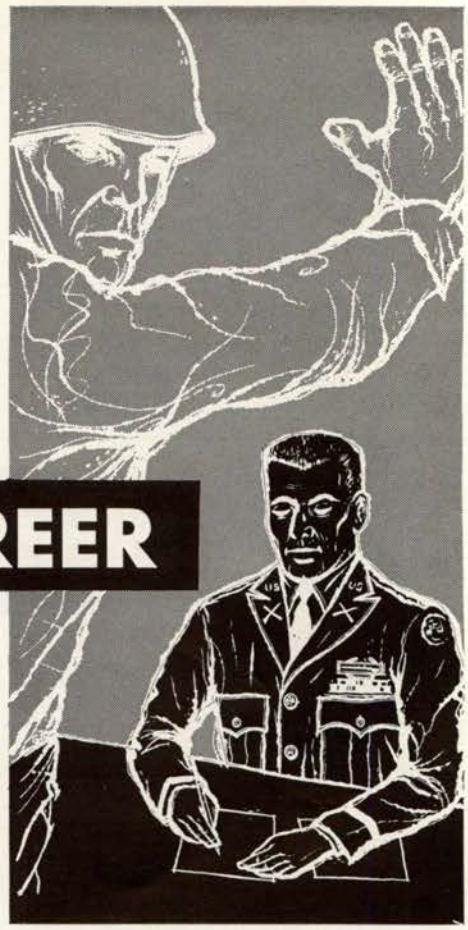
Sir:

Just a note . . . to pass on an observation made by Col Warren Hoover, the Acting Chief of Military History, in whose shop I'm located.

He feels that the cover of the Oct-Dec issue of *Infantry* is very poorly done. Specifically he takes objection, and I agree, to the lack of aggressiveness and combat urgency evident in the faces of the soldiers in the

Continued on page 70

A New Infantry Feature



Important information on policies and personnel actions which affect your Infantry career.

YOUR INFANTRY CAREER

Starting with this issue, we shall publish information from Infantry Branch, Officers Assignment Division on assignments, promotions, schooling and other important career matters. Information for the enlisted Infantryman will be obtained from other DA agencies.

Assignment to Short Tour Areas

Continuing and increasing requirements for Infantry officers in the so-called short or "hardship" tour areas are reducing the pool of field grade officers who have not served such a tour since June 1950. To meet the demand in a fair manner, Infantry Branch makes every possible effort to send only those officers who have not completed one of these tours. Unfortunately, a few officers of this group are currently in stabilized assignments. This further reduces the number immediately available for short tours.

Obviously, continuing requirements will make a second short tour inevitable for officers after they reach field grades. In the near future some majors will fall into this category. Second short tour assignments will be made on as fair and equitable a basis as possible.

Assignment Preference Statements

There seems to be generally prevailing opinion among Infantry officers that the Officers Assignment Preference Statement (DA Form 483) is "not even looked at" when reassignments are made. Nothing could be further from the fact. Your preference statement is given careful consideration. However, you must bear in mind that the primary basis for assignment is to meet service commitments. If this can be done in consonance with your desires, all concerned are satisfied: you, the using agency, and the Career Branch. The chances of achieving such a balance are greatly increased if you will complete the preference blocks in such manner that the type of duty you desire matches the location of an appropriate using agency. For example, if you want troop command, select an Army area and station where Infantry troops are located.

Volunteers for Overseas Assignment

At the present time few long tour assignments are available in areas such as Germany and Hawaii. Consequently, volunteer statements for such assignments must be disapproved. Volunteer statements for short tour areas, however, normally can be approved.

Regular Army Augmentation

The Regular Army Augmentation Program of 1957-58 is now complete, and all officers who were selected have been notified. However, there is a new and continuing program under which you may apply for a Regular Army appointment. This new program is covered in AR 601–100 which was scheduled for publication about 1 January 1959 and should soon be available. Of particu-

lar interest to the readers of *Infantry* will be the section of this regulation which covers applications from officers on active duty (including obligated tour lieutenants), former Regular Army officers, and Reserve Component officers in civil life. If you were not selected under the Augmentation Program you can reapply immediately under the new AR.

Since one of the most important sources of future Regular Army officers is from the ranks of young two-year obligated tour lieutenants, all Infantry commanders should be keenly aware of their responsibilities to observe carefully officers in this category and to encourage the outstanding to apply for Regular Army. The new AR 601–100 outlines these responsibilities.

Retention Beyond Retirement Eligibility

Many Reserve Component officers who entered active service during World War II and who will soon be eligible for retirement are asking Infantry Branch, "What are my chances of being retained on active duty beyond twenty years and how do I apply?" While Infantry Branch cannot give a specific answer to this question, information which may be helpful to you is contained in paragraph 11 of AR 135–215. This regulation provides for the retention of a limited number of highly qualified Reserve officers. A Department of the Army board meets in the fall each year to consider for retention officers who qualify for 20-year retirement prior to the end of the succeeding fiscal year. *Consideration of all officers is automatic. You are not required to apply.* Selections are limited to officers who have outstanding records and whose individual qualifications are required to fulfill the immediate needs of the Active Army. If you are selected you will be notified by individual letter approximately six months prior to your retirement date, and if you volunteer, you will be continued on active duty. If you are not selected you will be notified of your scheduled retirement date.

Review of Personnel Records

All Infantry officers are encouraged to review their 201 and efficiency report files in the Pentagon at least once every two or three years. This review is highly important since the information in these files provides the basis for personnel actions which affect your career. Department of the Army uses this information to determine: promotions, assignments, schooling, details, category determinations, appointments, retirements, eliminations, etc. It is important to you that the information in these files is current and correct.

If you are not able to review your own files you may designate, in writing, a representative for this purpose (see AR 640–12 for sample letter). However, officers assigned to The Adjutant General's Office (which includes Infantry Branch) cannot be deputized to perform this mission.

To assist you, or your designated representative, in reviewing your files, Infantry Branch has a receptionist on duty in Room 1E543 during normal office hours, Monday through Friday. The telephone number is LIberty 5-6700, extension 74634. In addition to securing your Branch file for review, the receptionist will arrange for an interview with an officer of Infantry Branch if this is desired. On request the receptionist will also make an appointment for you to review your official TAG 201 file.

If you wish to make your own arrangements to review your official TAG 201 file you may do so by writing The Adjutant General or by phoning the TAGO Records Custodian at LIberty 5-6700, extension 71111 and requesting an appointment. After making the appointment you may review the file by visiting Room 1E672.

Final Semester Plan

College-level education continues to play an important role in personnel actions which affect your Infantry career. If you lack a degree, you should plot a course to continue your formal education through off-campus study. When you reach the point where you can wind up your undergraduate work for a baccalaureate degree in approximately six months of on-campus study, look into the Army's Final Semester Plan. This plan is especially set up to help you obtain your degree. Of necessity, selection for schooling under this program is on a competitive basis. However, every effort is made to place deserving applicants in the program. Remember, if you are selected, you are freed of all Army duties while still drawing the pay and allowances of your grade. See AR 621–5.

Graduate-level schooling in the physical as well as social sciences is currently available to qualified Infantry officers. Recent applications received under this program have been predominantly for the more popular social science courses. This is fine since competition makes for better selection. On the other hand, increasing requirements for graduates in the physical science courses, coupled with comparatively fewer applications, increases the chance of an earlier selection for the program in this field. See AR 350-33 and AR 350-205.

Language Proficiency

Mission, MAAG and general service assignments in foreign countries can be more interesting and rewarding to you and to the service, if you have a working knowledge of the language of the country in which you serve. Today, the increasing importance of the individual officer's role in official contacts with foreign nations, as well as foreign governments, requires that every effort be made to increase foreign language proficiency. So, check your language aptitude. If languages come easy for you, learn more than one. Take advantage of every opportunity offered you by formal Army schooling, off-duty classes, or overseas tours.

Continued on page 65.

THE 1958 WORLD-WIDE

Infantry Conference

Here is a brief report on the important World-Wide Infantry Conference held at the United States Army Infantry School, 2-6 December 1958. This Conference is certain to have a major impact on future Infantry organization and doctrine.

LONG overdue, and of great significance to the Army in general and to the Infantry and Infantrymen in particular, was the World-Wide Infantry Conference held at the Infantry Center last month. More than a decade had passed since the Infantry assembled representatives from all major echelons of the Army to take stock of its organizational, materiel and tactical requirements.

The last Infantry Conference of this magnitude was held in 1946 to consolidate the experiences of World War II and to map the future of Infantry as it was viewed at that time. Out of that assembly came a number of important recommendations which modified the World War II Infantry division and its tactics. Specifically, the suggested changes resulted in the addition of a tank battalion, an antiaircraft battalion and a replacement company to the triangular division, and a tank company and 4.2-inch mortar company to the Infantry regiment. These and other

A reception and banquet gave conferees an opportunity to dis cuss Infantry informally. Left to right: Major General Freeman, Under Secretary of the Army Milton, General Van Fleet, General Clarke and Lieutenant General Young.

recommendations were proved valid in Korea.

During the twelve intervening years since the '46 Conference, major advances in weapons, ground and air mobility, and communication have had far-reaching effects on the Infantry. Developments have moved at such a rapid pace that organizational changes have been made, new weapons systems have been adopted, and tactical concepts have been accepted without an Infantry assembly to unify thinking on Infantry requirements.

The 1958 Conference was convened to take a close look at the Infantry of today and to establish cohesive positions on the organization, materiel and tactics it will require for the future. To orient the thinking of the Conference, the future was considered in three time frames: an immediate and mid-range period, FY 1959-1963; a longer-range period, FY 1964-1968; and a very long-range period, FY 1969 and beyond.

Maj Gen Paul L. Freeman, Jr., Commandant of the United States Army Infantry School, keynoted the task of the Conference in his opening remarks. He called on the conferees to "review ruthlessly what we now have in weapons, communications, vehicles, organization and tactical concepts in order to strike out the outmoded" and urged that the Conference "plunge willingly into the future," with "bold and imaginative thought" to formulate specific recommendations on Infantry requirements. The import of the assembly was reflected in a message to the Conference from President Eisenhower and in an address by Gen Maxwell D. Taylor, the texts of which are included in this report.

Pooled at the Conference was the thinking of approximately 200 conferees. Ranging in rank from the Under Secretary of the Army and four-star general to captain, they represented all major segments of the Army. In addition to key Infantry commanders of the active Army, the assembly included representatives from the National Guard and the Army Reserve, Infantrymen from a number of allied countries, Department of the Army civilian experts, and several distinguished military analysts and correspondents. Also among the conferees were a number of outstanding retired officers. Among the four-star generals present were a former Chief of Staff, former army commanders and active and retired commanders of the United States Continental Army Command. Also present were corps, division and battle group commanders, the Chief of Research and Development, and the heads or representatives of the technical services, service schools and other Department of the Army agencies. To insure that all conferees would be familiar with the latest developments and trends in the many areas of interest to the Infantry and to provide essential background information for later committee work, the first three days of the tightly

THE WHITE HOUSE

WASHINGTON

October 8, 1958

Dear General Freeman:

Please give my greetings to those attending the World-Wide Infantry Conference at Fort Benning.

Having spent many years of my military career as an Infantryman, I can appreciate the significance of this leadership conference. I know that the Infantry arm is an indispensable part of the balanced power required for our national security and for the maintenance of world peace.

With some good hard thinking in the area of Infantry doctrine and equipment, I am sure your conference will contribute to the strength of our Armed Forces.

Sincerely,

Dwight D. Eisenhower

Message from the President of the United States.

scheduled agenda were devoted to presentations by speakers from Department of the Army, Continental Army Command, the Infantry School and other Army agencies.

Throughout these presentations the members of the Conference, most of whom were assigned to one of the 11 committees or to subcommittees, sat in committee groupings. Pertinent portions of the presentations were directed specifically to appropriate committees for consideration.

Immediately after the objectives of the Conference were outlined by the Conference Director, the conferees received an intelligence briefing on current Soviet organization, hardware, tactics and capabilities. This was followed by presentations on limited warfare strategy, nuclear developments and nuclear weapons employment. With this material as a backdrop, the Conference next considered future organization and operational concepts, including reports on the status of ROCID and ROTAD changes and on mid-range tactical concepts for the battle group in offensive, defensive and retrograde operations.

Battle group logistics and communication then came under close scrutiny. Succeeding presentations covered special warfare and such basic Infantry subjects as combat formations, battle drill, physical training, battle indoctrination, filler personnel, Ranger training and the Expert Infantryman Badge. Next on the agenda were briefings on Infantry weapons doctrine. The Infantry School presented its recently developed position on sniper doctrine and covered in some detail Trainfire I, Autofire and Trainfire II. A related discussion of training research rounded out this portion of the program.

The conferees were then given a report on Lebanon operations and received two School presentations on vital Infantry requirements for improved ground and air mobility. The discussion progressed next to combat intelligence and target acquisition, following which the Conference moved out-of-doors for the final presentation—an afternoon-long demonstration of new and developmental Infantry weapons, vehicles and equipment. Tied in with this eye-opening session was an elaborate static display of more than 125 items and a demonstration of the versatile M56 as a platform for Infantry weapons.

The heart of the conference lay in the committee rooms where the conferees sifted the facts and analyzed the detailed requirements of the Infantry for the mid-range and long-range periods. It was here that the collective experience and thinking of some of the Army's most able commanders went into the drafting of the specific recommendations which would be voted upon by the full assembly on the final day of the conference. The committees worked at night after the daily sessions and throughout the fourth day of the conference. Most of the conferees, with the exception of the more senior general officers, were assigned to committees in which their particular knowledge and experience would be most productive. Since the thinking

Col James H. Hayes, Conference Director

of the top-ranking commanders would be helpful to more than one committee, these officers were designated as conferees-at-large or as consultants so they could make their thoughts and suggestions known in a number of areas.

When the finalized recommendations were presented by the committee chairmen in the closing, day-long session, it was apparent that a thorough, farsighted and imaginative effort had gone into their preparation. Most of the findings were indorsed immediately. Some, however, led to spirited discussion but were ultimately passed, a few after minor modification. Several of the recommendations failed to obtain sufficient support and were rejected.

Since most of the committee recommendations include classified material, it is not possible to present detailed conclusions in this report. However, classified copies of an official Conference Report, including the finalized recommendations, will be distributed to Infantry units and other interested agencies in the near future. Meanwhile, we *can* cover some of the broad conclusions reached by the conferees during their deliberations in the committee rooms and on the Conference floor.

The Conference re-emphasized the vital role of the Infantry in both general or limited warfare. It stressed that land combat is the primary interest and responsibility of the Army and that the ultimate control of land still rests with the Infantry. And it reaffirmed that the mission of Infantry continues to be to close with and destroy or capture the enemy and to control the ground on which the enemy stood.

The conferees reiterated that man, with a weapon in his hands, will continue to be the decisive factor on the battlefield. He can be assisted and augmented by machines but he cannot be replaced by a machine. It was noted, however, that improved physical standards will be needed by the Infantry soldier in the performance of his traditional role of sustained close combat in future warfare. The conferees also reaffirmed that the Infantryman must be able to fight in nuclear and non-nuclear wars and that he must be prepared for any eventuality.

CONFERENCE PRESENTATIONS

WELCOMING ADDRESS. Maj Gen Paul L. Freeman, Jr., Commandant, United States Army Infantry School.

CONFERENCE OBJECTIVES. Col James H. Hayes, Combat Developments Office, USAIS, Conference Director.

INTELLIGENCE SUMMARY. Col James W. Strain, Office of the Director of Foreign Intelligence, Assistant Chief of Staff for Intelligence, Department of the Army.

LIMITED WAR STRATEGY. Col James M. Shepherd, Office of Director of Organization and Training, Deputy Chief of Staff for Military Operations, Department of the Army.

CONSIDERATIONS IN THE EMPLOYMENT OF NUCLEAR WEAPONS AND NUCLEAR WEAPONS DEVELOPMENTS OF INTEREST TO INFANTRY. Lt Col Richard W. Healy, Special Subjects Department, USAIS.

DIVISION ORGANIZATION AND OPERATIONS FOR 1961 to 1970 PERIOD. Col Lee Wallace, Director of the Department of the Infantry Division, United States Army Command and General Staff College.

FUTURE ORGANIZATIONAL AND OPERATIONAL CONCEPTS FOR INFANTRY. Col Charles T. Horner, Jr., Chief, Combat Developments Office, USAIS; and Lt Col Albert J. McWade, Doctrine and Organization Section, Combat Developments Office, USAIS.

CURRENT STATUS OF ROCID-ROTAD CHANGES. Col John P. Jones, Jr., Chief, Combined Arms Branch, Doctrine and Requirements Division, United States Continental Army Command.

MID-RANGE TACTICAL CONCEPTS: BATTLE GROUP IN DEFENSE AND RETROGRADE; BATTLE GROUP IN OFFENSE. Lt Col Edwin C. Gibson, Command and Staff Department, USAIS.

BATTLE GROUP LOGISTICS. Lt Col William E. Neidner, Command and Staff Department, USAIS.

COMMUNICATION IN BATTLE GROUP. Col Julian H. Martin, Director, Communication Department, USAIS; and Maj William A. Van Dyke, Communication Department, USAIS.

SPECIAL WARFARE. Lt Col Irwin A. Edwards, United States Army Special Warfare Center.

BASIC INFANTRY SUBJECTS. Col John T. Corley, Director, Ranger Department, USAIS.

COMBAT FORMATIONS; BATTLE DRILL. Capt Richard B. Stough, Ranger Department, USAIS.

TRAINFIRE I; SNIPER DOCTRINE. Capt Allan A. Buergin, Weapons Department, USAIS.

AUTOFIRE. Capt Marvin C. Shelton, Jr., Weapons Department, USAIS.

TRAINFIRE II. Maj Edward J. Collins, Weapons Department, USAIS.

TRAINING RESEARCH. Lt Col George R. Stevens III, Chief, United States Army Infantry Human Research Unit; and Doctor Meredith F. Crawford, Director, Human Resources Research Office.

LEBANON OPERATIONS. Brig Gen David W. Gray, Assistant Division Commander, 24th Infantry Division.

BATTLEFIELD GROUND MOBILITY. Lt Col James F. Nabors, Ground Mobility Department, USAIS.

BATTLEFIELD AIR MOBILITY. Lt Col John W. Marr, Airborne-Air Mobility Department, USAIS.

COMBAT INTELLIGENCE AND TARGET ACQUISITION FOR BATTLE GROUP. Maj William B. Fowlkes, Command and Staff Department, USAIS.

NEW INFANTRY MATERIEL DEVELOPMENTS. Col Henry B. Kunzig, President, United States Army Infantry Board.

DEMONSTRATION AND DISPLAY AT HOOK RANGE: M56 DEMONSTRATION. Capt Raymond J. Grove, Weapons Department, USAIS; and 1st Lt Manfred Kelman, Weapons Department, USAIS.

Conference Pictorial

This giant geodesic dome, located near the conference headquarters, housed a Quartermaster exhibit.

Under Secretary of the Army Hugh M. Milton II, seated here with Commandant Maj Gen Paul L. Freeman, was the principal speaker at the conference banquet.

Among the conferees were guests from the United States Marine Corps and several of our free-world allies.

Conferees were given an opportunity to witness the mobility and accuracy of the 106mm rifle mounted on the M56.

The numerous static displays at the Conference included a jump belt which is designed to propel the individual Infantry soldier.

A new-type dehydrated meal was prepared quickly and easily for the more than 200 conferees by a few enlisted attendants.

Using only a pitcher, canteen cup and containers of hot water, each untrained attendant prepared and served 25 tasty meals.

Like most conferees, Maj Gen McNamara, Quartermaster General, was interested in the aerial-delivery and airborne equipment displays.

Among the items included in the Quartermaster exhibit was this saucer-shaped free-fall container.

Conferees were especially interested in the "flying jeep" and vertical-take-off aircraft displays.

CONFERENCE COMMITTEES

COMMITTEE 1. DIVISION ORGANIZATION AND OPERATIONS FOR 1959-1968 PERIOD

CHAIRMAN: Brig Gen Ben Harrell

PURPOSE: To consider the organizational and operational concepts for the Infantry division in the mid and long-range periods.

SCOPE: The committee will include but not be limited to the considerations of mobility, fire support, surveillance, and communication as they affect the organization and operations of the Infantry division in the mid and long-range periods.

COMMITTEE 2. INFANTRY OPERATIONS IN THE LONG-RANGE PERIOD

CHAIRMAN: Brig Gen Autrey J. Maroun

PURPOSE: To analyze various projected operational and organizational concepts as prepared by Army agencies for the long-range period in order to determine the optimum concept.

SCOPE: The committee, within the framework of the guidance provided by Department of the Army and USCONARC, will examine future Infantry operational and organizational concepts as visualized for the long-range period (1964-1968). The analysis will be confined to the levels up to and including brigade. Consideration of higher level units is not precluded, however, because it may be necessary in order to place deliberation in a proper perspective. In addition, consideration should be given to both limited and general war.

COMMITTEE 3. MIDRANGE TACTICAL CONCEPTS

CHAIRMAN: Brig Gen Charles W. G. Rich

PURPOSE: To analyze the tactical concepts projected for the Infantry division battle group in the mid-range and early long-range periods in order to determine the soundness of those concepts and to indicate corrective action required, if any.

SCOPE: The committee will include but not be limited to the consideration of the impact of varying degrees of mobility, including foot, vehicular, and aerial means; fire support means, including the habitual employment of low yield nuclear weapons; mechanical means of surveillance; command and control; employment of company and smaller units in semi-independent operations; and the degree of dispersion which can be accepted in offense, defense and retrograde operations. In all deliberations, the enemy will be considered to have capabilities equal to or greater than that of friendly forces.

COMMITTEE 4. BATTLEFIELD MOBILITY

CHAIRMAN: Brig Gen David W. Gray

PURPOSE: To analyze the inherent mobility of the ROCID battle group in order to ascertain its adequacy for the mid-range and early long-range periods and to determine corrective actions necessary for the future.

SCOPE: Includes (but need not be limited to) an analysis of the commitments of the United States Army and the varying types of conditions which will be met by the Infantry in both limited and general war situations. Specifically considers possible new requirements for battlefield mobility resulting from the increased dispersion created by the existence of tactical atomic and improved surveillance techniques. Correlates present ROCID battle group mobility with that which may be required so as to isolate the corrective action required.

COMMITTEE 4A. BATTLEFIELD GROUND MOBILITY

CHAIRMAN: Brig Gen Reuben H. Tucker, III

PURPOSE: To analyze the ground mobility of the ROCID battle group in order to ascertain its adequacy for the mid-range and early long-range periods and to determine corrective actions necessary for the future.

SCOPE: Includes (but need not be limited to) an analysis of the varying types of terrain conditions likely to be encountered by the Infantry in both limited and general war situations. Specifically considers possible new requirements for ground mobility resulting from the increased dispersion created by the existence of tactical atomics and improved surveillance techniques. Correlates present ground mobility with that which may be required so as to isolate the corrective action required.

COMMITTEE 4B. BATTLEFIELD AIR MOBILITY

CHAIRMAN: Brig Gen Chester B. De Gavre

PURPOSE: To analyze and evaluate the current and projected battlefield and strategic air mobility capability with particular emphasis to their effect on Infantry operations during the mid-range and long-range periods.

Continued on next page.

After the role and missions of the Infantry had been spelled out, specific recommendations were made concerning the organization, weapons, equipment and tactics needed to fulfill these responsibilities. Organizational concepts were recommended for the mid-range and long-range periods. These concepts, while based on Department of the Army and USCONARC guidance, were specifically geared to the survival of the Infantryman on the nuclear battlefield and to the defeat of progressively increasing Soviet ground combat capabilities. Emphasis was placed on smaller, lighter units with greater firepower, improved mobility and increased potential for independent action. The preeminence of the squad leader as the smallest unit commander was stressed.

The conference made both general and specific recommendations on the weaponry required now and in the future. It went on record that nuclear weapons must be available to units at lower echelons. To combat known Soviet strength in armor, it recommended an improved family of antitank weapons.

Major conclusions were reached concerning the Infantry's vital requirements for ground and air mobility. Recognizing the immediate need for means to concentrate and disperse forces rapidly, the Conference recommended that Infantry personnel carriers be made organic to the battle group and that light, tracked, thinly armored weapons platforms and carriers be provided for Infantry crew-served weapons. For the future, it concluded that the Infantry must have vehicles with zero ground pressure—perhaps of the flying jeep type—which would largely free the Infantryman from the limitations imposed by terrain.

To meet the problem of effective control in fast-moving and widely dispersed operations on the nuclear battlefield, the conferees recommended that greater emphasis be placed on the use of radios for communication, with less reliance on wire. They concluded that the Infantry must have radios with sufficient range to permit control of the entire battle group area of operation, and that the individual soldier must have a helmet-type radio to improve control and reduce

the confusion to be expected in nuclear combat. The recommendations also included security devices which could permit habitual voice transmission.

In view of the wide frontages anticipated in the future, it was concluded that gaps between units must be covered by surveillance devices. It was recommended that our scientists look for more effective surveillance means, possibly employing principles other than radar.

The Conference recommended that supply functions be concentrated under centralized control in a support group, that maintenance be functionalized and that greater reliance be placed on preplanned supply packets which could be delivered by all available means, including missile-type projectiles.

Numerous recommendations were made concerning the training of the Infantry soldier. The conferees called for the establishment of procedures which would permit the training of skilled technicians concurrently with the development of new materiel so that both would be ready for employment simultaneously. They asked also that doctrine and training literature likewise be prepared concurrently with the development of weapons and equipment.

It was recommended that Ranger-type training be extended throughout the Army training system to utilize the proven value of this training in the development of better soldiers. A modification of safety requirements was called for to eliminate unnecessary restrictions which prevent realistic training.

The conferees also asked that more attention be given to the Expert Infantryman Badge, and recommended revised procedures for conduct of the badge tests which would permit the Infantryman to earn "legs" on the award over a period of a year.

Before adjourning, the conferees recommended that another worldwide Infantry Conference be held in 1963 unless major developments or changes should require an earlier conference.

Infantry plans to present an analysis of unclassified conference recommendations in a future issue. Other details will be published as security classifications are lifted.

SCOPE: Includes (but need not be limited to) an analysis of the factors which will influence the character of battlefield air-mobile operations; organizational, training and materiel requirements for battlefield air-mobile operations; measures required to achieve a decisive air-mobility capability; and the effectiveness of strategic aerial deployment operations.

COMMITTEE 5. COMMUNICATION IN THE INFANTRY

CHAIRMAN: Maj Gen Louis W. Truman

PURPOSE: To analyze the Infantry battle group communication requirements and make recommendations designed to provide an efficient command and control means for the present and future.

SCOPE: The evaluation of the Infantry battle group communication system, to include known deficiencies at each echelon of command and action that must be taken to correct the deficiencies; communication trends and developments which will affect the Infantry battle group communication system; and requirements for modifications or new equipment.

COMMITTEE 6. NUCLEAR WEAPONS EMPLOYMENT

CHAIRMAN: Maj Gen Harvey H. Fischer

PURPOSE: To investigate certain areas of nuclear weapons employment to determine the adequacy of doctrine for the mid-range period and recommend any necessary corrective action.

SCOPE: Will consider current doctrine in the light of experience gained in various recent CPXs and field exercises to isolate deficiencies (doctrinal or training) which require correction as a contribution to efficient operational use of nuclear weapons.

COMMITTEE 7. COMBAT INTELLIGENCE — BATTLE GROUP

CHAIRMAN: Maj Gen Martin J. Morin

PURPOSE: To analyze the major intelligence problem areas in the Infantry battle group that may be anticipated in the mid-range period in order to determine the corrective action necessary for the future.

SCOPE: Will include (but is not limited to) the potential deficiencies or problem areas of the Infantry division battle group based upon current combat intelligence requirements, capabilities, equipment and techniques projected through the mid-range period.

COMMITTEE 8. COMBAT LOGISTICS — BATTLE GROUP

CHAIRMAN: Brig Gen Curtis J. Herrick

PURPOSE: To consider and reach conclusions on major logistical problem areas in the Infantry division with emphasis on the battle group.

SCOPE: Will include (but not be limited to) the potential deficiencies as problem areas based upon current combat logistical requirements, capabilities, equipment, and techniques projected through the mid-range period.

COMMITTEE 9. SELECTED BASIC INFANTRY TRAINING

CHAIRMAN: Maj Gen Sidney C. Wooten

PURPOSE: To analyze and evaluate various basic Infantry training areas in order to improve the concepts of employment both now and in the future.

SCOPE: Will consider Ranger training; combat formations, battle drill and control of small units; physical training, battle indoctrination, Expert Infantryman Badge and fillers.

COMMITTEE 10. TRAINING RESEARCH

CHAIRMAN: Maj Gen Earl C. Berquist

PURPOSE: To analyze ways to obtain maximum return to the Infantry from the training research effort.

SCOPE: Will consider possible ways in which the Infantry can facilitate the conduct of training research, areas for future training research concentration, and ideas for the conduct of training research to coincide with the materiel and organizational developments for the future battlefield. Discussions will also be concerned with the possibility of utilizing certain research techniques for improvement of day-to-day Army training.

COMMITTEE 11. FUTURE CONFERENCE AND DISSEMINATION OF FINDINGS

CHAIRMAN: Maj Gen John A. Dabney

PURPOSE: To determine the most effective means of disseminating the conclusions of the conference and to recommend a time for a future conference.

SCOPE: Will consider the audiences to which the conclusions should be presented, the media through which each audience may be reached and the requirements for a future conference.

FROM THE CONFERENCE FLOOR

Space limitations and security classifications do not permit detailed coverage of the comment and discussion which took place on the floor of the Conference. However, the few items presented here indicate the kind of thinking that was expressed by the conferees following each of the formal presentations and committee reports.

Extemporaneous Remarks

By Gen J. Lawton Collins (Ret)

I WAS indeed reluctant to say anything because frankly some of what I have heard has been over my head. I must admit that I'm getting older and perhaps outmoded. I do want to say how much I've enjoyed being here. I appreciate the opportunity to come back to Benning to see all these fine young officers and to hear this very interesting discussion from the platform. And also to hear again people rise in the audience and challenge the instructors. I always think that's a good sign.

Now before I make a few comments on what I have heard, let me tell you that I've always been skeptical of the person who's too much wedded to the past. . . . So I say, don't pay too much attention to older people like me who probably may be too much wedded to the past.

There are three main points though that have occurred to me as I listened to this look into the future. By no means do I challenge your view, but I do hope that some of the things which have been expounded will be subjected, as I feel sure they will be, to field tests before they're adopted.

Gen Collins speaks from the Conference floor.

Now with that note in mind, I want to mention the three areas about which I have been puzzled. The first of them is deploying our units on such very great frontages. I hope you will look at the vulnerability of these organizations to infiltration. On these extended frontages, I'm sure you'll all agree that you can never stop a good infiltrator by fire alone, particularly at night, in fog like we had here this morning, or in artificially created darkness. So I hope that this will be one of the things you will look into pretty carefully.

The second point that I wonder about is the extending down even to the platoon of heavier fire support weapons that have to be carried, not by men, but by vehicles. I believe that our tests have shown that men can withstand the blast effects of a nuclear weapon better than vehicles. You saw the picture of what results to vehicles in the event of an atomic airburst anywhere near them, and it just seems to me that it would be well worth checking whether or not some of the fire support that you are now trying to give these very subordinate units couldn't still be gotten from our marvelous Field Artillery and also from air support—or if not from air support, then from rocket or guided missile support which is not in the hands of platoon leaders or company commanders, but is farther back to the rear, with the essential observer up front with your frontline men. In other words, I can't help but feel that you are packing up, right into the very forward area which is going to be plastered with enemy artillery, a lot of equipment that is not going to live.

Now the third point is perhaps the most important one of all. This equipment which is being developed is, of course, wonderful, but it takes men to handle that equipment, and don't for a minute lose sight of the fact now as you put more in the hands of these young company commanders and platoon commanders up front, you've got to create some super-duper men to handle this equipment effectively. It's going to take men, as it always has done, to make good Infantry. There's nothing more requisite than top-flight frontline leadership, and it is not found on every tree. When you give to a company commander practically the same responsibility we gave to a battalion commander in the last war, add all of this technical equipment and then spread out his company over a tremendous frontage, you are putting on that youngster a weight of responsibility that has never before been put on a young officer under anything resembling these conditions. And this young fellow has to withstand the turmoil of atomic conflict.

So I assume that these points will be checked in field tests. I feel that it might be found that you can get just as effective support without jamming so much equipment into the forward battle area and without putting such terrific responsibility on your junior commanders. Use the artilleryman or the rocketman who is back out of the very center of this holocaust of combat, but who has an observer up front with good—really good—communication! And may I say that I thought your discussion of comunication was probably the best single thing that I've heard here. Again, with this emphasis on dispersion of units, the unit isn't going to be any more effective than the control, and control demands top-flight leaders and good, reliable communication.

Brig Gen Stanley R. Larsen
Assistant Commandant, U.S. Army Infantry School

Discussion on Mechanization

BRIG GEN LARSEN: ". . . Having talked to many of you in the last few days on ground mobility and mechanization, I have been filled with enthusiasm that so many people have questions about mechanization. . . . Recently, a very senior Army officer asked, in effect, the following: Why does the Infantry want to mechanize its crew-served weapons? You did all right with your mortar in World War II. Why do you suddenly feel that you have to shoot and scoot with it today — or tomorrow? Why shouldn't you be able to hand-carry the 106 cross-country? Why do you need cross-country mobility for such weapons?

"Gentlemen, when we have thinking in the Army that so strongly questions the wisdom of the Infantry's need for cross-country mobility and mechanization, I think we ought to have it discussed here. Those of you who question the wisdom of mechanization ought to express yourselves. . . ."

GENERAL DAHLQUIST: "I will take up General Larsen's challenge very briefly. I'm all for mechanization. But I suggest you consider these factors: *Money* (we might get it — but I doubt it) and *men*. How many guys will it take to maintain all these tracked vehicles? And where are you going to get them? . . . When the Board recommended approval of it the M56 self-propelled antitank gun and said it would work, I said let's put it on the shelf and not produce it. I was turned down. . . . The Airborne division had to have an antitank capability. Well, boys, producing that thing doesn't give you an antitank capability because you can't get the planes to carry it. It takes one plane to one gun. I think our answer is something like the mechanical mule . . . but don't try to improve it. . . . The simpler you keep it, the less maintenance it requires and the lighter it is. Don't put heavier batteries on it and don't give it four-wheel suspension or an automatic transmission. . . . Furthermore, I don't believe the jeep we have today is one bit better than the jeep we had in World War II. What does it do that the old one didn't do? But it costs more and weighs more. . . . We can keep on adding things that take more maintenance but I tell you boys, the bodies to do it just aren't going to be there."

MAJ GEN FREEMAN: "I have a question to ask General Dahlquist and I do this because I see General Trudeau sitting here and General Willens, both of whom have a part in the Infantry's problem of mechanization. We have a very interesting film, "A Sharper Sword and a Stronger Shield," that's being shown every night in the Conference billeting area. Also, we have had a presentation — a very fine one — which showed . . . that of the 175 Soviet divisions, the majority are mechanized, motorized, armored, or whatever you choose to call them. Now here is a country whose productive and mechanical ability we've seen fit to deride until only a few years ago. Now we see that the Soviets have the ability to put a vehicle under almost every one of their soldiers. Apparently, unless we are being misled, the Soviets can maintain, operate and fuel those vehicles. Why then, should there be any doubt, skepticism or hesitation? Why does a great mechanical, industrial, and productive nation like ours still have the doughboy marching at 2½ miles per hour — lugging the cumbersome, unwieldly, heavy equipment, weapons and communications that we require on the battlefield today. Now I'm not arguing at this time whether we should or should not have every Infantryman riding in a vehicle. It's for the conferees to decide how many vehicles we need and just what types they should be. But I ask, if they can do it, why can't we?"

Gen Dahlquist (left foreground) listens to the discussion on mechanization.

BRIG GEN LARSEN: "I'd like to add one more point if I may. The presentations that have been given here by the School have been based, in large part, on guidance from higher headquarters. . . . The employment of the ROCID Division as portrayed in the last two or three days has been the decision of the highest authority in the Army. I put to you — do you expect to be able to fight this division on its frontages and in the forms that are to be expected of it in 1965 on a 2½ mile an hour basis?"

Opening Remarks

By Maj Gen Paul L. Freeman, Jr.

IN 1946 under the dynamic direction of General Mike O'Daniel, Benning conducted a conference similar to that which you are attending. That conference had as its primary objective the application of lessons of World War II to the improvement of Infantry weapons, organization and technique. Principal among the recommendations made by the conferees and accepted by the Department of Army were:

The addition of a medium tank battalion and an antiaircraft automatic weapons battalion to the Infantry division.

The substitution of a 4.2-inch mortar company and a medium tank company for the regimental cannon company and antitank company.

Increase in Artillery howitzers to six per battery and recognition of Army Aviation capabilities.

Recognition of the need for an armored personnel carrier organic to the Infantry.

Many of us here profited by these augmentations of firepower and increases of personnel strength during the Korean conflict. We were in high praise of the beefed-up regimental combat team nearly 5000 strong. It provided great flexibility in the organization of sub-combat teams at any level down to the platoon. It could accommodate reinforcing units up to two battalions without strain. It could fight independently when separated from supporting units. Most of all, it could still fight effectively after sustaining losses of 30 to 40 percent in personnel and equipment.

Likewise, the 1948-1950 Infantry division was well able to take care of itself in sustained combat in Korea on frontages almost as wide as those that we now visualize for the future.

True, the Korean war was a peculiar war—in many ways, a retrogression to the primitive after World War II. However, deficiencies in enemy strength in artillery, in air power, and in better mobility which might have put our new organization to a more severe test, were more than compensated for by adversities of terrain, weather and restrictions of a political nature.

I mention our satisfaction with this heavy organization in some detail because of the contrast with our Infantry division of today. The conferees of 1946 did an outstanding job in improving our combat effectiveness for the period they could foresee.

Understandably, the revolutionary concepts in national strategy and ground warfare that now confront us could not have been anticipated. Unseen was the strategy of deterrence and retaliation that has led to a type of Army employment for which the heavy, cumbersome, slow-moving division and regiment of only five years ago are no longer suited. In this dramatic era of atomic plenty and scientific achievement, with the advent of low-yield nuclear weapons available for battlefield employment and with equal attainments in surface and air mobility, a new look at the immediate future and beyond is required if we are to realize the full potential of Infantry.

It is for this purpose that we have asked our foremost Infantry leaders and those representatives of other arms and services to meet with us in another Infantry Conference.

During the few days that you will be here, you will be given presentations by the Infantry School, the Department of Army, Continental Army Command, Command and General Staff College, and certain individuals on: the current situation; the latest doctrinal concepts of organization, tactics and methods; weapons; mobility, both ground and air; communication; and logistics and training. Pressing problems will be described to you. There will be some demonstrations and displays.

With the benefit of these briefings and your own experience and knowledge, it is our hope that you will assist us to resolve the problems and formulate specific recommendations as to the course that Infantry should take in the period from now through 1965. To do so will require bold and imaginative thought, and a willingness to plunge into the future, abandoning where necessary outmoded concepts of the past.

As you know, most of you are assigned to one or more of the eleven committees that have been formed to investigate specific subjects and to submit recommendations. These recommendations will be presented to the Conference at large and if adopted, will be processed through channels to be studied as the basis for changes in doctrine, equipment, organization and methods.

First of all, for our investigations we require a point of departure. Where do we stand now? What might be required of us? What will we need to do the job?

Admittedly, it is not within the purview of the Infantry School to examine national defense policy and war plans. These subjects will be developed by speakers from Department of the Army and USCONARC. However, we at the School who are charged with formulating Infantry doctrine must face the facts behind the guidelines we are given. We cannot logically work in a vacuum, oblivious of the restrictions imposed by national strategy and available resources of men and money.

We now have an Army barely adequate in numbers to

meet the many missions and requirements assigned it. What combat units we can maintain will serve little purpose in a war of the future of any size unless they are ready forces—fully equipped, trained and hardened. We have had small armies before, but probably not with so many frustrating problems, including those of funding, equipment modernization and developing new equipment, maintaining overseas deployment on such a large scale, training short term soldiers, and, most of all, with a zero time factor for reinforcement and mobilization. We find ourselves in an endless cycle of creating new units, taking them through their graduation maneuvers and then seeing them vanish as term of service expires, or to meet the demands of overseas requirements. Then, we commence the cycle all over again. These frustrations dictate expedients and short cuts of every type to insure maximum potential combat effectiveness on an as-is-now basis. Training must be simplified. Time no longer permits perfecting the individual soldier for his more complicated duties. Trainfire and Battle Drill are recent partial solutions to this problem. Also, we must recognize a more intelligent soldier who can learn in a shorter period of time. Equipment must be more rugged and simple to operate and maintain. The M14 rifle, which replaces four other weapons, is a step in this direction, as is some of our newer communication equipment. Where equipment cannot be simplified, we must develop "hard to train" technicians from sources other than troop schools.

As for what might be required of us, the Chief of Staff has stated repeatedly that while we have a role in general war, another of our principal missions is to prepare for the more likely smaller wars. Wars in the peripheral areas ranging from a show of force to organized conflicts such as Korea. Situations that require an adequate, measured application of force—Infantry-type wars designed to destroy the enemy on the battlefield and not the friendly nation that we seek to preserve. We must develop and maintain compact, hard-hitting forces capable of rapid movement from the U. S. or an overseas base to a peripheral area of potential or actual conflict to stamp out a spark before it becomes a bonfire. Forces light in equipment and manpower, but heavy in firepower, agile in movement and capable of sustained action pending reinforcement by heavier units and slower transport.

At the same time, we must continue to maintain heavier formations in Western Europe to deter the shock of an incident designed to take over by default.

Our requirements for units such as these are in most instances well recognized. Quite obviously, we need a rapid means of transport to the battle area, and while the provision of suitable air or sea lift cannot be resolved by this Conference, at least we can advocate equipment that is air-transportable, and techniques built around such equipment. Another pressing requirement is battlefield mobility, principally mechanization of the Infantry. First, armored personnel carriers, at least for all assault forces; later, fighting vehicles.

In communication we believe that we must rely on radio systems to the nearly total exclusion of wire in the fast-moving situations that we envisage.

These are only a few of our more obvious problems. Problems that must be solved within almost inflexible parameters of manpower, dollars and lead times. Problems that must be solved by imagination and courageous decision. They can be solved only by acceptance of new concepts that have not been proven and that combat-experienced Infantrymen might be reluctant to accept—concepts based on lighter, smaller units that must rely on heavier hitting power and greater agility, to provide their staying power, and attack formations and methods that more resemble a reconnaissance in force than a general advance. Tactically, we believe we must and can operate way out on a limb. You will hear some of our ideas later. We solicit yours.

In solving our problems here, we will make slow progress if we consider atomic firepower only as an extension of conventional firepower. Merely to append it to the weapons and methods of the past will accomplish little. The same precept holds for increased mobility. We cannot afford both the old and the new. For each new item of equipment adopted, we must give up some of the old; for each new role assigned a soldier, we must give up the one he now performs.

If we are to have more vehicles, better communication, heavier supporting weapons, the operators must come from present jobs, perhaps the rifle squads. Which do we need most?

In summary, gentlemen, we must ruthlessly review what we now have in weapons, communication, vehicles, organization and tactical concept in order to strike out the outmoded. We must have a concept which seeks decisions on the battlefield, not blind destruction or mere survival. The concept must find the balance among the limitations imposed by money, by personnel ceilings, and by the state of our technological advances. This is the problem we all face. What priorities will you have? Where will you distribute the men and where will you find them? To which type of project will you assign the available money? What, in fact, are the battle-winning items and concepts as distinguished from those that are less essential?

Some of our problems would be quite simple of solution were it not for the restrictions that I have mentioned. Others related to doctrine and methods are more profound and will require a great deal of analysis. While those pertaining to items of equipment will require an evaluation of facts and figures, priorities and a preference for this now or something better later.

We are anxious to have your thoughts and ideas and to learn your reaction to our proposals.

This is an *Infantry* Conference. Quite naturally, we are primarily concerned with the Infantry, its problems and its future. However, we are not unmindful that all that we are discussing here involves the Army as a whole—an Army that in these days must stand fully unified and make itself heard.

The doctrine of combined arms is far more important for the future than it has ever been. We are grateful for the superb support that has always been given the Infantry in combat by the other arms and services. In these days it would ill become any one arm or service jealously to seek to improve its potential at the expense of the unified whole. Nevertheless, there are gray areas overlapping and duplicating the role and function of each arm in matters of weapons, devices and vehicles which can lead to rivalry, waste, and delay in the procurement of improved materiel unless the common interest is allowed to prevail. I wish to make it clear to the Conference at large, and to the representatives of other arms and services in particular, that we at the Infantry School have no intention of competing for or infringing on the requirements of other branches of the Army. More than any other branch, we of the Infantry have reason to realize that we cannot do the job alone. But to do our own part we have certain valid requirements on which we intend to be heard.

Meeting the Challenge

By Gen Maxwell D. Taylor

IN THIS era of military change and growing complexity, tomorrow belongs to soldiers who refuse to be awed or confused by it and who resolutely rise to meet its challenge. Much of the complexity and confusion has been generated in the striking accomplishments of the technology of our age. By their very nature, these accomplishments sometimes tend to cloud some of the basic problems of our national defense, particularly those relating to combat on the earth's land surface—the area of primary interest and responsibility of the Army, the ultimate control of which rests upon the Infantry. This truth has been effectively expressed by General Omar Bradley, who observed that, "No victory has been assured until the man on the ground takes possession by his physical presence on the enemy's soil."

From this fact may be readily derived the over-all objective of the Army in this or any other period: that is, to contribute to the security of the Nation as a member of our tri-Service team by providing adequate forces for prompt and sustained land combat in any type of war. A concomitant objective of importance which I will mention only in passing is to furnish an adequate surface-to-air missile defense of the United States and our forces overseas.

From this line of departure, let us move to a consideration of the Army's future roles, with emphasis on the function of the Infantry. From this consideration, we can determine the requirements for the Army and its Infantry to meet the future successfully.

At the outset I would like to say that the potentiality of atomic weapons tends to cast a shadow over the value of historical analogy for the analysis of future warfare. However, regardless of this factor, in my judgment certain military fundamentals will continue to hold true. Firepower, mobility, communications, and well-trained men employed in the proper combination at the decisive point of combat remain the keys to success in battle. Further, these ingredients of victory must always be combined in proper proportion by trained judgment and with imaginative foresight.

Two facts are salient in any consideration of tomorrow's challenges. First, the Sino-Soviet bloc confronts us with a political and military system whose standards and announced objectives are violently opposed to our ideals and principles and to those of the Free World. Second, they will use all tactics and weapons which favor the attainment of their ends. Thus, in the event of war we must prepare for the use of atomic weapons to offset Communist numbers as well as to defend ourselves against atomic attack.

The Soviets, like the United States, have equipped themselves with nuclear weapons and both sides appear to have the capability of destroying each other in case these weapons are used without restraint. Although that sober conclusion suggests that neither side would deliberately initiate general atomic war, it does not impose restraint upon the use of lesser aggression as an instrument of Communist policy. Rather, it appears that the Communist bloc will continue to wield this instrument of limited aggression with increasing truculence under the cloak of fear imposed by mutual deterrence. We have seen ample evidence of this trend in the series of Middle Eastern crises and in the Far East, reminding us that in an age of atomic plenty the Soviets intend to throw their military weight about the world for the achievement of their ends.

Under these circumstances, the Red Army and the ground forces of the satellites become potent agents in periods of tension and potential participants in actual military conflicts of any dimension. These forces are combat-ready, equipped with the latest types of materiel and trained in mobile tactical concepts, and supported by large tactical air armies. Throughout the world, these forces are a readily-understood symbol of Communist strength. Particularly to the people of many under-developed areas, these forces give impressive proof of the capability of the Communist system to produce and equip the modern army as an indispensable element of national power.

As an instrument of the Communist politico-military strategy of eroding the Free World position, these powerful forces constitute a strong support for tactics in a period of tension—the threat or direct application of calculated, positive military force at times and places of their choice.

From these considerations there arise two significant operational functions for the Army to perform. These are: (1) the maintenance of overseas forces for deterrence of aggression, or prompt resistance to aggression if deterrence fails; and (2) the maintenance of a mobile combat-ready strategic force based in the United States for the rapid reinforcement of forward deployed forces or for the timely suppression of situations short of general war.

As you will note, these functions extend across the entire spectrum of the military threats confronting us, from the "worst possible" but less probable case of general atomic war, to the more likely scale of limited war and the current realities of a period of tension.

Immediately following the Korean War, the Army recognized the changing nature of the military threat and set about to meet it. Following a period of self-evaluation there ensued an evolution in organization, concepts and doctrine, so compressed in time as to verge on the revolu-

tionary. This readjustment has been made on a deliberate basis of calculated risk, with full recognition that much of the modern materiel and supporting means necessary to support our new concepts are not yet available in sufficient quantities. The need for change had to be balanced against the requirement for keeping up our guard during a period of serious world tension. However, the decision to act was taken because the lead-time for the understanding and acceptance of new ideas can often be a far greater problem than that for the production of the complex new hardware required to realize a concept. Fundamental to this need for change was the early attainment of that optimum combination of firepower, mobility and communications, to which I earlier referred, as the products of our expanding technology became available to us. If the past can tell us anything, it is that history is studded with the gravestones of those nations whose armies failed to achieve that proper combination of these vital ingredients of victory necessary to obtain superiority over the enemy.

As a result of the Army's effort to remodel itself at an accelerated rate, much discussion has arisen at all levels regarding the future functions and roles of the combat arms. Our modernization program has properly emphasized greatly improved firepower and communications, enhanced strategic mobility, new forms of battlefield mobility and the means of protection from nuclear effects. From this emphasis on complex equipment, some military critics have drawn the inference that the future of the Infantry may be limited. I would like to say that nothing could be further from the truth, if the essential nature of the Infantry's function is kept clearly in mind. This function for the future, as well as today, remains to close with the enemy and to destroy or capture him, driving him from his position and securing the ground wrested from him. In so doing, the Infantry requires great versatility. The same Infantry mounted in armored carriers and teamed with tanks for mobile operations must also be ready to move in aerial vehicles about the battlefield. But regardless of how the Infantry moves or maneuvers, it shares with no other arm the ultimate mission of sustained close combat with the enemy. Thus, to those who would say, "The Queen is dead," I would reply, "Long live the Queen!"

The leadership of the Infantry must keep this basic truth as a guiding principle, for it will serve to illuminate and clarify many issues relative to the role of the Infantry as our organizations, concepts and weapons continue to evolve. In the final analysis, all our efforts toward improvement seek but one principal end. It is to provide the Infantry, as the versatile basic arm of close combat, with a superior differential of sustained, mobile combat power, capable of delivery at the decisive point in time and space, under any and all conditions of combat.

In discussing our strategy, I have often had occasion to speak of the role of the sword and the shield. If we should have to face general war, the shield is those deployed forces which meet the enemy's thrust on the ground and in the air and blunt or parry it in preparation for the riposte of the sword of nuclear retaliation. But if it is necessary to face situations short of general war these roles are reversed. Under the restraints of mutual deterrence, our atomic retaliatory sword becomes a shield, holding in check atomic aggression by the enemy. The ground and tactical air forces become the strategic rapier to destroy localized aggression by the precise, selective application of force, thus preventing its spread into that general war which is our purpose to avoid. It is in these less understood areas of limited war that the significant capability of the Army stands out. And, it is here that the Infantry plays an essential part in contributing to the distinguishing characteristic of the Army—prompt, sustained combat on land.

Most of the Army combat units in both the sword and the shield are composed of Infantry units and their support elements. In those shield forces deployed abroad, the Infantryman stands as a visible symbol of our intent to deter aggression and to resist it shoulder-to-shoulder with our allies should it come. His mere presence, even in limited numbers, is often sufficient to achieve the desired effect. Berlin is an outstanding example which comes readily to mind, where two Infantry battle groups symbolize the power and determination of the United States. So long as they remain, Berliners and the rest of the world are assured that the United States means to resist aggression.

In those Army forces comprising the limited war sword, the Infantry components of STRAC are both the point and the cutting edge. Recent events have demonstrated the role of Infantry in our STRAC concept. Infantry's ready adaptability to prompt strategic deployment by air or sea lift, and its capability for rapidly entering into action under the widest range of climatic and geographical conditions are attributes suited to its part in our mobile strategy.

For the future, added means of firepower, battlefield mobility and increased staying power will be necessary to retain the essential versatility of the Infantry. It must receive modern arms and equipment characterized by ease of air and sea transportability. Strategic air movement and mechanized or aerial tactical maneuver must become commonplace in the thinking of Infantrymen, and indeed of the entire Army. There should be nothing difficult or unusual about deploying Army forces strong in Infantry to any point on the globe by air in order to intervene decisively in an area of strife. In fact, it is the capability to intervene rapidly and positively with appropriate forces and weapons in a dangerous situation which can deter a limited war or preclude its assuming general war proportions. Tactically, the greatly increased battlefield mobility which the Infantry can gain through mechanization and aerial vehicles will provide the means essential to success and survival against numerically superior enemies on the future battlefield.

These considerations of the mobility essential to the Infantry resolve themselves into four distinct but related components: the mobility of the individual; the mobility of the vehicles in which he is transported into combat; the mobility of the organization containing man and vehicle; and finally the over-all mobility of those major elements of the Army which must be responsive to the needs of strategic and tactical operations.

From the foregoing considerations, I hope that *versatility* has been one of the watchwords of this conference. Moreover, in considering how greater versatility for the Infantry is to be achieved, I trust you have applied yourselves to the problem of overcoming obstacles to its attainment and of discarding methods and procedures which are no longer useful. We cannot hesitate to reject concepts which

may have been valid in the past but which are no longer suitable for modern Infantry combat.

In addition to those keys to success in battle which I have described, there is always the intangible quality of leadership which transcends all material considerations, notwithstanding the advances in equipment or tactics. The recognition of the primacy of leadership has a two-fold aspect. First, the successful implementation of the Army's concepts is as much a condition of mobility of mind and versatility of imagination of commanders and staffs as it is of the weapons. Therefore, cultivation of these qualities in our leadership training is a task of overriding importance; without these attributes of mind all else will be sterile effort. Second, there is the necessity for meeting the greatly increased demands for character, responsibility and initiative which the future battlefield will impose on Army leaders of all echelons. We look to The Infantry Center and to you who lead the Infantry to set the pace in the development of these vital leadership qualities.

In touching upon the roles of the Army and the functions of the Infantry, I have not meant to depreciate in any degree the valuable and indispensable support of the other combat arms and the technical and administrative services in performing the many duties which devolve upon the Army. Rather it would seem to me that, while I have stressed the importance of the Infantry's role as is appropriate before this Conference, we may see in the future an even closer amalgamation of the arms and services than ever before. We should properly maintain a competitive spirit within the elements of the Army in order to stimulate progress through new ideas and concepts. These latter must then be objectively evaluated in the cold light of their military worth and battle effectiveness, irrespective of branch partisanship or tradition. Whatever changes they may suggest, it is clear that our Army in any future type of war will derive its versatility and staying power from the Infantry, its shock action and protected tactical mobility from Armor and its supporting heavy firepower from the Artillery. It is you gentlemen who have the privilege and heavy responsibility of welding these elements together through effective leadership, and of forging a powerful weapon from our modern Army with which to meet the military challenge confronting us.

The ultimate product should be a stronger, integrated Army team, serving within our larger tri-Service force, dedicated as ever to the preservation of peace and the attainment of our national objectives.

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TRAINFIRE II

By Maj Edward J. Collins

This new marksmanship training program for the rifle squad has been troop-tested. The Infantry School has recommended that it be adopted.

BEFORE the Infantryman can become an effective member of the rifle squad, he must be a marksman capable of detecting and hitting combat targets. Trainfire I, which has already been adopted, gives the basic trainee this essential instruction.[1]

As a squad member, the rifleman must be taught *when, where* and *how* to fire and to move under battlefield conditions. This is the job of Trainfire II, the projected squad training program developed by the United States Army Infantry Human Research Unit at Fort Benning, in conjunction with the United States Army Infantry School. Based on the results of extensive troop testing, the Infantry School has recommended the adoption of Trainfire II as the standard program for squad combat training.

As the first step toward a revised squad training program, the Human Research Unit conducted several years of basic research into the deficiencies of our present program. Among the conclusions of the study was this important one—that teamwork inadequacies of American Infantrymen during World War II and the Korean Conflict were not primarily caused by fear. Instead, when they were under the stress of fear or apprehension, riflemen usually *did*

[1]See "Trainfire" in the January 1956 *Infantry School Quarterly*, pp. 47-54; "More About Trainfire I" in the April 1957 *Infantry*, pp. 34-44; "Trainfire Adopted" in the July 1957 *Infantry*, p. 89; and "Army Rifle Marksmanship Today" in the July-September *Infantry*, pp. 6-14.

MAJ EDWARD J. COLLINS, a member of the Technique of Rifle Fire Committee in the Infantry School's Weapons Department, was commissioned in 1942 after completing OCS at Fort Benning. In the following year he went to Europe where he served as a platoon leader and later as a company commander with the 320th Infantry Regiment, 35th Infantry Division. He left the service after the war but reenlisted in 1948 and in the same year was recalled to active duty as a commissioned officer. He then went to Germany as a company commander with the 18th Infantry Regiment, 1st Infantry Division. He was graduated from the Advanced Course at the Infantry School in 1954 and then served with the 24th Infantry Division prior to beginning his current assignment.

not know how to participate in effective squad action.

The explanation is twofold. First, the loose and unrelated ends of the rifleman's training had never been tied up into a compact, integrated pattern. Second, the individual had not received enough drill in squad action to make his battlefield reactions automatic and instinctive. Both these factors are, of course, interrelated.

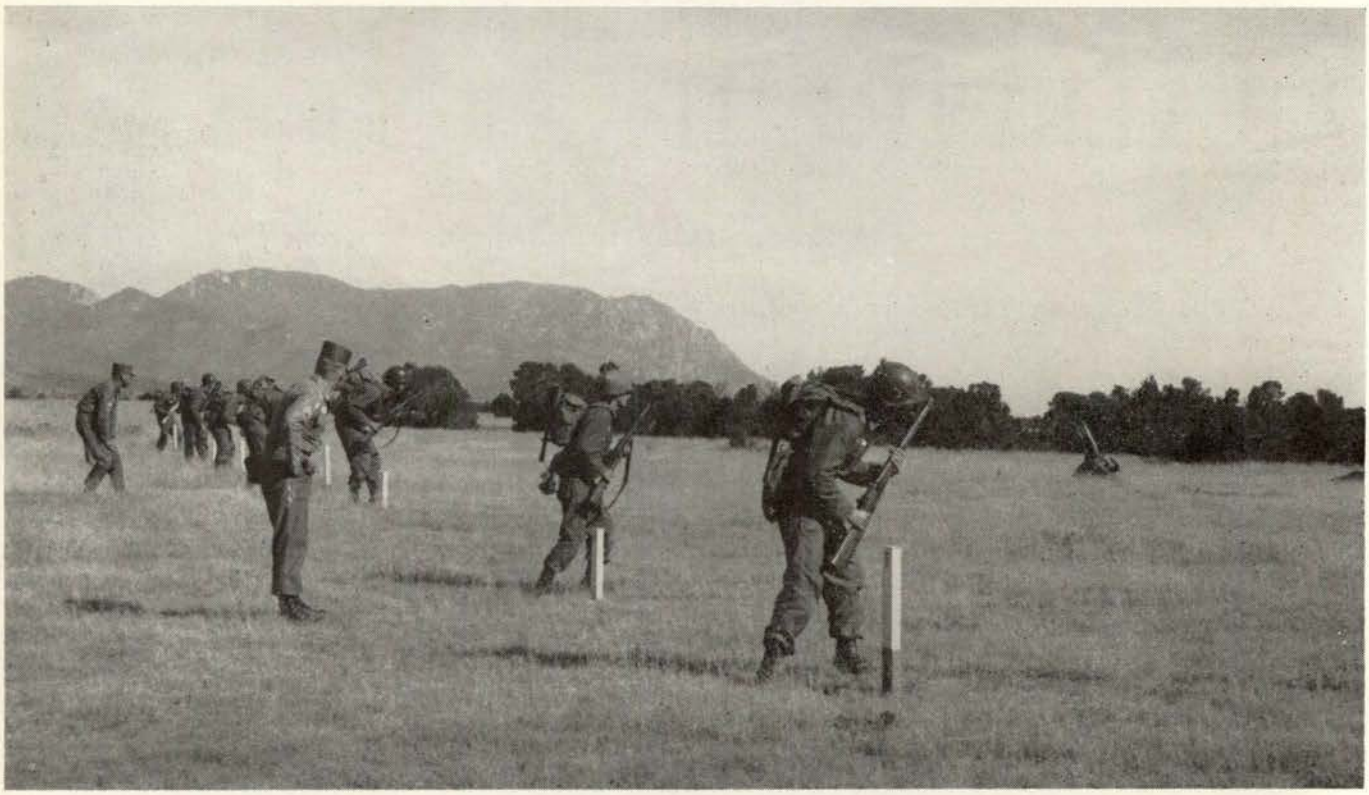
Trainfire II, therefore, gives the rifleman integrated training in the technique of rifle fire *and* squad tactics. At present, under ATP 21–114 these two subjects are presented separately, and the result is "loose ends." In Trainfire II, training in related subjects is stressed. Besides giving the firer a complete pattern of battlefield procedure, this method allows instructors to work with smaller groups, to conserve training time and to make better use of training facilities.

Technique of rifle fire, in its present form, teaches methods which apply, in general, to any tactical situation. However, research has shown that techniques employed by the squad in effectively applying fire change, depending on whether the squad is attacking or defending. Thus separate techniques must be taught specifically for the attack and specifically for the defense. This is another deficiency remedied by Trainfire II.

Moreover, Trainfire II is more of a *how to do* than a *what to do* program. Great emphasis is placed upon drill and practical experience. The object is to produce a rifleman who, under stress of fear, fatigue, hardship and battlefield confusion will react automatically and, when necessary, without specific directions from the squad leader. This is to ensure that, whatever the conditions, the Infantryman will contribute his full share to squad fire and maneuver.

Once the squad begins operating as a casual assemblage of individuals, its efficiency is reduced, even if all members are firing. Real impact upon the enemy comes from collective fire and movement undertaken according to plan and technique. Consequently,

The trainee squad, formed as skirmishers, crosses the line of departure . . .



. . . advances by fire and maneuver, one man covering another's movement . . .

much of Trainfire II instruction is based on SOPs and standardized techniques, some of which are already being used. Using these SOPs, the proper response to any combat situation becomes second nature to the Infantryman. The SOPs allow the squad leader better and more effective control over his men. They reduce the amount of additional combat training necessary for replacements and they decrease verbal instruction, thus providing more training time for practical work.

All of these elements add up to realism, and that is one of the primary objectives of Trainfire II. Each trainee fires a total of 256 live rounds on a variety of Trainfire II ranges. Full use is made of realistic targets at combat ranges. Several newly developed simulators recreate enemy firing and actions in combat. Every effort is made to give the rifleman the next best thing to actual battle experience.

Trainfire II ranges and procedures were intensively troop-tested and additional tests continue. During troop tests, the performance of conventionally trained soldiers and soldiers trained under Trainfire II was compared and evaluated. The two groups were sent through proficiency ranges designed for this purpose and the conduct of each was carefully observed. Where necessary, modifications were made in the original Trainfire II program.

Fort Carson, Colorado, and Fort Jackson, South Carolina, were given the mission of conducting the troop tests. As a preliminary step, selected personnel were sent to the Trainfire II Instructor Orientation Course at Fort Benning in September 1957.

Based on a Trainfire II "Instructor's Guide," prepared by the Weapons Department of the United States Army Infantry School, and utilizing the instructors trained at Benning, Fort Carson conducted its original tests from late November 1957 to the end of March 1958. USCONARC subsequently approved Fort Carson's request to further test a revised Trainfire II program which incorporated recommended changes. The additional tests were conducted in June and July 1958, and most of the changes proved acceptable. Pending approval of Trainfire II by the Department of the Army, Fort Carson has received permission to utilize the Trainfire II program in instructing all basic trainees.

Troop tests at Fort Jackson began in September 1958 and are scheduled for completion by the end of February 1959. Evaluation of the results can be expected late this spring. It is expected that a finalized Train-

. . . or two men covered by the other members of their fire team . . .

. . . and assaults the objective, firing from the shoulder or underarm position.

fire II will become the standard squad combat training program throughout the Army sometime late this year.

The detailed lesson plans contained in the "Instructor's Guide" are a significant feature of the Trainfire II experimental program. The lesson plans standardize material presented to trainees, and simplify class preparation and conduct. Not in any sense "canned," the lesson plans provide lines of development and explanation for the individual instructors to follow. Basic material is presented in narrative form to insure that every class will receive the same clear, logical presentation. This is necessary because much of the value of Trainfire II is derived from the logical sequence in which subjects are taught, and from a full use of concurrent or integrated training.

The 32 hours required by ATP 21–114 are replaced by 30 hours of Trainfire II. The distribution of hours is detailed in Figure 1. Individual tactics, cover and concealment, camouflage and other subjects related to the movement of the soldier on the battlefield are presented concurrently.

Trainfire II ranges reproduce the basic problems the squad will encounter in combat and are designed to develop each trainee's ability to function as a part of a fire unit in the engagement of combat-type targets in the attack and in the defense. For this purpose several ranges and courses are employed, including a Technique of Rifle Fire Range (periods 2 and 3), a Defense Training Range and a Technique of Assault Range (period 4) and an Attack Training Range (period 5).

The electrically powered pop-up target M31 is the principal device used on Trainfire II ranges. The M31 simulates a human figure that suddenly appears, remains exposed in the same position, then disappears. The M31 remains in the visible position until struck by a bullet or released by the operator. The advantage of this pop-up device is that it presents a "killable" target which automatically falls when hit. It also provides an on-the-spot measure of the soldier's accuracy.

In addition, camouflaged plywood panels are used to record hits and distribution of fire. The panels are placed, either individually or in banks, behind pop-up and linear targets. Scores are registered electrically upon a mechanical counter.

The realism of Trainfire II ranges is increased by the use of various types of simulators. An electromechanical small-arms simulator, 3–C–65, is employed to create a background of single shot and automatic enemy fire (Figure 2). Panel-mounted and operated by remote control, it produces smoke, flash and sound. The device is used to give battlefield clues to target locations, and to mark the extremities of linear targets.

Quarter-pound blocks of TNT, or

Figure 1. Training Program.

TRAINING PROGRAM

Period	Subject	Hours
1	Orientation, Formations and Means of Control	2
2	Tactical Training for Squad in the Defense; Technique of Rifle Fire, Part I	4
3	Tactical Training for Squad in the Attack; Technique of Rifle Fire, Part II	4
4	Live Firing Exercise for Squad in the Defense; Tactical Training for Squad in Reorganization and Consolidation of the Objective; Technique of Assault Fire	8
5	Live Firing Exercise for Squad in the Attack; Tactical Training for Squad in Semi-Independent Action	8
6	Blank Firing Exercise for Squad in Semi-Independent Action	4
	Total	30

standard 105mm simulators, are used to reproduce artillery blasts. In addition, a specific artillery simulator, which works on the principle of 3–C–65, has been developed (Figure 3). It is safer than explosives, and can be used to the rear of as well as forward of the squads.

Such devices provide a large amount of the "feel" of the battlefield. Moreover, the realism of Trainfire II ranges is increased by a systematic use of this equipment. The M31 device, for instance, provides a most effective target clue when the silhouette is replaced by a bush or branch to simulate a moving but hidden enemy. On the Defense Training Range, a logical sequence of enemy attack is represented by the interrelated use of many targets, target clues, simulators and other devices.

The value of Trainfire II principles and techniques was clearly demonstrated by the troop tests thus far completed. Since trainees ordinarily have not received automatic rifle training by their seventh week, when Trainfire II is presented, automatic rifles are not used in the Fort Jackson and Fort Carson trainee squads. The initial test squads consisted of eight trainees armed with the rifle, a cadre squad leader and two cadre team leaders.

When Autofire[2] is integrated into the basic training program, trainee automatic riflemen will fire the automatic rifle during Trainfire II. The two automatic rifle positions in each squad will be rotated among all trainees. An adaptation of Trainfire II has been recommended for TOE squads and for 11-man trainee squads utilizing trainee squad leaders, trainee team leaders and trainee automatic riflemen. Eventually, members of the rifle squad will be armed with the M14 and M15 rifles, but these new weapons will have no effect upon Trainfire II techniques and procedures.

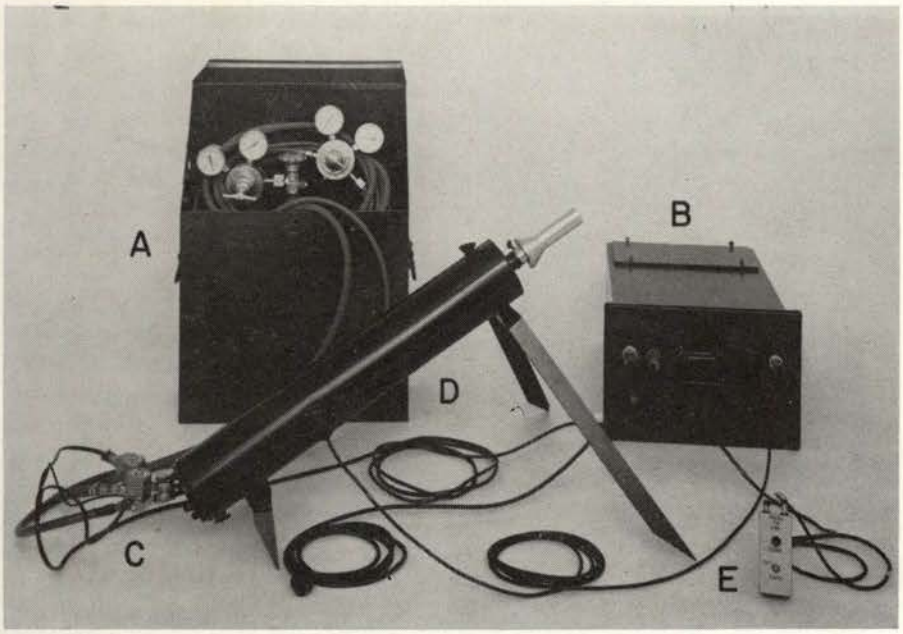
The aims of Trainfire II remain essentially the same as the present program. But the means employed are radically different and much more effective. Trainfire II teaches the individual squad member *when, where* and *how* to shoot when his squad is *attacking* and when his squad is *defending*. It teaches this as an integrated, squad combat training program which stresses *doing*. It produces a rifleman who reacts with confidence under fire, and who is equipped to contribute his full share to squad fire and maneuver.

Trainfire II does not diminish the need for effective leadership and the will to win. It does, however, provide a firm foundation which makes the individual soldier more responsive when leadership is called for, and more self-reliant in situations demanding self-reliance.

[2]See "Autofire," p. 42.

Figure 3. The Artillery Simulator operates on the same principle as the Gunfire Simulator. Considerably safer than an explosives-type device, it produces realistic sound, smoke and flash. It can be used to the rear of as well as forward of troops. The simulator motor is not shown in the illustration.

Figure 2. The Gunfire Simulator reproduces the noise, smoke and flash of small arms. Adjustable for either a single-shot or automatic effect, the simulator realistically "fires" 21,000 rounds without "reloading" — enough for a full day's training. The device, which more than pays for itself through savings in blank ammunition, has many applications in maneuvers and field exercises. The complete simulator shown above includes: A — fuel supply of oxygen and acetylene; B — motor; C — ignition system; D — gun; E — trigger.



In the next issue of INFANTRY, *Major Collins will present another article on Trainfire II. He will discuss in some detail Trainfire II courses of instruction, lesson plans, training techniques and ranges.— Editor.*

TRACKS FOR THE INFANTRY

This is a continuation of the series of articles on the adaptability of the M56 as a light, mobile, immediately available platform for Infantry weapons.

THE M56 has the kind of mobility the Infantry needs and wants. This vehicle is reminiscent of the jeep, which introduced a new kind of wheeled mobility during World War II. Starting off as a small, rugged, ¼-ton truck, unlike anything the Army ever had before, the jeep soon became an indispensable workhorse. Uses not contemplated when it was developed were soon found for it. The jeep became a command vehicle, an ambulance, a weapons carrier and even a weapons platform.

An M56-type vehicle could have a comparable future as a tracked workhorse for today's Army. Like the fabulous jeep, it is small, light, rugged and versatile. Developed as the carriage for an air-transportable 90mm self-propelled antitank gun, it has demonstrated remarkable capabilities. The Infantry sees in this vehicle an immediately available platform for Infantry weapons and for other uses which will provide the mobility needed by the Infantry right now. In "Tracks for the Infantry" in the last issue, *Infantry* began a series of articles on the M56. Part I, "The Scorpion," discussed the characteristics, capabilities and tactical employment of the M56 self-propelled antitank gun. Part II, "Short Cut to Mobility," showed how, with very minor modifications, this standardized and available vehicle will provide the Infantry with a full-tracked platform for such weapons as the 106mm recoilless rifle, the 4.2-inch and 81mm mortars and the quad .50 multiple machinegun. Discussion of the M56 is continued in this issue, in Part III, "Mortar Mobility."

Part III. Mortar Mobility

By Maj Frederick M. McConnell

THE last issue of *Infantry* magazine, in a two-part article, "Tracks for the Infantry," discussed the adaptability of the M56 "Scorpion" as a multi-purpose carrier to increase Infantry mobility. In Part II of that article, "Short Cut to Mobility," Maj Albert L. Kotzebue pointed out briefly that the M56 would provide a versatile platform for the 4.2-inch mortar. The same issue carried an article by Maj Hulen D. Stogner, "The Battle Group Commander's Personal Artillery," which discussed the organization and employment of the 4.2-inch mortar as an Artillery unit in the battle group.

These two articles pave the way for a closer look at the M56 as a mortar platform, and for a reappraisal of the organization of the 4.2-inch mortar battery in the light of this marriage of an indirect-fire weapon with a tracked vehicle.

The characteristics of the M56 have already been covered. Without going into specifics, we know that it is a remarkably fast, light, rugged and maneuverable vehicle. We know that no more maintenance is needed on the M56 than on the ¼-ton truck. We have seen that the M56 track system is unique, trouble-free and dependable. Of course no one needs to reiterate that tracks provide better battlefield mobility than wheels.

We also know that the M56 can take the recoil of the 4.2. And we have found that sight deviation after the firing of each round is no greater than when the mortar is fired from the ground.

If the M56 has these capabilities, and if the marriage of this carrier with the 4.2-inch mortar has been proved feasible, then it seems to me that the Infantry now has the possibility of a significant advance in the effectiveness of its supporting firepower.

There is one very obvious—and very important—advantage to mounting the 4.2 on the M56 carrier. It stems from the fact that the effectiveness of firepower generally increases in direct proportion to its mobility. The necessity for dispersion and rapid concentration on the nuclear battlefield is mentioned so often these days that we tend to skip over its importance. Yet practical mobility is vital in modern combat and when such mobility is allied to the potent 4.2-inch mortar, the result is an extremely efficient weapon.

At the present time, the 4.2-inch mortar depends upon the ¾-ton truck and trailer for its mobility, and it is a rather limited mobility at that. When carrying the 4.2 and crew, the truck is overloaded by 1700 pounds and can move the mortar only to

Side view of the 4.2-inch mortar mounted on the M56 carriage. Note ammunition stowage boxes and seats for crew.

positions which are accessible by road or over ideal terrain. At times, the wheeled mobility of the ¾-ton truck will not permit the mortar to be delivered on carrier to the desired point of emplacement. In such cases, the mortar must be manhandled over considerable distances and, of course, the ammunition must also be hand-carried to the position.

The M56-mounted mortar, however, has no such limitations. It can go just about anywhere the Infantry soldier goes. It can climb slopes, surmount obstacles, span ditches and ford streams. With a low track pressure of 3.5 pounds per square inch it can do this through snow, mud, sand or dense vegetation. It can provide fire support for the Infantryman where he needs it and when he needs it.

This unusual mortar mobility has other advantages. For instance, it could lessen the dangers of close-up employment. The mortar unit could go rapidly out of action, move to a new position and quickly re-engage the enemy. No difficult and time-consuming withdrawal from a prepared position, no loading and unloading, no preparation of a second emplacement. The M56-mounted 4.2 can literally "shoot and scoot."

This capability is particularly important now that radar equipment will enable the enemy to place counterfire on our mortar positions within a few minutes. After firing, the M56-mounted 4.2 can actually move off while the rounds it has fired are still on the way.

The superiority of the M56 system in this respect was demonstrated by a simple test by the Weapons Department of the Infantry School. Two mortar squads started simultaneously from the same point and moved to separate firing positions thirty yards away. A five-man crew serviced the carrier-mounted mortar; the other mortar, on the ¾-ton truck, required a seven-man crew. The mission was to engage a target from these initial positions and then place fire on a second target from alternate positions. The first target was at a range of 1700 yards, the second at 1400 yards. The truck-borne squad unloaded their mortar and assembled it on a previously prepared position. They fired two "settling" rounds, then one round for adjustment and five rounds for effect. But by the time this squad's first round for effect had landed on target one, the smaller M56 squad not only had fired an identical mission (less the "settling" rounds), but it had completed the second mission —had moved 65 yards to the alternate position, fired one adjustment round on target two and had five rounds "on the way." This test was repeated six times with essentially the same results. There is no question that the M56-mounted 4.2 mortar far outclasses the truck-borne 4.2 in movement capabilities.

As a matter of fact, so great is the maneuverability of the M56-mounted mortar that it is as if a "ghost" mortar platoon had been added to the battle group commander's arsenal. That is, the carrier-

mounted 4.2 can provide wider coverage, or more intensive coverage of a limited area. This capability assumes great importance on the nuclear battlefield. The dual requirements of increased frontages and periodic concentration of conventional fires seem ideally answered by the M56–4.2 mortar combination.

There are still other advantages. As indicated earlier, the carrier-mounted 4.2 requires no "settling" and its emplacement travels with it. This particular advantage represents a considerable saving of ammunition and of time. Yet the tracked 4.2 can avail itself of all the benefits of emplacement—camouflage, concealment, defilade—with none of the drawbacks.

It has been pointed out that the M56-mounted 4.2 is serviced by two fewer men than the 4.2 carried by the ¾-ton truck. In addition, the M56 can carry a total of 90 rounds, as opposed to the 74 rounds which now comprise the basic load of the ¾-ton truck and trailer. And because there is no necessity of "settling," every round counts.

The M56-mounted 4.2 retains the capability of being air transported. It is light enough to be airlifted in several of our current cargo aircraft and, with a modified baseplate, could be lifted short distances by the H37 helicopter. These capabilities permit the tracked 4.2 to be employed with an extra measure of speed and surprise.

Another capability of the M56-mounted 4.2 is particularly useful on the nuclear battlefield. While the best protection undoubtedly would be achieved by digging in the dismounted mortar, this takes time. The tracks of the M56 provide a speedy means of using ground for protection. The digging can be accomplished by using explosives to blow a crater large enough to accommodate the M56. The vehicle can then trundle into the hole in a few seconds and move out again just as quickly. Of course, if time permits, the hole could be improved for better protection. The tracked platform will suggest a host of similar expedients to the imaginative commander.

The 4.2 mortar mounted on an Infantry carrier can clearly deliver more accurate, more responsive and more decisive supporting fires. In highly successful testing at Fort Benning over a period of nine months, the M56-mounted 4.2 fired a total of some 700 HE rounds, at rapid rate and from minimum to maximum ranges. The performance exceeded that of the ground-mounted 4.2.

In reality, the marriage of the mortar to the M56 produces a new weapon which can give the battle group commander a more effective Sunday punch. Employed in this manner the carrier-mounted 4.2 should be an Infantry weapon.

This proposal is not an attempt to usurp a function of the Artillery. It is made to utilize most effectively the special responsiveness of the M56–4.2 mortar combination to Infantry requirements. Furthermore, the Artillery has indicated that the 4.2, even as it is now employed, is unsatisfactory as an Artillery direct support weapon. It seems logical that the present mortar battery should return to Infantry organization as a mortar company. In this case, the 4.2 mortars would become—fully and literally—the battle group commander's personal artillery, completely responsive to their role in the total Infantry job.

Integration of the 4.2 into the Infantry team would have several important effects. To begin with, Artillery and mortar fires would be placed in better perspective. This would benefit everyone. The Artillery could devote its attention to matters involving artillery support. And the Infantry would be able to tie together all of its mortar support. This is particularly desirable since the improved 81mm HE round so closely approaches (2450 yards) the close support range of the 4.2. Furthermore, both the 81mm and 4.2-inch mortars now have the same sight (M-34A2) and, under Infantry control, the fires of the 4.2 would undoubtedly be directed by the same fire control instrument, the M16 plotting board.

Certain changes in the present battery organization and equipment would permit the Infantry mortar company to make maximum use of the M56-mounted 4.2. The introduction of longer range radios on Infantry channels would permit adjustment of mortar fires by the Infantryman. Moreover, this use of Infantry frequencies would allow the establishment of a common mortar fire direction system within the battle group. Thus the fires of the 81mm and 4.2-inch mortars could be massed when necessary.

Also, the ability to shift trained crewmen laterally, without a change in branch, is a desirable advantage. And training of mortar personnel would be greatly simplified due to the use of somewhat less complex

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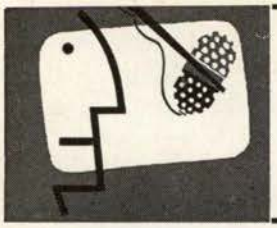
MAJ FREDERICK M. MCCONNELL is the executive officer of the Mortar Committee in the Infantry School's Weapons Department. He received an Infantry commission in the Organized Reserve Corps at Fort Moultrie in 1938. During World War II he served with the 260th Infantry Regiment at Camp Shelby and with the 334th Infantry Regiment, 84th Infantry Division in Europe. After the war, he attended Clemson College, from which he was graduated in 1950. He then became an instructor in Military Science and Tactics and Chief of the Infantry Section at Georgia Institute of Technology. In 1952 he went to Korea where he commanded both a rifle company and a heavy weapons company with the 9th Infantry Regiment, 2d Infantry Division. Major McConnell began his assignment at the Infantry School after completing the Infantry Officer Advanced Cource in 1954.



QUARTERLY QUIZ

Answer the following questions to determine whether you are a bolo, recruit, marksman, sharpshooter or expert. Each question is worth 10 points.

1. A linear formation (three or more rifle companies in the attacking echelon) is favored for the dismounted battle group when:

a. terrain provides excellent cover and concealment.

b. there is an adequate road net.

c. multiple approaches are available and objectives are shallow.

d. strong flank security is required.

2. In an attack in which the platoons of a rifle company are mechanized with Infantry carriers, is an assault line selected?

3. What vehicles are available within the assault gun platoon of Hq & Hq Co, Infantry division battle group, for ammunition resupply from the battle group supply point when the platoon is operating as a unit? How are they used?

4. The general location, control and composition of the combat outpost line are usually prescribed by the:

a. forward rifle platoon leader.

b. weapons platoon leader of the forward rifle company.

c. battle group commander.

d. forward rifle company commander.

5. In a night attack, the probable line of deployment is the location on the ground where:

a. the company commander plans to complete final deployment prior to moving out with squads as skirmishers.

b. movement is facilitated into and out of the attack position at night.

c. attacking troops do not pass without battle group authority.

d. weapons are registered to deliver fires on call, if necessary.

6. You are the leader of a night combat patrol. After receiving the commander's briefing, what preparations and planning will you accomplish before the time of departure?

7. During defensive operations, the battle group relies upon wire as one of its primary means of communication. As a minimum, the battlegroup communication platoon installs:

a. one line to all attached and subordinate units.

b. two lines to all attached and subordinate units.

c. two lines to frontline units and one to reserve and supporting units.

d. two lines to all rifle companies and one line to the mortar battery.

8. If no battery supply is available or if the transmitter element is defective in the Telephone Set TA-312/PT, emergency operation is possible over reduced distances by:

a. shouting into the transmitter.

b. holding the press-to-talk switch down for several seconds.

c. using the transmitter element as a sound-powered transmitter.

d. using the receiver element as a sound-powered transmitter.

9. You are detailed to conduct a special flame warfare school to qualify gunners for the portable flamethrower. The division G3 informs you that the fuel available will permit only one "shot" per man. This is inadequate to conduct aiming and firing exercises. What can you do to ensure realistic "shooting"?

10. What are the four major differences between the new M14 and M15 rifles?

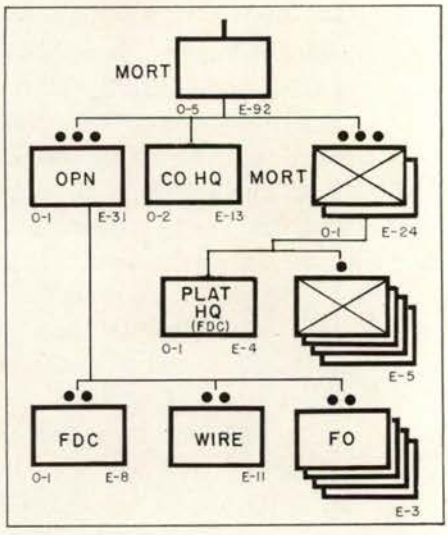
For answers turn to page 72

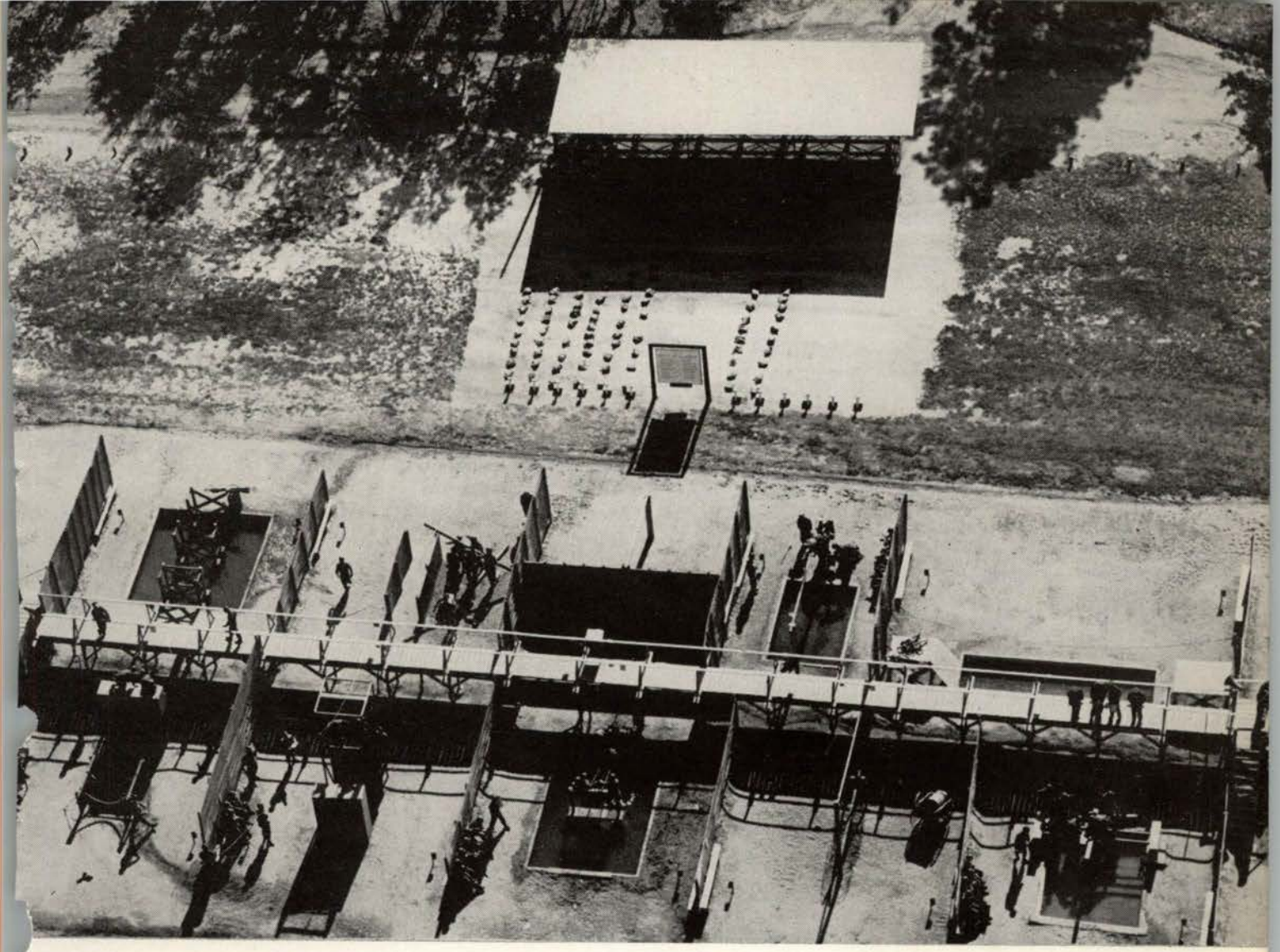
methods of fire control and the possibility of providing instruction strictly in the relevant Infantry aspects of mortar support.

An organization chart for an Infantry mortar company, utilizing the same eight tubes now assigned to the mortar battery, but mounted on the M56 carrier, is shown in Figure 1. The company contains five officers and 92 enlisted men, organized into an operations platoon and two firing platoons, each with an organic fire direction center and four mounted mortar squads. The squads contain five men each. The Survey Section, and the fire support coordination and air control functions, would be returned to the Artillery. The Infantry mortar company would require six fewer officers and 42 fewer enlisted men. These officers and men could be made available to the Artillery.

The M56–4.2 combines firepower with mobility. It permits the close and continuous organic fire support which regimental commanders dreamed of just a few years ago. An Infantry mortar squad, mounted on an Infantry carrier, can apply flexible, mobile, hard-hitting firepower when and where the Infantry most needs it. This combination is really a new weapon—one that is more remarkable than the M56 and more effective than the 4.2.

Figure 1. Proposed Infantry mortar company.





Leadership Training Come to Life

By Maj Van T. Barfoot

Here is a realistic Leaders Reaction Course which provides a practical approach to our leadership training. This course teaches as it measures leadership strengths and weaknesses.

THE eight-foot wall of a prisoner-of-war compound rose abruptly from the far edge of a water-filled moat. Across the top of the wall ran a bare cable heavily charged with electricity. Coils of concertina wire blocked all other exits from the enclosure. In a shadowy corner near the moat, six soldiers huddled together talking in whispers. Working rapidly and quietly, one of the soldiers knotted a length of rope to the top rung of a short, makeshift ladder and tested it with a hard tug.

The man who appeared to be the leader of the group listened intently for a moment, then gave a silent signal. Quickly, efficiently, two of

Water obstacles provide a "dampening," but harmless, penalty for misjudgment.

the men carried the ladder the short distance to the moat and stood it upright, at the same time bracing it with their boots. It was obvious that the ladder was too short to span the moat but this did not deter these men. Three other men of the group moved from the shadows and grasped the free end of the rope which hung from the upper end of the ladder. They dug their heels into the sandy ground. As the remaining man moved from the shadows and began to climb, they slacked off the rope and the ladder angled out over the water.

Cautiously, glancing first at the water and then back at his comrades, the soldier climbed. In a moment he was perched on the top rung. The other men strained to hold the ladder steady while he carefully stretched across the open space to reach the top of the wall. He found a handhold dangerously near the highly charged wire, but without wavering for a moment he shifted his weight to that hand and then located a hold for the other. With athletic agility he vaulted and pulled himself to a position atop the wall. On the other side he found a piece of pipe. Cautiously moving this over the wire he was able to help the rest of his comrades, and the entire group was soon across the moat and assembled on the other side of the wall.

This team of young soldiers had successfully solved one of the realistic situations of the Leaders Reaction Course at the United States Army Infantry School. Like the other tasks in the course, this problem demanded the kind of thinking and teamwork that is required of young leaders in combat. The course is really a laboratory for testing the principles of leadership which students at the Infantry School learn in the classroom.

In similar cubicles of the compactly designed problem area other teams were facing comparable situations. Spirit was at a high level. Every man was putting forth his best effort to help his team succeed. It is apparent to anyone who observes this training that here is an excellent vehicle for impressing students with the importance of teamwork. But this is only one facet of the course. It merely scratches the surface of the total value of the Leaders Reaction Course.

To understand the purpose and true value of this unique teaching aid, it is necessary first to understand the thinking behind leadership training at the Infantry School. The School considers leadership to be an art which can be learned and developed. It rejects the theory that leadership ability is entirely a matter of heredity —that all leaders are born. It believes that good leadership is founded upon certain personal qualities and upon ability to understand and apply leadership principles and techniques.

Of the many personal attributes necessary in a good leader, three form the basic foundation for all others: character, intelligence and alertness. This of course does not mean that all people who possess these qualities are leaders, but any individual who aspires to be a leader must possess them to a reasonable degree. Other qualities must be present or must be developed. Among these are such things as decisiveness, endurance and military bearing. The School believes that these can be developed by the individual who has a sincere desire to lead men. By study and application of the techniques of leadership, the individual who has the basic attributes, plus the desire and the willingness to work at it, can become the kind of person who commands the respect, confidence, loyal cooperation and willing obedience of other men.

Application of the techniques is especially important. Practical experience is needed which will reveal flaws in the individual's approach to leadership problems. Too often in

the past young leaders who have studied the principles and felt they knew the techniques have failed to recognize serious weaknesses in their leadership ability until failure has brought their shortcomings into sharp focus.

Such failure can be costly—not only to the leader but to those he leads. Once lost, confidence and respect are difficult, frequently impossible, to regain. But more important, lives lost through leadership errors can never be restored. One of the purposes of the Leaders Reaction Course is to help the individual recognize his weaknesses so that he may overcome them. The course has proved to be so effective that all officer candidate, basic Infantry officer and senior noncommissioned officer classes at the School go through it as a part of their leadership training.

The problem area for the course is a compact structure which consists of 12 walled-off compartments, each containing all of the necessary items for the situation to be solved. Nine of the enclosures contain a shallow, water-filled moat. The moat constitutes an obstacle which must be negotiated and provides a "dampening," but harmless, penalty for misjudgment. The remaining compartments provide other types of obstacles. The arrangement of the structure permits maximum control by instructor personnel and reduces movement time between tasks.

MAJ VAN T. BARFOOT, who wears the Medal of Honor, is an instructor with the Leadership Committee of the Infantry School's Special Subjects Department. He enlisted in the Army in 1940, and later participated in the amphibious landings on Sicily, and at Salerno and Anzio. In 1944, while in Italy, he received a battlefield commission and served as a platoon leader and company executive officer before assuming command of a company of the 349th Infantry Regiment, 88th Infantry Division. Major Barfoot returned to the United States in 1945 and joined the 5th Infantry Division at Fort Jackson. While he was with this organization, he commanded a company of the 10th Infantry Regiment and later held the post of regimental adjutant. He then went to Germany for an assignment with the 1st Infantry Division. There he was assistant S3 of the 18th Infantry Regiment, commander of a heavy mortar company and finally, commanding officer of division headquarters and headquarters company. His next assignment was that of advisor of the 116th Infantry Regiment, Virginia National Guard. He left that post in 1954 to become the assistant G3, U.S. Army, Alaska. Three years later he received his current assignment at USAIS.

Strength, dexterity and a good plan are needed to manipulate the drum over this obstacle.

The concept of the Leaders Recreation Course and the objectives sought are not new. Actually the same type of course has been used for some time by the United States Air Force at Maxwell Air Force Base and by the British, who utilize it to determine the leadership potential of candidates for Sandhurst and the Royal Air Force Academy. The British Intelligence Service also has used a situation-type course to train and test agents for employment behind enemy lines. The former German Army evaluated its officer candidates using much the same method.

Taking the basic ideas developed by these agencies and adapting them to fit Infantry requirements and situations, the Infantry School introduced its own reaction course in 1954. The course has three objectives: to measure the degree to which leadership traits are possessed by the individual; to provide the junior leader with a means of making a self-evaluation of his leadership ability and potential; and to give the participant an opportunity to apply lessons learned in formal leadership instruction.

The course is divided into two

Should the soldier lack the physical agility or strength necessary in a combat leader, this task will bring it out.

phases: the application phase, which is conducted out-of-doors in the problem area, and a subsequent counseling phase for each individual which is given in privacy indoors.

The class receiving instruction is organized into 12-man groups at the outdoor site and each group is assigned to an experienced officer who acts as a rater. After a brief orientation, during which the importance of not divulging problem situations to subsequent classes is stressed, the groups are taken to their first situation area. There the rating officer divides the 12-man group into two teams. These teams alternate between working problems and observing. Each man dons a numbered helmet and the members of the observing team take seats on the bench provided in each cubicle. At the order, "Commence work," given to all groups simultaneously by the principal instructor, the rater reads the special situation and explains the task requirement.

In a typical situation the members of the team might be told that they are bringing ammunition forward to their unit in a cart. Enroute they come to a blown-out bridge over an unfordable river which separates them from their unit. The problem is to cross the river (represented by the moat) with the cart and ammunition. The only materials available at the site are a few planks, some steel pipe and a rope. For the next 15 minutes the students are on their own. If this is their first situation, they work without a designated leader. This is done to give the rater an opportunity to look for leadership ability in members of the team. Frequently, a student will emerge from the team to take charge, and the task will proceed under his direction. At times a team will work as a committee with no one really in charge. And, of course, there is also the case where no one leads and no one cooperates, a situation which results in confusion. In subsequent problems, however, a leader is appointed.

At the end of the 15-minute period the principal instructor orders, "Cease work." The team stops and replaces all materials. A five-minute critique is then given either by the rater or by a designated member of the observing team. The group then moves to the next situation where the observing team becomes the working team. In this manner the group works and observes its way through the 12 tasks. If the rater desires, he can rearrange the teams at any time during the course so that the same men do not work together throughout all tasks.

The rater is the key to the success of the course. Each task is designed to expose both the good and bad traits of all the participants. It is vital that the actions of the men be properly evaluated. Only a ma-

Moving a loaded cart over this obstacle requires leadership and teamwork.

ture, experienced officer can do this. He must decide to what degree each student possesses such leadership traits as decisiveness, judgment, enthusiasm, endurance, initiative and unselfishness. He attempts to rate each man in these traits every time the man performs, but this is not always possible. Therefore, he rates only those traits which he actually observes, and evaluates them as high, medium or low.

Experience gained during past operations of the course assists the rater. Also, the initial situation in which a leader is not appointed gives the rater an exploratory period during which he can categorize his students roughly as good, average or poor leaders. He can begin to look for character types, some of which are quite common and easy to pick out.

For instance, he can spot the man with ideas, who seems to do most of the talking. While this individual generally has an innate desire to lead, he is not necessarily a leader. In fact, his fellow students may already have eliminated him as such. The rater watches very closely for evidence of this. Such an individual may lack good judgment, and may put forth a number of ideas in rapid-fire order without being sure of any of them. The person with better judgment generally is not as talkative.

Then there is the person who is too positive. He usually is characterized by rigid thinking and a vigorous defense of his ideas, even though they may not be based on sound judgment. This type of person may feel that he possesses the natural right to be a leader.

Another type is the "spoiler." This man has few good ideas and resents others who have ideas of their own. Normally he is unenthusiastic and passes the course off as a joke. The rater gives special attention to this type.

Attention is given also to the student who tries with all his heart but appears to lack ability. This individual has one of the important ingredients of leadership—determination. With proper guidance he may be developed into an effective leader.

Both the observing team and the rater watch the working team closely for evidence of leadership.

All of the tasks require ingenuity in the use of materials at hand. Note the forked sticks lashed to the stretcher.

The man with little ability and no determination presents the most difficult problem. Unless he can be sufficiently motivated and developed, he will be of little use as a leader.

Occasionally two strong leaders turn up in the same team. When this happens, one frequently resents the other. Such resentment, of course, is a weakness and indicates a lack of ability to be a good follower. The good leader must be able and willing to follow as well as to lead. The rater may let the situation develop or he may shift one of the men to the other team.

Then there is the person who lacks tact. He is not confined to any one

type. He can have most of the potentials of a good leader or he may lack them. In the case of the potentially good leader this is indeed serious, for his tendency to offend people can seriously weaken his overall capability for leadership.

This listing of types is by no means exhaustive but it does include some of the personalities which emerge most frequently in the course. The rater is constantly alert to spot these and other types during the conduct of the problems.

During the critique period the rater actually conducts a brief class in leadership, using the task just completed for examples. He relates the lessons learned to problems which the student is likely to encounter later as a commander. In some instances the rater directs a member of the observing team to conduct the critique, particularly if he feels that this will provide a broader picture of the briefer's abilities. This procedure also allows the student to gain experience in evaluating the capabilities of others.

When the group has completed the application phase of the course the rater's other vital job begins. He consolidates his findings for each student on a single form and prepares a word picture of each man. After careful study of these findings the rater is ready for the counseling phase of the course. During this phase, in a private conference, he points out to the student his demonstrated strengths and weaknesses. The rater is frank but friendly in his relationship with the man and reflects a real desire to help him. The student is assured that the information gained during the course will not be used to his detriment but that it can work to his benefit. He is encouraged to relax and be honest with himself.

Frequently the rater finds it helpful to have the student talk about his own leadership attributes or lack of them before discussing the information gathered from his reaction on the course. This permits the student to acknowledge his weaknesses without the rater having to point them out. In some cases it eliminates embarrassment or the possibility of the rater's becoming too blunt. Regardless of how the rater conducts the interview, an air of mutual honesty, frankness and sincerity is necessary for successful counseling.

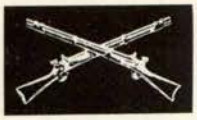
The length of the discussion varies, depending upon the student's problems, but whatever the length, the rater must accomplish two things. He must point out to the student his strengths and weaknesses, along with advice leading to self-improvement. And, most important, he must motivate the student to make maximum efforts in accomplishing that self-improvement.

The student profits from the Leaders Reaction Course in many ways. He learns to appreciate the full value of teamwork—he can see quite vividly how his own actions and those of his teammates either help or handicap the accomplishment of the team mission. He gets practical experience in evaluating the abilities of other men and learns how to size-up his associates. He is given the opportunity to evaluate his own abilities by observing the response of his teammates to his actions and orders —he determines to what degree he is able to get results from others. He sees more clearly the validity of the instruction he may have questioned in the classroom.

He actually leads others, but the mistakes he makes do not result in the serious penalties which may follow errors made in real command situations, particularly in combat. If he errs in judgment, wavers on a decision or fails in any other way, no serious harm is done and he learns how to avoid such errors when the chips are down. And finally, he gets the mature counseling of an officer who has a personal interest in his ability and accomplishments.

The Leaders Reaction Course is not only a sensitive barometer of individual capabilities, but it also teaches as it measures. The realism and the wide application of the situations it presents provide vital preparation for the young officer, detect his deficiencies and indicate means of self-improvement. The Leaders Reaction Course is leadership training "come to life."

The Leaders Reaction Course is one of the several steps taken by the United States Army Infantry School to develop the leadership ability of the junior Infantry leader. In a future issue, Infantry *will discuss TRAINLEAD, a series of leadership films. Each film is designed to capture the interest of the student to the extent that he will identify himself with the central figure and participate actively in subsequent classroom discussion. Distribution of the films began last October.—Editor.*



WHAT IS AN INFANTRY WEAPON?

An Infantry weapon is any individual or crew-served weapon, irrespective of size, weight, range, caliber, mobility or lethality, which is habitually employed by Infantrymen in mounted or dismounted operations.

PRO & CON

A NEW *INFANTRY* FEATURE

This column provides a forum for open discussion on both sides of controversial subjects. If you and your associates hold opposite views on a topic of interest to Infantrymen let us have your thinking. We want both viewpoints.

THE value of the sniper in Infantry units has been a matter of controversy for some time. Recently, the Infantry School has taken the position that the sniper is no longer needed. It is apparent, however, that many Infantrymen—even those who concede that the sniper is no longer needed in the rifle squad or even at platoon or company level—feel that there is still a requirement for the highly skilled precision marksman. In the interest of developing further thought and discussion on this subject we present the opposing views of two officers in the School's Weapons Department. We would like to have your thinking on this and other areas of interest for future "Pro & Con" discussion in INFANTRY.*—Editor.*

Sniper - Sayonara

By Maj Leslie B. Enoch

BY DEFINITION, the true sniper is a highly skilled rifleman capable of delivering first-round hits on enemy leaders, communication personnel and weapons crewmen at ranges up to 600 meters. His purpose is to demoralize the enemy by selective killing. Employing stealth and surprise, the sniper attempts to sap the confidence of the enemy by exposing him to accurate, long-range rifle fire against which he has no immediate protection.

The sniper must be physically and emotionally conditioned to his job. A cross between the expert woodsman-hunter and the outstanding soldier-rifleman, he must be thoroughly trained in camouflage, concealment, observation, survival and individual patrolling. Specially equipped and schooled, the true sniper is a specialist who does one job and no other.

This is the theory. There is, however, some question whether or not this true sniper is worth his salt. And there is real doubt that the dual-capacity sniper—who uses issue sniper equipment but is employed as an ordinary rifleman in some situations and as a specialist in others—is capable of fulfilling the mission assigned to him.

True snipers have been employed by few nations. While the Japanese used the sniper in World War II, he was not effective. He was a poor marksman, badly trained and equipped, and "sniper fever" often resulted from chance hits by stray rounds. Many of our units, preferring to aim their efforts at more serious threats, took few anti-sniper measures. The Russians have also employed the sniper. More of a specialist, he has earned a better reputation. He receives highly technical training and, in contrast to the Japanese sniper, is by no means regarded as an expendable, "suicide" weapon. He is used carefully and in specific situations. When circumstances are favorable to his work, he evidently achieves the intended effect.

The point is, however, that the true sniper is most useful in static defensive situations involving extensive troop concentration — just the kind of warfare that nuclear mobility will largely obviate. Current organizational concepts, which visualize a general increase in individual firepower in small, fast-moving, carrier-mounted units, leave no room for the true sniper.

When the mobility of armies was measured in terms of foot movement, the sniper's stealth had a definite place on the battlefield. Now, however, his slow, patient stalking cannot keep pace with an enemy who moves with the swiftness nuclear warfare necessitates. The fact is that modern battle moves too fast for the traditional sniper.

Moreover, when the ordinary Infantryman was armed with a weapon of relatively limited power and accuracy, there was some reason for providing selected personnel with weapons of greater capabilities and with training which would permit these weapons to be applied with telling effect beyond the normal range of small-arms fire. But the trend in individual weaponry is toward maxi-

mum small-arms firepower and accuracy for *every* Infantryman. Thus, the function of the sniper has to some degree been absorbed by the Infantryman at large.

Of course, if we saw fit to produce the Russian type of sniper, it would not be beyond our capabilities to do so. However, in view of the decreasing usefulness of the sniper on the modern battlefield, it does not seem worthwhile to produce such a specialist.

We cannot gamble on a concept which yields doubtful combat results. We operate on a limited budget and our strength is fixed. We should not siphon off key personnel for sniper training if that training doesn't pay off. Production, handling, transportation, supply and repair of special sniper equipment is more costly and complicated than first impressions indicate. And training the true sniper is not a half-way proposition. If he is worth having at all, we must take the time to make him an expert, for the true sniper who is less than that—since he normally operates as an individual and without the support of a rifle squad—would probably be of less use than the ordinary rifleman.

In the past, the United States Army utilized a sniper in the rifle squad. This man was not a true sniper—he did not operate individually or as part of an all-sniper team. In effect, he was a hybrid. Normally, he worked in conjunction with the squad. In special situations, however, his sniper training and equipment were brought to bear to increase the range and selectivity of the squad. There are a number of reasons why even this "modified sniper" may have a questionable effectiveness.

To begin with, his training was insufficient—when, that is, he received any special training. Previous ATPs programmed 37 hours of sniper training in the Advanced Individual Training Phase. This special training disrupted team organization. More important, the Weapons Department of the Infantry School has indicated that the minimum training requirement should be 120 hours. It can only be concluded that the sniper went into battle grossly undertrained for his special job.

Regardless of how well or how badly snipers were trained, issue sniper weapons and equipment are clearly inadequate for the mission assigned the sniper. The telescope provided is so ineffective that many snipers preferred to use their own sights. Issue ammunition is erratic at long ranges. Neither issue ammunition nor the sniper rifle equipped with the M84 telescope possesses sufficient inherent accuracy to permit the sniper to obtain consistent first-round hits on combat targets out to 600 meters. In fact, tests by the Weapons Department have demonstrated that such equipment produces effective results only up to a little more than half that range.

It is true that, with a vastly expanded training program and by employing match-grade weapons and ammunition, we could give the squad sniper the accuracy demanded of him. But again, the question is whether the problems of adapting a precision-type rifle for battlefield use and of maintaining and supplying match-grade ammunition are compensated for by the over-all value of the squad sniper.

Experimental squad sniper and specialized sniper training programs were studied by the United States Army Infantry Human Research Unit. After extended consideration, both programs, designated respectively as Trainfire III and Trainfire IV, were discontinued. It was pointed out that the extraordinary accuracy shooters sometimes spend years in developing is not normally combined with the mental and physical attributes desirable in snipers.

The clinching argument is simply that the new rifle and automatic rifle programs, Trainfire I, Autofire, Trainfire II and Advanced Rifle Marksmanship, will accomplish the mission of training *every* rifleman to engage combat targets out to 500 meters. The extra measure of accuracy at far ranges which might be produced by special sniper training and match-type equipment is not so great as to justify the effort, time and expense involved.

This is not to say that situations in which the sniper is an effective element no longer exist. However, where such situations occur, the best rifleman in the squad can be assigned a sniper-type mission. This procedure is simple and to the point. It is reinforced by the fact that present issue non-sniper equipment produces results which approximate those of issue sniper equipment.

The accuracy and effectiveness of the individual rifleman is constantly increasing. The truth is that, equipped with the M14 and M15 rifles and trained under Trainfire concepts, every rifleman is essentially a sniper. The sniper's effectiveness has not been dispensed with. Instead, it has been broadened and extended.

Wanted: A Killer

By Maj Edward J. Collins

WE HAVE a definite requirement in the Infantry today for a specially trained marksman-sniper with the specific job of looking for, detecting and killing key enemy personnel. This requirement is not new. The sniper has been an important figure on the battlefield of the past. Throughout the history of warfare armies have employed sharpshooters or snipers to kill and demoralize enemy troops by picking off their leaders. General Braddock was the victim of a well-aimed shot at Fort Du-

quesne. Many generals and countless soldiers of lesser rank were felled by the sharpshooter's bullets on both sides in the Civil War. And in World War II, the Russian sniper exacted a significant toll of German commanders.

By killing enemy leaders, members of automatic weapons crews and other key personnel, the sniper has caused the enemy to lose purpose, direction, control—and even the battle.

Some military men today, however, believe that mass-destruction weapons and other developments will lessen or eliminate the need for snipers in modern warfare. Such reasoning is perhaps understandable because powerful new weapons may kill off the leader and his key personnel along with the rest of the troops.

But this line of reasoning is faulty. The astute military thinker recognizes that modern combat will offer opportunities of great significance for small numbers of highly skilled individuals who can *detect* and *kill* selected enemy personnel.

Even granting that selected individuals can be killed deliberately by other weapons in the Infantry arsenal, the sniper is still essential. We need someone with the specific mission of looking for and detecting key personnel. We must have an individual who is equipped and trained to perform this function. Reliance on mass-destruction weapons or the chance detection and killing of the leader by the average soldier who is part of the fire team is not good enough.

It will be no more difficult in the future than in the past for the trained sniper to find his target. The real leader, whether or not he actually holds or wears rank, will identify himself by his location on the battlefield, by his movements and gestures, by the weapon or equipment he carries, by the proximity of communication personnel and by other indicators.

Fast-moving, self-contained units, operating independently over large areas of real estate, will require strong leaders. Such units will be vulnerable to riflemen who can pick off the leader and key personnel—particularly to the sniper who can detect and kill such personnel at distances beyond the effective range of the regular rifleman. The loss of leadership to such units can be serious, even disastrous.

Furthermore, long-range targets can be expected to appear more frequently, and infiltration by enemy snipers and small units can be expected to be more common. Such conditions will offer increased possibilities for the use of the sniper.

— While the requirements for the sniper are just as valid today as they have ever been, we do need more detailed and more specific doctrine for his employment. That doctrine must provide for use of the sniper in both the offense and the defense.

– In the attack the sniper may be used effectively to pick off personnel in the gaps between our units or on the flanks of our attacking elements.

In the defense, he should be positioned so that he has observation not only forward of, but within the battle position. He can then engage the enemy at long range, close in and within the battle position itself. The sniper can also be used to cover gaps, either from positions within the gaps or from the flanks of adjacent units.

He can be given a mobile mission as well, moving about the battle area either on foot or in vehicles, as the situation demands, and seeking opportunities to harass the enemy and kill his leaders.

In retrograde movements his job would be to support the elements left in contact by further delaying the enemy. He would locate himself at critical points—road junctions, defiles or stream-crossing sites. As always he would kill key personnel, thereby creating confusion and delaying the enemy's operations.

Our doctrine must spell out applications such as these—there are others—so that we can get away from concepts which consider the sniper a part-time specialist to be used on special occasions at the whim of the commander.

In addition, we must provide a definite place for the sniper in our organization so that he can be a full-time operator. Missions for the sniper must be included in the operation order just as for other supporting weapons. Properly employed by a commander who understands his value, the sniper can be of great service now and in the future.

Some critics who advocate the elimination of the sniper claim that we cannot afford to devote the time, money and effort necessary to train and equip this specialist properly. These critics maintain that we should concentrate on producing better riflemen over-all. Of course we should make every effort to train better riflemen, but such efforts will continue to produce some men who stand out from others as exceptional marksmen—a source to be tapped for snipers. Exceptional marksmen will be discovered through Trainfire I, our new system of basic marksmanship training. Some of these men can be earmarked for further training.

As for additional training, the competitive marksmanship program will fill part of this need in peacetime. In wartime potential snipers can be developed along the lines prescribed by ATP 7–200 and sent through replacement channels identified by MOS. Assignment of the partially trained sniper to a seasoned sniper as a "buddy" would further his training. We manage to train other specialists in wartime. Certainly we can find time to train this killer.

The time and effort necessary to train and equip the sniper will be well spent. Give him one mission—to kill key enemy personnel—and he will more than pay his way in combat.

The Changing Face of
THE INFANTRY

THIS is a continuation of the pictorial feature which was started in the last issue of *Infantry*. The purpose of the feature is to provide a periodic look at the constantly changing facilities and activities at the Infantry Center. It is hoped in this manner to help Infantrymen who are scattered around the globe to keep in closer touch with their Infantry home at Fort Benning.

New ranch-type officers' quarters add a touch of suburbia to the residential area of the main post. Constructed to provide better housing for captains and majors, three-bedroom duplex quarters for 20 families were completed last year.

Briant Wells Field House, named for Maj Gen Briant H. Wells, a former commandant, is located in the center of the main post, opposite Doughboy Stadium and Gowdy Baseball Field. The field house is equipped with a swimming pool, two basketball courts, two handball courts and a judo room, and is the scene of many year-round sporting and civic events. A balcony overlooking the basketball floor contains weight-lifting and boxing equipment.

Opened in early 1957, a large, com-

- TOP — New ranch-style officer quarters.
- CENTER — Briant Wells Field House.
- BOTTOM — Main Post Exchange.

CENTER

pletely modern Main Post Exchange provides military shoppers in the Fort Benning area with air-conditioned shopping comfort. With the commissary and milk bar to its rear and flanked by two rows of modern shops—uniform, tailor, appliance, barber, beauty, laundry, shoe repair, watch repair and photo—and a snackbar, the PX forms the hub of a convenient shopping center.

Thousands of Infantrymen of many nations will long remember the ever-popular Biglerville Mess. Now renamed Crain Hall as a memorial to Medal of Honor winner T/Sgt Morris E. Crain, this attractive brick structure is being converted into a beautiful noncommissioned officers' mess and club. When completely refurbished, using $65,000 of nonappropriated funds, the new club will have a terraced dining room, a large ballroom and lounge, a barroom and other facilities.

Fort Benning now has two on-post drive-in snack bars. The one pictured here is located on the main post near the Airborne jump towers. An almost identical drive-in serves 2d Infantry Division personnel in the Sand Hill area.

- TOP — Crain Hall, new NCO club.
- CENTER — Drive-in snack bar.
- BOTTOM — Post Exchange shops.

AUTOFIRE

Using the principles employed with the rifle in Trainfire I, a new course of instruction, Autofire, has been developed by the Infantry School for training with the automatic rifle.

By Maj Leslie B. Enoch and Lt Virgil E. Moore, Jr.

ACKNOWLEDGED deficiencies in the effectiveness of our rifle fire during World War II and the Korean War prompted studies to determine why our combat soldiers lacked skill and confidence in the delivery of aimed fire. These studies in turn led to a research project, called Trainfire, to find methods for improving our rifle marksmanship training.

By this time most Infantrymen are familiar with Trainfire I which has been adopted by Department of the Army and is now being implemented Army-wide for all basic individual rifle marksmanship training. And *Infantry* readers have at least a speaking acquaintance with Trainfire II which is designed to train the rifleman to function effectively as a member of the Infantry squad. This phase of Trainfire is discussed in this issue beginning on page 21.

It is doubtful, however, if many Infantrymen have heard of "Autofire," the United States Army Infantry School's proposed course of instruction for the automatic rifle.

Autofire stems from Trainfire I. When the Infantry School recommended to USCONARC that Trainfire I be adopted, it pointed out that comparable training had not been considered for the automatic rifle. Consequently, in January 1957, Headquarters, USCONARC directed the Infantry School to study the requirement for such training and submit a proposed course of instruction, using as a guide the principles developed for the rifle in Trainfire I. The resulting course was called Autofire.

Autofire, like Trainfire I, is based on a number of fundamental premises concerning the battlefield:

1. Enemy personnel targets are rarely visible except in a close assault.

2. Most combat targets consist of a number of men or objects linear in nature, irregularly spaced, and using cover such as ground folds, hedges, foxholes, bunker emplacements and borders of woods or ditches.

3. These targets, detected by smoke, flash, dust, noise or movement, are usually seen only fleetingly.

4. These targets can be engaged by using a nearby object as a reference point.

5. Selecting an accurate aiming point in elevation is difficult because of the low outline and obscurity of combat targets.

6. The problem of proper elevation is complicated by using a six o'clock hold on the bull's-eye to achieve a center hit. This procedure introduces an error which is half the diameter of the bull's-eye. The error introduced is increased if the soldier is required to aim at the center of the mass of a field target rather than at its lowest visible edge. Since only part of the actual mass or bulk of the target is usually seen, the center of visible mass will normally be above the actual center.

7. Combat targets for the rifleman seldom exceed 300 meters; however, the automatic rifle may engage targets at greater ranges. The inherent stability of the bipod, the automatic fire capability and dispersion of the cone of fire permit area-type targets to be engaged effectively up to 500 meters.

8. Conditions of combat complicate the detecting and engaging of camouflaged targets beyond 500 meters. Therefore, the squad leader, or member of the squad, must assist the automatic rifleman to detect targets and adjust fire at greater ranges.

9. The nature of the target, the terrain on which it appears, and the tactical employment of the weapon usually favor the use of positions in which the bipod can be used, i.e., the prone and standing-foxhole positions. However, the hip-firing position is required in the assault, and the aerial target position is used for firing at parachutists and slow-flying aircraft.

10. A battlesight setting and hold-off normally are used to engage combat targets 500 meters or less in range. Observation and adjustment of fire are necessary after each burst.

The first six of these premises are the same as those upon which Trainfire I is based, except that foxholes and bunker emplacements—considered likely targets for the automatic rifle—are included in the second premise.

The objective of Autofire is to develop an automatic rifleman who can detect and effectively engage single, multiple and area combat targets at ranges up to 500 meters. To accomplish that objective in a minimum amount of time, a 48-hour training program has been developed. See Figure 1, next page.

The program requires eight hours less than the course prescribed in FM 23–25 which it is designed to replace. When the recently adopted M15 rifle replaces the Browning automatic rifle, additional training time will be saved. The four hours devoted to mechanical training, functioning and maintenance with the BAR can be eliminated, since instruction in these subjects for the M15 is identical to that given in earlier training for the M14 rifle.

During the two-hour orientation period the soldier learns the scope of Autofire. He is shown how it ties in with Trainfire I and II, and he is given the history, characteristics, capabilities and limitations of the automatic rifle. At this time he also learns how the weapon operates, to prepare him for the two-hour "early firing" period which is designed to motivate his interest in further instruction.

The early firing period is followed by a four-hour period on maintenance. This instruction is presented early in the course so the soldier will realize the importance of proper care of this weapon and will better understand how it functions.

Autofire preparatory marksmanship training can be conducted on the Trainfire 25-meter range. The 14 hours which remain (after the two hours devoted to early firing) are scheduled in three four-hour periods and a two-hour period during

TRAINING PROGRAM

Subject	Hours
Orientation	2
Early Firing Period*	(2)
Maintenance	4
Preparatory Markmanship and 25-Meter Firing	16
Battlesight Zero at 75 Meters	4
Field Firing	14
Record Firing	8
Total	48

*Included in the 16 hours allotted to Preparatory Markmanship and 25-Meter Firing.

Figure 1. Autofire Training Program.

which the soldier fires a 25-meter course to test his ability. These periods may be scheduled either consecutively or at intervals.

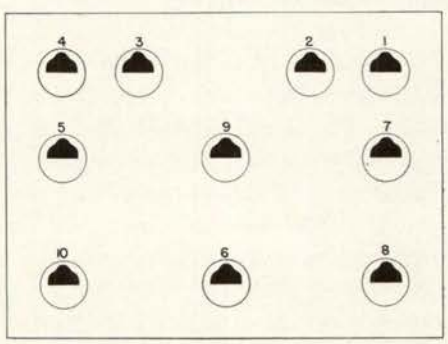
In the first four-hour period, emphasis is on positions, aiming and trigger control, which together constitute the "integrated act of shooting." The instruction consists largely of conferences, demonstrations and practical work. However, some zeroing and grouping exercises are fired. In the second four-hour period, the fundamentals of preparatory marksmanship are continued and instruction in battlesight setting, magazine changing, body shift to engage targets in width and depth, and the hip-firing position are added. The third four-hour period requires a continuation of these exercises and, in addition, an explanation of trajectory and hold-off and instruction in the standing-foxhole and aerial target positions. The two-hour firing period concludes the preparatory marksmanship training. Firing is scored and the results are used to determine the individual's readiness for the field firing range.

The half-silhouette targets which are used for all 25-meter firing help the soldier in his transition (Figure 2). Targets 1 through 4 are used for zeroing, grouping, trigger control and automatic fire exercises. Firing is from the prone and standing-foxhole positions. During one of the exercises the firer is required to move rapidly from the hip-firing position to the prone position. Silhouettes 5 through 10 are used for an automatic fire exercise which includes trigger manipulation, magazine changing, and body shift to engage targets in width and depth.

After the trainee has completed the 25-meter firing he learns to battlesight zero the automatic rifle. This instruction is conducted on a field-firing range. To obtain the proper sight setting, a three-round shot group is fired at a target at a range of 75 meters. The target consists of a special black and white paster which is affixed to an "E"-type silhouette (Figure 3). Note that there is a battlesight setting "A" for ranges up to 300 meters and a battlesight setting "B" for ranges from 300 to 500 meters. To obtain battlesight "A", the firer aims at the bottom center of the black rectangle and adjusts the rear sight until the shot group hits the top center of the rectangle. This gives the zero for 250 meters, which is used from 0 to 300 meters. To obtain battlesight setting "B," the firer again aims at the bottom center of the black rectangle, but adjusts the rear sight until the shot group hits the intersection of the black cross at the top center of the paster. This zero is for 450 meters and is used from 300 to 500 meters. The battlesight zeros thus obtained are used for all firing during the remainder of the course.

All field firing is conducted on a new range which can serve a dual purpose. The range is so constructed that expansion to 750 meters will permit training with both the automatic rifle and the machinegun. The range has 12 lanes, each of which is 10 meters wide at the firing line and fans out to a width of 50 meters at the far range of 500 meters. There are 18 automatic pop-up targets and one scoring panel in each lane. The scoring panel is located at the far range of 500 meters and serves as an area target.

Figure 2. The 25-meter target.



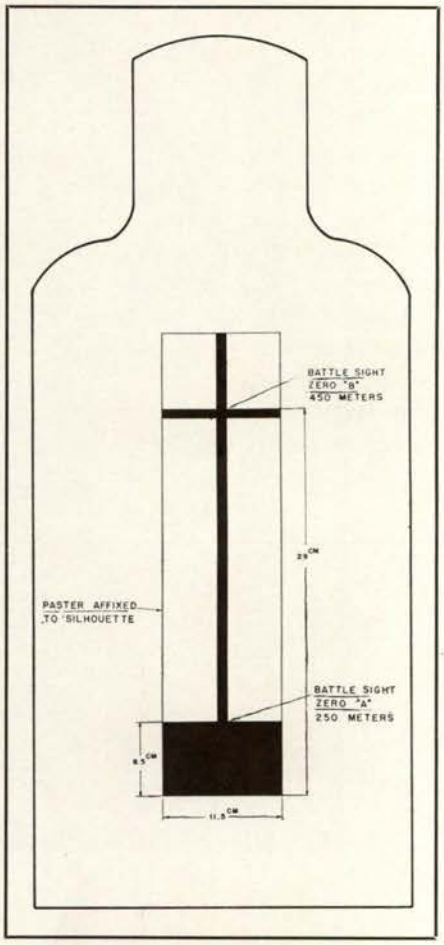


Figure 3. Battlesight zero target.

The company is broken down into two groups of two platoons each and while one group fires, the other group receives concurrent training in a rear area. The 12 lanes are ideal for the ROCID organization. Since the weapons platoon and the weapons squads do not receive this training, there is a lane for each fire team of the rifle squads. Two foxholes in each lane also facilitate the firing. While one man fires from foxhole A, another dry-fires from foxhole B. Then B

fires while A dry-fires. This arrangement permits the team leader to observe the firing and to give maximum assistance to the men of his fire team.

The field firing is conducted in four four-hour blocks, which may be scheduled with a time lapse in between. Since only 14 hours are allotted to field firing, two hours of another ATP subject are scheduled during the last four-hour block as concurrent training and charged to that subject. In each block of instruction, the soldier fires a different phase of field firing (Figure 4). All four phases require the firer to engage targets at varying ranges, in timed exercises. The exercises may be fired on any of the 12 lanes by using different combinations of targets.

In Phase I the battlesight zeros are confirmed and targets are engaged from the prone position. During this period, a review of range estimation and target detection, with emphasis on the far ranges between 300 and 500 meters, is given as concurrent training.

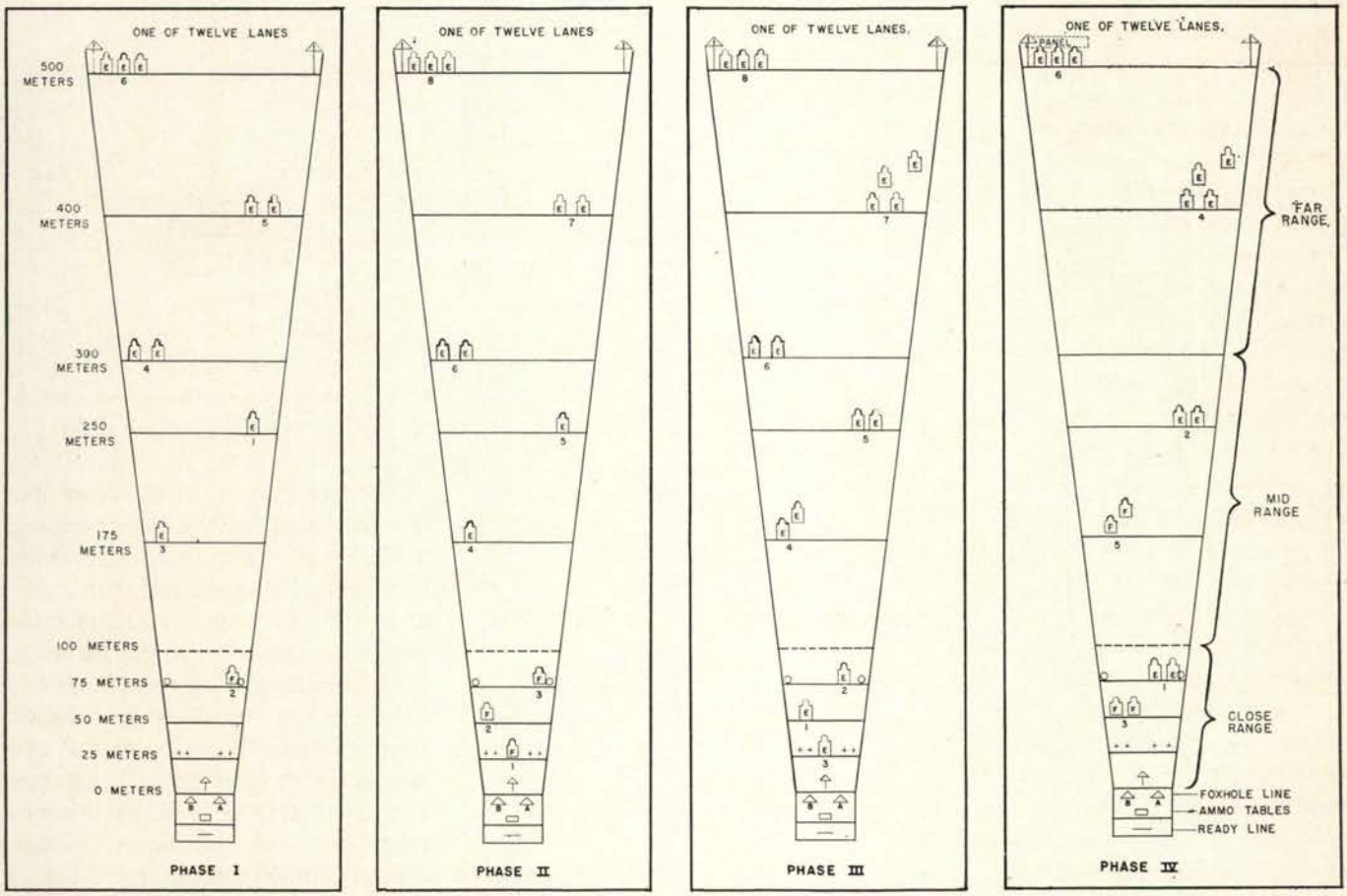
During Phase II, the soldier engages surprise targets from the prone and standing-foxhole positions. Concurrently with this firing, he reviews the fundamentals of preparatory marksmanship training, and receives additional instruction in aiming, positions, trigger control, battlesight setting, magazine changing and hold-off.

Phase III employs a series of close-in surprise targets which are engaged in rapid succession from the hip-firing position. Multiple targets are also used in this phase. They are engaged, in width and depth, from the prone position. The concurrent training consists of additional instruction in range estimation and target detection, with each soldier receiving a maximum of practical work.

In Phase IV, the soldier engages close-in targets from the hip-firing position and then moves rapidly into the prone position to engage targets at far ranges. A scoring panel is hidden at 500 meters. Its location is indicated by smoke or noise. The area target is detected and engaged with a series of long bursts from the prone position. As indicated above, the two hours of concurrent training given during Phase IV are not charged to the Autofire program.

There are two record courses in Autofire, Record Course #1, Phase V, and Record Course #2, Phase VI. Record Course #1 can be superimposed on a Trainfire I record course by extending the range to 500 meters, adding targets in width and depth, and adding area targets with scoring panels (Figure 5, next page). Two Trainfire lanes are utilized for each Autofire lane. There are eight Autofire lanes, 60 meters in width, with 17 automatic pop-up targets in each lane. If the terrain does not permit a range out to 500 meters, a modified course (Course B) can be fired

Figure 4. The four phases of practice firing.



which extends only to 350 meters (standard Trainfire I range). In this case all firing is from the prone and standing-foxhole positions.

Record Course #2 is an assault course run concurrently with Record Course #1 (Figure 6). It puts the soldier through the actions of a rifleman in the attack, although no tactics are taught. There are four lanes, 30 meters wide and 400 meters in range. Under the supervision of an assistant instructor the automatic rifleman leaves the starting point, advances 65 meters and engages close-in surprise targets from the hip-firing position. When all riflemen have reached the phase line of control, the assistant instructor straightens the line, if necessary. The soldier then assaults targets on the objective. When he reaches the crest of the hill, he sights targets at a range of 300 meters which represent fleeing enemy. The firer moves quickly into a position of his choice and engages those targets.

A simple scoring system has been worked out for both the field firing and record courses. Emphasis is on placing a burst on each target. However, full credit is given for one hit. No credit is given for unexpended rounds.

It has been recommended that all riflemen in the ROCID rifle company receive Autofire training, i.e., the rifle company less the headquarters, the weapons platoon and the weapons squads of the rifle platoons. The unit commander will have an opportunity to observe the training and select the best men for assignment as automatic riflemen. However, all riflemen in the company will be capable of assuming this important role.

The proposed Autofire course was submitted to USCONARC for consideration in May 1957, and the United States Army Infantry School subsequently was directed to submit detailed requirements for conducting a pilot test. The requirements were forwarded in September 1957 with a recommendation that the pilot course on Autofire be conducted at Fort Benning. Early last year USCONARC approved these recommendations and the pilot test will be conducted as soon as the ranges are available. Due to funding arrangements this probably will be sometime after July of this year.

Figure 5. Record Course Number 1.

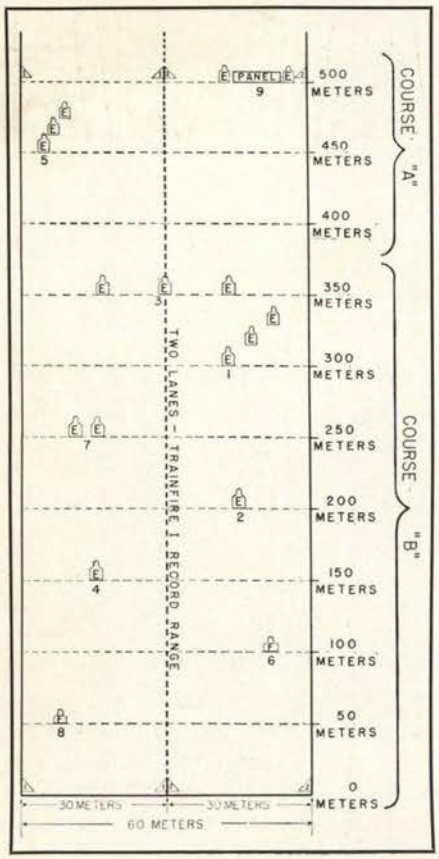
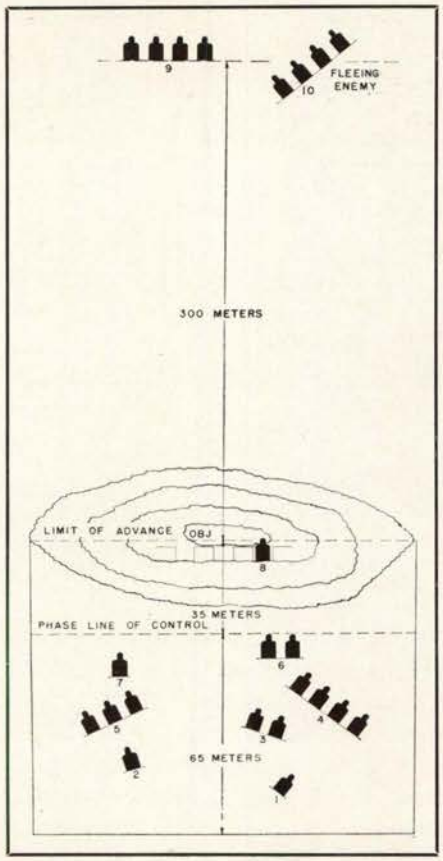
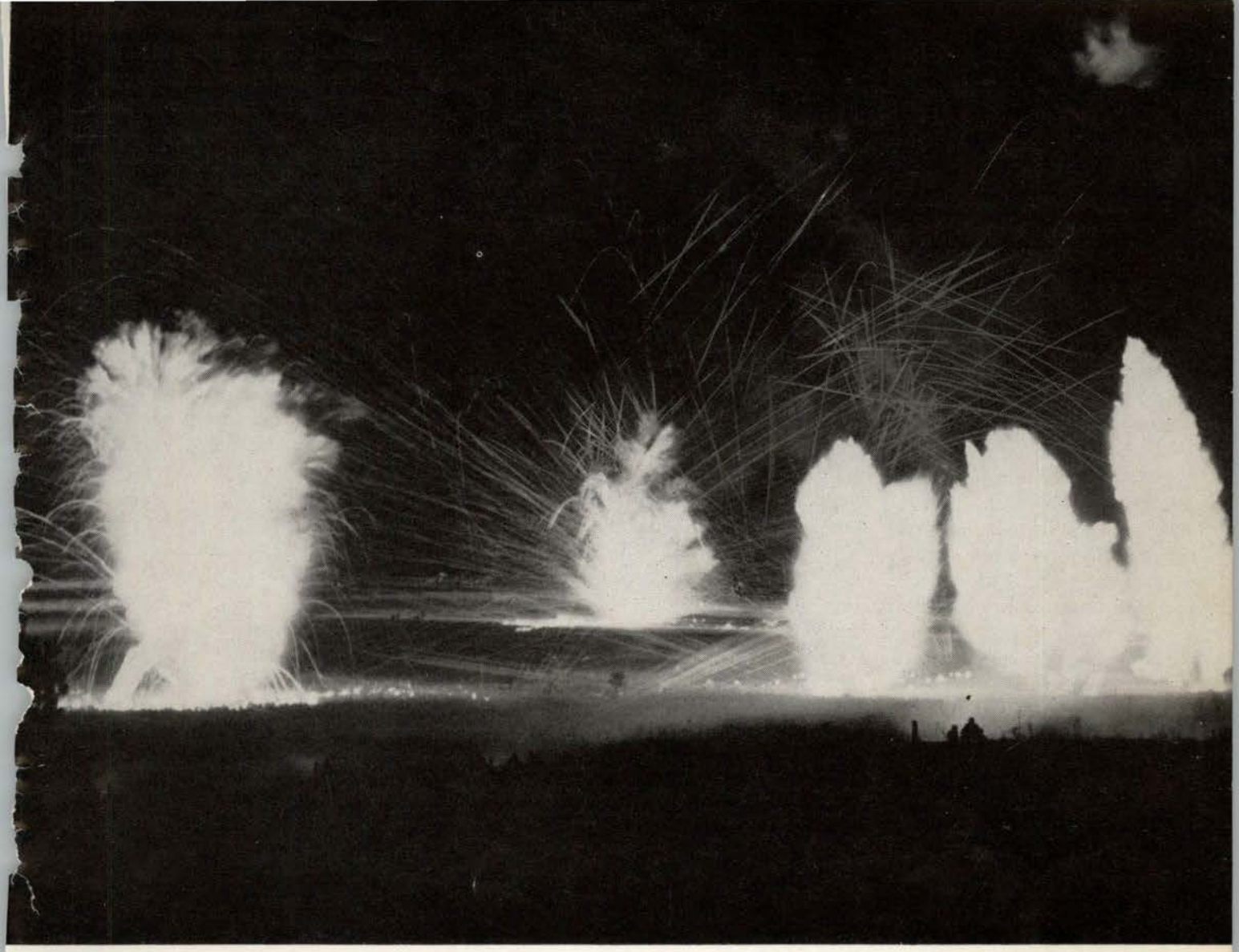


Figure 6. Record Course Number 2.



MAJ LESLIE B. ENOCH is executive officer of the Rifle Committee in the Weapons Department of the Infantry School. He enlisted in the Tennessee National Guard in 1935. Five years later he was called to active duty and served with the 30th Infantry Division. In 1942 he received an OCS commission at Fort Benning and then went to the Pacific Theater of Operations, where he was assigned to the 305th Infantry Regiment, 77th Infantry Division. Following the war he left the service and was a member of the Army Reserve until 1951, when he was recalled to active duty. After completing the Company Officer Refresher Course at Benning he went to the Far East. Following a tour of duty with the 179th Regiment, 45th Infantry Division in Korea, he became an administrative officer at Camp Drake, Japan. Major Enoch was graduated from the Advanced Course in 1954 and was then assigned to the School.

LT VIRGIL E. MOORE enlisted in the Army in 1951 and received his commission through OCS at Fort Benning the following year. He then went to Fort Jackson, where he was a company executive officer and later a company commander with the 61st Infantry Regiment, 8th Infantry Division. He left the service in 1954 but returned to active duty three years later and and was assigned as an instructor with the Rifle Committee of the Infantry School's Weapons Department. Lieutenant Moore is currently administrative officer of the Rifle Committee.



We Must Fight at Night

We must increase our ability to fight effectively at night both with and without electronic, infrared and other technical night fighting aids.

By Lt Col John P. Reames

THE odds are heavy that the combat forces of the United States and the other nations of the free world will be greatly outnumbered in any future conflict. The sheer weight of enemy manpower in a huge land army, together with possible enemy use of nuclear weapons and other advanced weapons and equipment, conceivably could result in severe setbacks for the West, unless we make skillful use of tactics and every human and physical resource at our disposal.

One important, but often-overlooked factor that could help offset our initial disadvantage in any future war is the ability to fight at night. The surprise and psychological advantage achieved by night attacks and skillful night defense could do much

LT COL JOHN P. REAMES received an OCS commission at Fort Benning in 1941. He served with the 98th and 63d Infantry Divisions in the United States before going to Burma in 1944 as a liaison officer to the Chinese Army. He later saw service in China. In 1946 he was named assistant director of training at Camp Stoneman and two years later went to Jefferson City, Missouri as a senior Reserve instructor. He went to Korea in 1950 where he was senior advisor first to the 12th Regiment, 1st ROK Division and later to the 11th ROK Division. He then assumed command of the 515th Field Artillery Battalion at Camp Breckenridge. Colonel Reames' next assignment was in Europe with the Military Assistance Division, Headquarters, U.S. European Command. After returning to the United States in 1956, he was assigned as a project officer with the Combat Developments Office of the Infantry School. He is now chief of the Materiel Section in that office.

to compensate for our initial inferiority in numbers.

Night fighting certainly is not easy, but no form of Infantry combat can be called easy. The difficulties and complex problems of night fighting can be overcome only through planning, training and practice. All of our Infantry units must have the ability to move, patrol, defend and assault during absolute darkness. They must be capable of conducting any type of operation with or without night vision aids, and every man must be a proficient night fighter.

There are three major problem areas in night operations, regardless of the type, size or scale. Fighting at night presents difficulties in the control of units, the direction of firepower and the detection of targets for weapons from the rifle on up. The solution to all three of these problems depends upon the ability of the individual soldier to fight during the hours of darkness.

Before entering the Army, a large number of our soldiers spend most of their lives in towns and cities. They rarely venture beyond the range of street lamps. When such men are first taken into the dark, they are relatively helpless. They are startled by every shadow, stumble even on level ground, make a considerable amount of noise, and are generally so confused or nervous that they certainly are not effective. Yet, by a short course of instruction in darkness adaptation, these same men can be trained to work together confidently, even on the darkest night. Once they have gained confidence, it is comparatively easy to train them further.

If we in the Infantry do not attain and maintain an ability to fight effectively at night, the enemy will be quick to exploit our weakness. During World War II, Japanese intelligence disseminated the information that American forces habitally broke contact at 1600 hours to dig in. Night attacks by Japanese units increased after this announcement. The Chinese Communist forces in Korea inflicted terrible casualties using night "swarm tactics," starting with an attack on the 8th Cavalry Regiment. This unit lost a thousand men in *one night* at Unsan, on 1 November 1950.

The Soviets, too, are well aware of the advantages and importance of night operations, as illustrated in this comment from their *Handbook for Sergeants and Privates*: "The night is a faithful and reliable helper of the soldier. It has never disappointed those who knew how to profit by its advantages and who were familiar with the peculiarities of night. Generally speaking, the darker the night, the worse the weather, the better it is for the brave and proficient soldier."

Unlike most American troops, the average Soviet soldier is born and raised far from big cities. From early childhood he is accustomed to covering long distances across difficult terrain, orienting himself by conspicuous features on the ground, by the stars, and often by simply following his natural instincts. Even though their soldiers have this natural ability, it is estimated that 50 percent of the present Soviet tactical training is devoted to night training.

Despite our apparent dislike of night operations, many American units have used them to great advantage in the past. Infantry night attacks were successful in both world wars and in Korea, and occasionally were even supported by tanks. The 104th Infantry Division conducted more than one hundred successful night attacks during World War II, many of which were regimental and combat-team size. The 30th Infantry Division conducted successful regimental and divisional night attacks.

In Italy, during the month of February 1945, one battalion of the 10th Mountain Division conducted a night assault up cliffs in fog and snow, achieving complete surprise and success. One squad leader panicked and his men were ambushed; otherwise the battalion suffered no casualties. On the next night a full-scale division night attack succeeded in securing Mount Belvedere, whereas numerous daylight attacks against the same objective by other divisions had failed.

Although techniques have been revised and equipment has been improved, the principles of night operations have remained essentially the same for centuries. The night operation must be based upon a simple plan, and detailed instructions must be prepared to carry it out. The operation must be preceded by a careful and complete reconnaissance, it must be thoroughly coordinated and it must be executed with precision. Adequate secrecy and security measures must be included in the operational plan to insure surprise. Upon reaching the objective, units must reorganize quickly in dispersed positions to withstand a counterattack.

Normally night attacks are executed by reserve units, since reserve

troops are rested and their leaders have adequate time to perform full reconnaissance. As is true with any well-planned attack, a night attack should be preceded by a coordinated rehearsal—over similar terrain if possible.

Upon analysis it will be seen that most of the principles for night operations are merely modifications of daylight techniques for use at night.

When the situation demands it, we must be able to fight during darkness without relying on the use of special equipment. However, it is recognized that technical aids will help offset some of the inherent difficulties.

With this in mind, the Combat Developments Office of the Infantry School, working in close cooperation with the instructional departments, is experimenting with certain types of invisible light aids and radar to enhance detection, observation, weapons sighting, navigation and control at night. These include aids that are man-carried or mounted in ground vehicles or aircraft. The tactical employment of these aids will allow friendly attacking units to take maximum advantage of the cover of darkness until such time as secrecy is no longer desirable or required. At this time, visible lights may be employed and the operation will proceed essentially the same as in daylight.

Refinement of the new equipment has now progressed to the point where we can predict when it will be in the hands of the troops. These developments are being made with the knowledge that the Soviet Army is also making progress in night fighting aids. Their equipment can detect our sources of active infrared light—such as flashlights, searchlights and vehicle headlights with infrared filters—just as readily as we can detect theirs.

Several new items can now be added to the list of equipment on hand to increase the effectiveness of our units in night fighting. The equipment is designed to help the Infantryman find the enemy in darkness and engage him with aimed fire. It is of two general types: vision aids, and electronic aids for surveillance and target detection. All of the items are now in being, although some of them are being refined for lighter weight, greater range and more reliability. The allocation recommended by the Infantry School will be discussed here in general terms. First, let's examine some of the aids to night vision.

Figure 1. T-1 infrared sight mounted on the carbine.

In the field of visible illumination, a typical example of the new equipment is the active infrared principle as applied to the T–1 infrared weapons sight (Figure 1). Adaptable for use with all Infantry direct fire weapons, this sight is capable of picking up a one-man target in a narrow angle of observation on a moonless night. Its range is several times greater than that of previous infrared sights. The new sight also is used to detect enemy use of infrared equipment, but it is equally susceptible to detection by similar equipment. Complete with power source, the standard T–1 sight weighs far less than the World War II version, and developments indicate that its weight may be reduced even further. Because of the relatively high cost of the T–1 sight, the Infantry School recommends that issue be made on the basis of one for each platoon and company headquarters.

For those weapons which are not allocated a T–1 sight, the new Multilite sight[1] appears to offer great promise. Multilite is a sturdy, lightweight, inexpensive sight which allows the Infantryman to aim his weapon under any condition of visibility. Activated by available light, the new sight consists of two posts which fit over the regular front and rear sights of the weapon. The Multilite sight has luminous dots and reflective surfaces which, when aligned, give greatly increased accuracy at battle ranges up to 300 yards. When finally produced in quantity, this sight may be either a snap-on or a flip-over type. It

[1]See "Multilite" in the October-December 1958 *Infantry*.

may be permanently mounted in a manner that will not interfere with the regular sights. Prototypes of the Multilite sight have been applied to and tested with all Infantry direct fire weapons. Even the 106mm rifle gains accuracy when fitted with this amazingly simple device.

Another new item of equipment for night operations is the image metascope (Figure 2). A small, portable viewing device using the infrared principle, the image metascope

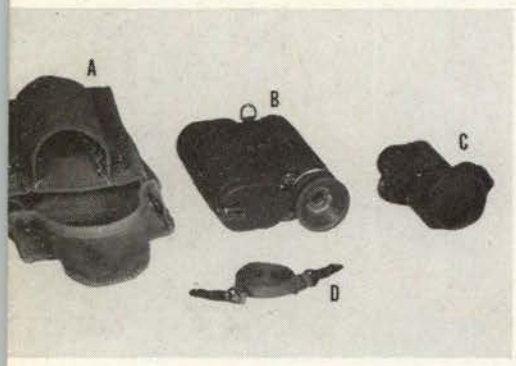


Figure 2. Components of the image metascope kit: A — carrying case. B — metascope. C — infrared flashlight. D — carrying strap.

will be invaluable for invisible detection of enemy infrared equipment, because it is not detectable by the enemy. It is carried either on a neck strap or in a belt-mounted case, and it develops power from a built-in hand-crank generator. The addition of a near—or active—infrared flashlight will broaden the usefulness of the metascope. It is anticipated that the metascope will be issued on the basis of one per platoon.

A new set of infrared binoculars has been developed to allow walking, driving and even maintenance tasks to be performed with relative ease in areas covered by infrared searchlights, flashlights and headlights (Figure 3). Battery-powered and head-mounted to leave the hands free, the T–6A binoculars provide a range of vision suitable to the tasks of the user. They will be issued to leaders and gunners who must maintain control of troops and firepower. Drivers, litter-bearers and wiremen also may use these binoculars when working in the dark. A convertible, visible-infrared flashlight will be provided to each wearer of infrared binoculars.

Newly developed infrared filters for the headlights of all tactical vehicles will allow vehicle loading, driving at normal speeds, and even maintenance to be performed with comparative ease. These filters will be available for mounting on the 30-inch searchlights which will be used

Figure 3. T6A binoculars.

with Infantry personnel carriers and tanks for general-purpose battlefield illumination. They allow the use of invisible light on the battlefield to aid individuals equipped with infrared viewing devices or infrared binoculars. When the need for surprise is past or when the enemy is using infrared devices, the simple filters allow quick conversion of our searchlights to visible light, thus eliminating the effectiveness of enemy infrared equipment. The light thus provided will vary from the level of bright moonlight to the brilliance of an overcast day, allowing the further conduct of operations as in daylight.

A navigational automatic position finder is being developed and will be invaluable for vehicle navigation in darkness as well as daylight.[2] By looking at the face of the instrument, the vehicle commander will be able to locate his position in eight-digit map coordinates at any given time. The instrument also will give the headquarters a "fix" on the vehicles at all times. By aligning two direction-indicating needles on the face of

Figure 4. Navigational automatic position finder.

[2]See "Vehicle Navigation," July-September 1958 *Infantry*.

the dial, the driver can keep the vehicle on course at all times (Figure 4). It is visualized that this instrument will be issued on the basis of one per squad and platoon headquarters of Infantry personnel carrier units.

To provide early warning of the enemy use of infrared equipment, a new infrared warning device has been developed. This small, eight-ounce instrument is equipped with an ear plug and will be carried on the soldier's person. An audible warning is produced when the device is subjected to infrared radiation. It is anticipated that an instrument of this type will be issued on the basis of two per platoon.

A new "package" of observation equipment, known as the Unit Commander's Observation System (UCOS), will give the battle group commander night eyes for his observation post (Figure 5). Consisting of a 24-inch searchlight, a near infrared telescope and a generator, the UCOS will be effective to distances as great as the range of the battle group's organic fires. It can be used with either a vehicular or a ground mount.

In addition to these improved vision aids, new items of electronic equipment have been developed recently to perform surveillance and target detection in both daylight and darkness.

An infrared intrusion detector will detect the presence of hostile forces in friendly areas (Figure 6). Resembling a television camera, the intrusion detector is capable of detecting variations in temperature. The body warmth of humans or the engine heat of vehicles sets off an audible signal in the intrusion detector, thus warning the operator of enemy movement. Operated in pairs like machineguns, the intrusion detectors are mounted so that their beams cross and form an infrared "final protective line" in front of friendly positions. Two of these devices are expected to be issued to each rifle platoon of the Infantry division battle group.

A new rifle company surveillance and intrusion device has been designed. Consisting of a radar with a range commensurate with battle group organic fires, the present model weighs 70 pounds and makes a two-man load (Figure 7, next page).

Two new surveillance devices have been recommended for the battle group. These truck-mounted units will be able to search the entire battle group area of responsibility in less than four minutes.

Figure 6. Infrared intrusion detector.

Figure 5. Unit Commander's Observation System.

A moment's thought about all that has been said so far will reveal that, while all of these items of equipment are new, the principles upon which they are based are well known. But the new *combination* of items and principles previously used separately will increase the unit's capability and help to insure its success in night operations.

For many years we have had night vision and night firing aids in the Infantry, but few commanders knew what the equipment could do, and little use was made of it in the field. Most units treat equipment like the sniperscope and the metascope with kid gloves, afraid that such items will be broken during training. The result of this attitude is that the equipment is often left to gather dust on supply room shelves. Infantry School doctrine advocates taking full advantage of all available aids to night fighting, for even the most advanced

equipment in the world is valueless if it is not used.

The introduction of these new aids to night combat is resulting in certain changes in the concept of night operations. As an example, the use of Infantry personnel carriers equipped with automatic navigation-position finders and convertible searchlights will increase the Infantry's speed and effectiveness in operations which do not require movement by stealth.

Although the familiar terms "illuminated" and "nonilluminated" night attack are still being used, the introduction of new night fighting aids renders these terms somewhat deceptive. For instance during the *nonilluminated night attack,* visible light is not used, but certain invisible light aids, such as radar and infrared, are employed. The term *illuminated night attack* means that the operation is supported by visible light and can be conducted almost the same as in daylight. Visible light provides more freedom of movement and allows support by Infantry personnel carriers and tanks to speed the rate of advance.

In either of these general types of attack we must prepare both a *light plan* and a *fire plan* to cover all phases of the attack. An attack initially planned for stealth might suddenly require effective visible light and fire support. Both must be planned for, just as we plan for alternate means of support in any other type of operation.

During the movement to contact, all aids for control and communication should be exploited fully. All available invisible light equipment should be employed when advantage may be gained from its use. When the element of surprise is lost or no longer desired during a nonilluminated attack, the commander may decide to switch searchlights from infrared to visible light, conducting the remainder of the attack as in daylight.

Even when we have no night vision equipment, there are many other aids available to help in the conduct of a night attack. Although the effective use of arm-and-hand signals is eliminated by darkness, radio, telephone and dim flashlight signals may be used for control purposes. The "Individual Soldier's Radio" in the hands of squad and fire team leaders will also improve control (Figure 8). Both identification and control are simplified when luminous arm bands or helmet markers are used. Patrols may be used to place luminous markers, white engineer tape and other similar material for marking assembly areas and lines of deployment.

Figure 7. "Silent Sentry" target acquisition radar.

The use of tracer ammunition and illuminating projectiles will assist greatly in marking the objective area. Dogs and messengers may be used widely to supplement other means of communication.

We must avoid establishing a predictable pattern in our night attacks. The combination of time, formation and means employed must be altered with each operation. Crew-served weapons, particularly machineguns, should be moved after firing because the enemy will take steps in his counterattack for their early neutralization, based on the last position known to him.

Extra ammunition must be carried during night attacks because of the difficulty and time required for resupply after the move starts. Ammunition vehicles normally will follow the attacking troops, but if they do not, extra men must be detailed to the heavy weapons sections and to the medical aid section to save load-carrying time.

Once the enemy has discovered our attack, we should make full use of flamethrowers, recoilless rifles, demolitions, rocket launchers and grenades to increase the psychological advantage of our attacking troops. Infantry personnel carriers, tanks and helicopters may also be used to bring in additional troops and increase enemy shock and confusion after our attack has been discovered.

Possibly more important than any other portion of the operational plan is the necessity for reorganization to regain control after the objective has been taken. If the plan requires that the objective be occupied, the area must be organized with dispersed and dug-in positions to minimize the effects of enemy artillery and nuclear fires and to insure that his counterattack can be defeated. When the operational plan does not require occupation of the objective, plans must be made for reorganization of the attacking troops in the objective area before they continue the advance.

Whether in offense or defense, night dispositions of security elements

must be made so as to provide early warning of hostile movements. Failure to do so may result in *our* surprise, rather than the enemy's. Outposts and listening posts should be placed to cover trails and other avenues of approach to the position area, and counterreconnaissance measures must be taken to deny the enemy knowledge of our intentions.

The Infantry School envisions that illumination normally will be used in night defense. The presence of the enemy is detected by our outposts with their infrared intrusion detectors and warning devices. The outposts then relay this information through command channels to headquarters, where instructions are given to the target acquisition radar for pinpoint checks in the suspected area of enemy approach. When radar or infrared surveillance indicate that the enemy is advancing in force, the searchlights available to the unit are turned on. These lights, according to the commander's decision, may be invisible infrared lights to maximize the advantage of our night sighting aids, or they may be visible lights to neutralize infrared equipment in the hands of a well-equipped enemy. Illumination from the lights mounted on Infantry personnel carriers, together with the searchlight units in support, allows the conduct of the defense to be essentially the same as in daylight.

Training in the tactics, techniques and procedures of night operations must be complete and continuous. It must not be scheduled by infrequent blocks of time which include sleep, travel and administrative tasks. Schedules should require four or five days and nights of continuous operation, as opposed to blocks of only two or three hours at a time. A minimum of one full week out of each sixty days should be spent in the field, during which time emphasis should be placed on night operations. Essential administrative and maintenance duties during these periods should be performed during daylight. Troops would then become accustomed to training at night and sleeping in the daytime.

Full use should be made of Ranger-trained officers and NCOs during our night training activities. Ranger-type training is especially valuable in night combat, and Ranger personnel may be used profitably to supervise, umpire and train other personnel of the unit in night fighting techniques.

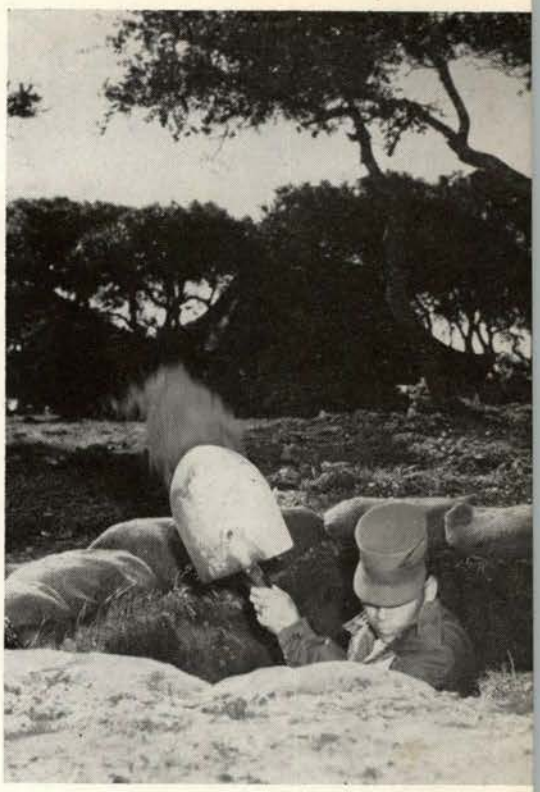
Remember that night fighting is no longer a special operation. The principles are basically the same as in daylight, with appropriate modifications for night combat. Make full use of all available aids for night operations—don't store them in the supply room until the annual IG inspection, or use them only for CP security.

Figure 8. One version of the helmet radio.

In nine cases out of ten, the very conditions under which we fight at night require the Infantryman to play the decisive role—for no one else can do the job. The Infantryman always has been and will continue to be the decisive striking force, both day and night. But he must be ready!

Infantry magazine has come a long way since its genesis as the Infantry School mailing list. There is a real need for it. The Infantry must speak for itself. When it fails to do so, it not only serves its own arm badly indeed, but it does a disservice to the country. For far too long the glamor of other arms and hardware, such as missiles, have overshadowed the hard core of our military establishment, that is, our Infantry. Of course, they will always do so if the Infantry is quiescent. Being fully confident of the significant role that it can and must play in national defense, it should let itself be heard on every and all occasions and through all possible media.

Lt Gen James E. Gavin (Ret)



The basic training of the Infantry soldier should include factual information and practical work in the protective measures which can be taken against nuclear weapons.

NUCLEAR TRAINING FOR BASICS

By Brig Gen Morris O. Edwards

THE objectives of basic training have not changed very much since World War I. General Pershing's criterion—men who can march, shoot and salute—is still reasonably valid. We must have soldiers who are well disciplined, who know how to take care of themselves and live together in garrison and in the field, and who know how to fire and care for their basic weapons.

Well aware of the complexities introduced into the training of soldiers since World War II, I was somewhat surprised to find, when I was assigned to Fort Ord approximately two years ago, that basic training had not really changed a great deal.

However, three giant steps have been taken in the past two years to modernize our basic training. The first of these is the adoption of a new system of individual rifle marksmanship called Trainfire I.[1] The second is really a refinement or dramatization of traditional fire and movement in small-unit tactics by the formalization of battle drill.[2] The third, which I will describe in greater detail, is concerned with individual and small-unit actions in the face of nuclear weapons.

The major objective of instruction in individual protective measures against nuclear weapons is to provide against the day when they may be used either by our own forces or the enemy's. Training must be such as to avert panic among our troops. Plainly, this objective is rather difficult to accomplish without the actual use of nuclear weapons. Instructions to basic trainees must be quite simple. It is not necessary to give a mass of technical details, nor is it necessary to get into highly classified information. All individuals coming into the Army today have an active curiosity concerning the effects of blast, heat and especially nuclear radiation. Motivation to learn is there. All we need is to devise ways and means of teaching—without increasing training time—which will

[1] See FM 23-71, "Rifle Markmanship Course Trainfire I," September 1957; and "Army Rifle Markmanship Today," by Gen Willard G. Wyman, in the July-September 1958 issue of *Infantry*. Trainfire II, squad training, is now undergoing troop test.

[2] See TC 7-2, "Combat Formations and Battle Drill," January 1957; and "Battle Drill" in the January 1957 issue of *Infantry School Quarterly*.

BRIG GEN MORRIS O. EDWARDS, Chief of Staff of the Alaskan Command, was deputy commanding general of the U.S Army Training Center, Fort Ord, when he prepared the material for this article. Prior to that assignment he was assistant division commander of the 5th Infantry Division at Fort Ord until its inactivation in 1957. He received his commission from the United States Military Academy in 1933 and was graduated from the Command and General Staff College in 1943. Early in World War II he commanded the 65th Infantry Regiment in Puerto Rico and later became G3 of the 63d Infantry Division. In 1944 he went to the European Theater of Operations as an observer, after which he rejoined the 63d and accompanied it to Europe. Later he commanded the 253d Infantry Regiment. Following the war he served in various military government and civil affairs positions in Germany until 1948, when he became Chief of the Information Branch, Armed Forces Information and Education Division in the Office of the Secretary of Defense. After graduation from the National War College in 1953, he went to Korea and served with the Korean Civil Assistance Command and, a year later, he joined Headquarters, Army Forces Far East, in Japan. He then served on the faculty of the Army War College before going to the 5th Division.

give each young soldier sufficient factual information to overcome his fears and some practical work in actively protecting himself against the possible physical and psychological effects of a nuclear explosion.

When we started to revise our basic training program at Fort Ord, we were confronted with two major obstacles to training: first, the lack of good, unclassified, down-to-earth training material slanted at the individual soldier; and second, the lack of trained instructors—our junior officers and noncommissioned officers were almost as poorly informed as our soldiers regarding the effects of nuclear weapons. We discovered a disturbing amount of misinformation among some of our cadre, due in part to variances in the instruction provided by certain schools and publications, and in part to a plain lack of any instruction and a dearth of good unclassified training material. Better material is now available. On 7 October 1957, Department of the Army published a revision of Army Subject Schedule 21–6, "Individual Protective Measures Against Atomic, Chemical, Biological and Radiological Attacks," and in November 1957 a revision of GTA 3–2, "Things To Do Under Atomic, Biological or Chemical Attack." In February 1958 it released an excellent training film, "Individual Protection Against Atomic Attack," TF 20–2531. Reference materials include DA Pamphlet 39-3, "The Effects of Nuclear Weapons," May 1957, which contains the most up-to-date unclassified data. FM 21–41, "Soldier's Manual For Defense Against CBR Attack," 1953, as changed, is helpful but possibly needs updating. Also useful is USCONARC Training Text 7–10–2, "Rifle Company, Infantry Regiment," February 1957 (For Official Use Only).

Preparing Instructors and Materials

Our first step, then, was to send away to school a sufficient number of officer-instructors who upon their return would train both officer and noncommissioned officer personnel in post-level, one-week schools. Actually, this post-level training was extended over a two-week period with attendance scheduled only four hours per day so there would be minimum interference with other training activities.

Initially, our post school was set up, with a program of instruction prescribed by higher headquarters, to train selected officers of the division and the post in the techniques of employing special weapons. Most of these officers were captains and field-grade officers. After conducting the required number of classes, the instructors were directed to modify the program to emphasize individual and small-unit actions and the course was subsequently conducted for selected company-grade officers and noncommissioned officers.

The next step was to prepare appropriate instructional material to be issued to all officers and noncommissioned officers taking part in the instruction of trainees. Preparation of this material was undertaken by our nuclear employment school instructors. It was put out in the form of a company SOP. Attached to the SOP was an annex, a "fact sheet," which gave, in narrative form, sufficient information to provide background material for all basic unit training as well as for small-unit operations. Comments on this material were solicited from USCONARC, the United States Army Command and General Staff College and the United States Army Infantry School, and the revised material was published to the command. A third and most important aid was a printed card bearing in simple language the "do's and don'ts" of nuclear warfare. These cards (Figure 1), like similar handouts on general orders for interior guard and the Code of Conduct, are

now issued to each trainee as well as to individuals in strategic reserve units and all members of the permanent party at Fort Ord.

Revising the Training Program

After the instructional material was prepared, we undertook a wholesale review of the five basic Army training programs utilized at Fort Ord (basic training, advanced individual training for light and heavy weapons Infantrymen, and basic unit training for light and heavy weapons Infantrymen). It was decided in the beginning that no new block of hours specifically for nuclear warfare was really needed. Instead, the old 10-hour block of CBR training was revised to provide approximately four hours on nuclear protection. The remainder of the instruction was to be accomplished by concurrent training and by integrating nuclear instruction into all other appropriate subjects. That is, nuclear instruction was made more a matter of emphasis and full utilization of existing time than of the inclusion of additional time. Lesson plans on field fortifications, first aid, scouting and patrolling, tactics, anti-guerrilla and anti-infiltration security, landmine warfare, night firing, technique of firing and weapons demonstration for advanced trainees all were provided with appendices or inclosures on nuclear protective measures.

Tactical training is particularly appropriate for this type of integration. For example, in the three-week field phase of our basic unit training for Reserve Forces Act trainees we played the nuclear weapon both in the 24-hour Platoon Leader Exercise and the 54-hour Company Tactical Exercise. In the area of field fortifications the requirement obviously existed for some modification of existing model fortifications to provide more realistic nuclear shelters—that is, shelters which would be more resistant to blast and would provide sufficient earth-cover for protection from nuclear radiation and heat effects (Figure 2). It is apparent that further work can profitably be undertaken in this area.

Figure 1. Wallet-size card issued to all basic trainees and other personnel at Fort Ord.

FOR PROTECTION AGAINST NUCLEAR WEAPONS

DIG A FOXHOLE:
Dig a foxhole five to eight feet deep (at least three feet between occupant and ground level).
Cover the foxhole with 18 inches of earth, or if time is lacking, cover it with shelter half or poncho.
Streamline the top of the foxhole.
Reinforce the sides of the foxhole.
Continue to improve the foxhole as time permits.
Stay as low in the foxhole as the situation permits.

IF THERE IS NOT TIME TO DIG:
Take advantage of existing cover (ditch, culvert, fold in ground).
Lie flat, face down, hands under body, eyes closed.
Cover body with shelter half or poncho.

WHEN THE FLASH IS OBSERVED:
Fall to the ground.
Lie flat, face down, hands under body, eyes closed.

WEAR CLOTHING LOOSELY AND BUTTONED.

WEAR STEEL HELMET, GLOVES, SCARF OR HOOD.

CARRY PROTECTIVE MASK.

WHEN IN FALLOUT:
Take cover.
Wear protective mask.
Brush dust from clothing.

IF DIGGING IN A CONTAMINATED AREA:
Scrape dirt from around the edge of the foxhole for at least three feet.
Scatter spoil as far as possible up to ten yards.

PROTECT WEAPONS AND EQUIPMENT:
Dig them in if there is time.
Tie down small items of equipment when not in use.

WHEN DRIVING AT NIGHT HAVE ASSISTANT DRIVER WEAR PATCH OVER ONE EYE.

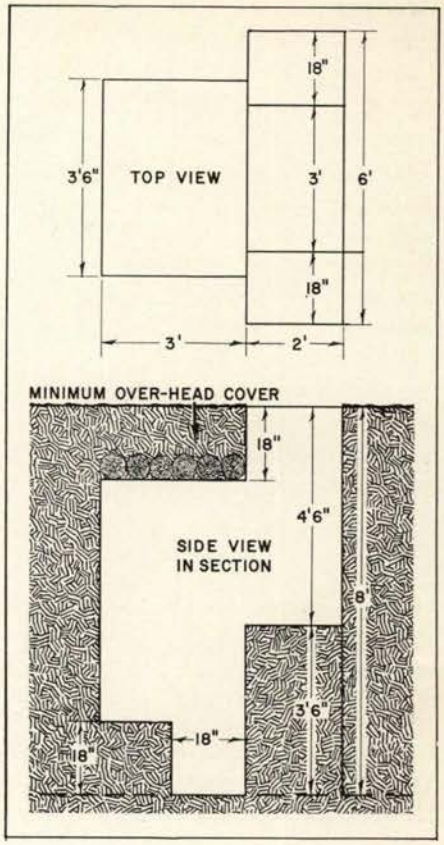


Figure 2. Construction details of a two-man foxhole which provides partial protection against the effects of nuclear weapons.

Use of Simulator Helps

As a catalyst to effective training it was decided to utilize an atomic simulator to be fired three or four times weekly in connection with one of the problems in a close-in training area. The vehicle chosen was the anti-guerrilla and anti-infiltration problem which is conducted under post control. In this four-hour problem trainees are placed in fortified platoon areas with Aggressor patrols and civilians attempting to work their way through designated areas to a guarded area in the rear. A "home-made" atomic simulator is detonated some distance away at a prescribed time. Five minutes prior to blast time a jeep-mounted siren is sounded. This is the signal for all instructors in the area to require their students to take individual protective measures against the nuclear blast.

Initially the explosions were a little too heavy and some complaints were received from nearby commu-

The trainee is taught to keep his weapon in his hole and to wear the protective mask when a nuclear blast is imminent. Note the shelter half which will be used to cover the foxhole.

nities. However, the amount of TNT used was gradually cut down and a local information program was undertaken to allay any unnecessary fears. We experimented with various combinations of explosive, napalm, etc., and were able to produce a more realistic fireball, while at the same time reducing the explosive shock and cost of the demonstration. The simulator now being used consists of two 55-gallon drums of eight per cent napalm and several explosive charges connected by detonating cord. When exploded, this device produces a fireball approximately 80 feet wide and 100 feet high. The mushroom-shaped pillar of smoke rapidly rises 1000 to 1200 feet. Figures 3 through 7 detail the design and placement of this device and provide a cost breakdown. This is a considerably modified version of the locally fabricated device described in "SOP for Atomic Blast Demonstration," Sixth U.S. Army Circular 2–28 dated August 1958.

I was a little skeptical at first about the value of this training aid, but after a few weeks of watching the problem, checking trainees and talking with commanders, staff officers and instructors concerned, I became convinced that it really was worth the time, money and effort. While the effect of the simulator upon individual trainees was not great, I felt its chief value was to dramatize to all of our officers and noncommissioned officers the fact that the nuclear weapon must be considered daily in all of our military activities. As a result of the use of the simulator, together with the other steps described, substantial progress began to be made in other areas of instruction.

Testing Lends Emphasis

Another problem was to redesign

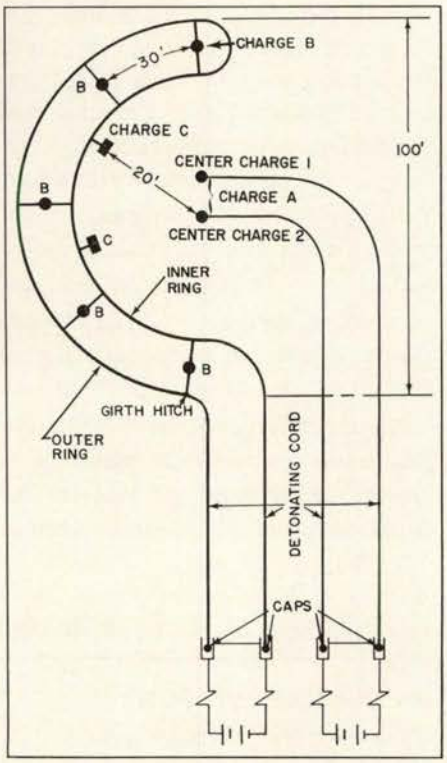


Figure 3. Diagram of layout for nuclear simulator. For Details—See Figures 4 to 7.

MATERIAL LIST

4	Grenade, hand, smoke, WP M15	$10.00
2	Thickener, incendiary, oil	3.80
40	Charge, TNT, 1-lb block	3.80
4	Charge, tetrytol, 2½-lb block	5.00
4	Cap, blasting, electric	.72
5	Cap, blasting, non-electric	.20
2	Drum, steel, 55 gal	2.50
5	Balloon, weather, 300 gram	10.00
	Cord, detonating, petn, 1100 ft	22.00
	Fuze, blasting, time, 5 ft	.05
	Gasoline, 74 octane, 100 gal	17.00
	Carbide, fine grind, 20 lb	1.20
	Total	$90.87

Figure 4. Cost of materials.

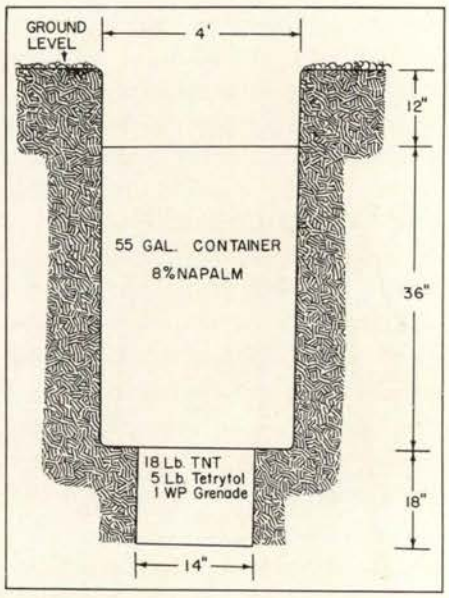


Figure 5. Charge A. The complete charge consists of two 55-gallon drums placed side-by-side over the explosive charge shown. The two explosive charges are connected by one line of detonating cord and each charge is further connected to the firing circuit by separate lines of detonating cord. After the drums are placed in the holes, the soil is replaced and tamped.

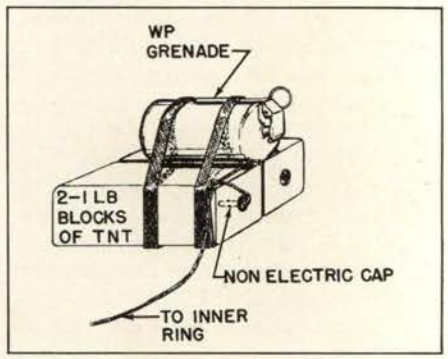


Figure 6. Charge C. The charge is connected to the detonating cord circuit by a time fuze. Friction tape is used to bind the two two-pound blocks of TNT to the white phosphorus grenade.

our proficiency tests to include one or more stations on troop safety measures against nuclear weapons. For the basic training test we simply provide foxholes, each with a BAR alongside and a poncho or shelter half nearby. The trainees to be tested, equipped with gas masks, are told that shortly a nuclear blast will be detonated at some distance away and they are to take immediate individual protective measures. To pass the test successfully, the trainee must put on his mask, jump in the foxhole with the BAR and place the shelter half or poncho over him until the All Clear is given.

A foxhole covered with a poncho. In the absence of overhead cover, this expedient provides the soldier with some protection from radioactive fallout.

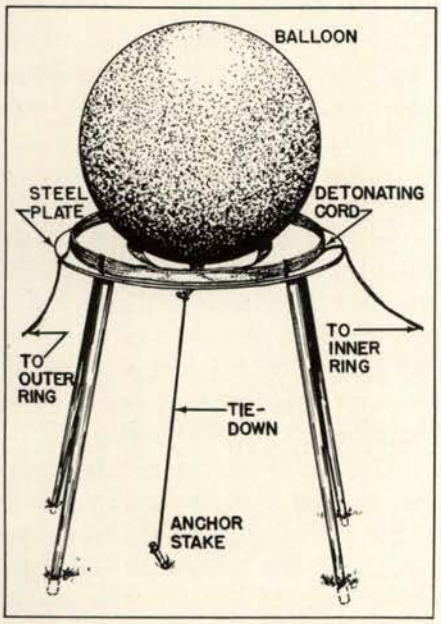
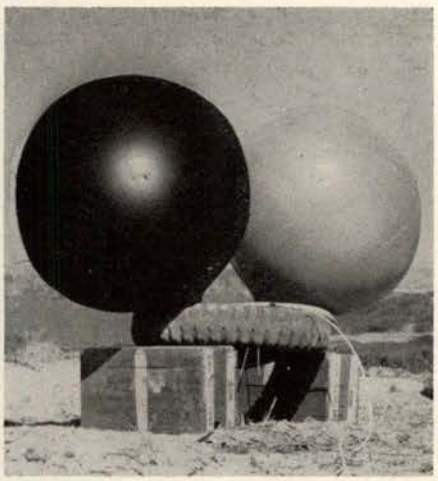


Figure 7. Charge B. The circular steel plate is 16 inches in diameter and ½-inch thick with a beveled center hole eight inches in diameter to accommodate the balloon. The plate rests on four legs 18 inches above the ground and supports the detonating cord which is arranged in five loops 14 inches in diameter.



This field expedient can be substituted for the arrangement shown in Figure 7.

In the advanced individual training test the trainee is placed in a foxhole utilized in our squad-in-defense test. He is provided with an intrenching tool and a cloth. He is told that protective instruments indicate fallout has occurred in the area and he is instructed to take steps to decontaminate himself and his foxhole. His action should consist simply of dusting himself off very thoroughly without leaving his hole, of cleaning his weapon and of lifting the dirt from the bottom, sides, firestep and lip of his emplacement. The contaminated dirt is dumped as far away as he can reach with his intrenching tool.

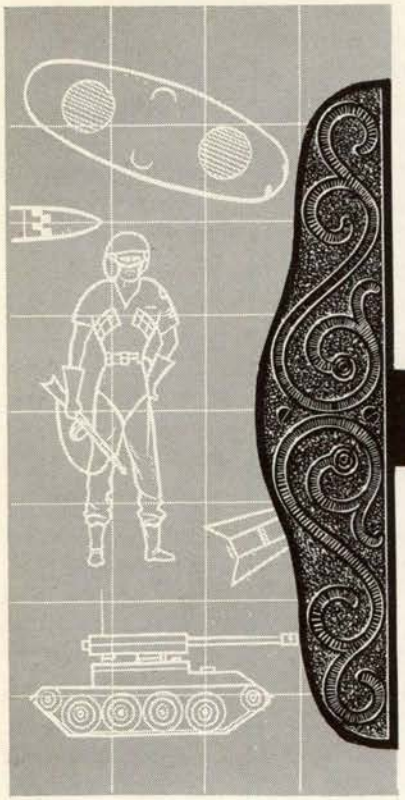
By these tests we are able to get an idea of how well our instruction has been getting across. The tests also serve as a selective emphasis to spur training commanders and instructors to make sure that all individuals receive proper instruction in this important area.

Additional impetus to our training program was provided during the 1957 Nevada nuclear test series at Desert Rock, when Fort Ord contributed a number of officers and service units. The officers and men involved got first-hand experience with a number of nuclear blasts and were most helpful in passing along their knowledge and impressions to others at Fort Ord. In addition, a number of our senior officers were sent as observers to one of the blasts of the series. This also stimulated the emphasis we desired.

Early in the game the necessity for a good training film on individual protective measures was recognized. Since no top-flight American training film was available until February of last year, we made use of a very fine British film, "Effects of Atomic Weapons on Troops in the Field," MF 20-8598, Confidential, Modified Handling Authorized. The film was obtained through the Signal Corps film library and until recently was shown to all trainees in connection with their nuclear training. We now employ the excellent American Army film previously referred to, "Individual Protection Against Atomic Attack," TF 20-2531.

The Value of Training

Though basic training at Fort Ord has not changed radically during the past year and a half, I believe that by virtue of our emphasis on nuclear training, the whole atmosphere has improved. This step, when considered together with others taken during the



WHY DON'T WE?

Perhaps you have an idea for some item or technique that would help the Infantry. Send it to the Editor of INFANTRY. *If it is published you will receive a free one-year subscription.*

Why Don't We . . .

. . . provide two grommet holes or eyelets in the bottom of the present canteen cover for the attachment of a tie-down thong? Soldiers who must run or double time with the present arrangement find themselves either pounded unmercifully on the hip or forced to hold the canteen in place with one hand. Occasionally, unknown to the soldier, the canteen even becomes detached from the belt and is lost. The result—a statement of charges.

Lt Dandridge M. Malone

. . . take the shoulder weapon away from Infantry officers? As combat leaders we are constantly reminded that our job is to lead (command) troops. While we are performing this job the carbine or its eventual replacement, the M14 rifle, is of doubtful value. In fact, the weapon gets in the way. The officer must carry it slung in order to scan a map, use binoculars, or give hand and arm signals. Moreover, when the enemy gets within small-arms range the temptation to use the weapon is strong. Yielding to this temptation reduces the officer to the status of rifleman at the time when direct and forceful leadership is most needed.

With the adoption of the M14 a solution is possible at no loss to the government. As the TOEs are changed, make the authorized weapon for officers the .45-caliber pistol. With its effective range of 50 yards, the pistol provides an officer with close-in protection when he needs it. Also, he cannot be tempted to act as a rifleman and it frees him of a burden which serves no useful purpose.

An additional benefit could be had from this change-over if every officer were issued a pistol when he was commissioned. He would retain the weapon throughout his service, thereby eliminating paperwork when he transfers to a new unit.

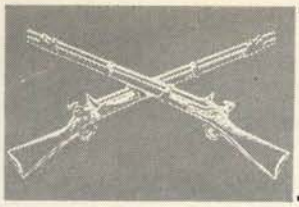
Capt Arthur E. Taylor, Jr.

Continued on page 73

period, has convinced us that no longer are we behind the times in basic training. We do not rely exclusively on passive measures. At the same time we continue to stress aggressiveness, mobility, speed of maneuver and assembly, effective scouting and patrolling, absolute discipline, each man's responsibility of caring for himself, his buddies and his equipment, and the ability of the individual to withstand the shock and rigors of the battlefield.

Emphasis on battle drill has helped. Adoption of Trainfire will further the trend toward effective, up-to-date basic training. Use of the new ROCID organization in our training is also a step forward. When the 5th Division was inactivated we decided to adopt the applicable organizational framework of the ROCID division in our training center—employing battle groups and brigades to introduce ROCID unit terminology to the trainees right from the beginning.

We are definitely *not* preparing our trainees to fight the next war in terms of the last. We *do* believe we are adequately preparing our trainees to become full-fledged replacements for active Army and reserve component units, geared to fight the war of the present or immediate future should it break out the day they join their parent units. We *do* satisfy the soldier's curiosity about nuclear weapons early in the game and give him confidence in himself. While we still emphasize the basic fundamentals of soldiering, we also teach our young soldiers to fight and take care of themselves on the nuclear battlefield. As tactics, techniques, weapons and weapons application change, our training will, of course, have to keep up. However, some type of fundamental, individual protective measures similar to those now being taught will always be necessary, regardless of the complexity of future nuclear weapons and tactics. If this type of training is continued in the units our trainees join, we do not believe they will panic when the first strange weapon goes off in their vicinity.



THE SOUNDING BOARD

This new feature gives Infantrymen an opportunity to "sound off" on a wide variety of subjects. It provides an outlet for thinking which need not conform to doctrine. We are looking for constructive ideas—well-conceived and concisely expressed—which challenge or inform. Articles will be paid for at regular *Infantry* rates.

The Fine Art of Followership

By M/Sgt Forrest K. Kleinman

THE little men with the quilted uniforms waited patiently in their camouflaged foxholes until the platoon was only a few hundred feet from the crest of hill 153. Then their dirty brown fingers pressed triggers and their Russian-made machine-guns began to stammer d-d-d-d-death!

The platoon hit the ground, tried to melt behind rocks and tufts of grass. But the Reds had planned this scene as a massacre. There was no cover.

Recognizing that his platoon must move or die, the platoon leader leaped to his feet. "Follow me," he signaled and lunged forward.

The men of his platoon lay frozen to the illusory security of the earth beneath their stomachs and watched him go. He got as far as the crest of the hill before a burp gun cut him down. He died without knowing that he had charged the enemy alone.

Time soon ran out for the rest of the platoon pin-pointed on the coverless slope. One by one, enemy marksmen picked them off. Before they died perhaps the bitter realization came to some that they would have had a chance if they had followed their leader.

This tragic incident is neither fictional nor unique. One way or another it has occurred in every war of recorded history—not just to green troops, but to veterans.

Why? In moments of life or death why do men sometimes fail to respond to the orders and personal example of their leader?

While many possible answers suggest themselves, all connote failures in followership. Even the possibility that the leader failed to win the confidence of his men, or lost it by his errors in previous combat, signifies faulty followership as well as leadership. For, confidence in the leader poses a two-way obligation. It must be given to be received. It must be sustained in the face of human error and adversity—else it will be lacking when both leader and follower need it most.

Similarly, failure to acquire correct habits of response to orders in training is a matter of poor followership as well as poor leadership. Tactical training provides the "dressage"—the forms of response—for followership in battle. But without voluntary sublimation of self to purpose *by the follower,* no amount of drill will make correct responses instinctive under stress.

Schooling in this fundamental discipline of followership should begin with the enlistment oath. Perfunctory reading and repetition of the pledge at the enlistment ceremony is not enough. By thought-provoking explanation and solemn ritual, its significance should be impressed indelibly upon the mind and heart of the fledgling soldier. A filmed message from the President of the United States in his capacity as Commander-in-Chief of the Armed Forces would be highly appropriate to the importance of the occasion.

Orientation in followership should be continued throughout the soldier's career. This demands more than mere lip service to the old adage, "Tell the soldier why." He should be told why in such a way as to reinforce his willingness to sublimate self to purpose.

Opportunities to relate humdrum activities to important objectives can be found by a thoughtful troop leader in almost anything that soldiers are required to do. The most stimulating orientation talk I ever heard convincingly tied an order for wearing neckties on a 20-mile hike to the success of Allied operations in North Africa during World War II!

The most misused opportunity to teach and to demonstrate good followership that I ever witnessed was in an orientation talk on the Code of Conduct. The "orienter" opened with these words: "Those of you who have actually been prisoners of war probably won't agree with what I'm going to say today. But whether you agree or not, this is the official word from DA. . . ."

Pre-service experience endows some men with a higher aptitude for followership than others. Psychological studies leading to a combat adaptability test, now being developed, indicate that the "fighter"—follower par excellence—has a background of more stable family life, more participation in team sports and more education. In other words, he has

had more practice in subordinating self to the interests of the family, the team and society. So men whose records show a lack of this pre-service experience in followership should be particularly encouraged by unit commanders to take part in team sports, group projects and the Army educational program.

As Gen Bruce C. Clarke stressed in his filmed address to classes at the Command and General Staff College this year, good followership can be developed by all but the mentally ill. Normal men want to belong to the team, want to contribute to its success. Guiding the development of followership consists primarily in helping men to realize their own innate ambition.

Contrary to the tyro's misconception, blind obedience and military followership are not synomymous—but antonymous. No less than leadership, good followership demands the use of imagination and initiative.

Maj Gen William F. Dean, famed combat commander of the 24th and 44th Infantry Divisions, summed up his battle observations on the subject this way: "It takes TWO to take a hill—the ONE who leads and the ONE who follows without hesitation!"

Experiments in group psychology confirm that General Dean's arithmetic is literally true. They show that the physical response of one man in a group to a command or other stimulus is very often emulated by the rest. This characteristic of group behavior is particularly pronounced under tension and when the form of response is familiar to all.

By virtue of his moral and physical position in relation to the group, the leader is set apart. While his personal example reinforces the stimulus of his order, it is only when a member of the group responds that emulation by all is assured.

The initiative of one man—the leader—provides the spark. The initiative of a second man—a follower—provides the tinder. Together, they ignite the whole.

So the exercise of initiative by just one more man on hill 153 might have saved the platoon. If just one man had got up and followed the platoon leader, his action could have triggered the same response in the rest.

From this cursory exploration of the subject, it appears that followership is really leadership once removed on the chain of command. It is the art of converting decisions into achievements.

Since the American chain of command comes full circle and no chain is stronger than its weakest link, it can be concluded that General Patton's famous axiom about field soldiers also applies to followership:

There is no such thing as a good leader or a good follower. A good soldier is both!

M/Sgt Forrest K. Kleinman is an information supervisor at Headquarters, U.S. Continental Army Command. He enlisted in the Army in 1934. The following year he received a reserve commission at Vancouver Barracks and was ordered to active duty with the 15th Infantry Regiment. During World War II he served with the French Training Section of the Joint Rearmament Committee and later commanded a training company at Camp Roberts. In 1945 he became S3 of the San Francisco Main Recruiting Station, and subsequently was adjutant of the 1st Infantry Regiment. He then was named public information officer of the 24th Infantry Division. He left the 24th in 1952 to become Chief of the War Briefing Section in the Office of the Chief of Information after which he served in the Los Angeles branch of OCI. Following a break in service, Sergeant Kleinman reenlisted in 1954. He served as a secretary to General Dean at Headquarters, Sixth U.S. Army, before assuming his current duties at USCONARC. Sergeant Kleinman holds a reserve commission of lieutenant colonel.

Do We Need a Better Sidearm?

By Sgt James I. Allen

The present sidearm of the United States military services, the .45-caliber semi-automatic pistol adopted in 1911, is accepted by some authorities as the finest military sidearm in the world today. Although the 9mm Luger round approaches the .45 in striking energy and has considerably higher velocity, the .45 is generally conceded to be more effective against humans.

Civilian police and sportsmen, however, haven't been content to use this fine combat weapon. To many of them, the .45 service round which has a muzzle velocity of 802 feet per second and muzzle energy of 329 foot-pounds has neither the velocity nor the striking power to fill their needs. As a result, the .357 magnum round was developed for revolvers. It's basically just a .38 special that has been souped up and modified so it won't fit the .38 chamber. This round gives 1450 feet per second of muzzle velocity and 690 foot-pounds of muzzle energy.

This round has proved to be a useful tool for the highway patrolman, since it can go through the metal of an automobile and still have enough energy left to incapacitate an occupant. Sportsmen have adopted the round for long-range shooting and as a standby weapon on big game hunts. Some hunters have regularly killed varmints with it at distances of 100

yards and over. A number of revolvers have been chambered for this round, which is twice as powerful as the .45 service round.

But the .357 magnum had to yield to its big brother, the .44 magnum. This monster fires a 240-grain bullet at 1570 feet per second, giving 1310 foot-pounds of energy at the muzzle. Several revolvers for this round are now on the market, and many sportsmen have adopted the .44 as their reserve weapon in big game country. In the western states, some hunters have been using .44 magnum revolvers to shoot deer and other big game. Neither of these revolvers, however, fills the bill for the soldier.

The service pistol is semi-automatic. It carries seven rounds in its magazine, and extra loaded magazines can be carried. Changing magazines takes only a few seconds. The .44 magnum revolver isn't capable of the sustained fire of the service pistol. It taken only a little practice to fire six aimed shots as rapidly with the revolver as with the pistol, but reloading is clumsy. Even the one .44 magnum revolver that has the modern swing-out cylinder is clumsy to reload compared with the pistol, and the others are very slow.

Where does this leave us? The service sidearm still has less than a quarter of the power of a popular civilian weapon. The .44 magnum will penetrate deeper than the .45, and is more effective against vehicles. Also, the .44 magnum, in the hands of an expert, has a greater effective range. But the .44 magnum round is designed for revolvers, and a revolver doesn't fill the needs of modern warfare.

At close ranges, the .45 automatic *is* an effective stopper. A man who absorbs one of its bullets isn't likely to have much fight left in him. Still, the ballistics of the civilian .44 magnum are tempting. It's probably safe to say that in the next real shooting war a few Infantrymen will forsake the service pistol in favor of the .44 magnum revolver.

Just for kicks, let's try designing a weapon that will have the ballistics of the .44 magnum, but will be a real military weapon. As armchair designers, we won't worry about the details, but we'll combine the best of everything and add a few touches of our own, letting Ordnance take care of the details.

We want an automatic pistol with rapid-change magazines like those we have now. But since we're designing a modern weapon, we want it to be able to do things the old 1911 model would never approach.

Beginning with the ammunition, we'll arbitrarily use a modification of the .45 auto. We'll make the case long enough to hold the powder needed to push a 240-grain bullet at 1570 feet per second, a velocity equal to the .44 magnum.

Instead of the old round-nosed bullet, we'll use the semi-wadcutter design for maximum shock effect. Although civilians use soft lead bullets to do maximum damage, we'll have to stick with a full-jacketed bullet in order to conform to the conventions of war. The flat surfaces of the bullet will do enough damage without the mushrooming effect.

The pistol itself will be stronger than the old .45, and maybe a little heavier. It will be gas-operated, using the same type of gas cylinder and piston as the carbine. The short bolt will function like the carbine bolt, and there will be an external hammer, like the one on the 1911 pistol. The firing pin will be of the inertia type so the hammer can be lowered on it without the danger of a discharge.

We'll make the trigger mechanism the same type as is on the double-action revolver that's so popular these days. This will enable us to carry the weapon with the hammer down and a round in the chamber, and be ready to shoot with just a good hard pull on the trigger. When it's cocked, the trigger pull will be short and light. The thumb safety will work with either thumb.

The barrel and receiver will stay together, except when Ordnance does extensive repairs. Both of the sights will be mounted on this unit, giving greater accuracy than the 1911 pistol. We'll make the barrel six inches long, producing a pistol which is a little heavy and bulky, but which has added accuracy and muzzle velocity to make up for this.

The magazine will hold 13 rounds, like the Browning 9mm which some armies now use. This will give us a good big grip that should be easy to hang onto. We'll have a 50-round magazine for special purposes, which we'll enumerate in the next few paragraphs.

The last departure from the present weapon will be the addition of a switch to convert the pistol instantly from semi-automatic to full-automatic fire. This may seem like an idiotic suggestion. We all know it's impossible to hold a powerful pistol for accurate full-automatic fire. Anyone capable of hanging onto the weapon would soon find it firing back over his shoulder. Apparently, the pistol isn't the right weapon for full-automatic fire.

SGT JAMES I. ALLEN, a graduate of the University of Wisconsin, is a field editor for *The Dakota Farmer*. He enlisted in the reserve in 1954 and for four years was a member of Headquarters and Headquarters Company, 338th Infantry Regiment, 84th Infantry Division, USAR. While with this unit he was a communication specialist, operating the regimental message center and performing other communication duties during summer training at Camp McCoy. In July of last year he was assigned to the 5303 USAR Control Group, XIV U.S. Army Corps. Sergeant Allen has completed the Infantry Pre-Commission Extension Course and is currently enrolled in the Company Grade Extension Course.

But we haven't looked at the accessories yet. Granted, the pistol would be an impossible weapon under full-automatic fire, but it can serve as the basis for a very effective submachinegun. The first accessory is a shoulder stock. It will fasten on with a couple of lugs and a clip or two. Then we will add an interchangeable barrel and receiver unit that features an 18-inch barrel with a pistol grip attached.

Now we have a very fine submachinegun. It can be used with or without the stock, as either a full- or semi-automatic weapon. Since the sights are mounted on the barrel and receiver, we can have an adjustable peep sight on this version. This weapon should be very accurate and have enough power to do some real damage.

The conversion from the short barrel to the long barrel and back again will involve only the normal disassembly procedure that the soldier performs when he cleans his weapon. Only one piece, the barrel and receiver unit, is changed.

The advantages of this kind of system are numerous. In the first place it will cut down on the types of spare parts that must be kept in stock. It will also reduce the training needs.

Ordnance will have to train a man on only one weapon to enable him to service either version, as the only difference mechanically will be in the sights. The soldier will have to learn only one weapon in addition to the rifle. By training on the pistol, he will also learn the submachinegun, requiring only the practice in full-automatic firing for proficiency.

By keeping a supply of accessory barrels and stocks at low echelons, the weapons system can be tailored to meet day-to-day needs. When a man is working in a rear area he will carry a pistol, while a barrel change and a stock will arm him for a night patrol. Weapons of this new design can also be very effective in the hands of guerrillas.

The truck driver who finds himself ambushed can use the weapon as a rifle if the enemy is at a distance, or as a submachinegun if close. The communication specialist can use the weapon as a pistol when he's doing his normal work, and convert it to a submachinegun when he has to provide security for the communication center. The company commander can have a good pistol when he's occupied with administrative work in a rear area, but a submachinegun capable of accurate semi-automatic fire when he has to go forward to make a personal reconnaissance.

In short, a weapon of this type with its large amount of striking power would serve the needs of the soldier whose primary job doesn't usually require personal contact with the enemy, but who needs a means of fighting when things get rough. At close ranges, this weapon, because of its large bullet diameter and specialized bullet shape, would be more effective than the rifle, and much easier to use.

The proposed round that we've picked for this weapon would be more effective than either the carbine or pistol round now in use, and would have roughly half the power of either the M-1 round or the NATO round. It would have over four times the power of the present pistol round, and be at least twice as powerful with far greater stopping ability than any other pistol or submachinegun round in the world today.

Civilians are now using revolvers chambered for rounds of this amount of power, and are finding that the recoil isn't too much for accurate shooting.

The adoption of a weapons system such as this would fill a need on the front lines. It would serve the platoon leader, the machinegunner, and other specialized personnel who need plenty of personal firepower, but can't manage the bulk of a rifle and still do their jobs efficiently. Giving this weapons system to troops in rear areas would increase defensive depth and lessen the dangers caused by small groups of the enemy infiltrating through the lines.

The present .45 pistol is still a fine weapon, but it's possible to do much better today than we could in 1911. The proposed new weapon would improve on the pistol, the carbine and the submachinegun, which are not ideally suited for present roles in modern warfare.

Look Beyond Your Present Circle

By Capt Thomas D. Donegan

THE American Army officer of today, more than his predecessor, is bombarded by current events and opinions in an era of rapid change. Like the officer before him, he is flexible, adapting himself to new tools of his trade and the concepts needed to use them. In this fast-moving world, however, he bears added responsibilities.

Present world conditions require a fellowship of many nationalities, religions and customs. Standing beside the American officer in school, in garrison and in the field is a man who as short as twenty years ago lived in a land relatively as remote and strange as the moon. This fellowship demands a special maturity, knowledge and understanding—qualities that are vitally essential to leadership and cooperation among all officers of the free nations.

That the American officer was often deficient in these qualities in the past is affirmed by Gen Omar N. Bradley in his book, *A Soldier's Story*. Reflecting on World War II

CAPT THOMAS D. DONEGAN enlisted in the Army in 1940 and served at Fort Slocum and later at Fort Clayton, Canal Zone, prior to entering OCS at Fort Benning. After he received his commission he was a training officer at Camp Blanding until 1944, when he went to the European Theater as a platoon leader with the 324th Infantry Regiment, 44th Infantry Division. Captain Donegan left the service in 1946 to attend Clemson College, where he received a degree in English. He then attended Duke University, earning a master's degree in history. Returning to active duty in 1951, he became a company commander with the 3431 Army Service Unit at Fort Jackson and then went to Germany where he was assistant information officer at Headquarters, Seventh U.S. Army. Captain Donegan returned to the United States in 1955 for a three-year tour as a unit advisor with the U.S. Army Reserve at Lexington, Kentucky. In September of last year, he entered the Advanced Course at the Infantry School and has since received orders for an assignment in Korea.

military cooperation, he said, "Some officers of the American Army were peculiarly insular in their outlook, never having traveled abroad nor associated professionally with our prospective allies. As a consequence some of us were probably unduly sensitive to slights upon our Army and our national pride."

Today, our position is such that much of the free world looks to America for guidance and our military allies look to American armed forces for leadership. Overseas service during and since World War II has removed much of the insularity referred to by General Bradley, but the American officer still needs to look beyond the small circle of his unit, his job and his associates. It is not necessary that he become a political scientist to gain the knowledge and understanding essential to international leadership and cooperation. The mass media—the press, radio and TV—as a supplement to his personal contacts provide the means and opportunities of expanding his knowledge and understanding of other nations and peoples.

It should not be necessary to draw up a recommended reading list. The average officer is well aware of the many periodicals, newspapers and news magazines that are available to him as sources of contact with the world. It is only important that he take advantage of these sources by allotting a portion of his leisure time to reading and thinking about affairs outside his circle. It is also important that his sources be varied enough to reflect the many sides to all problems, so that he may more logically develop his own conclusions.

The responsible and educated officer enjoys encounter with new ideas, new facts and new events. He understands the economic, social, political and cultural environment of his neighbor. With this understanding he is better able to stand with other free men, effectively combating forces that threaten freedom, and planning the future with vision and purpose.

The opinions expressed in these articles do not necessarily reflect official thinking of the Infantry School.

YOUR INFANTRY CAREER continued from page 5

If you have studied a language in the past and are a bit rusty, brush up on it, and take the appropriate Army Language Proficiency Test. Arrangements for this can be made locally with your personnel officer. If you achieve a rating of "fair" or better in reading, writing and understanding, you will be considered proficient in the language. This extra qualification will fit you for additional and more varied assignments. Make sure your records reflect your degree of proficiency—it's important to you and your branch. See AR 611-6 and AR 350-24.

Photographs

Formal portraits of officers in the grade of colonel and above play an important part in many personnel actions. Army Regulation 640-140 requires that each colonel furnish the Department of the Army with a portrait-type photograph of himself. A new portrait, made with complete decorations, is required every three years. While the current regulation does not require a copy be furnished the officer's career branch it is highly desirable that pictures be available. Accordingly, all Infantry officers are encouraged to send their photograph to Infanty Branch. The photographs should be 8"x10" and sent to Infantry Branch, ORD, TAGO.

Gen Tucker Now Chief of Infantry Branch

Brig Gen R. H. Tucker has replaced Brig Gen Ben Harrell as Chief of Infantry Branch, Officers Assignment Division. General Harrel is now Assistant Division Commander of the 7th Infantry Division in Korea. General Tucker comes to the Branch from the 101st Airborne Division at Fort Campbell, Kentucky.

Army Enlisted Management Program

Department of the Army has announced an over-all personnel management program which is designed to enhance the prestige and improve the effectiveness of the enlisted man.

The new program, to be known as the Army Enlisted

Management Program, incorporates two years of Army developmental studies and the philosophy of recent military pay legislation. It is designed to provide more attractive career opportunities by: the introduction of a system to evaluate enlisted personnel against Army-wide standards; extra pay for greater proficiency; a system of centralized assignment for noncommissioned officers of the two top grades, similar to that of officers, and college training in scientific, technical and managerial areas at government expense.

Heart of the new management program is its Enlisted Evaluation System. This system, operated primarily through the Enlisted Evaluation Center at Fort Benjamin Harrison, Indiana, provides for a relative evaluation of the proficiency of each soldier based on written and performance tests, plus a job effectiveness report on the individual by his unit commander. The evaluation will insure the selection of the best qualified men and women Army-wide for promotion, proficiency pay and further career development.

One of the major applications of the Enlisted Evaluation System is the recently established Proficiency Pay Plan whereby extra pay is awarded to the most proficient enlisted men as reflected by their proficiency scores.

Recognition of the Army's enlisted personnel who carry heavy responsibilities has been provided by the addition of two new pay grades to the top of the enlisted pay structure. Promotion to these grades as well as to other enlisted grades will be related to the enlisted evaluation system. The Army plans to advance at least 14,500 to the top grades (E8 and E9) during the next four years.

For those noncommissioned officers who make the Army a career, permanent promotions are now being made for the first time since the outbreak of the Korean War. Permanent grades are given only to individuals who have proved themselves on the job in the temporary grade, thus giving the qualified professional soldier added recognition and a permanent status.

Another aim of the Army Enlisted Management Program is to aid in the development of promising enlisted men by further training and education. Upon entering the Army, the volunteer, beginning in January, 1959, will have the opportunity of enlisting for a particular occupation of his choosing in which he can show sufficient aptitude. In addition to the many service schools available, career-motivated soldiers may now also apply for college-level training in technical, scientific and managerial areas at government expense. Since March, 1958, when this opportunity was announced, the Army has received 1290 applications for college training from enlisted men, 127 of whom are now in school or awaiting admission to 27 accredited colleges. It is expected that approximately 1200 soldiers will be admitted to college during the next four years under this program.

To insure timely use of the skills and enhance the prestige of top noncommissioned officers, the Army will centralize the assignment of the top grades, E8 and E9, in a method somewhat similar to that currently in effect for officers. Permanent changes of station of those noncommissioned officers will be controlled by the Department of the Army.

Part of the new noncommissioned officer career plan is a change in the Army's previous policy that certain enlisted men with 20 years service could remain indefinitely in the United States. The new policy, based on operational necessity, provides that soldiers will henceforth be subject to overseas assignment until their 27th year of service. Those already stabilized will retain this prerogative, but special provision is made to insure the availability of E8 and E9 personnel for overseas assignment.

The Army will also introduce a modification for temporary enlisted promotions based upon the use of a composite score, a Promotion Qualification Score, as a screening device. The plan will provide an Army-wide system for enlisted men and women to prepare themselves for promotion on an individual basis. Another innovation is a plan for making 20 percent of all temporary promotions to E8 and E9 from among outstanding men and women who have between eight and 15 years of service. This plan will give aggressive young noncommissioned officers a chance to get ahead faster, as well as recognizing the value of experience for the majority of promotions.

The Army will continue its program of separating from the service those soldiers who are unable to handle the complex jobs of today's Army. During the past year, the Army has given early discharges to 70,000 men. The discharge of ineffective men from Army rolls has already resulted in an over-all improvement in the level of training, job performance and behavior, and has caused a major upward trend in voluntary participation in elementary educational courses.

The Army publication outlining the Army Enlisted Management Program (DA Circular 600–15) has been distributed Army-wide. It covers the Enlisted Evaluation System, proficiency pay, Promotion Qualification Score, promotion to E8 and E9, permanent enlisted promotions and name assignments for E8 and E9, as well as stabilization of upper-grade enlisted personnel, Job Performance Potential Program, pre-induction aptitude screening, occupational area enlistment option, educational development and the Army Green uniform.

DA Circular 621–25, recently distributed, announces the details of "Voluntary Off-Duty Education at Civilian Schools and Colleges." It authorizes partial tuition assistance for Army personnel of up to 75 percent, not to exceed $7.50 per semester hour, $5.00 per quarter hour, or $22.50 per H.S. Carnegie Unit, and states that applications for assistance will be made on DA Form 2171–R.

Hannigan Learned the Hard Way

We must be ready to meet the man who is everywhere yet nowhere, who can play havoc with isolated troops on the dispersed battlefield—the guerrilla.

By Capt Morris H. Jenkins

It was a stormy Sunday night, and a cold, gusty wind swept sheets of rain against the windshield of the tracked cargo carrier. Sp5 Hannigan could feel the force of the wind against the sides of his vehicle. The nearest of the six carriers in front of him was hardly visible.

"Hell," Hannigan said to himself, "in half an hour I'll be relaxing with a cup of hot coffee while someone else is lugging off my load of ammo and medical supplies." He lit a cigarette.

An occasional flash of lightning cut across the sky, silhouetting pine-covered peaks. One of the flashes was mirrored in a steep-sided mountain lake. "Be glad to get out of this slop," he thought, looking again at his watch. The supply point toward which the small convoy was moving was one of several in the area, all highly dispersed, all accessible only

CAPT. MORRIS H. JENKINS began his military career when he enlisted in the Army in 1945. After seven years of enlisted service he received a direct appointment as a second lieutenant. He then became a platoon leader with the 504th Airborne Infantry Regiment, 82d Airborne Division and served with that organization until late 1952 when he joined the 10th Special Forces as a team leader. Captain Jenkins was with the 10th Special Forces for four years, serving at Fort Bragg and later at Bad Tolz, Germany. In 1956 he was assigned to the Infantry School as an instructor with the Basic Airborne Committee of the Airborne-Air Mobility Department. Captain Jenkins entered the Advanced Course at the Infantry School last September and, upon graduation in February, he is scheduled to go to Korea.

by air or by tracked vehicles. This was nuclear war in rough country.

Hannigan drew at his cigarette. He coughed the smoke out in surprise. An explosion too loud for thunder and too bright for lightning had called his wandering thoughts sharply back to the situation at hand. Instinctively he came to a halt and reached in the dark for the pistol grip of the machinegun.

Oddly enough, he hardly heard the second explosion. But he was lifted bodily and propelled through the carrier door and into a ditch. For a fraction of a second before he lost consciousness, he felt the heat of the blast on his back.

It was fortunate for Hannigan that he passed out. Small groups of shadowy figures emerged from the thickets, hip-firing their automatic weapons and swarming over the carriers. They believed Hannigan to be dead.

Quickly, quietly, without apparent supervision, the figures moved back and forth from the vehicles to the wood's edge. Then, as quickly as they had come, they were gone.

When Hannigan came to, the rain had stopped. There was a distinct smell of scorched metal in the air. Embers glowed in the ruins of the convoy and at one end there was still a small fire of some sort. Hannigan broke the oppressive silence to talk to himself again. "Well, whadda you know—guerrillas," he said softly. "After our supplies. And no warning—except maybe that knocked-out bridge back on the main road. I wonder how they knew. I wonder. . ."

It's probable that Hannigan will never get the answers to all his questions—in fact, he'll be lucky if he gets the answers to a few of them. The guerrilla band that hit the column probably was formed in that vicinity only a short time before. It might just as well have sprung from the earth. Guerrillas are a clandestine force. They operate with complete informality, taking quick advantage of any opportunity. It is difficult if not impossible to predict the time, place and pattern of their operations.

The guerrilla leader is a clever and intelligent man. He plans. He shrewdly makes use of every advantage available to him. He has intimate knowledge of the countryside. He knows every likely hiding place. And he knows where to strike and how to disappear afterwards. The choice of both terrain and time of attack are his, and the element of surprise works for him. He knows that fifty or so guerrillas in his "army" can accomplish the work of a company or even of a regiment or battle group.

The guerrilla leader who hit Hannigan's column had observed the area and the supply convoys moving through it. Perhaps he learned from a network of informers, or perhaps from careless conversation among our troops, what supplies the convoys were carrying. It could be that he obtained the information by monitoring our communications.

Learning that the vehicles carried items he needed, the guerrilla leader timed our movements carefully and found that we were operating on a fairly fixed pattern and schedule. He decided to ambush one of the convoys. To insure that we would use a route through the mountains which was most suitable to his purpose, he destroyed a bridge on the main route. He did so as unobstrusively as possible so that the incident would appear isolated and would give no warning of his intentions.

When he was ready to attack, the guerrilla chief moved his entire band to an area several miles from the ambush site. From there he dispatched observers to keep a watch on the main depot from which the supplies would move. The evening before the strike, he conducted a rehearsal at the ambush site under cover of darkness. After the rehearsal, the guerrillas retired a short distance and made last-minute improvements in their plan of attack. Every man knew his job and every man carefully memorized the routes of approach and withdrawal, the signals for opening and ceasing fire, and the "bug-out" signal in case anything went wrong. The leader, while planning to *use* surprise, was also prepared *for* surprise. He personally saw to it that the route of withdrawal was protected by special security guards. The die was just about cast.

Promptly at nine-thirty on Sunday night the guerrilla band moved into position. The chief himself supervised the laying of demolition charges in the pass to seal the column in. A driving rain had already set in, turning mountain streams into torrents and soaking him to the skin. But when the leader glanced skyward there was satisfaction in his face. He had learned that foul weather can be a powerful ally, masking his movements and decreasing our alertness and ability to fight. Remaining hidden, the guerrillas waited.

As it had done on previous eve-

nings, our convoy moved out of the supply depot at approximately ten o'clock. After leaving the highway, it followed the only available route, and the signal that our carriers were moving was passed along the guerrilla communication net to the chief. Tense with excitement and anticipation, he was determined that the ambush would be successful. And successful it was.

Unfortunately, our troops gave unwitting cooperation to the guerrilla force. As a result of our general apathy toward unconventional warfare, they had received little training in antiguerrilla fighting. They committed grave mistakes. They fell into the trap of a fixed pattern. Not only did they discount the effectiveness of clandestine enemy attack, but on this particular night they did not even regard it as a possibility. They believed that bad weather would keep hostile forces inactive. They were unable to "think" guerrilla warfare, and consequently they failed to take even the simplest precautions against it.

Guerrilla activities can be expected to be more frequent and more costly in future combat than they have been in the past. When our troops are committed to battle in nuclear warfare, they will be widely dispersed—laterally and in depth—for protection against atomic and other high-yield weapons. But this dispersion will set them up for the guerrilla. Units operating independently or semi-independently of other forces will be particularly vulnerable, and unless we are prepared to cope with them such attacks could be disastrous.

The Infantryman is accustomed to measuring combat strength in terms of battle groups or divisions. Because the guerrilla generally operates in relatively small bands, the Infantryman is tempted to write him off casually. But the guerrilla is able to harrass, terrorize and demoralize large forces. His small groups accomplish missions which might require whole enemy divisions operating in a more orthodox manner.

The guerrilla is a master of three special types of military operations—the raid, the ambush and the limited attack. Each of these operations requires a small, highly mobile, lightly armed, tightly organized force. However "civilian" he may be in principle, the guerrilla can be quite "military" in practice. And it is wise to remember that many guerrillas have had prior military experience. They know how to use terrain as an aid in attaining their objectives. They have learned to combine short rations with a rigorous existence. Necessity, a most effective teacher, compels them to work together in a manner which regular forces would find difficult to match. And since guerrillas usually are lightly armed, and equipped for a particular mission, they do not require the variety of technical information demanded of the regular Infantryman. A working knowledge of their basic weapons is sufficient. Moreover, they are not slowed down by the bulk and weight of unnecessary weapons and equipment.

Given the choice of time and terrain, the guerrilla can sometimes outclass the professional soldier at his own game. To underestimate the guerrilla is simply to add to his advantage. Moreover, it is wise to assume that experienced, successful and established guerrilla forces are receiving some type of support from regular forces. The enemy is just as willing as we are to provide instructors, weapons, ammunition and food to guerrilla bands which have demonstrated their ability to fight. The enemy is just as willing, in fact, to organize guerrilla bands where nothing exists but the potential. In dealing with guerrillas, therefore, we sometimes are not dealing with a "civilian" force at all. We may be dealing directly with the professional enemy soldier himself, or his equivalent.

It is obvious that the modern Infantryman must be prepared to counter guerrilla activity, both offensively and defensively. We must be prepared to defend ourselves against the guerrilla at any time and place. We must be ready to fight him not just in the rear areas where guerrillas customarily operated during World War II, but in forward battle areas as well, where we can expect increasing amounts of guerrilla activity. It is, after all, the guerrilla who dictates the circumstances of the meeting.

In addition, the Infantryman must be capable of offensive action against the guerrilla. We must, in other words, be able to dictate some of these meetings ourselves. We must know when, where and how to destroy guerrilla efforts. This ability cannot be improvised in the battle area itself—it requires thorough planning and effective training *before* we enter combat. We must learn to think and act like the guerrilla before we can fight and conquer him on his own ground. And the unit or individual that is well-trained in the concepts of guerrilla fighting will be better prepared for any phase of nuclear warfare.

Unfortunately, effective antiguerrilla warfare training is an uncommon today as it is necessary. While we are providing instruction and training in the employment of *friendly* guerrilla forces, we are doing very little about the techniques of combating enemy guerrillas.

The United States Army Special Warfare School at Fort Bragg offers a one-week orientation course on the organization of Special Forces which includes some of the methods used by guerrillas. But this course is not intended as detailed preparation for antiguerrilla operations.

Beyond the training provided by this specific school, basic (ILOC) and Advanced Officer courses at the United States Army Infantry School include a short orientation in the role of Special Forces, but this instruction is primarily concerned with the organization, training and supply of friendly guerrilla forces. Both courses briefly mention antiguerrilla measures, but only in connection with

instruction on the defense of rear areas. Students attending the Ranger course receive some partisan play in their patrol problems, but here again the emphasis is placed upon contacting and utilizing friendly guerrillas. All basic trainees, of course, receive four hours of orientation and demonstration on guerrilla and antiguerrilla warfare. But they receive little if any practical work in this field.

It is apparent that the Infantryman needs more training in guerrilla and antiguerrilla warfare. A guerrilla warfare school for selected officers and noncommissioned officers is the logical answer to this need. Instruction should include not only supply, administration and training of friendly guerrillas, but tactics and countertactics, antiguerrilla security, and other topics of use in combating enemy Special Forces. In a few weeks, students of such a course could learn and perform the basic techniques of countering unconventional warfare. They, in turn, could prepare and supervise guerrilla and antiguerrilla warfare instruction for their home units. Much of this training could be worked into platoon- and company-level field training exercises. In addition, special instructional teams could be provided for major combat units. In any event, the importance of guerrilla warfare certainly warrants more attention in our service schools.

Specialist Hannigan and the other members of the convoy were not prepared for what happened to them that rainy Sunday night. They were up against a different kind of fighter —a fighter who is as clever as man, as deadly as any wild creature—the guerrilla. Unless we are willing to risk a similar fate, we must learn to fight him.

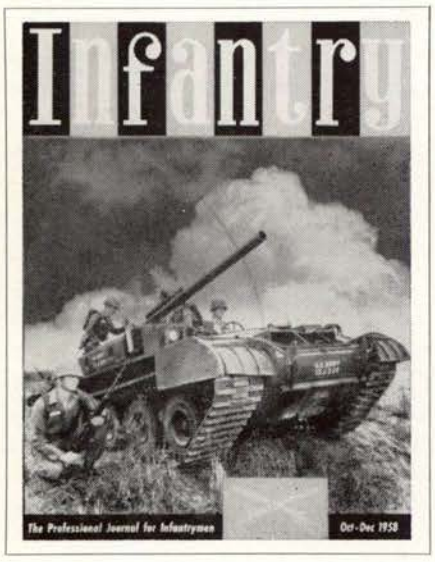
Significance is added to this subject by the possibility that future Infantry operations may at times resemble guerrilla-type operations and that guerrilla-type forces may utilize small, low-yield nuclear weapons.—Editor.

LETTERS *(continued from page 3)*

picture. . . . He characterized them as looking soft and lacking the "fire" expected of combat soldiers.

It occurs to me, also, that in making a picture like this, every effort would be made to capture the determination, aggressiveness and fire that you would find on a combat poster. I've seen many good Infantry School pictures but this one seems a little flat. While mechanization is here to stay, we keep insisting, and rightly so, that the soldier is the key to victory—let's portray him in such a manner that we convince people it's true. . . .

D. G. GILBERT
Col, Infantry
Fairfax, Va.



Empty Holsters

Sir:

Very early in the Korean War I recall seeing a photo of a young soldier . . . test-firing a bazooka prior to going into combat, according to the caption. The last sentence of the caption asked, "But where is his pistol?" He was wearing a holster but it did not contain a pistol. Since that time I have noticed so many Infantrymen, enlisted and officer, who are guilty of this same omission. . . . In your fine issue of Oct-Dec 1958 I was distressed to see the "empty holster," not only on page 10 but on the cover itself. . . . Couldn't we start a "fill the holster" movement?

Many years ago . . . I initiated a request for a permanent binder for the old *Quarterly*. I hope you will soon see fit to make available to us a binder to keep and protect our *Infantry*.

Keep up your outstanding work.

EDMUND T. NEGRELLI
Maj, Infantry
Connecticut National Guard

Personnel at the United States Army Infantry School do carry pistols in their holsters. However, the detail furnished for the M56 photos apparently showed up without them, and no one picked this up, including members of the Infantry *staff. Be assured that we shall be holster conscious in the future.*

The Book Department of the United States Army Infantry School plans to procure a binder for the enlarged magazine which will be similar to the one provided for the smaller magazine. We shall notify all readers when the new binder is available for purchase.—Editor.

All Subscribers

Sir:

. . . I am happy to inform you that all of my Infantry units have subscribed to *Infantry* magazine and nearly 100 percent of Infantry officers of my command are now subscribers. . . .

M. C. TAYLOR
Col, Infantry
2d Infantry Brigade
Fort Devens, Mass.

Double Time

Sir:

Recently my company commander and the rest of the company officers

. . . were wondering what commands can be given at double time. The new FM 22–5, Drill and Ceremonies, specifies only "Halt" and "Quick Time." I say that "Column Right" or "Column Left" may also be given. Can a flanking movement and a rear march be given as well? The manual is vague on this. My argument is that double time is no less a precision march than quick time. Only the cadence has been increased, but the dress and interval remain the same.

The new *Infantry* . . . has greatly helped all of us here in Germany to better prepare ourselves for our mission with the NATO forces. Our best wishes to the new *Infantry* and keep up the good work!

LAWRENCE C. BRUSCAS
1st Lt, Infantry
APO 36, New York

We assume that you refer to FM 22-5, dated August 1958. In paragraph 17(c), this manual directs that any marching movement may be executed at double time unless otherwise stated. One reference, paragraph 29(a), specifically states otherwise. It advises that "Rear, March" may be given only at quick time. Paragraph 70 indicates that flanking commands also are given at quick time. However, in view of paragraph 17(c), this would not preclude giving flanking commands at double time. The Infantry School feels, however, that such movements given at double time would lack order, smartness and precision, and therefore advises against this. Paragraph 102(b) provides an example of column movements given at double time.—Editor.

Terrain Pictures Wanted

Sir:

During the past few months this instructor unit has been making VU-Graphs from the "How Would You Do It?" articles in *Armor* magazine for instructional use in the ROTC program. We have found them very helpful in teaching Armor tactics.

It is felt that your articles could be used in the same manner if they contained more terrain pictures in the development of tactical exercises. . . .

DOYLE D. SMITH
1st Lt, Infantry
Midwestern University, Texas

Your suggestion has merit, particularly for ROTC students. However, we have found that the sketch type of illustration is not sufficiently accurate for readers to solve our tactical problems. Consequently, we have been using simplified map-type illustrations which permit the use of a scale.—Editor.

Sky Diving

Sir:

Congratulations on your new look. I am pleased to find that your taste and style in material have not changed. I especially refer to your article by Capt Jacques Istel, USMCR, on Sky Diving—old format—and your article by Lt Fritz Bernshausen, USA, on the new jump techniques—new format ("Stabilized Free Fall," Jan 1958 *Infantry*; "Old Jumpers—New Technique," July-September 1958 *Infantry*).

About one year after my release from active duty with the U.S. Marines, with the experience I picked up at the Airborne and Jumpmaster Courses at Fort Benning (in which Lieutenant Bernshausen was one of my instructors), with the advice of Captain Istel and with the help of many good books, I founded the Midwest Sky Diving Club. Many of our members are officers and men of the 302d Special Forces Reserve—the only Airborne reserve in the Midwest.

I am at your readers' disposal in regards to any information that they may desire about our club, other clubs in the United States or Sky Diving in general. No prior experience is necessary for this sport, for most clubs have a training program such as ours.

We have begun a collection of foreign jump-wings and if anyone comes across a good example he is willing to part with, we would be honored to include it in our collection. Also, any literature about parachuting in general and Sky Diving in particular is always welcome.

Keep up the fine work and you will remain what you are now, a stimulus for Infantrymen the world over.

FRANK F. OWSIANKA
Pres., Midwest Sky Diving Club
1116 Washington Blvd.
Oak Park, Ill.

Continued from Page 20

CONFEREES

Maj Russell C. Peeples, Jr.
Maj Donald V. Rattan
Maj Clifford H. Reynolds
Maj James E. Wirrick
Capt Fred K. Cleary
Capt John Dunlop
Capt Sarah F. Niblack
Dr. Preston S. Abbott
Mr. Maynard R. Ashworth
Mr. Hanson Baldwin
Mr. Monte Bourjaily
Dr. F. H. Carten
Mr. Erle Cocke, Jr.
Dr. Meredith P. Crawford
Mr. D. Z. Henkin
Dr. Douglas H. K. Lee
Mr. Jean L. Lewis
Mr. Leonard Plotkin
Mr. Edge Reid
Mr. W. C. Tucker
Dr. V. O. Wodicka
Mr. William H. Zimmerman

USAIS & USAIC CONFEREES

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Brig Gen Stanley R. Larsen
Brig Gen John F. Ruggles
Col Francis X. Bradley
Col Robert S. Cain
Col Paul T. Clifford
Col John T. Corley
Col Robert L. Crouch
Col William E. Ekman
Col Norman B. Edwards
Col Edgar L. Grider
Col Adrian L. Hoebeke
Col Harry E. Hornecker
Col Charles T. Horner, Jr.
Col Frank M. Izenour
Col Paul J. Jarrett
Col Lewis W. Leeney
Col Julian H. Martin
Col Samuel T. McDowell
Col Horace F. McFeely
Col George A. McGee, Jr.
Col Robert S. Moore
Col John F. T. Murray
Col Roy A. Murray
Col George D. Patterson
Col John J. Pavick
Col Lloyd B. Ramsey
Col Robert B. Skinner
Col Braxton E. Small
Col Albert C. Wildman
Col John M. Woestenburg
Col Robert H. York
Lt Col Thaddeus W. Drobek
Lt Col Richard W. Healy
Lt Col John W. Marr
Lt Col James F. Nabors
Lt Col William E. Neidner
Lt Col Stephen H. White
Lt Col William H. Witt
Maj John W. Collins
Maj William B. Fowlkes
Maj Euless B. Moore, Jr.
Maj Robert B. Nett
Maj William A. Van Dyke
Maj Frank J. Walton
Dr. Harold S. Tate

ANSWERS TO QUARTERLY QUIZ *(See page 30)*

Possible score 100 points, expert 90-100, sharpshooter 70-80, marksman 50-60, recruit 30-40 and bolo 0-20. For detailed discussion of the answers checks the references listed.

1. **c.** When multiple approaches are available and objectives are shallow, a linear formation (three or more companies in the attack) maximizes the frontal firepower and allows the majority of the battle group to close rapidly with the enemy. (Chap 2, Sec III, pars 53 and 54e(3), Advance Sheet, Infantry Division Battle Group, USAIS, July 1958).

2. **Yes.** In a mechanized attack an assault line is selected even though mounted movement onto the objective is planned. In such a case, the assault line selected should be suitable for use by dismounted troops in the event early dismounting is forced by enemy action. (Chap 2, Sec IX, par 58b(6), Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

3. The ¾-ton truck and trailer from platoon headquarters receives its load from the battle group supply point. This vehicle is under the supervision of the assistant platoon sergeant, and remains in a centralized, covered location while one ¼-ton truck and trailer from platoon headquarters and the ¼-ton truck and trailer from each section receive ammunition to resupply the guns. (Chap 5, Sec I, par 131, FM 7-21, August 1957).

4. **c.** The battle group commander usually prescribes the general location, control and composition of the combat outpost. Normally, the responsibility for establishing the combat outpost and the authority to control it are delegated to the forward companies. Troops to garrison the combat outpost are normally furnished by the forward company, though reinforcements such as tanks and Infantry carriers are frequently attached to the company for use on the combat outpost. (Chap 3, Sec II, par 87b, Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

5. **a.** The probable line of deployment is the location on the ground where the company commander plans to complete final deployment prior to moving out with squads as skirmishers. This line should coincide with visible terrain features to facilitate its identification at night. It should be generally perpendicular to the direction of the attack and should be as close to enemy positions on the objective as it is estimated the company can move without being detected. When the enemy has wire obstacles in front of his position, the probable line of deployment should be on the enemy side of the obstacle if feasible. If the battle group commander does not designate the probable line of deployment, the company commander selects it. (Chap 2, Sec XI, par 72f, Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

6. After receiving the mission you will make a *tentative plan,* mentally outlining the actions to be taken so that you may best utilize the time available for preparations and planning prior to rehearsals and departure. You will then *select the additional members of the patrol.* The men will be chosen with care; no one with colds or other physical ailments should be allowed to go on the patrol. You will then issue a *warning order* to all members of the patrol. The warning order will include the situation, mission, equipment and a complete chain of command. While a designated person *supervises* the preparation of patrol members, *you and your second-in-command will make a reconnaissance* from a friendly OP or by light aircraft if the latter is available. Upon completion of the reconnaissance, which should permit a tentative selection of routes and rallying points, you will complete your *detailed planning,* integrating what facts you have learned with those given you by the commander at his briefing. After your detailed planning is complete and arrangements are made to pass through and return to friendly lines, you will issue *the patrol order.* The patrol order should include the situation, mission, the general plan, specific duties of individual patrol members and coordinating instructions, such as time out and in, routes and alternate routes, passage of friendly units, action at danger areas, action to be taken upon enemy contact, initial rallying points, action at rallying points, action at the objective and reporting after the patrol. The order should also point out the arms and ammunition to be carried, how the wounded will be handled, signals, communication and challenges which will be used, the chain of command and the position of the patrol leader in the formation. In giving the patrol order, you should include a briefing with a map and a sandtable or a replica of the objecttive area fashioned from dirt and other natural materials. Your next step will be to conduct a *rehearsal* of the patrol. The rehearsal should be conducted on terrain as similar to the objective area as possible and it should be used to check control, security en route and at the objective, actions to be taken in case of unexpected contact, and actions on the objective and during withdrawal. Following the rehearsal you will conduct a final check of equipment to ensure that everything is ready and complete to the minutest detail. Then the patrol should be allowed to relax until the specified time to move out.

The italicized words and phrases contain the principal points to be considered in patrol preparation.

(Chap 10, Sec II, pars 131 through 140; Sec III, par 140; Sec IV, pars 141 through 147, FM 21–75, June 1957).

7. **b.** During defensive operations, the battle group relies upon wire as one of its primary means of communication. Two or more lines are laid over different routes from the battle group command post to the subordinate units. (Chap 2, Sec III, par 7–21, August 1957).

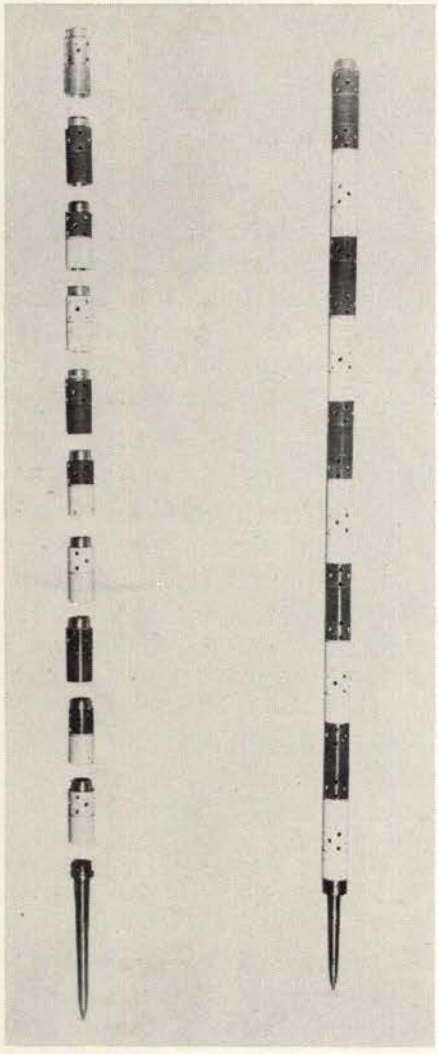
8. **d.** If no battery supply is available or if the transmitter element is defective, emergency operation of Telephone Set TA-312/PT is possible over reduced distances (approximately four miles) by using the receiver element as a sound-powered transmitter. This is done by speaking directly into the receiver element, then listening while the distant party is transmitting. (Chap 2, Sec III, par 22, TM 11–2155, December 1957.)

9. Realistic "shooting" with the portable flamethrower for aiming and firing exercises may be achieved by the use of water instead of fuel. The Special Purpose Weapons Committee of the Weapons Department, USAIS, has found that water gives the same effect or feel in the portable flamethrower as unthickened fuel. Instructors should ensure that flamethrowers are wiped dry after "firing" with water.

10. The M15 rifle differs from the M14 in that it has a bipod, a heavier barrel and handguard, a hinged buttplate and a selector for full automatic fire. ("Firepower," Pentomic Infantry Division, July 1957 *Infantry*; "New Basic Weapon for the Infantry," January 1958 *Infantry* and Special Text 7–179, "U.S. Rifle, 7.62mm, M14 and M15," November 1958).

Continued from Page 60.

Why Don't We . . .



Expedient aiming stake. Left: extensions and spike; right: assembled stake.

. . . manufacture a threaded spike for a field-expedient aiming stake? Thirty-five cartridge-container extensions from 4.2 mortar rounds and the spike, when assembled, will make a standard-size stake. The stake can be painted red and white or left unpainted, since the aluminum alloy extensions are naturally reflective and will not rust.

This type stake in some ways is superior to the issued equipment. The height can be adjusted merely by adding or removing the desired number of extensions; it can be pounded into frozen or packed soil (if the top extension is damaged it can be easily replaced); the stake is rugged enough to withstand rough handling; and replacement parts are readily available at the nearest 4.2 outfit.

The spike should be machined from either one-inch, cold-rolled steel rod stock or similar material. It must have a left-hand thread guaged to fit the female end of the cartridge container extension. The spike is simple to produce. If not provided as an issue item it could be turned out by division ordnance.

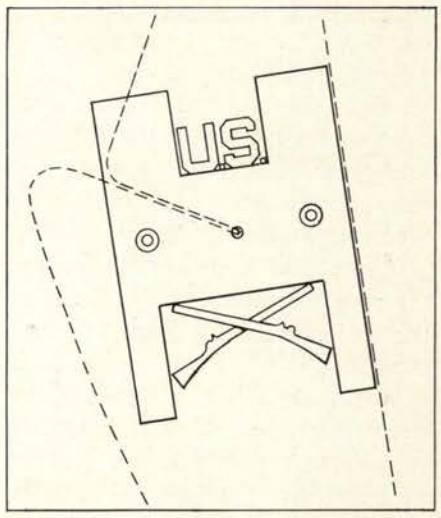
Capt Robert E. Copeland

. . . use a simple template to align lapel insignia? Getting each item in the proper place is a tedious and time-consuming task. Even with care proper placement is not always achieved. This, of course, detracts from the otherwise smart appearance of the uniform.

A plastic, metal or even cardboard template can be made quite easily at home or in a craft shop. The "H" shaped device has a small hole in the center of the crossbar of the "H." The top and bottom edges of the crossbars are exactly ⅝-inch from the hole. To use the template, place it on the lapel so that the center hole is directly over the apex of the lapel slot and the edge is parallel to the lapel fold. The insignia is then centered in the appropriate notch as shown in the sketch. Two pushpins cemented to the template will hold the device in place while the insignia is being positioned.

Capt Wray E. Bradley

Insignia Template



WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Specific or General Interest to Infantrymen

SS10 Antitank Guided Missile Platoon

A pilot SS10 Antitank Guided Missile Platoon is being troop tested at Fort Benning.[1]

The test platoon, organized from elements of the 2d Battle Group, 14th Infantry, began training in November, 1958. In February, the platoon will participate in field exercises to determine the adequacy of the SS10 instructional program.

To facilitate the training of SS10 gunners, the United States Army Infantry School has received two training devices, a Simulator and a Cinetir.

The Simulator is an electronic device which represents the SS10 tail flare by means of a moving spot on a cathode ray oscilloscope (similar to a TV picture tube). The movement of the spot is controlled by the same type of remote control unit and signal generator used with the actual missile. The Simulator is employed in the basic stages of gunnery training to teach the gunner the fundamentals of guiding the missile in flight.

The Cinetir is used for advanced gunnery training. This electronic aid portrays realistic combat situations for student gunners by means of a wide-screen motion picture. A luminous spot, representing the tail flare, is projected on the screen. The position of the spot is controlled by the standard remote unit. The student is required to "fly" the spot to a moving target. The Cinetir can also show the effects of varying atmospheric conditions on the missile's flight.

Vehicle Navigation Course

A one-hour period of instruction on vehicle navigation has been integrated into the program of instruction for Advanced, Associate Advanced, Motor Transportation and Automotive Supervision classes at the United States Army Infantry School.

The period is designed to acquaint the student with the requirement for a system of vehicle navigation for the mobile Infantry and to arouse his interest in this subject.

The student is given an orientation on navigational equipment currently under development, including the subminiature gyro compass and the position indicating computer.[2] These two instruments comprise an automatic dead-reckoning navigational system which will provide the vehicle commander or operator with constant data on his position and course.

Protective Mask

The new E13 protective mask has been tested at Fort Benning under simulated combat conditions.[3] The mask uses lightweight filter pads inclosed in cavities molded into the facepiece. The protruding cannister has been eliminated entirely.

The E13 offers superior vision and lower breathing resistance. Its "voice-mitter" amplifies the wearer's voice so that masking will not interfere with communication between soldiers.

Fort Benning's Infantry Human Research Unit conducted the six-day test to determine the effect of the mask on individual combat performance. Troops were tested in the use of the rifle, binocular target detection, terrain speed traps and physical endurance runs with and without the mask. Any loss of performance due to masking was noted. Results of the test are not yet available.

Tubeless Tires

A user evaluation test of tubeless tires for jeeps is being conducted at the United States Army Infantry Center to determine whether these tires are suitable for Infantry vehicles. The test is being made by the 1st Battle Group, 29th Infantry, and the Transportation Motor Pool, in conjunction with the Ordnance Tank-Automotive Command.

Except for the tubeless feature, the tires are identical in dimension and construction with the standard 7.00-16 military tire. The only other tubeless tires currently used by the Army are those installed on new sedans by the manufacturer.

Poncho Parachute

A new use has been found for the Army poncho. The poncho, shower-shedder for troops all over the world, can also be used as an improvised supply parachute.

[1]See "Death to the Tank" in the July-September 1958 *Infantry*.

[2]See "Vehicle Navigation" in the July-September 1958 *Infantry*.

[3]For information about an earlier model of the E13, see "What's New for Infantrymen," p. 107, October 1957 *Infantry*.

The practicality of this field expedient was demonstrated recently in a test drop made in the Panamanian jungle by personnel of the Jungle Warfare Training Center and the Army Aviation Section, 1st Battle Group, 20th Infantry.

Practice and demonstration drops utilizing poncho parachutes are now carried out as a normal part of the training cycle at the JWTC.

By using the poncho, the Center avoids the expense of employing the regular cargo parachute. Use of cargo parachutes is restricted to items too heavy to be sustained by the poncho.

Mortar Locator Radar

The MPQ–4A Mortar Locator Radar developed for the Signal Corps has undergone producer's tests. Highly mobile, the trailer-mounted radar system detects an incoming mortar shell in flight and electronically computes the location of the enemy mortar which delivered it.

The capability of rapidly searching out the sources of mortar and high-angle, low-velocity artillery fire permits a quick and effective defense against one of the Infantryman's most formidable adversaries. In addition to being able to locate rapidly sources of enemy mortar fire and high-angle, low-velocity artillery, the MPQ–4A can also be used to locate points of impact for the direction of counterfire.

Revised Pre-Commission Course

A revamped Pre-Commission Extension Course, oriented to pentomic organization, is now available to enlisted personnel throughout the Army. The course is administered by the Department of Non-Resident Instruction of the United States Army Infantry School.

The specific purpose of the course is to cover those basic subjects which are common to all branches of the Army and which may be required for appointment to the grade of second lieutenant in one of the Reserve components. However, all enlisted men may use the program to improve themselves professionally and to further qualify themselves for advancement.

While the revised Pre-Commission Extension Course is not specifically designed to be used as a vehicle for promotion within the enlisted grades, completion of the course will improve the military education of the individual and thus equip him academically for promotion and acceptance of added responsibility.

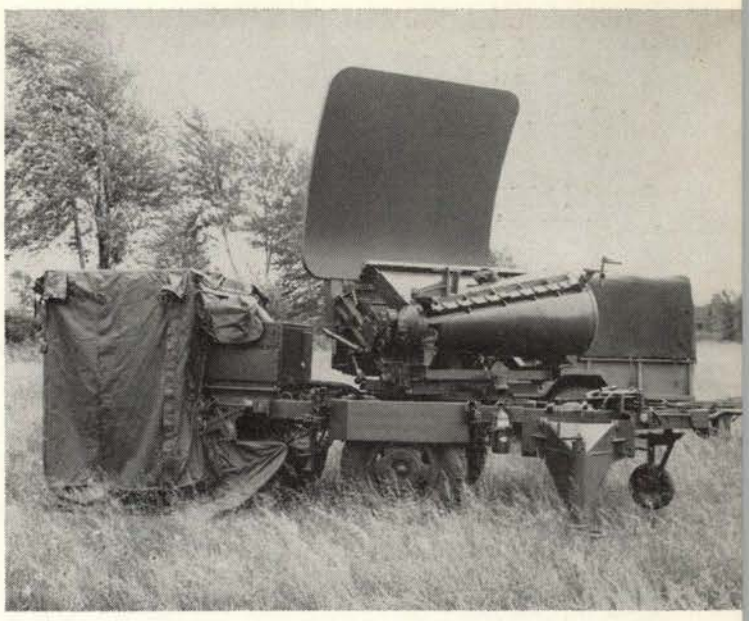
Information on the Pre-Commission Extension Course and other Army Extension Courses is contained in AR 350-60 and DA Pamphlet 350–60.

New Extension Course Brochure

Copies of a new brochure describing the 1958-1959 Extension Course Program of the United States Army Infantry School have been distributed to all army and corps headquarters, military districts, service schools and state adjutants general throughout the United States and in overseas commands. The brochure lists by number and title the subcourses prepared and administered by the Infantry School, and also contains information on content, eligibility for enrollment and enrollment procedures.

Entitled "Extension Course Program 1958-59," the brochure is available at active Army, Reserve and National Guard headquarters and installations. It can also be obtained by writing to the Department of Non-Resident Instruction, United States Army Infantry School, Fort Benning, Georgia.

The Extension Course Program parallels the instruction presented to resident students at the Infantry School, but is designed to meet the needs of correspondent students. More than 52,000 students are currently enrolled in USAIS Extension Courses.



The MPQ-4A Mortar Locator Radar.

MANUALS

The following manuals and training literature are being written or rewritten. Publication cannot be expected until later this year.

FM 7–21, C1, Headquarters and Headquarters Company, Infantry Division Battle Group (change).

FM 21–5, Military Training (revision).

FM 21–75, C1, Combat Training of the Individual Soldier and Patrolling (change).

FM 23–30, Grenades and Pyrotechnics (revision).

FM 23–( ), Machinegun, 7.62mm, M60 (new).

FM 23–( ), 90 mm Gun, Self-Propelled, M56 (new).

TC (s) ( ) – ( ), The Antitank Guided Missle (SS–10) Platoon (Organization and Operational Concept) (Part One) (U) (new).

TM 57–210, Air Movement of Troops and Equipment (revision).

The following manuals have been forwarded by the United States Continental Army Command to The Adjutant General for printing and publication:

DA Pamphlet 23–2, Hits Count (revision).

FM 21–( ), Evasion and Escape (new).

(C) FM 21–( )A, Evasion and Escape (new).

FM 22–5, Drill and Ceremonies (revision).

FM 22–100, Military Leadership (new).

FM 23–5, U.S. Rifle Caliber .30, M1 (revision).

FM 23–90, 81mm Mortar, M29 (revision).

ROTCM 145–4–2, The Junior ROTC Manual (revision).

ROTCM 145–100, Service Orientation (revision).

TM 57–220, Technical Training of Parachutists (revision).

The following manual has been forwarded to Department of the Army for approval and publication.

FM 7–40, Infantry Division Battle Group (new).

The following manual has been forwarded to United States Continental Army Command for review and approval:

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Group.

The following manuals have been published by Department of the Army and are available to instructors through normal supply channels:

FM 21–18, Foot Marches (revision).

FM 21–150, Hand-to-Hand Combat (change).

FM 23–32, 3.5-inch Rocket Launcher (revision).

FM 23–72, Carbine Marksmanship Courses, Trainfire I, (new).

FM 23–82, 106mm Rifle, M40A1 (revision).

FM 57–35, Army Transport Aviation—Combat Operations (new).

ROTCM 145–30, Individual Weapons and Marksmanship (revision).

ROTCM 145–41, Crew Served Weapons and Gunnery (revision).

ROTCM 145–60, Small Unit Tactics Including Communication (revision).

ROTCM 145–80, Logistics (revision).

ROTCM 145–90, Operations (revision).

TM 57–220, C3, Technical Training of Parachutists (change).

TRAINING FILMS

The following training films have been approved for release to requesting units:

GF 10–44, Warehousing Series—Part IV—Palletized Unit Loads, 17 min.

GF 10–45 Warehousing Series—Part V—Receiving and Shipping of Supplies, 23 min.

MF 5–8986 The Army Package Power Reactor, 26 min.

MF 7–8879 Terrain of the Nurenberg-Bamberg Area (Color), 31 min.

MF 11–8912 Electronic Warfare (U), 21 min.

MF 46–8902 Helicopter Mountain Operations, 25 min.

MF 46–8906 Helicopter Vibrations and Resonance —Part IV—Ground Resonance, 7 min.

MF 46–8908 Helicopter Emergency Procedures—Part II—Emergency Procedures in the H–13 (HTL), 11 min.

MF 46–8998 Flying Soldiers, 30 min.

TF 7–2634 Jungle Operations—Part I—How to Live in the Jungle, 19 min.

TF 7–2635 Jungle Operations—Part II—Technique of Jungle Combat, 23 min.

TF 7–2700 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem one, 5 min.

TF 7–2701 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem two, 4 min.

TF 7–2702 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem three, 7 min.

TF 7–2706 Leadership—Post-Commissioned Series, Handling of Subordinate Leaders in Combat, Problem one, 6 min.

TF 7–2707 Leadership—Post-Commissioned Series, Handling of Subordinate Leaders in Combat, Problem two, 6 min.

TF 7–2708 Leadership—Post-Commissioned Series, Handing of Subordinate Leaders in Combat, Problem three, 6 min.

TF 7–2709 Leadership—Post-Commissioned Series, Utilization of Personnel, Problem one, 4 min.

TF 9–2586 Automotive Trouble Shooting—Part XVII —Hydraulic and Air Hydraulic Brakes, 29 min.

TF 9–2690 Throttle Synchronization, M59 Armored Infantry Vehicle, 6 min.

TF 11–2237 Servo Systems and Data Transmission —Part III—Automatic Tracking and Data Transmission, 33 min.

TF 11–2487 Radio Interference—Part I, 23 min.

TF 11–2488 Radio Interference—Part II, 37 min.

TF 11–2650 Operation of Countermeasure Receiver AN/TLR 9, 10 (U), 26 min.

TF 16–2695 The Character Guidance Program, 23 min.

TF 16–2735 Moderation, 6 min.

TF 16–2736 Life—My Right to Life, 7 min.

TF 17–2600 Communication in an Armor Battalion Task Force Command Post, 26 min.

TF 30–2601 Electronic Search Recording Techniques, 37 min.

TF 33–2581 Leaflet Dissemination, 20 min.

TF 41–2590 Military Government in an Enemy City—Public Safety, 17 min.

TF 41–2591 Military Government in an Enemy City —Public Health, 16 min.

TF 41–2592 Military Government in an Enemy City—Civilian Evacuation, 25 min.

INSTRUCTIONAL MATERIALS

The following instructional material is suitable for resident as well as non-resident instruction and may be obtained from the Book Department, United States Army Infantry School, Fort Benning, Ga., at the prices shown:

Mechanical Training, 106mm rifle, 1707–USAR, four hours. Integrated conference, demonstration and practical exercise covering disassembly, assembly, functioning, stoppages and immediate action for the 106mm rifle. 20¢.

106mm Recoilless rifle; 3.5-inch Rocket Launcher; 90mm Assault Gun; 90mm Gun Tank; and 76mm Gun Tank, 1710–USAR, three hours. Conference and demonstration covering characteristics and capabilities of the 106mm recoilless rifle; 3.5-inch rocket launcher; 90mm assault gun, M56; 90mm gun tank, M48; and 76mm gun tank, M41. Includes new developments in ammunition and firing demonstrations. 25¢.

Introduction, Ammunition and Marksmanship, 106mm Recoilless Rifle, 1736–USAR, three hours. Integrated conference and demonstration covering general data, characteristics and capabilities of the 106mm rifle and its ammunition, weapons system alignment and night firing techniques. 15¢.

General Characteristics of the 90mm Gun Tank, M48, 1767–USAR, one hour. Integrated conference and demonstration covering general characteristics and data pertaining to the 90mm gun tank, M48. Operation, use, capabilities and limitations of turret control and direct fire control system of the M48 are discussed. The problem also covers the capabilities and limitations of 90mm ammunition and the direct fire support role of the M48 tank. 20¢.

Military Instruction, 7188–USAR, three hours. Integrated conference, demonstration and practical exercise to bring out the principles and techniques of military instruction and the use of training aids by teaching the duties of the battle group S3 in detecting weaknesses in training by personal observation, analyzing training inspection reports to isolate strengths and weaknesses, and formulating recommendations for the improvement of training. 20¢.

The Mortar Battery in Action, 2662–USAR, one hour. A demonstration of the operating capabilities of the mortar battery. The problem includes reconnaissance, selection and occupation of the position area, followed by live firing of a typical fire mission. The demonstration portrays the related and concurrent operations of each element of the mortar battery, including firing battery, platoon and battery fire direction centers, survey, communication and observation. Emphasis is placed on the capability of the battery to function as a unit or as two separate firing platoons. 45¢.

Concept of Intelligence, Weather and Terrain, 6607–USAR, three hours. A conference and practical exercise covering the principles of military intelligence, the value of intelligence in the exercise of command and the concept of combat intelligence. A map exercise covers the weather and terrain, the military aspects of terrain and terrain analysis. 25¢.

The Enemy, 6608–USAR, one hour. A conference on the enemy element of intelligence, including information essential for analysis of indications and determination of capabilities and probable courses of action; and an orientation on the purpose and use of the Aggressor Army. A practical exercise is presented on order of battle fundamentals, to include familiarization with the Aggressor Handbook. 15¢.

Collection of Information, 6612A–USAR, three hours. The problem outlines collection of information, to include sources of information and collection agencies, the handling of prisoners of war and enemy documents, and the use of aerial photos as sources of information. 65¢.

Collection, Reconnaissance Duties of the S2, 6616–USAR, three hours. A conference and practical exercise covering S2 reconnaissance responsibilities, to include necessary coordination with other officers, operation of observation posts, employment of organic reconnaissance elements, patrol planning and the briefing and debriefing of patrols. $1.00.

Processing Information, 6627–USAR, four hours. A conference and practical exercise on recording and analyzing information concerning the weather, terrain and enemy; drawing conclusions from processed data; maintaining a continuous intelligence estimate; techniques and methods used in posting the S2 situation map, in maintaining the S2 worksheet, evaluating and interpreting information, and preparing the intelligence estimate. 85¢.

The S2 at Work: Use of Intelligence, 6629–USAR, eight hours. A conference and practical exercise on the processing of information into intelligence and the use of resulting intelligence in several attack situations; performance of normal combat duties of an S2 at battle group level, to include maintaining a situation map, worksheet and current intelligence estimate. The conference includes a review of collection planning, the preparation of an intelligence estimate for a defensive situation, and the use of intelligence in orders, reports and records. $1.20.

Counterintelligence, 6646–USAR, one hour. A conference covering counterintelligence and familiarization with AR 380–5, "Safeguarding Military Information." 10¢.

Intelligence Training, 6650B–USAR, one hour. A conference and practical exercise on the purpose of intelligence training, scope, responsibility, personnel to be trained and implementation of training. 30¢.

ANNUAL INFANTRY INDEX

This index lists all of the articles published in INFANTRY *during 1958. The articles are arranged chronologically under appropriate USAIS academic departments.*

AIRBORNE-AIR MOBILITY DEPARTMENT

STABILIZED FREE FALL — JAN 1958
By Capt Jacques Andre Istel
Discusses the techniques and equipment used in stabilized free-fall parachuting (Sky Diving). Suggests that this safe, silent and accurate parachuting technique can be used for reconnaissance on the modern battlefield.

OLD JUMPERS—NEW TECHNIQUE — JUL-SEP 1958
By Lt Fritz Bernshausen
A couple of veteran parachutists discuss the unusual features of, and methods of parachuting from, the C-130 troop-carrier aircraft.

COMBAT DEVELOPMENTS OFFICE

A NEW LIFT FOR THE INFANTRYMAN — JUL-SEP 1958
By Lt Col Edward H. Simpson
Describes the characteristics and capabilities of the newly developed amphibious and air-transportable T-113 Infantry personnel carrier.

COMMAND AND STAFF DEPARTMENT

THE BRIGADE HEADQUARTERS — JAN 1958
By Capt Joseph H. Rapp
Discusses the purpose, organization and specific functions of the new brigade headquarters in the pentomic Infantry division.

STAFF PROCEDURES — JAN 1958
By Maj Edmund J. Carberry and Capt Joseph A. Edmunds
Discusses division and battle group staff procedures in the pentomic Infantry division. Describes the organization and functions of the battle group staff.

LOGISTICAL SUPPORT — JAN 1958
By Lt Col T. F. Horan
Discusses logistical support for the pentomic Infantry division. Covers in some detail the organization and operations of the division trains. Suggests several TOE revisions.

PENTOMIC COMPANY IN THE DEFENSE — JAN 1958
By Capt Thomas H. Jones
Discusses position and mobile defense by the pentomic rifle company. Presents a tactical exercise in which the company conducts a mobile defense with atomic weapons.

BATTLE GROUP IN THE ATTACK — APR-JUN 1958
By Lt Col Albert H. Smith, Jr.
Discusses the planning and conduct of mounted offensive operations by a battle group on the atomic battlefield.

THE BATTLE GROUP IN THE DEFENSE — JUL-SEP 1958
By Lt Col Albert H. Smith, Jr.
Discusses the organization and conduct of both mobile and position defense by the battle group. Presents a tactical exercise in which the battle group conducts a mobile defense with atomic weapons.

PUT THE INFANTRY CAR IN THE INFANTRY GARAGE — JUL-SEP 1958
By Col Frank M. Izenour
Recommends that the personnel carriers in the Infantry division be assigned to the Infantry.

GARRISON SUPPLY — JUL-SEP 1958
By Capts Chandler Goodnow and Benjamin G. Spivey
Discusses the new garrison supply regulation, AR 735–35, which simplifies supply procedures at company and battery level.

THE BATTLE GROUP COMMANDER'S PERSONAL ARTILLERY — OCT-DEC 1958
By Maj Hulen D. Stogner
Discusses the organization and tactical employment of the 4.2-inch mortar battery as an Artillery unit in the battle group of the pentomic Infantry Division.

HOW WOULD YOU DO IT? — OCT-DEC 1958
By Capt Robert F. Lynd and Lt Wesley B. Shull
Presents a tactical problem on the organization and employment of a helicopterborne, small-unit task force which is supported by atomic fires. Requirements are provided for the reader to solve. Solutions are given and discussed.

COMMUNICATION DEPARTMENT

ARE YOU SATISFIED WITH OUR COMMUNICATIONS? — APR-JUN 1958
By Capt Joseph J. Piaseczny
Discusses the communication requirements of the Infantry squad, platoon, company and battle group. Describes and assesses current and proposed communications means, including radio, wire, messenger, visual and acoustical.

TESTING BATTLE GROUP SWITCHBOARDS — APR-JUN 1958
By Capt John E. Riordan
Presents operational tests developed by the United States Army Infantry School for the SB–86/P and SB–22/PT switchboard.

COMMUNICATIONS, PLEASE! — JUL-SEP 1958
By Col John T. Corley
Evaluates post-World War II communication improvements and points out deficiencies in the rifle company, particularly at platoon and squad level. Stresses the need for improved communication training and maintenance.

HOW TO INSPECT COMMO EQUIPMENT — OCT-DEC 1958
By Capts Emil J. Stryker, Jr. and Clarance J. Schlafer
Describes in some detail recommended procedures for non-technical inspection of all signal equipment in the pentomic rifle company.

GROUND MOBILITY DEPARTMENT

VEHICLE NAVIGATION — JUL-SEP 1958
By Capt Davant T. Williams
Discusses navigational instruments now being developed which will enable personnel carriers and other Infantry vehicles to navigate the modern battlefield under any condition of visibility and without the aid of maps, roads or prominent terrain features.

SHORT CUT TO MOBILITY — OCT-DEC 1958
By Maj Albert L. Kotzebue
Discusses the adaptability of the M56 "Scorpion" as a full-

tracked weapons platform for the 106mm recoilless rifle, the 81mm and 4.2-inch mortars and the quad .50 multiple machinegun. Describes a modified version of the M56 which will provide a light, amphibious Infantry personnel carrier.

RANGER DEPARTMENT

SQUAD TACTICS—CARRIER BATTLE DRILL — APR-JUN 1958
By Capt John T. Hodes

Describes a seating arrangement and a dismount drill which will enable a squad to leave the Infantry personnel carrier in an organized manner and ready to engage in close combat.

INFANTRY INTERN — JUL-SEP 1958
By Lt Col Alden P. Shipley

Discusses the Ranger training given by the United States Army Infantry School. Points out how this training provides a rugged internship during which the young Infantryman, like the medical intern, gets the experience he needs in his profession.

SPECIAL SUBJECTS DEPARTMENT

NONCOMMISSIONED OFFICER — JAN 1958
By M/Sgt Frank K. Nicolas

Discusses the need for strong, responsible noncommissioned leaders in our modern Army.

THE 'R' OF CBR — APR-JUN 1958
By Lt Col Walter L. Miller, Jr.

Discusses the source, detection and effects of nuclear radiation on the battlefield, and methods of combatting it.

MEDICAL SERVICE FOR MODERN COMBAT — APR-JUN 1958
By Lt Col Robert F. Bell

Discusses the problems to be faced and modifications required in furnishing medical support during modern combat.

TRAINING FOR COMBAT — APR-JUN 1958
By Lt Col Walter R. Bruyere

Recommends military mountaineering as an effective but safe method of training which provides the element of personal danger experienced by the soldier in actual combat.

OF WORDS AND WEEDS — JUL-SEP 1958
By Col John Dibble, Jr.

Provides tips on how to write for publication and how to get a manuscript published.

DON'T LEAD HIM BY THE HAND — JUL-SEP 1958
By Lt Col John M. Hinman

Points out that many senior commanders fail to develop initiative and responsibility among their junior officers because they lead them by the hand instead of delegating authority.

LET'S GIVE TRAINING BACK TO THE COMMANDER — JUL-SEP 1958
By Brig Gen Joseph B. Crawford

Advocates discontinuance of the committee system of training and recommends a return to unit training.

YES SIR! — OCT-DEC 1958
By Lt Col Leland S. Devore, Jr.

Discusses various aspects of command management. Recommends elimination of the automatic "Yes, Sir!" which leads to friction and inefficiency and suggests the creation of an atmosphere in which the commander's desires and orders are clearly understood by his subordinates.

LET'S STRESS THE BLUE BADGE — OCT-DEC 1958
By Brig Gen David W. Gray

Discusses the value of the Expert Infantryman Badge and EIB testing. Describes a method of planning for and conducting the tests.

WEAPONS DEPARTMENT

NEW BASIC WEAPON FOR THE INFANTRY — JAN 1958
By Maj R. H. Oestreich

Provides a detailed look at the new M14-M15 rifle. Discusses characteristics, mechanical training, functioning, maintenance, ammunition, sights and marksmanship.

THE CALIBER .45 PISTOL — APR-JUN 1958
By Capt John L. Eberhard

Explains three changes in .45-caliber pistol instruction at the United States Army Infantry School which enable anyone to fire the pistol effectively.

ARMY RIFLE MARKSMANSHIP TODAY — JUL-SEP 1958
By Gen Willard G. Wyman

Answers questions on the Army's new rifle marksmanship program and explains its superiority over systems employed in the past.

DEATH TO THE TANK! — JUL-SEP 1958
By Lt Col Albert A. Merglen

Discusses the characteristics and capabilities of the remarkable French SS10 and SS11 guided antitank missiles.

FLAME FOR THE INFANTRY — JUL-SEP 1958
By Lt Col Walter L. Miller, Jr.

Discusses the current and projected capabilities of flame weapons for modern combat with emphasis upon their demoralizing and casualty-producing effects.

GIVE LITTLE TUBE A JOB — OCT-DEC 1958
By Maj Frederick M. McConnell and Sgt Calvin W. Sears
Advocates giving the rifle platoon the hand-held 60mm mortar as an organic indirect fire weapon. Discusses the versatility, simplicity and availability of the 60mm mortar to back up this proposal.

THE SCORPION — OCT-DEC 1958
By Capt Wayne L. Seeley and Lt William T. Pye
Discusses the characteristics, capabilities and methods of employment of the M56 self-propelled, airborne, 90mm antitank gun.

MULTILITE — OCT-DEC 1958
By Maj Jack F. Kettler
Discusses a new aiming system which will enable the Infantryman to employ his direct fire weapons with greater accuracy at night.

EFFECTS OF COLD WEATHER ON INFANTRY WEAPONS — OCT-DEC 1958
By Lt Andrew W. Furlan
Discusses the effects of sub-zero temperatures and other extreme cold conditions on Infantry weapons and provides solutions to some of the problems presented.

MISCELLANEOUS

LETTER TO A TROUBLED LIEUTENANT — JAN 1958
By Capt Thomas H. Jones
Describes the challenges and rewards of an Army career and answers the questions of a troubled lieutenant who wonders whether he should or should not remain in the service.

WAR OF WORDS — JAN 1958
By Capt John W. Warren
Emphasizes the importance of equipping Infantrymen with the truth about our country and our objectives as our best weapon against enemy psychological warfare.

PENTOMIC TERMINOLOGY — JAN 1958
By Infantry *Staff*
Presents the approved titles and unit designations for pentomic Infantry, Airborne and Armor divisional TOE units.

A NEW LOOK AT SOVIET TACTICS — JAN 1958
By Lt Col Willard W. Hawke
Appraises Soviet tactical capabilities and limitations based on the latest and most valid information available to the Department of the Army. Discusses Soviet tactics for the attack and the defense in nuclear and non-nuclear warfare.

THE INFANTRYMAN IN THE ATOMIC AGE — APR-JUN 1958
By Lt Gen Herbert B. Powell
Discusses the role and continuing importance of the Infantryman in the atomic age.

THE SOVIETS FORGE AHEAD — APR-JUN 1958
By Col Theodore C. Mataxis
Discusses new weapons and equipment in the hands of Soviet troops and compares such weapons and equipment with our own.

EASING THE LOAD ON THE INFANTRYMAN'S BACK — APR-JUN 1958
By Maj Theodore K. Hudson
Describes the new universal individual load-carrying system which reduces the weight of the load slightly and makes it much easier to carry.

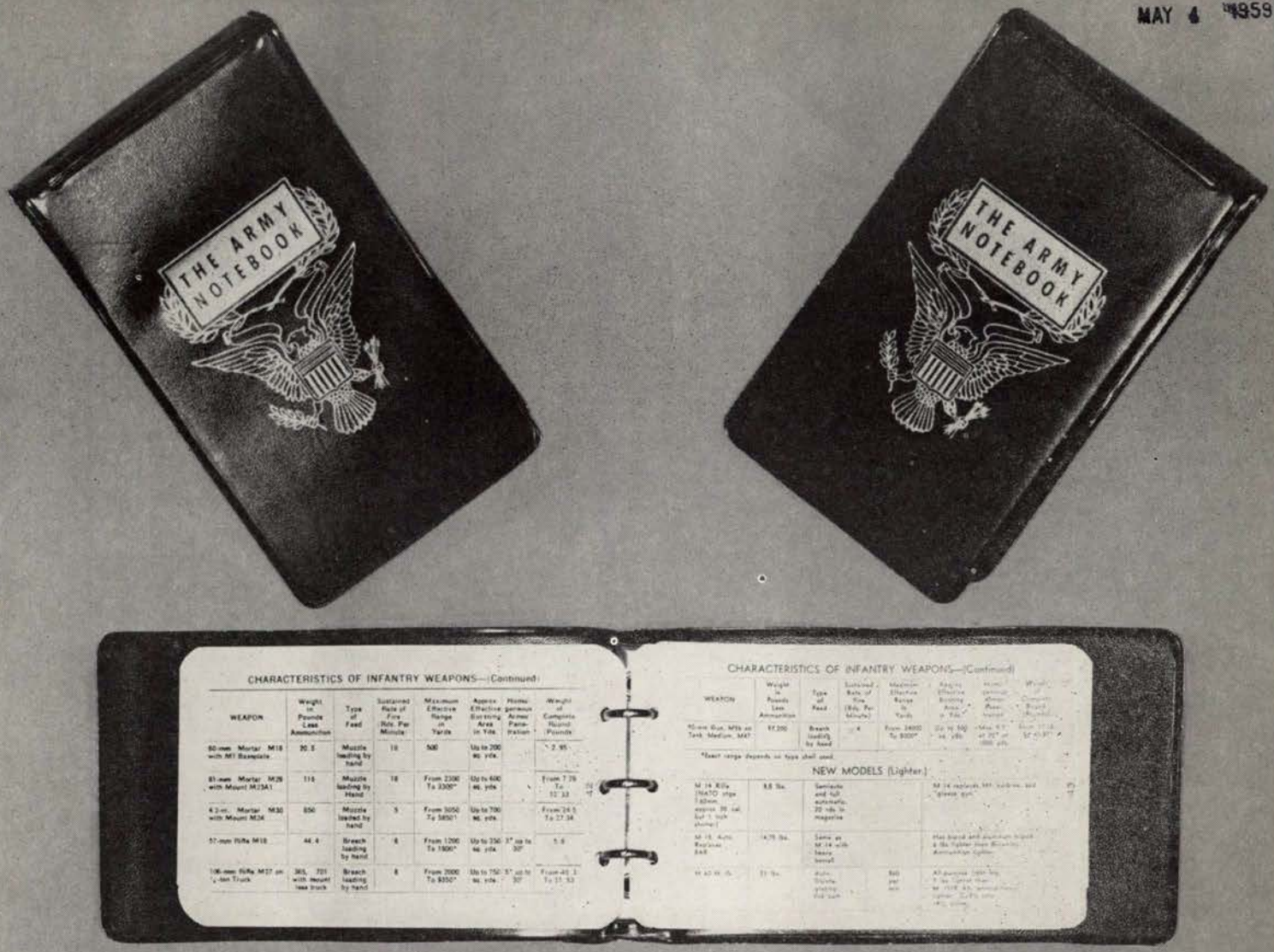
RESCUE THE COMPANY COMMANDER — JUL-SEP 1958
By Lt Col Anthony L. P. Wermuth
Advocates raising the rank of the company commander in the pentomic Infantry division from captain to major.

LETTER OF APPRECIATION — JUL-SEP 1958
By Lt Loren C. Troescher
Expresses a young reserve lieutenant's appreciation to the United States Army for the unusual opportunities and benefits he received during his two-year tour of active duty.

INFAIRTRY—A LOOK AHEAD — OCT-DEC 1958
By Lt Col Jack W. Hemingway
Discusses the present and future of Infantry-air teams. Presents a fictitious company which solves a tactical situation as it could be done today, then as it might be done in the future.

THE INFANTRY GOES TO THE DOGS — OCT-DEC 1958
By Lt Clifton H. Deringer, Jr.
Discusses the Infantry Scout Dog Platoon, its organization, training and capabilities for modern combat.

STAND UP AND TALK — OCT-DEC 1958
By Col John Dibble, Jr.
Discusses the technique of good public speaking. Points out that careful preparation, a simple approach and confidence enough to avoid memorizing or reading a manuscript make up the "gift" of good public speaking.



You Need the Army Notebook!

This complete and compact pocket notebook has been prepared by Colonel Sidney Morgan to provide important fingertip information for Infantry officers and noncommissioned officers.

The Army Notebook is an attractive plastic (leatherette), loose-leaf book which measures only 3½ by 5¾ inches. In addition to a thorough, compact coverage of principles, charts, symbols and vital data needed by the Infantryman, it contains 50 blank pages for daily notes.

A few of the many subjects covered are: • Pay Data • Leadership Principles • The Principles of War • Troop Leading Steps • Estimate of the Situation • First Aid • The Pentomic Division • Military Symbols • Attack and Defense Tactics • Guided Missiles • Vehicle Maintenance • Communication • The Characteristics of Infantry Weapons.

Price: $1.40. Refills (note sheets) $.07 per package. Send order with full purchase price plus 5% for purchases over $5.00, or a minimum of $.25, for postage and handling charges.

Write: The Book Department, United States Army Infantry School, Fort Benning, Georgia

TO THE ULTIMATE WEAPON

By Lt Col Anthony L. P. Wermuth

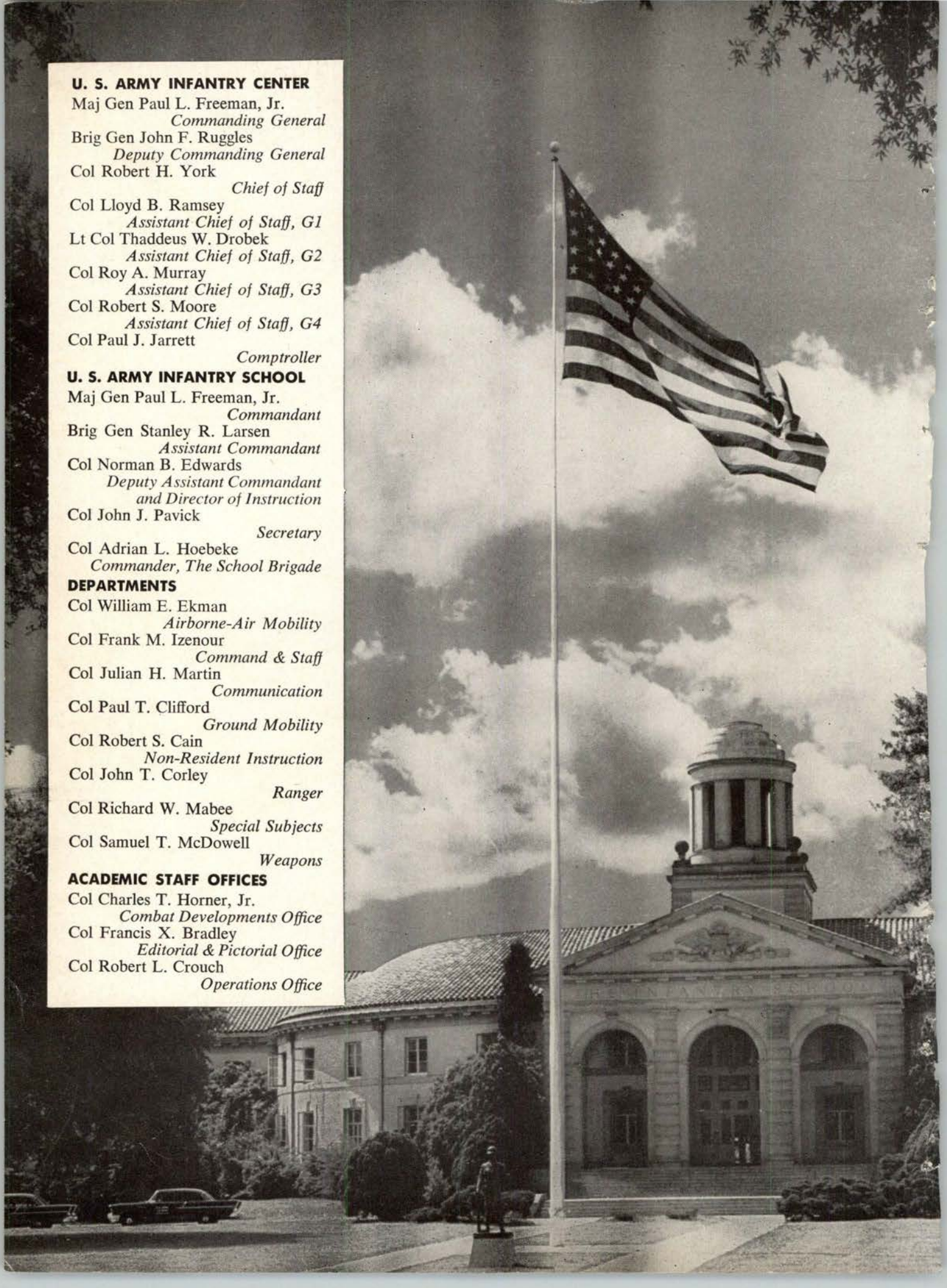
First in, last out . . .
Fidelio,
The angel Gabriel in a muddy helmet,
A flame-charred devil on the ninth level of *Inferno*—
The Infantryman!
The fighter's fighter.
The soldier's soldier.
He travels not along the super-highways
But along the faint trails of the world,
High along the ridges and down the defiles,
Tracing the veins and capillaries
On the skin of the earth,
To thrust his bayonet
Personally
Into the incandescent heart of battle.
The cost of this trip
Is the highest
Exacted in war.
Not for him the three-
Or ten-hours-a-day war.
Sheltered by a parasol of planes,
Served by men and machines of infinite variety,
Reassured by mortars and ships
Prowling the nearby meadows and seas,
He is,
Nonetheless,
In light and darkness,
Perpetually
Shadowed
By death.

Until, at last,
On some strange promontory,
In the midst of comrades fallen,
Suddenly,
He stands alone.
The only powers of body and spirit
Available
To be summoned
Are such as he happened to bring
To the battle—
To the personal battle
No other man
Is called upon
To undergo.
Sooner or later,
Struggling in the vortex of the whirlwind,
Tested over and over again,
With the scarred body,
The bloody fist,
The indomitable heart,
The blistered feet, and
The fighting hands,
He stands alone,
Where the danger is.
The Infantryman
Volunteers for nothing,
But every lethal device in war
Volunteers for him.
When they come after him,
They've tried and failed
With everything else
To reach
The point of power,
The focus of freedom,
The pivot of decision,
And the hottest spot in the war.
Sprawler during every opportunity,
Plodder, racer,
Stalker, raider,
Waiter,
Walker over mountains, glaciers, and swamps,
Outwitting the machine he witted,
He does what no one else can do—
He storms the parapets yet untaken
By all the machines
And munitions of war.
He lays his manhood,
Sometimes not yet reached,
On the line,
And sometimes stays forever there,
Reformed to a grotesque
Memorial,
Having given a massive transfusion
To hills like home
Or desert sands.
If there is blood on his hands,
It is a stain he carries
For every man,
Woman, and child
In friendly lands.
The rifleman lives,
If he does,
On what is left after lending time;
The beloved people
Of his country
Live afterward on borrowed time—
His.
Decorated with a flower
Flushed from a field bathed in deadliness,
Dressed in dirt,
With dusty lungs,
He hardly suggests
The beau ideal
Of every other fighting man.
Too numerous to be distinguished;
Too full of the memory of fear
To swagger;
Too tired to boast;
Too well aware of the luck
Of his own survival
To pontificate;
Too mindful of a platoon
Of missing heroes
To be a hero;
Too grateful to demean any other fighter—
If he is unimpressed with others,
It is the natural result of being unimpressed
With himself.
He is the personal fighter,
The champion,
The first in and the last out,
The irreplaceable,
The ultimate weapon! . . .
The Infantryman!

Infantry

e Professional Journal for Infantrymen

Apr-Jun 1959



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THE COVER

This is the second in a series of covers designed to demonstrate the versatility and mobility of the Infantry. The Infantryman can move to any point that a land, water or air vehicle or parachute can reach. From there he can move on foot. Photo by Sgt Louis Castagnaro with cooperation of 1st Battle Group, 29th Infantry and 4th Transportation Company. Note: Back cover is designed for matting and framing.

Infantry

The Professional Journal for Infantrymen

OFFICIAL PUBLICATION

UNITED STATES ARMY INFANTRY SCHOOL

Vol. 49 Second Quarter Apr-Jun 1959 No. 2

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Dear Infantryman:

HAVING proudly worn the crossed rifles myself — both as an enlisted man and as an officer of the 42nd "Rainbow" Division throughout all its World War I engagements — I have a particularly warm spot in my heart for you, the American Infantryman. Fighting shoulder-to-shoulder with the artilleryman, the tanker, and the soldiers of the other ground arms and services, you have borne the brunt of the battle throughout the history of this Nation. You have met the enemy head-on, and defeated him in close, personal combat. You epitomize the fundamental element of warfare — man, the "ultimate weapon."

No one knows better than you that the role of the Infantryman has through the years become infinitely more complex. In this nuclear age you must be prepared to face powerful weapons new to warfare, and to cope with a tactical environment unknown in the past. But throughout history, you have consistently pitted your ingenuity and your valor against new weapons and new situations, and won your way to victory. To assist you in carrying out your basic and time-honored mission of closing with the enemy and destroying him on the field of battle, you have the finest equipment and most potent armament American science and technology can provide. These you must learn to exploit with maximum effect, but nothing can overshadow the importance of you, yourself.

No mechanical device could ever take the place of your ingenuity, your capacity to reason, your courage and determination in the face of the harsh realities of combat. The tools of war which have been placed in your hands are your servants; they lengthen your reach, give wings to your boots, and increase the strength of your arms, but without you as their master, they are less than nothing.

I have abiding faith in you. That faith will go with you wherever you may serve, wherever you and the other members of the Army team may be called upon to uphold and defend the majestic ideals upon which this Nation was founded. In a very real sense, the future of America is in your worthy hands. Guard it well.

Wilber M. Brucker.

WILBER M. BRUCKER
Secretary of the Army

FROM THE SECRETARY

THE EDITOR SAYS

DEAR READER:

With this issue of *Infantry* we complete a full year with the enlarged format. It might be well to pause at this point to take stock and set our sights for the future.

While *Infantry* must be financed entirely by revenue from subscriptions, the change to the more expensive format was accomplished at no additional cost to the reader. This was made possible by a steady increase in the number of subscribers—circulation during the past quarter reached an all-time high.

Except for several individuals who have expressed a preference for the smaller magazine, most *Infantry* readers have been enthusiastic about the new look and the added features.

Infantry will continue to be a vital source of information for Infantrymen and members of other branches who work with the Infantry. It will cover every new development in Infantry organization, weapons and equipment, and tactics — well in advance of field manuals and other texts which take longer to produce. It will continue to present trends and career information.

Now, we set a new goal for the future. We aim to make your professional journal the foremost military publication of its kind in the world. We are determined that this official voice of the Infantry will contain the most authoritative information and thinking, from the highest to the lowest levels, on Infantry requirements and on the Infantry's role as a vital member of the Army team. It is our intention that *Infantry* be a publication with the highest professional and ethical standards and that it form a common bond among all Infantrymen of our Army and of our allies in the interest of Free-World security.

EDITOR.

LETTERS TO THE EDITOR

Patting and Padding

Sir:

. . . It may be presumptuous for me to say so but it seems that far too much space is taken up with "patting yourself on the back" in the "Letters" column. All but one of the letters in the last issue were of this nature. Correspondence should be directed more to interesting and constructive criticism.

Infantry is well produced but articles often seem long-winded. A certain amount of "padding" seems to be included. Photographs and diagrams are excellent.

A longer editorial on anything new which has happened in the Infantry world since the last issue might be interesting, as would new appointments of officers of higher rank.

W. A. ROBINSON, Maj
King's Own Royal Regiment
British Forces Post Office 10

Major Robinson's comments are appreciated. Actually, we do publish all of the criticism we receive. But we get too little of this kind of comment. We could do a better job if more readers told us what they want and offered constructive suggestions for improving INFANTRY.

Excerpts from favorable letters are published for a purpose, but not "to pat ourselves on the back." Since INFANTRY *subsists entirely on subscriptions and has no funds for advertising, we use this means of showing how* INFANTRY *has been helpful to a wide variety of readers—Active Army Infantrymen, National Guardsmen and Reservists, members of other branches and services, allied officers and even retired officers and civilians. We do this in the hope that such comments may strike a responsive chord with the chance reader of* INFANTRY *and make him a regular subscriber.—Editor.*

Smaller Size Better

Sir:

I was very sorry to see the size of *Infantry* change. The smaller size was easier to carry and refer to.

In Korea, as a member of KMAG, I carried the new issue, or a selected old one, with me in the field. At lunch and various other times (when I had a point I wanted to make) I would show it or lend it to Korean officers to read.

The smaller size was also better for filing. I have a file going back to the 1940s. . . . While some of the older issues are outdated, they still contain much of interest and value.

B. A. REYNOLDS
Lt Col, Infantry
U. S. Army Advisory Group
Baton Rouge, La.

Invaluable Source

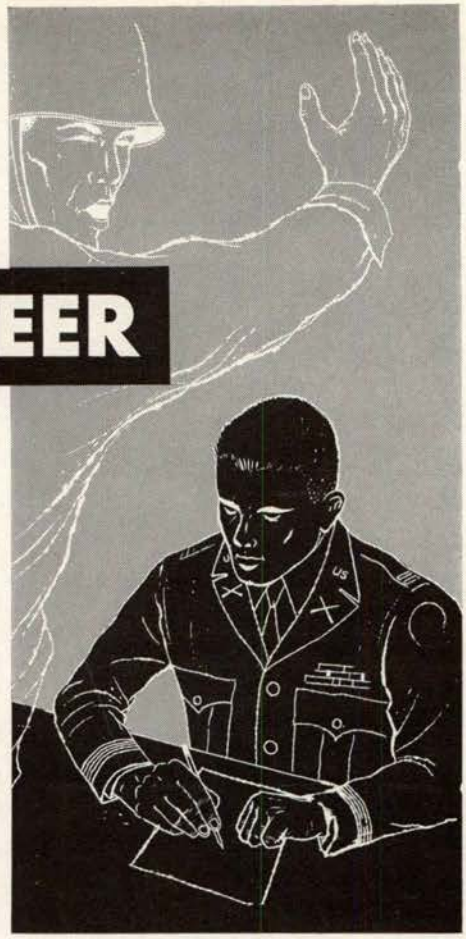
Sir:

Congratulations on the January-March issue of *Infantry*. The scope and nature of its contents show a most remarkable awareness of the complex problems facing our combat ground forces today and in the future. I was particularly impressed by the coverage given to the discussions at the Infantry Conference.

As an Artilleryman brought up in the belief that the redleg existed only to support the doughboy in combat, I've always subscribed to Infantry School literature for professional improvement. Continued on page 72

A Regular Infantry Feature

YOUR INFANTRY CAREER



This regular feature, initiated in our last issue, provides important information on policies and personnel actions which affect your Infantry career. Material for Regular Army and active duty Reserve officers is furnished by Infantry Branch of the Officers Assignment Division. Similar material for Infantry Officers of the USAR is provided by the Army Reserve Branch of The Adjutant General's Office. Information for the enlisted Infantryman is obtained from other Department of the Army agencies.

From Infantry Branch

INFANTRY Branch receives numerous queries from officers concerning assignments, promotions, schooling and other matters which affect their careers. Frequently, the same question or similar questions are asked by many officers. It is believed that answers to such questions may be helpful to most Infantrymen. In this issue, answers will be given to the queries received most frequently on military and civilian schooling and on specialization. Subsequent issues will answer questions on assignments and personnel actions. While this material cannot cover the peculiarities of every individual case, it will provide general information which applies to most cases and which may serve as a basis for personal planning.

When can an officer expect to attend the Infantry Officer Advanced Course?

The Regular Army officer will attend the Infantry Officer Advanced Course between his fifth and twelfth year of promotion list service. However, every effort is made to program attendance before he completes eight years of promotion list service. Reserve officers are eligible for either the Regular or the Associate Infantry Officer Advanced Course. Normally, the Reserve officer will attend the Associate Infantry Officer Advanced Course prior to completing his fifteenth year of service.

Must an officer apply to attend the Regular or Associate Infantry Officer Advanced Course?

The Regular Army officer need not apply. He will attend automatically. This is not the case for the Reserve officer. The Reserve officer who is not selected for the Regular Course may attend the Associate Course in one of two ways. He may be sent in a temporary duty status while en route to a new permanent station either in the United States or overseas. In this case, a scheduled class must be available at the time the officer is due to move and the schooling must not delay his arrival at the new station beyond the date on which his presence is required. If not selected in this manner, an officer stationed with a unit in the United States may apply through channels to the Commanding General, United States Continental Army Command, as outlined in Department of the Army Pamphlet 20–21. If approved, he attends on unit orders in temporary duty status and returns to his unit.

Must an officer apply to attend the Command and General Staff College?

No. An officer need not apply to attend the Command and General Staff College. The Regular officer's eligibility for attendance at the Regular Course commences when he has completed eight years of commissioned promotion list service and continues through the fifteenth year. During this period, every eligible Regular officer is automatically considered each year until he is selected or until he passes from the eligible zone. If not selected to attend the Regular Course during this period, he will be considered for attendance at one of the Associate Courses between his fifteenth and nineteenth year of commissioned service. The age limitation for selection to the Regular Course is 41.

The Reserve officer is considered for the Regular Course between his eighth and fifteenth year of Federal commissioned active duty service. Concurrently, he is also eligible for the Associate Course from his eighth to nineteenth year of commissioned service. Every eligible Reserve officer is considered for either the Regular Course or the Associate Course.

The maximum age limitation for both the Regular and Reserve officer to attend the Associate Course is 44.

What are the years of eligibility for attendance at the Armed Forces Staff College and for War College level courses?

Every Regular Army officer who is a graduate of the Command and General Staff College or who has equivalent credit is considered for attendance at the Armed Forces Staff College between his tenth and twenty-first year of promotion list service. A Reserve officer with a minimum of ten years commissioned service and not more than fifteen and one-half years total Federal service is considered.

Consideration for War College attendance is given to every eligible Regular Army officer between his fifteenth and twenty-third year of active commissioned service. For the Reserve officer, years of service is based on Federal commissioned active duty.

Is there a maximum age limitation for consideration for the Armed Forces Staff College or for War College level courses?

No. There is no maximum age limitation for these schools.

What is Operation "Bootstrap"? What is necessary to qualify?

Operation "Bootstrap" (or Final Semester Plan) is authorized by AR 621–5. Training permitted by this regulation was specifically set up to assist officers to complete the traditional residence requirements for a baccalaureate or advanced degree. To qualify:

1. An officer must be able to attain his degree within one semester or two quarters. In exceptional circumstances, an additional summer school session may be authorized.

2. The applicant must have a minimum of three years of continuous active Federal service and normally not more than fifteen years service for retirement purposes.

3. The Reserve officer must request, or have been approved for, extended active duty.

4. The officer must agree to remain on active duty for a minimum of four years subsequent to completion of training.

Does the government pay the tuition fees for officers approved for Final Semester training?

No. All expenses incurred in connection with this training are borne by the individual, including tuition, fees, books and necessary travel. However, during Final Semester training the officer does receive authorized pay and allowances.

When can an application be submitted for Final Semester Plan training?

Applications may be submitted at any time through channels to the Adjutant General, Department of the Army, Attention: Infantry Branch. An application must be indorsed by the individual's commanding officer indicating approval or disapproval and must state the date on which the applicant will be available to enter school, if selected. At the same time, a signed statement from the accredited college or university must be submitted stating that the officer requires a certain number of credit hours for graduation; that he can complete this work by full-time attendance, from a starting date to a graduation date; and that, provided he receives acceptable grades, he will be awarded the appropriate degree.

Is Final Semester Plan training approved only in conjunction with a permanent change of station?

No. An officer may attend in a temporary duty status en route to a new station, or he may also attend in a permissive temporary duty status and return to his organization upon completion of training. Attendance in this latter manner requires that his commanding officer release him for schooling during the time required.

What are the current regulations governing the Civil School Program?

AR 350–200 and AR 350–205.

SCHOOL LISTS 1959-1960

Starting with this issue, *Infantry* will publish the names of Infantry officers selected to attend service schools. The first lists appear on page 70.

Are there maximum age limitations for Civil School training?

Yes. The regulation places an age limit of 37 on work for a master's degree and 42 on work for a doctor's degree. However, under present policy, no applications for master's degree training are being returned prior to the time the applicant reaches age 40.

If an application for Civil Schooling is submitted and is not favorably considered the first time selections are made, must it be resubmitted?

The fact that an officer is not initially selected does not preclude subsequent consideration. All active applications will be reviewed each time selections are made. An application is active until the applicant withdraws it, declines training for which selected, or is no longer eligible by virtue of age.

When can applications for Civil Schooling be submitted?

Applications for Civil Schooling may be submitted at any time through channels to the Adjutant General, Department of the Army, Attention: Infantry Branch.

How are selections for Civil Schooling determined?

Selection is competitive and is based on a comparative evaluation of the military and undergraduate records of officers who have applied.

What is the latest date on which an application may arrive at Department of the Army and still be considered for the 1960 Civil School Program?

Applications should arrive in Infantry Branch prior to 1 November 1959.

What are the applicable regulations for Airborne, Army Aviation and Ranger training?

Airborne: AR 611–7, dated 29 November 1956, and Change 2, dated 21 February 1958. Army Aviation: AR 611–110, dated 23 November 1956, to include Change 5 dated 30 December 1958. Ranger: no specific AR, but the scope of the course and prerequisites for attendance are set forth in Department of the Army Pamphlet 20–21, the Army School Catalog.

Can an Infantry officer above the grade of lieutenant apply and be selected for aviation training?

Yes. In accordance with AR 611–110, Change 5, a limited number of captains, majors and lieutenant colonels may be entered into flight training to fill established aviation positions. Since a large number of officers apply for limited training spaces, the program is extremely competitive. Selections are made on a best-qualified basis in accordance with the applicant's manner of performance and military merit.

Does the Infantry officer who is an aviator lose out on advancement and higher schooling because of his aviation specialty?

No. The aviator receives equal consideration with all other Infantry officers for advancement and career service schooling. Dependent on requirements, Infantry Branch rotates officers to ground duty to maintain branch qualification in accordance with AR 600–105.

Is an officer who has received several assignments in the Research and Development field, or in any other specialist field, considered a specialist, and will he continue to be restricted to such assignments?

Not necessarily. Actually, an officer is not a true specialist until, in accordance with appropriate regulations, he voluntarily applies in writing for the particular specialist field in which he is interested. If he is accepted, his assignments are monitored so that he gets alternating or continuous specialist assignments, depending on the field. The officer who does not volunteer but has served in specialist areas is not considered a specialist and will not be restricted to specialist assignments. However, it may be necessary, on occasion, to assign such an officer to a critical position in the specialty field for which he is qualified.

Should a record of completion of academic courses in civilian schools, as well as extension courses from military schools, be submitted to the Branch?

Yes. This is extremely important. It is the responsibility of every officer to insure that his DA Form 66 is kept current. Entries included in Item 16 (Civilian Education and Military Schooling) of Form 66 are considered in connection with all assignments.

Is there any utilization connected with language training received under the provisions of AR 350–24?

Selection for training under this program is not contingent upon an immediate utilization assignment. However, officers otherwise eligible are normally selected for language training just prior to a scheduled overseas tour in the area of language fluency.

If an officer is already proficient in one foreign language, can he be selected for additional language training under the provisions of AR 350–24?

No. This program is designed for officers who do not possess a foreign language proficiency. Officers already proficient, or who once were, should "brush up" in language refresher programs available at local education centers.

What are the formally recognized fields of specialization in the Army?

The recognized fields of specialization are: Army Aviation, Intelligence, Atomic Energy, Research and Development, Logistics, Civil Affairs and Military Government, Information, Army Security, and the Foreign Area Specialist Training Program.

From Army Reserve Branch, TAGO

The following items provide information which answers some of the queries received most frequently by the Army Reserve Branch.

Reserve Promotions

Promotion of Reserve officers is governed by the Reserve Officer Personnel Act of 1954.

Whenever a unit officer has completed the minimum time-in-grade provided by this Act (three, two, four and four years in grade of second lieutenant, first lieutenant, captain and major, respectively) he may be recommended and selected for promotion whenever a vacancy in the next higher grade occurs in his unit.

Non-unit officers are considered for promotion without regard to vacancies after completing the following minimum time-in-grade: second lieutenant, three years; first lieutenant, four years; captain, seven years; and major, seven years. In order to be eligible for promotion, non-unit second lieutenants, first lieutenants, captains and majors must *also* complete three, six, twelve and seventeen total years, respectively, of commissioned service.

Unit officers are considered for promotion based on vacancies and are evaluated on the "best qualified" concept (the best qualified officer of all those eligible in a given unit). Non-unit officers are considered for promotion when they meet the criteria (zone) and are selected by the "fully qualified" method; i.e., morally, physically and professionally qualified to serve in the higher grade upon mobilization. An officer must be fully qualified before he can be considered best qualified.

Promotion Responsibility

Promotion of unit officers through the grade of lieutenant colonel is effected by boards convened by the area commander. Non-unit officers not on extended active duty are also considered by boards convened by the area commanders. Those non-unit officers who are on extended active duty as officers, warrant officers or enlisted men are considered by a selection board which convenes each November at Department of the Army. This board considers all officers who will complete the time-in-grade and service requirements prior to 31 December of the following year.

Officers selected for promotion will be promoted on the day prior to the date they complete the above requirements.

Promotion Boards

Selection boards for USAR promotions are composed of at least five officers, all senior to the officer being considered. At least 50 percent of the membership must be Reserve officers. Evaluation of officers by promotion boards is based on a review of the officer's 201 file, accompanying recommendations, fact sheets, etc. Boards are responsible for considering the officer's entire record of service. Among other factors, consideration is given to manner of performance, military education, civilian education, awards and decorations, assignments and versatility. No one factor or qualification is given special consideration.

Promotion of Second Lieutenants

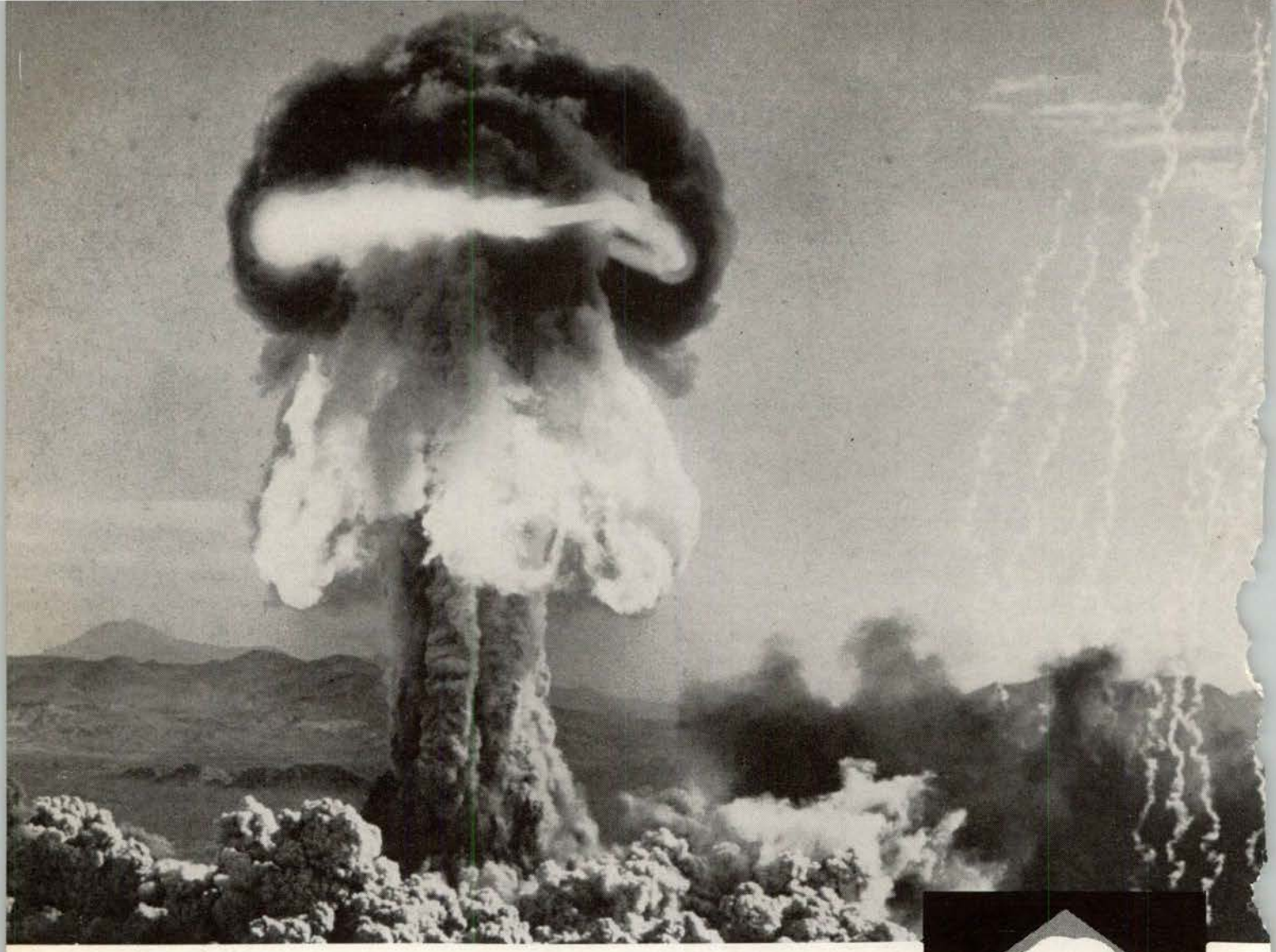
Promotion in the USAR of all non-unit second lieutenants has been delegated to area commanders and in most cases redelegated to lower commanders. This promotion is accomplished upon completion of three years time-in-grade, without selection board action. Commanders who do not consider the individual qualified for promotion must submit reasons to Department of the Army for withholding the promotion. If promotion is not approved by Department of the Army, necessary action is taken to eliminate the officer from the Reserves. The above procedure does not apply to the obligated reservist.

Promotion to Colonel, USAR

A promotion selection board was scheduled to convene at Headquarters, Department of the Army, in March 1959 to consider all eligible USAR lieutenant colonels for promotion to colonel. To be eligible for consideration an individual must have served 11 years in the USAR grade of lieutenant colonel. In addition, over 18 years total commissioned service is required, either actual or constructive, based on age.

Individuals in the above category include all USAR lieutenant colonels serving on active duty as officers, warrant officers or enlisted men, and those not on active duty and not assigned to a USAR unit. Eligible personnel who are not considered by the regular selection board will be considered by a standby board and, if selected, will be promoted without interference of promotion eligibility date.

Continued on page 69



By Col Frank M. Izenour

ROCID CHANGES

Here, in some detail, are recent organizational and equipment changes announced by Department of the Army for the pentomic Infantry division.

AFTER TWO years of testing and evaluating the pentomic Infantry division, Department of the Army has announced organizational and equipment changes which bolster the division's combat effectiveness. Almost every element of the division is affected. Some units gain or lose only a few men or items of equipment; others undergo a major face-lifting (Figure 1).

Roughly, these changes occur in three main areas: fire support, surveillance and the basic battle unit. Artillery fire support has been increased and centralized. Surveillance and target acquisition capabilities have been increased. The Infantry battle group, the basic battlefield unit, has been reorganized.

Major changes have been made in the division artillery, the most significant of which is the provision of a direct support battalion for each of

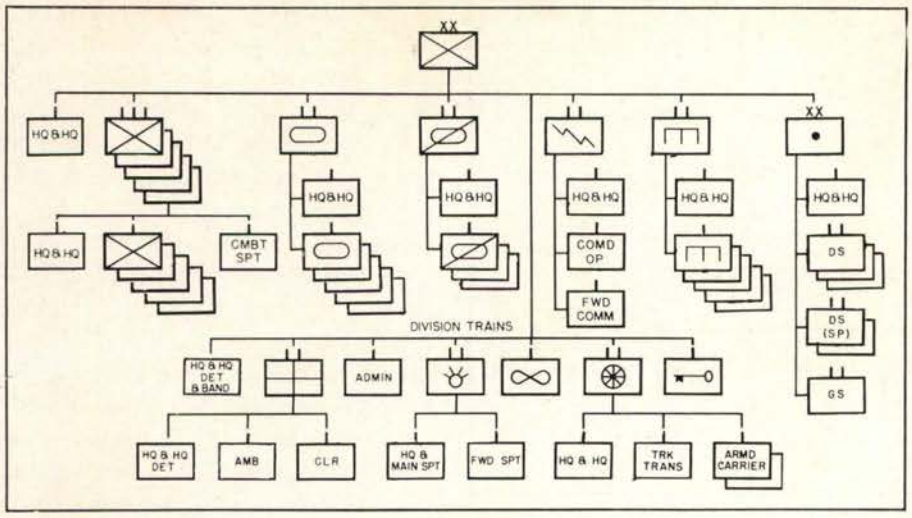


Figure 1. The Infantry division.

the five battle groups. This change adds eighteen 155mm howitzers and eliminates ten 4.2-inch mortars. However, as will be discussed later, six 4.2-inch mortars are retained in the battle group as the organic fire support weapon.

As changed (Figure 2), the division artillery now has five direct support battalions, each of which has a headquarters and service battery, a 105mm howitzer battery and a 155mm howitzer battery. This organization has been achieved by taking the five 105 batteries from the old 105 battalion and the two 155 batteries from the old composite battalion, by deleting the 4.2-inch mortar battery in each battle group and by adding three new 155 batteries. Two of the direct support battalions have self-propelled weapons while the others have towed weapons. A general support battalion replaces the former composite battalion. This new battalion is organized into a headquarters and headquarters battery, an 8-inch howitzer battery of four howitzers and an Honest John rocket battery of two launchers.

The pressing need for an increased battlefield surveillance capability within the division is recognized by the changes made in this area. With newly developed equipment and with combat surveillance and target acquisition capabilities provided down to the rifle company level, a major step has been taken toward meeting this requirement.

The battle group's surveillance problems are partially solved by the establishment of an organic radar section in the combat support company. This new section is equipped with two AN/TSP–21 medium-range radars and five AN/PPS–4 radars for short-range work. Such equipment permits ground surveillance of the gaps between the units of the battle group as well as to the front and flanks.

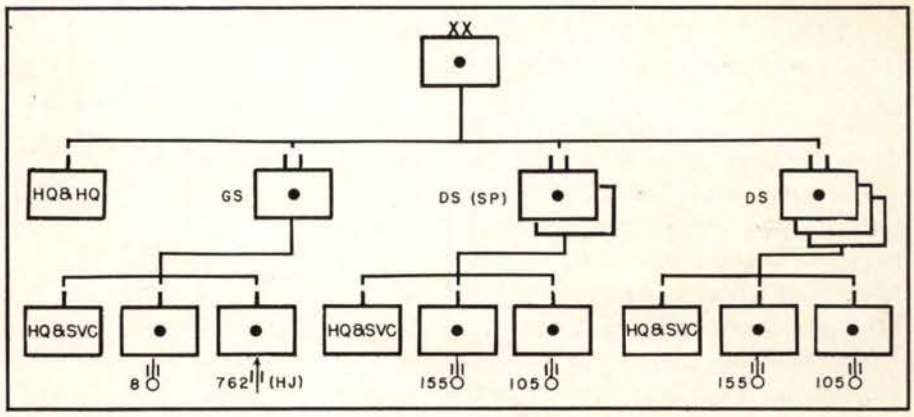
At division level prior to this reorganization, all surveillance equipment and personnel were located in the cavalry squadron. However, the aircraft needed to carry this equipment were assigned to the aviation company. This disjointed arrangement led to many problems. Now, the equipment, the personnel, and the aircraft are combined in a new aerial surveillance platoon in the aviation company. The surveillance capabilities of this platoon include aerial radar, aerial photography and a surveillance drone system. Such capabilities, in general support of the entire division, increase over-all combat effectiveness, particularly in situations when the division is widely dispersed with large gaps between units.

A number of important changes have been made in the battle group, the most obvious of which is the addition of a fifth rifle company and a combat support company (Figure 1). These changes result in a battle group similar to that in the Airborne division, and increase the flexibility and effectiveness of this basic battle unit.

The combat support company includes all of the tactical support or "fighting" elements, while the administrative, logistical and control units remain in the headquarters and headquarters company. This arrangement provides a more efficient organization and makes a desirable reduction in the strength of the headquarters company.

A look at the headquarters and headquarters company (Figure 3) reveals that the reconnaissance and assault gun platoons and the counterfire squad are missing. The reconnaissance platoon and counterfire squad, as well as the assault weapon platoon which replaces the assault gun platoon, are now located in the combat support company. Other

Figure 2. The new division artillery.



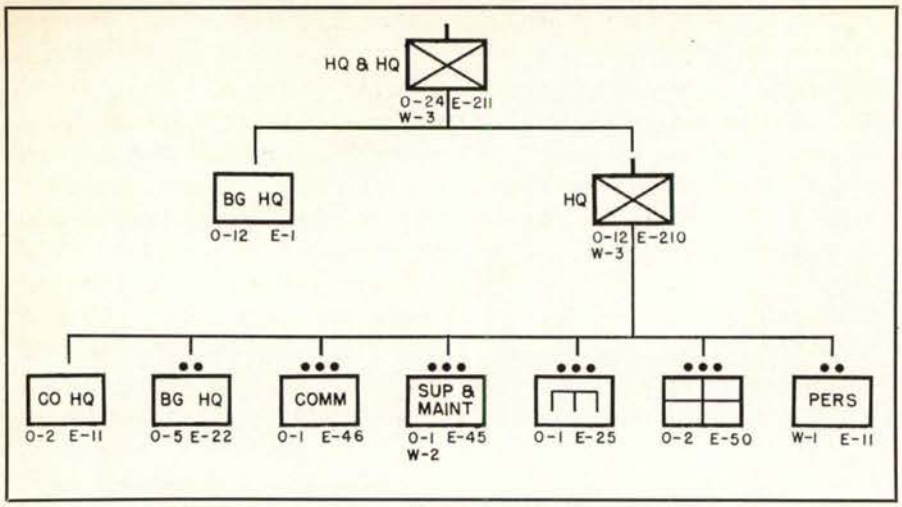


Figure 3. The battle group headquarters and headquarters company.

changes, not revealed in the organization chart, have been made internally.

A deputy battle group commander has been authorized, along with a driver, radio and ¼-ton truck for his use. Experience with the Airborne battle group revealed that this additional officer at the command level facilitates control of the battle group. While he may be used in whatever manner the battle group commander desires, likely assignments are to command the reserve, to lead a task force, or to control detachments left in contact during retrograde actions.

The S4 is now authorized an AN/VRC–18 radio so that he can operate in the battle group administrative net and simultaneously monitor the command net. Also, the S4 has been given an assistant—the supply and maintenance platoon leader—who has been upgraded to captain and given the title of Assistant S4. The truck squad of the supply and maintenance platoon now has two additional 2½-ton trucks. This addition provides a truck for the transportation of the baggage, mess equipment and mess personnel of each company as well as for other required transportation needs.

A platoon leader has been authorized for the communication platoon. This officer will also assist the battle group communication officer.

The engineer platoon gains one 2½-ton truck and trailer for the platoon headquarters, and a 2½-ton dump truck with pole-type trailer replaces the conventional 2½-ton truck and trailer in each squad. The platoon also is authorized a radio net utilizing AN/PRC–10 radios. The platoon leader controls the net with his AN/PRC–10 and operates in the battle group administrative net with his AN/VRC–18. Earth-moving equipment has been added to the platoon in the form of a pneumatic-tired tractor with a 1½-cubic yard scoop, dozer blade and fork lift.

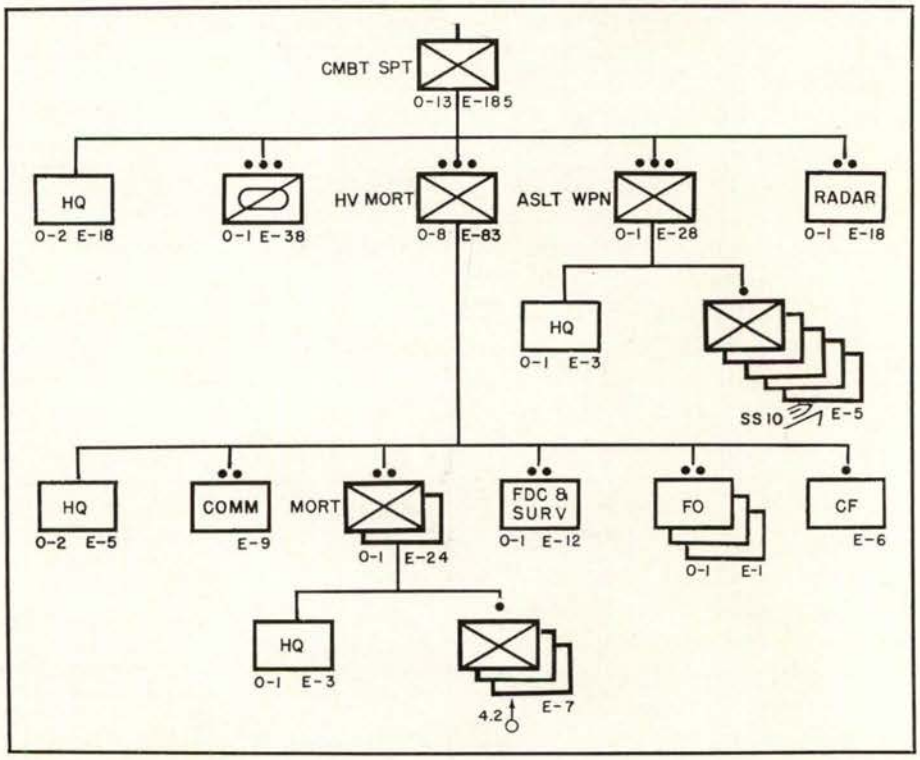
No changes are shown for the medical platoon. However, this unit is being revamped. Information on these revisions will be covered in a subsequent issue of *Infantry* magazine.

As mentioned previously, the combat support company (Figure 4) contains three tactical support platoons—reconnaissance platoon, mortar platoon and assault weapon platoon—and a radar section. The tactical elements of this company will receive orders directly from the battle group headquarters. Present concepts for the employment of this unit place the company commander in much the same relationship to the subordinate elements of the company as the commander of the headquarters and headquarters company.

The reconnaissance platoon retains the same organization and structure it had in the old battle group.

The new mortar platoon with its six 4.2-inch mortars is by far the largest platoon in the battle group. It replaces the mortar battery and returns the heavy mortar to the Infantry. Thus the Infantry battle group retains an organic fire support unit and gains the increased range of an additional artillery battery which is

Figure 4. The new combat support company.



contained in the direct support artillery battalion. The fact that it is commanded by a captain underscores the importance of this platoon. The manner in which it is organized and its dual radio equipment—it has both Infantry and Artillery radios—give the mortar platoon considerable flexibility. However, it is tied to wheeled vehicles which limit its cross-country mobility and result in a reaction time (getting in and out of action) that is too slow for modern combat operations.

The mortar platoon may be employed in several ways. It may be placed under the operational control of the direct support artillery battalion or it may be given a separate mission. It can operate as a platoon or as two sections. But irrespective of how they are employed, the mortars remain immediately responsive to the needs and desires of the battle group commander.

The new assault weapon platoon is equipped with the SS10 missile,[1] which can be fired either from a ¼-ton truck or from the ground. The platoon's pentagonal organization permits considerable flexibility in its employment. This organization was tested recently by the Infantry School and additional information on the platoon and the SS10 will be published in *Infantry* and in training literature as soon as it is available.

The radar section with two medium- and five short-range radar sets is organized on a team basis. Normally, the two-man AN/PPS–4 ("Silent Sentry")[2] teams will be attached to the rifle companies. This short-range radar may be man-carried or transported on available company transport. While the medium-range AN/TPS–21 is also portable, it normally will be carried on a ¼-ton truck which is provided for this purpose. This set will usually be employed in general support under the operational control of the battle group S2. Each of the AN/TPS–21 teams is equipped with an AN/VRC–10 radio, and the section headquarters has an AN/VRQ–3, mounted in a ¼-ton truck.

The major change in the rifle company is immediately apparent (Figure 5). It has returned to a triangular structure. The fourth rifle platoon has been eliminated so that the company commander can exercise tighter control. Also, elimination of one platoon provides the men required for the fifth rifle company and other new units.

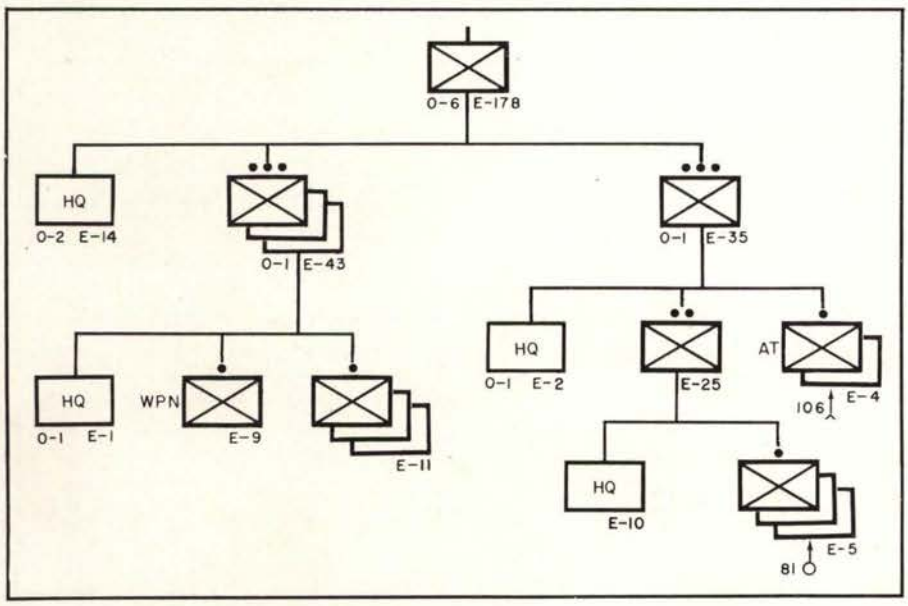
To provide additional spaces for all of the necessary changes without increasing the over-all manpower requirements of the division, other reductions were made within the rifle company. All messengers, one cook, the one cook's helper and one 3.5-inch rocket launcher team per rifle platoon have been eliminated.

The rifle company's communication system, however, has been augmented. The company commander now has an AN/VRQ–3 radio in place of the AN/VRC–18, which enables him to operate in both battle group nets simultaneously. He retains the AN/PRC–10 for use in the company command net. The rifle platoon leader has been given an AN/PRC–10 for the company net. He will use his AN/PRC–6 in a newly established platoon net which will link the squad leaders and platoon sergeant with the platoon leader. The company headquarters also receives an SB–22

[1]See "Death to the Tank" in the July-September 1958 *Infantry*.

[2]See "We Must Fight at Night" in the October-December 1958 *Infantry*.

Figure 5. The rifle company.



COL FRANK M. IZENOUR was graduated from the United States Military Academy in 1938. During World War II, he served in North Africa with the 7th and 30th Infantry Regiments of the 3d Infantry Division, and in 1944 he was named commanding officer of the 7th Infantry. Following a tour as assistant G1, Headquarters, Army Ground Forces, he entered the Command and General Staff College and upon graduation was appointed an instructor at the college. Afterwards, he was graduated from the Armed Forces Staff College and was assigned to Trieste United States Troops. Returning to the United States he attended the Army War College, following which he was assigned to the Military Personnel Management Division, Department of the Army. He then went to Korea where he served as G3, Eighth U. S. Army, and later as commander of the 17th Infantry Regiment. In 1957 Colonel Izenour began his current tour at the Infantry School as Group Chief in the Tactical Department. He is now director of the Command and Staff Department.

switchboard as a replacement for the SB–18/GT.

Since the M14 rifle and the M60 machinegun are now in production, these weapons are shown in the new TOE in place of the M1 rifle and the M1918A4 and A6 machineguns. The automatic rifle (BAR) will be replaced by a modified version of the M14. The M15 will not be produced since it has been found that the lighter barreled M14 will stand up under sustained automatic fire. The modified M14 will have a bipod, hinged buttplate and a ventilated upper hand guard.

More experience with this division may require additional changes. Some areas in which modification may be needed are discernable; for example, the rifle platoon leader is equipped with two radios, but is not authorized anyone to carry and operate them. He is forced to "borrow" a rifleman to do this job, or to carry both sets himself.

These are the highlights of the revised ROCID division. To understand all of the specific changes in personnel and equipment will require detailed study of the new TOE.

Additional details on the new TOE, necessary revisions in tactics and any future changes in the division will be covered as they become available.—Editor.

Thoughts on ROCID Changes

By Capt Charles E. Thomann

If not already done, somebody should sit down and do a learned paper on why uneven numbers of military units seem to work out tactically best! At any rate, the addition of the fifth company to the battle group has provided us with a more flexible organization and solved some major problems.

For example, the four-platoon companies were a bit unwieldy, as were the four-company battle groups. In position defense it was hard to position the reserve because of the amount of terrain to be covered in the rear. Now the frontage of the battle group can remain much the same, but we achieve adequate defense in depth by the use of two companies in reserve. This also applies in the attack. The weight of two companies in reserve will count heavily. Five companies also makes for more combinations to fit the local situation.

The company, by the loss of one rifle platoon, has gained much in control. Three rifle platoons are about right when the situation gets fluid and control becomes of paramount importance. The span of control can only be stretched so far and making the company commander a major isn't the answer! The only other significant change I would like to see in the company organization at this time is the addition of one 60mm mortar with each rifle platoon. This handy little weapon can prove very decisive when needed and it demands little equipment. As was brought out in a recent *Infantry* article, the 60mm mortar is quite effective when used without the bipod. A little practice is all that's needed.

Another advantage of the five-company battle group is the flexibility achieved in a logical command structure. The battle group commander can turn most of his attention to the control of his forward troops while the deputy battle group commander controls the reserve. If the situation dictates, and we stress decentralization in nuclear warfare, the battle group span of command can be simplified by the executive officer's commanding two companies (not always the same ones) while the deputy commander commands the remaining three. This leaves the battle group commander free to direct the entire operation with a clearer view, and his control is also simplified with the additional gain of faster reaction time by the companies.

The new support company will have its problems, but the weapons within it are certainly better off when divorced from the headquarters, headquarters and service company. Tactical and administrative units should always be kept separate—no matter what the level of command. The reduction of the 4.2 mortars to six is certainly logical and formation of this battery into a platoon should facilitate rather than hinder operations. With its new additions, the support company can be commanded by a captain—we gain nothing by having the company commanded by a major.

As an Infantryman I appreciate all the artillery support I can get. The additional 155mm support is loudly welcomed. My personal feeling is that we now have the type of organization we have been looking for. More changes must come as weapons improve, but we have gained in fire support and flexibility, and now, more than ever, our Infantry division has the punch it needs for today's war.

The opinions expressed in this article are those of the author and do not necessarily reflect thinking of the Infantry School.

CAPT CHARLES E. THOMANN received his Infantry commission upon graduation from the University of Denver in 1949. In 1957 he attended the Infantry Officer Advanced Course and is now an ROTC instructor at Southwest Missouri State College.

SPECIAL FORCES

By Capt Roger M. Pezzelle

Special Forces—now an important part of the Infantry—is a military organization which is designed to plan for and employ guerrillas against the enemy in future combat.

MOST Infantrymen have some knowledge of our Special Forces units and of the Army's growing interest in the field of unconventional warfare. However, for various reasons little has been said or written on this subject. Consequently, many Infantrymen do not fully understand or appreciate the mission and combat potential of these forces, or the effects they can have on the tactical battlefield.

The United States Army's Special Forces Groups, previously classified as branch immaterial, have recently been designated as branch Infantry. Members of these units are volunteers. They willingly agree "to participate in Airborne training and to perform parachute jumps from aircraft in flight," and "to infiltrate deep within or behind enemy lines during wartime for the purpose of conducting guerrilla operations against the enemy."

Traditionally, guerrilla warfare has been held suspect by professional soldiers because of its irregular tech-

CAPT ROGER M. PEZZELLE received an OCS commission at Fort Benning in 1943. He then served with the 197th Infantry Battalion at Camp Blanding before going to Italy, where he was a platoon leader with the 473d Infantry Regiment. Returning to the United States he became an OCS tactical officer at the Infantry School. In 1948 he returned to Italy where he served with the 351st Infantry Regiment as a platoon leader, company executive officer, battalion S4, regimental S2 and as assistant regimental S3. He then returned to the Infantry School for the Basic Airborne and the Jumpmaster Courses, after which he commanded a company of the 505th Airborne Infantry Regiment at Fort Bragg. There he joined the 10th Special Forces Group and later accompanied that organization to Germany. In January 1958 he completed the Advanced Course at the Infantry School and became a project officer for the School's Combat Developments Office.

niques, organizational deviations and general unmilitary nature. However, the United States made an effort in this field in World War II with the organization of the Office of Strategic Services (OSS), a part of whose total effort was guerrilla warfare. It is unnecessary to recount the achievements of the guerrillas of that era since the exploits of the OSS have been fairly well covered. It is sufficient to point out that the activities of the OSS were global in scope and that the praise heaped upon the OSS-directed guerrillas is a part of the history of that war and its decision. That initial venture provided a sound foundation for the establishment of Special Forces, a military organization designed to exploit the guerrilla potential which exists and will continue to exist in the face of the communist threat.

The Special Forces Group is made up of operational teams. These teams vary in size, depending upon their mission, but are basically similar in construction. Each is composed of highly trained leaders, demolition experts, communicators, weapons specialists and medical aidmen. The basic team, called an FA team, has 15 officers and men. Commanded by a captain, it has the mission of infiltrating by land, sea or air behind enemy lines to *organize, train, supply, control* and *direct* a guerrilla "regiment" for the conduct of guerrilla warfare.

The key to understanding the U.S. Army concept of guerrilla warfare lies in the meaning of the italicized words above. In guerrilla warfare each of these words has a special meaning.

Organize means to unite under command without bringing together physically; it means to systematize information gathering, internal communication, normal subsistence means and many other things. In short, organizing facilitates the accomplishment of all other team responsibilities.

Training is of a special nature because it is conducted within the enemy area without benefit of normal training facilities. Also, there may be a language barrier between instructor and trainee. Therefore, training is confined to the techniques of combat for individuals and small units, and is drastically limited in time. A guerrilla who sees and touches demolitions for the first time in the afternoon may use them against the enemy that same night with combat being his first practical exercise.

Supply by an outside source is an absolute essential to successful, sustrained guerrilla operations. While our concept requires maximum use of supplies from within the area of operations, the essentials for waging combat—weapons, ammunition, demolitions and medical supplies—must come from without. Sometimes even food must be provided, but generally the guerrilla force feeds itself. The system of caches and the issuing of supplies in guerrilla operations are among the most important facets of Special Forces techniques and actually deserve separate and full treatment.

All Special Forces operations begin with a thorough briefing.

Control means responsiveness on the part of the guerrilla force to the will of the U.S. Army commander on the friendly side of the lines. This control is not automatic; the Special Forces team achieves it by the exercise of mature judgment, superior knowledge, trustworthiness, leadership and courage. Normally, guerrillas are *commanded* by one of their own. The team controls the commander, thereby assuring that the guerrilla force executes the desired mission at the desired time, to obtain maximum results in coordination with the operations of regular forces.

Direct means to guide the overall operations of the guerrilla "regiment" toward the accomplishment of the broad mission assigned to each team initially.

To the conventional soldier, the term guerrilla "regiment" is the most mystifying of all. This term connotes all the essentials of our concept—that is, organization, control, direction and coordination. It does not mean an organization of fixed size, attacking and defending in a relatively confined area as a unit. The strength of these "regiments" may vary from a few hundred to more than a thousand. The strength is dictated by the manpower and subsistence potential of the particular area; by geographical, social, economic and political factors; and by our capability to supply the force at a particular time.

This brief discussion of the mission of the basic operational team should enable us to dispel some of the doubts about guerrilla warfare. There is general misunderstanding about the time it takes to achieve active guerrilla operations after the infiltration of Special Forces teams. The field manuals on this subject describe seven distinct steps in organizing and developing a guerrilla force. They are psychological preparation of the population in the potential area of operations; initial contact with resistance elements; infiltration of the Special Forces team; organization of the guerrilla force; build-up of the force in strength, equipment and capabilities; exploitation of the guerrilla force; and finally, demobilization of the force after the regular combat zone passes beyond the area.

Every operation is carefully planned. Guerrilla forces thrive on concurrent operations during the "build-up phase."

This is a logical sequence that facilitates training, but such terms as "build-up" and "exploitation" are frequently misunderstood. In guerrilla activities, time is of the essence. Operations against the enemy commence almost immediately after infiltration of the team, increasing in intensity and scope as the guerrilla force grows. In many cases, the Special Forces team itself executes interdiction of enemy lines of communication immediately upon entry into the area. There is no lagging while an extensive recruiting campaign and training program are conducted. Successful operations provide the team with its best recruiting tool. But precautions must be taken to insure that the unit is not infiltrated by the enemy.

The so-called "build-up phase" is a misnomer. This term implies that little is done during this phase except to gather strength and supplies, and to train for a special "D-Day." Such was the case in certain completely clandestine operations in France during World War II, but this is not the general concept.

The guerrilla force thrives on concurrent operations during the build-up phrase. Its best training is "on-the-job training" attacking railroads, communication facilities, oil dumps, patrols and so on.

Also greatly misleading is the term "exploitation phase." This term leads one to believe that the guerrilla force is not extensively employed until just prior to link-up with a regular force. On the contrary, the guerrilla force is employed to the fullest extent possible from the moment the first attack is made.

The manual may further cause some to believe that coordinated action with regular forces is also deferred until just prior to link-up. In reality, all Special Forces-directed guerrilla activity is constantly coordinated with the operations of regular

Good communication is vital.

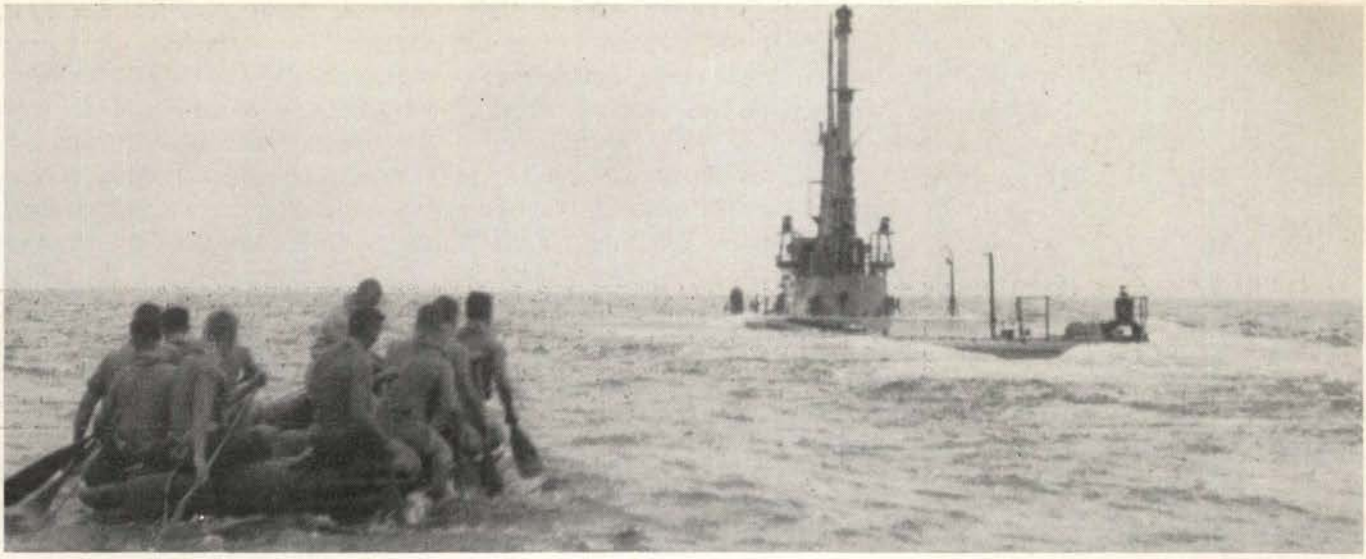
forces. However, the level at which this action is coordinated depends upon the scope and timing of the operation, and upon the depth of the guerrilla force behind the lines.

Another common misconception is that Special Forces operations are entirely strategic in nature. For the most part, this misconception stems from the false association of Special Forces with the cloak and dagger aspects of OSS. Additionally, official publications give little space to Special Forces operations under the control of the field army and lower levels of command. Actually, Special Forces conducts both strategic and tactical operations.

Time is a basic element which determines whether an operation is strategic or tactical. Space is no longer of great consequence, due to our advanced capabilities for movement. Whether or not a particular enemy force or collection of supplies and equipment is of tactical significance to the enemy is wholly dependent upon his ability to move those troops or supplies to an area *in time* to influence the decision at that point. Because of this capability of rapid movement, tactical reserves of men and materials will be held deeper in enemy territory. This means that areas which heretofore have been beyond the field army's immediate concern are now within its scope of operation. (The range of tactical missiles has also increased this depth.) Guerrilla forces in these deeper areas may contribute signficantly to the tactical operations by *timely* attacks on lines of communication, troop movements and supply installations. Additionally, nuclear-age concepts of dispersion of forces and depopulation of the battlefield will allow guerrilla forces an opportunity to work closer to the battle area. In the past, the primary reason for the absence of sustained guerrilla activity close to the main battle positions was the density of enemy combat troops. This situation deprived guerrillas of adequate refuge areas and freedom of movement, and made them subject to constant pressure. This may not be the case in future war. But even if guerrillas are still unable to exist close to the main battle area, they will nevertheless be able to thrive and to operate in the deeper portions of the field army area of responsibility, where they have not been in the past. Thus they will be an extension of the field army commander's combat forces, and will execute such missions as he may direct—in complete coordination with the tactical plan of operations.

Other activities, no less coordinated, but conducted outside the tactical area of operations, will also contribute greatly to the tactical decision. *Direct* or *indirect* effects on tactical operations can be achieved by guerrillas operating at great distances from the combat zone. A striking example of *direct effect* achieved at long range can be found by considering this possibility—should hostilities break out in Western Europe, we may find ourselves fighting a massive delaying action against an almost totally mechanized Soviet Army. This army's lifeblood—fuel—must be drawn

Supplies for sustained operations must come from outside sources by any means possible.



Special Forces teams are prepared for operations anywhere in the world and will be ready to infiltrate enemy territory by many means.

from Eastern European sources and transported across hundreds of miles of guerrilla-infested territory. Properly *directed* guerrilla forces, conducting continuous and widespread attacks and acts of sabotage against oil fields, fuel dumps, pipelines and all modes of fuel transport can be expected to reduce the flow of this critical item to a trickle. The effect will be swift, decisive and *direct*. Recall, if you will, the effect which the lack of fuel had on General Patton's Third U.S. Army at one notable stage of the campaign in France.

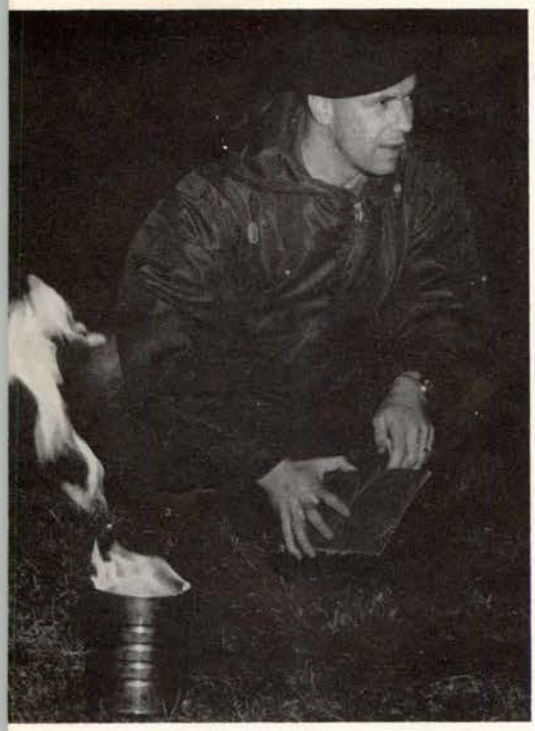
The *indirect* effects which guerrilla activities can have on tactical operations are many and varied. Probably the most important of these is the diversion of large enemy resources of manpower and supplies from the combat zone to hunt down or attempt to guard against guerrillas. Hitler overran Yugoslavia in a month, only to find that he needed 15 divisions to occupy the country and fight guerrilla forces. These 15 divisions did not participate in the attack on the Soviet Union, nor did they later contribute to the Nazi defense in the West. The effect was permanent, important and *indirect*.

To show how Special Forces can accomplish this job of supporting the tactical effort as well as the strategic plan, it is necessary to go back again to the basic FA team. The men who make up this unit undergo a diversified and rigorous specialized training program, in addition to the normal training given every Infantryman. After completion of basic, advanced individual and Airborne training, they are sent to service schools, where possible, for MOS training. Following this, each team member is thoroughly trained in subjects peculiar to Special Forces. This program includes techniques of organizing and developing guerrilla forces, methods of instructing guerrilla personnel, fieldcraft and survival, background studies for a particular area of operations and language training, to name a few.

At this stage, the well-trained individual specialists are prepared to receive their unit, or team, training. During this phase the teams learn to operate as cohesive units, practicing under field conditions the techniques they learned in earlier training. The unit training period includes all types of team operations, among them joint exercises. The teams also receive training in different environments. They go to Camp LeJeune for jungle and survival training; Camp Hale for mountain training; and Little Creek, Virginia, for amphibious training. At the end of the unit-training phase, the Special Forces team is prepared for operations anywhere in the world.

At the outbreak of hostilities, these highly trained teams will be ready to infiltrate enemy-held territory by many means, or could be left behind when friendly regular forces withdraw from an area. At this same time, many men from the overrun areas or the satellite nations will join active resistance groups. These will be men

Special Forces directed and controlled guerrilla units, and at times the Special Forces team itself, can sabotage enemy lines of communication and supply.



Special Forces Troops are trained in many special techniques. They can improvise means to provide terminal guidance for airborne assaults.

hungry for freedom, those bearing long-standing grudges against an oppressive state, men eligible for labor drafts and others with any of a dozen motivations. Special Forces teams can seek out and join with these groups, commencing active operations immediately, no matter how small.

Almost simultaneously, across the breadth of the entire theater of operations, from close to the battle area to deep within the enemy homeland, Special Forces teams will be able to direct guerrilla forces in continuous, lightning-fast attacks against lines of communication, storage areas, small groups of enemy soldiers, missile launching sites, airfields, isolated enemy installations and other objectives. These actions will be calculated to disrupt communication, destroy supplies, inflict casualties and draw enemy combat troops away from the main battle areas. Throughout the action a vast amount of information about the enemy and his activities will be acquired and passed on to friendly forces.

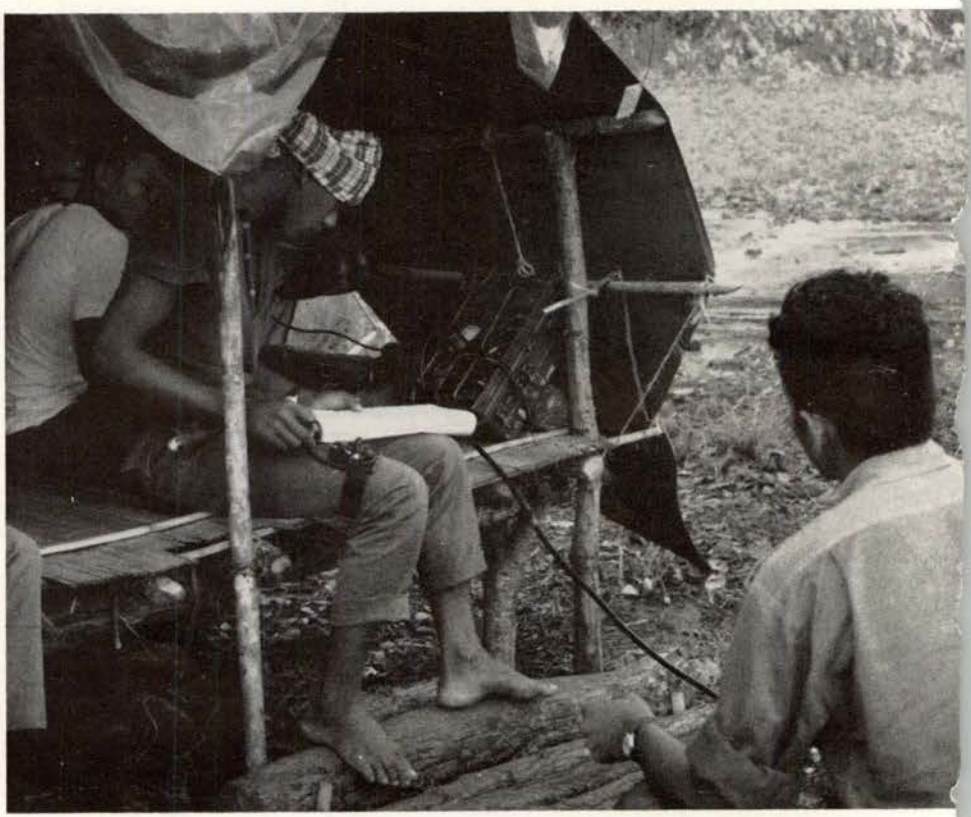
Nothing succeeds like success. The strength of the guerrilla forces and the intensity of operations grow continuously. Each attack, regardless of size, is a part of a Special Forces team's over-all plan designed to achieve specific results in coordination with tactical or strategic plans.

Such teams, operating within the area of responsibility of a tactical commander, execute missions in direct response to orders from that tactical commander, regardless of the level of command, from battle group to theater. This coordinated effort becomes more visible when the initiative is gained by the friendly forces. Then guerrillas begin to participate directly at close range in support of tactical operations. They give valuable assistance to airborne assaults: they secure drop and landing zones, provide terminal guidance to aircraft, recover equipment, aid in the assembly of units, conduct diversions to cause confusion, and delay enemy forces moving up to meet the air assault.

Guerrilla units also support deep penetrations by mounted Infantry or Armor. For example, a deep penetration is planned and will include a diversionary action by friendly regular forces on the right flank, so conceived as to cause the enemy to commit a known force in that area. Guerrillas, directed by Special Forces and under direct orders from the tactical commander, allow the enemy unit to pass en route to the area of the diversion. When the enemy discovers the true nature of the attack and the direction of the main effort, he turns to meet the main friendly force and finds himself continuously harrassed and ambushed during movement. Defiles are blocked or made impassable; his forces are channelized and vulnerable to atomic strikes. The guerrilla is capable of such significant action due to improved weapons systems and communication, both made available to him by the Special Forces team.

Special Forces teams can directly aid the field commander in many other ways. These teams, and the

Special Forces teams are now in position on both sides of the globe and are ready to meet the enemy with effective guerrilla warfare.



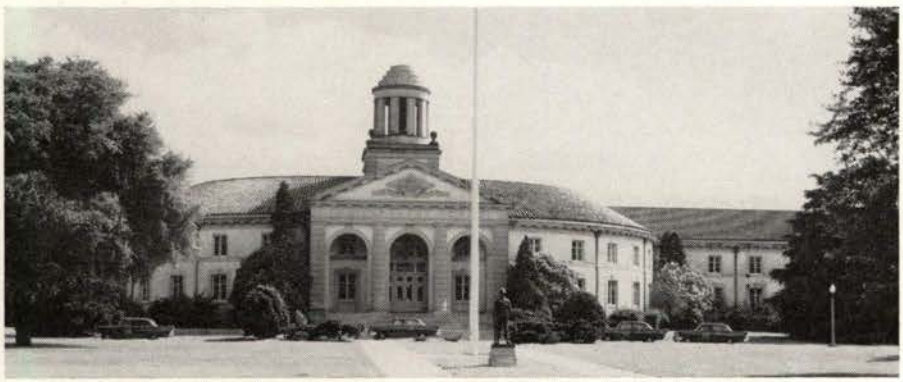
guerrilla units they control, can perform extensive reconnaissance and give general assistance to reconnaissance units, free prisoners of war and aid evaders and escapees. The possibilities for employment of guerrilla forces are limited only by the degree of preparation for such activity and the ingenuity of the commander.

The benefits to be derived from the Special Forces program are in sharp contrast to the austere conditions under which it can operate. The meagerness of guerrilla requirements is one of the most attractive features of this type of warfare, especially in these times of manpower and money shortages. In terms of manpower alone, consider that 100 of these 15-man teams, little more than the strength of a single battle group (1356), represent the potential of 100 "regiments"—behind the enemy lines.

The supplies for these "regiments" are as nothing compared to the requirements for a regular battle group. The uniform of the guerrilla is a distinctive armband or beret, nothing more. He lives where he can. His subsistence comes from the land. His necessities are weapons, ammunition, demolitions and medical supplies. These are standard, though other articles—boots and food in some cases —may be required. For his close-quartered, hit-and-run fighting, obsolete weapons may be used, thereby placing no demand on critical items for regular units. The guerrilla is inherently thrifty with supplies, if not spoiled with an excess of them, for his life is a continual battle for survival.

Not to be overlooked in the cost of these benefits is the fact that only a small special staff section is required at each level of command which exercises control over Special Forces activity. The size of this section depends upon the number of Special Forces teams under the control of the tactical headquarters, but in no case would it be very large. Also, there must be a compatible communication system, and the tactical commander must assume certain responsibilities with respect to support of the guerrilla forces. Primarily, however, this support would continue to come from higher headquarters and the Special Forces base.

Special Forces Groups are now in position on both sides of the globe. These volunteer teams are ready to meet the enemy in his own backyard with effective guerrilla warfare from the moment hostilities commence. The guerrilla is on our team. We must organize for him, plan for him and *use* him.



FIFTY-SECOND ANNIVERSARY

UNITED STATES ARMY INFANTRY SCHOOL

The United States Army Infantry School celebrated its fifty-second anniversary 1 April, rounding out more than a half-century of effort dedicated to the training and development of outstanding Infantry leaders. Victories on the battlefields of three wars attest to the success of this work.

Today's Infantry School, the foremost of its kind in the world, grew from the School of Musketry which was established in 1907 at the Presidio of Monterey. Six years later the school was moved to Fort Sill and finally, in 1919, it was established at its present location near Columbus, Georgia. Fort Benning, named for Confederate Brig Gen Henry L. Benning, a former resident of Columbus, was at first a tent camp. It has grown steadily since that time. The tents gradually gave way to frame buildings, many of which have now been replaced by concrete and brick structures. Land acquisitions over the years expanded the post from the initial 96,000 acres to the present 184,000 acres of varied terrain necessary for Infantry training.

As the post changed so did much of its teaching. New weapons, equipment, tactics and techniques, most of which were developed at Fort Benning, have required the School to alter its instruction to match the times and the needs of modern Infantry. The Infantry school has always kept its teaching abreast of technical developments and has helped greatly to shape Army thinking as the means of waging war have changed.

Today the Infantry School trains not only men from this country, but from 35 allied nations as well. It is performing a global role in the preservation of freedom. But more than this, it is dedicated to the task of training the best possible Infantryman, who can and will be a decisive force in any future conflict.

Instructors of the Infantry School Combat Conditioning Committee try out part of the experimental physical proficiency test.

Our Physical Unfitness

By Lt Col James E. Reilly and Capt Robert M. Garrison

There is considerable evidence that our soldier lacks the physical conditioning and stamina we will require for the modern battlefield. We must do something about this now!

MANY Infantrymen are concerned—and rightly so—about the apparent decline in the physical fitness of the American soldier. This concern is shared by other elements of the Army and by our national government, including the President of the United States.

Historically, we have considered the aggressive, physically hardened fighting man as the backbone of our Army and our national defense. Since we are not plush with manpower and can expect to be outnumbered in any future conflict, the quality of our soldier must to some extent compensate for our lack of quantity. This is particularly important today when it is obvious that conditions on the battlefield will demand increased hardiness and stamina.

The problem seems to stem in part from inadequate physical conditioning of the American youth in general, and in part from improper or insufficient effort within the military establishment. That improvement is needed nationally is indicated by the shocking number of youths who are rejected for military duty by Se-

lective Service because of physical deficiencies.

Aware that our present sedentary way of life, in which almost everyone rides, uses labor-saving gadgets and overeats, undoubtedly affects the physical fitness of our youth, President Eisenhower established the President's Citizens Advisory Committee on Fitness of American Youths and the President's Council on Youth Fitness. The purpose of these two groups is to determine the extent to which our youngsters are becoming soft, and to alert the American people to this problem.

Within the Army, dissatisfaction with the conditioning of the soldier led to a Physical Fitness Seminar at the United States Army Infantry School last year. This seminar, the first of its kind ever conducted by the Army, brought together representatives from major Army headquarters and commands; service schools; the Marine Corps; the Air Force; the American Association for Health, Physical Education and Recreation; the U. S. Office of Education and the President's Council on Youth Fitness. One of the goals of the seminar was to assess the current physical fitness of the Army and to recommend future standards.

Further attention was directed to the problem by its inclusion as an agenda item at the World-Wide Infantry Conference held at the United States Army Infantry Center last December.

Ironically, the important breakthroughs which we have achieved in weapons and equipment, and which magnify our combat capabilities, also reduce our capabilities by contributing to the softening and deterioration of the soldier.

Our problem becomes even more significant when we consider some of the factors which favorably influence the physical condition of the Soviet soldier. In the first place, the Russian people provide a broad base of physically hardened citizens for the military service. In Russia it is considered a patriotic obligation to be physically fit. Everyone is expected to develop and maintain maximum strength, endurance and agility. Physical education is an instrument of national policy and is a required subject in all Soviet schools. Twenty million Russian men and women belong to athletic clubs and great emphasis is placed on physical accomplishments. Equally important, the Soviet citizenry is exposed to the deteriorating effects of few mechanical luxuries. Their manner of daily living reinforces rather than impairs physical fitness. Transportation is limited—consequently, Ivan walks more. Lacking labor-saving devices, he does more manual labor.

As a result, the Soviet draftee enters the Army better equipped physically for rigorous training. And while he is in the service he is kept physically fit. Soviet doctrine stresses that the outcome of an engagement will always be decided by men "strong in spirit and physically tough." The Soviet soldier is given little opportunity to become soft.

Many commanders, particularly Infantry commanders, recognize that the combat mission of the Army requires superb physical conditioning, not only in the combat elements but in support and service elements as well. They recognize also that such conditioning cannot be accomplished overnight or after the curtain goes up. No longer can we count on allies to buy us time to train or to get into shape. In this nuclear era we can expect to find ourselves in combat immediately after the enemy launches an attack—on this country or on one of our Free-World allies. There will be no time to develop physical endurance en route to the battle area. Yet, the kind of combat we visualize today will require rapid movement and deep patrolling over great distances, and vigorous fighting against superior numbers and under the most difficult conditions. While the Infantry is becoming increasingly mechanized, there is not a diminishing, but rather an increasing demand for higher physical standards. Protected carriers and aircraft may not always be available or usable for movement over the battlefield. To avoid destruction and to conduct offensive operations we frequently will have to move on foot over greater distances and at greater speeds than in the past. And we will *fight* on foot. If we are to sur-

Instructors check the triple standing broad jump, another event of the experimental test.

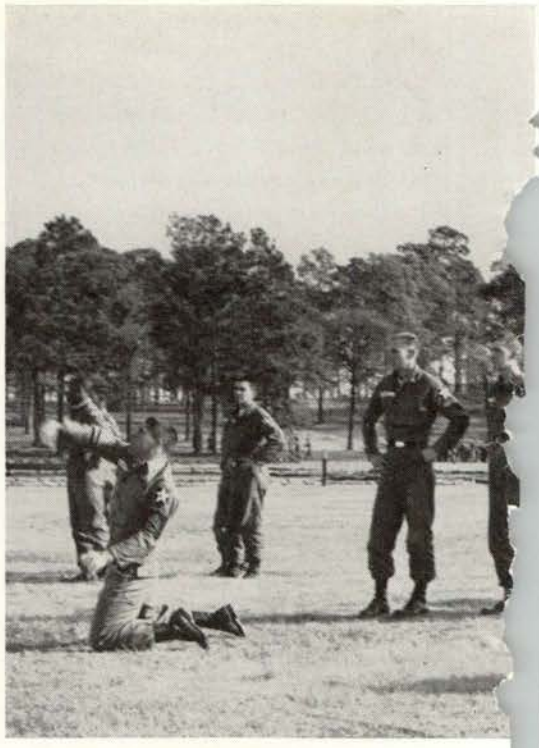
vive and win on the modern battlefield we must get into top physical condition now and stay in condition.

Commanders who recognize the urgent need for physically hardened soldiers are alarmed by what seems to be a spreading deemphasis on physical fitness. While it is difficult to fix a point and say exactly where stress on fitness is being subordinated or why, it is not hard to find evidence of declining standards. Perhaps the decline can be attributed to neglect of our physical training program, to a lack of decisive emphasis at some command levels or to a shortage of officers with sufficient experience to develop really effective fitness programs.

Prior to the seminar at Fort Benning, two field surveys were conducted to determine what units and individual officers felt about the effectiveness of our present physical training. Questionnaires were sent to all divisions—Infantry, Airborne and Armor—and to Army headquarters. Seventy percent of the units questioned indicated that our present programs are insufficient for mobilization purposes. Sixty percent expressed a need for the allotment of more time to physical training. Questionnaires returned by more than 1700 individual officers—warrant officer through colonel — reflected almost identical viewpoints as those received from units. Most of these same officers, however, felt they would have from three to six months to get into shape between mobilization and actual combat. The recent situation in which troops were airlifted to Lebanon within a few days should indicate that we are not likely to have months or even weeks in which to shape up.

Speakers at the seminar pinpointed additional evidence of the need for more emphasis on physical conditioning. Capt Bruce Wallace, Chairman of the Fort Benning Ranger Committee in the Infantry School's Ranger Department, reported that many young officers and noncommissioned officers feel that the Army should provide the necessary conditioning—that little or no self-generated effort should be necessary. He pointed out that more than 20 percent of the men who apply for Ranger training fail to meet minimum physical requirements—"a sad commentary when you consider that these men are supposedly selected individuals, the cream of the American Army."

A similar situation was reported by Lt Col Guy E. Campbell, Chairman of the Basic Airborne Training Committee. Despite minimum standards, 14 percent of all volunteers fail the pre-Airborne physical fitness test. And



Grenade throw.

many more must be washed out after starting the course because they fail in their physical training or suffer minor, athletic-type injuries during physical conditioning periods.

The high rejection and failure rate is significant because most of the volunteers are highly motivated individuals and in general are in better physical condition than the average soldier.

Working in committees, the seminar developed a number of conclusions and recommendations. Some of these were of major significance to the civilian population, particularly to educators. We will mention here only those which are related to or apply specifically to the military.

The seminar recognized that physical fitness is essential to the Army. It recommended that physical fitness be given positive command emphasis at all levels of command. It stressed that physical training must have the same emphasis as is given to other training subjects. And it called on company and battle group commanders to evaluate continuously the physical proficiency of their commands to insure that their troops are

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LT COL JAMES E. REILLY received an Infantry commission upon graduation from New York University in 1936. During World War II he served as company commander with the 18th Infantry, 1st Infantry Division and as Chemical Warfare Officer of the 13th Airborne Division in France and Germany. In 1952, after duty in Germany with the Operations Section of Headquarters, Seventh U. S. Army, he commanded a battalion in the 505th Airborne Infantry Regiment of the 82d Airborne Division. In 1955, Colonel Reilly became Advisory Team Chief with the III Corps of the Chinese Nationalist Army. He is now Chairman of the Infantry School's Combat Conditioning Committee.

CAPT ROBERT M. GARRISON was commissioned in the Infantry upon graduation from Norwich University in 1952. After attending the Associate Infantry Officer, Ranger and Airborne Courses at Fort Benning, he was assigned to the 11th Airborne Division. He then served in Korea and on Okinawa before returning to the Infantry School as an instructor in the Airborne-Air Mobility Department. He is now attending the Advanced Infantry Officer Course.

always ready for and capable of participation in combat operations.

The World-Wide Infantry Conference focused further attention on the fitness problem. Speaking from the Conference floor, Col John T. Corley, Director of the Ranger Department, aired the deficiencies of our physical training program, and a Conference committee, headed by Maj Gen Sidney C. Wooten, drafted specific resolutions which were designed to provide sound corrective action. These resolutions, unanimously endorsed by the Conference, gave direction and force to the Infantry's physical combat-proficiency efforts. The Conference resolved:

That all personnel of Infantry combat units establish a training objective of 30 minutes of physical conditioning exercises each duty day.

That a new test, consisting of specific physical combat skills, be devised to measure more accurately the Infantryman's physical fitness.

That all Infantrymen be tested annually until they reach their forty-first birthday.

That results of physical fitness tests be made a matter of permanent record on DA Forms 20 and 66.

That a score of 200 points on the present physical fitness test be accepted as the minimum standard of fitness, until the new test is developed and implemented.

Such a physical proficiency test is now being developed at Fort Benning. An experimental battery of tests utilizing the basic combat skills of climbing, crawling, jumping, throwing and running, was tested in January of this year by selected units of the 2d Infantry Division. The experimental test consisted of a horizontal ladder climb, a 40-yard crawl, a triple standing broad jump, a grenade throw and a one-mile run. The results are now being analyzed.

In general, the test events were approved by the trainees. They felt that the combat-related tasks which require all-round development are superior to present physical fitness test events.

The physical fitness problem has been recognized and exposed. We know what we must accomplish and we know how to do it. But merely making resolutions, introducing a new physical fitness program and developing a new proficiency test is not going to solve the problem. Fitness is a job for every unit, every commander and every Infantryman. Only when the individual soldier is physically ready to fight any kind of war, in any kind of terrain, climate or weather, will we have faced the problem and solved it. Fitness is an Army-wide concern, but a command and individual responsibility.

Survival Training

By Lt Earl J. Cantrelle

SPECIAL missions which take Rangers deep behind enemy lines may often require living off the land for extended periods of time. The Ranger Department, realizing the need for survival training, incorporated it into the Ranger Course some years ago.

It has been found, however, that the need for such training is not limited to men who perform special missions—as our experience in Korea, where units or parts of units were frequently cut off behind enemy lines, makes amply clear. With this in mind, the Department has established a two-hour course entitled, "Survival Techniques," which is presented to Basic Infantry Officer Course and Officer Candidate School students at Fort Benning. The course is not designed to make experts of the students. However, it does effectively acquaint them with the basic techniques of survival. Emphasis is placed on the "will to survive."

After a general orientation, the class is divided into three groups. The groups are rotated among stations at which various aspects of land survival are presented. At station one, several types of plant and animal life are discussed, and the methods of procuring them are demonstrated. During the discussion the instructor stresses the importance of being able to determine what foods are edible in various areas and of acquiring the skill to obtain them. At station two, traps and snares are demonstrated and their uses discussed. Here the students learn that to trap successfully they must decide what to trap, and what the habits and foods of the animal are, and then must bait and set their traps accordingly. Finally, at station three, the basic techniques of building shelters and fires are explained. The instructor demonstrates the use of fires for keeping dry and warm, cooking, purifying water and signaling, and emphasizes that survival may depend on a man's ability to provide fire and shelter when he needs it.

"Survival Techniques" is a significant addition to the BIOC and OCS programs of instruction. Students will be given a basic working knowledge of the survival techniques and, most important, in future assignments will be able to train other men in survival.

Men without weapons in modern war are helpless, but weapons without men are nothing.

GENERAL OMAR N. BRADLEY

Carrier Signals

By Capt Gordon E. Williams

Here is a suggested set of flag signals which would give the leader of small Infantry units a visual means of controlling his personnel carriers in mounted operations.

Now that the personnel carrier is such a major factor in our combat operations we are faced with the problem of controlling the movements of these vehicles on the battlefield. As foot soldiers we have tended to rely on our familiar arm-and-hand signals. But these signals simply are not suitable for use with the carrier. Frequently they cannot be seen, let alone understood and executed.

A set of signal flags—red, green and orange—is provided as TOE equipment with each carrier. However, we have not been using them, apparently because we don't know how to do so. What we need is a system of standardized flag signals.

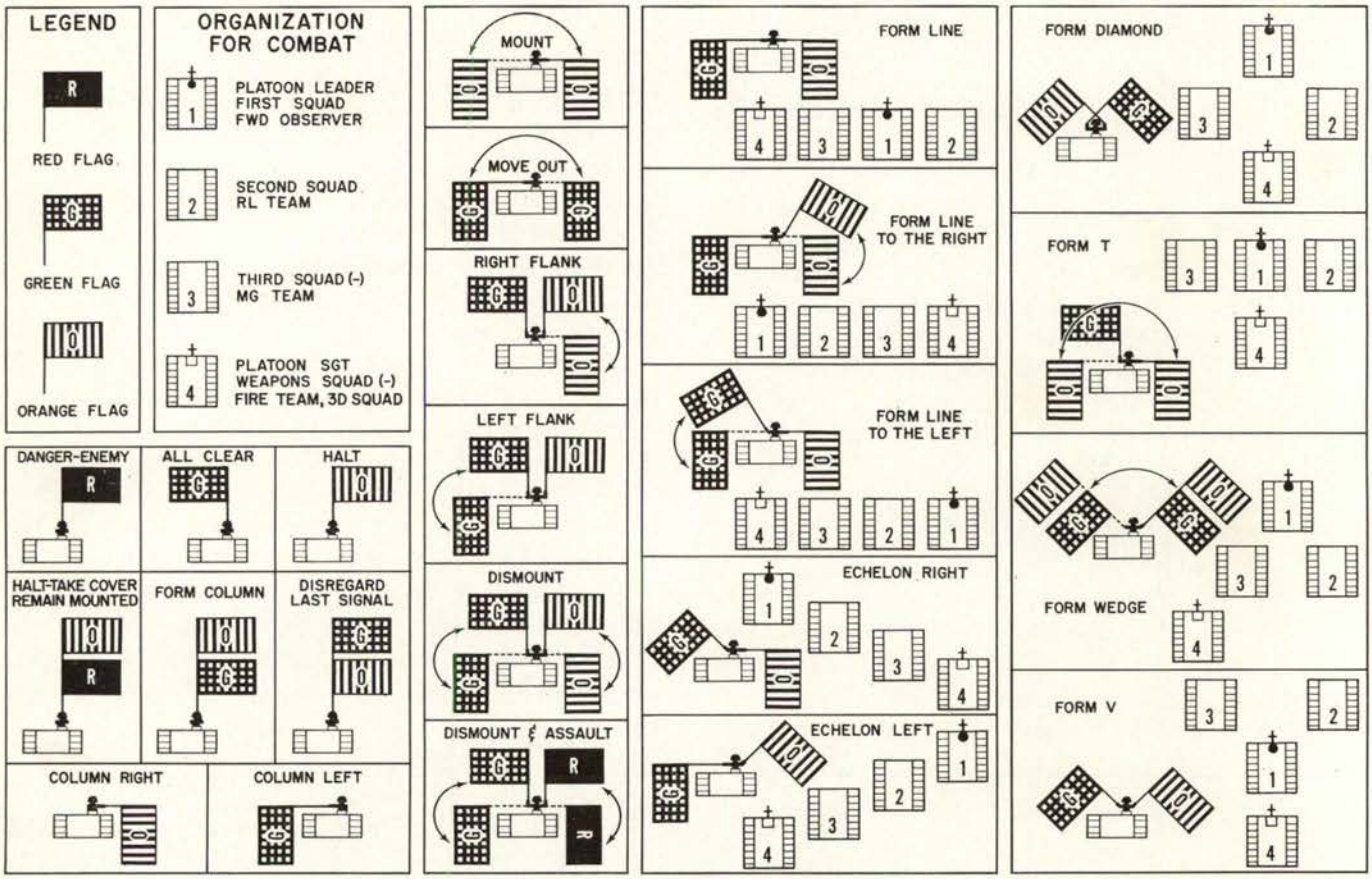
We suggest the system illustrated below. In this system the green flag normally would be held in the left hand, and the orange and red flags in the right hand. In a few cases, two flags would be held in one hand.

The platoon leader's vehicle would be the lead vehicle. Signals would be given from the turret of the vehicle by the platoon leader, and repeated by the other vehicle commanders to insure that all carriers to the flanks or rear received them. The vehicle commanders would hold the signal until the platoon leader dropped his flags, at which time the command would be executed.

The organization illustrated is provided only as a guide. It is based on the fact that the rifle platoon normally will receive four carriers for mounted operations. Modifications can easily be made for other circumstances.

If such a system is adopted, the signals should be reproduced in color and displayed in the carrier turret.

Proposed Flag Signals.



By Gen Matthew B. Ridgway

Any reasonable person who considers the truth and fundamental principles rather than "get-rich-quick" schemes must conclude that ground forces have the ultimately decisive role in warfare. And any young man who seeks to serve his country will find that leading the heroic ground fighter offers the best of all rewards.

The Army's Basic Role

It is often disturbing to me to note the extent to which the basic role of our Army fails of adequate appreciation in the public mind. There are many reasons, but perhaps the most influential is the same reason which contributes to much confusion of thought, even among thinking people, in the attempt to reach sound conclusions regarding the great international problems which confront us today. This reason, it seems to me, is that the more complex the problem, the more readily people seem to grasp at every proposed short cut for its solution. The fundamental truths and principles on which and by which any sound solution must rest are either forgotten or cast aside, and the appeals of "get-rich-quick" schemes whereby great objectives can be attained at low cost and with little effort lull them into forgetfulness of the harsh facts of life.

There are simple truths and fundamental principles which must enter into any honest analysis of these problems, if there is to be reasonable hope of enduring solutions. If in our thinking we recognize these truths and apply these principles, we shall have a far greater chance of working solutions than if we ignore either or both.

Let me state a few of these truths as I see them.

First, man has yet to conquer space. He may soon make the first few venturesome flights beyond our atmosphere, but he must quickly return and get his feet on solid earth again. Nor for more than brief moments, relatively speaking, can he sustain himself away from land. The bases of naval and air power are all established on land, and neither navies nor air forces can exist without them.

Second, it therefore follows, as clearly as night does day, that the basic objective of war is the control of land areas and of the people who live on them.

Third, since manned aircraft have but two alternatives — to bluff or to bomb — and since naval ships, whether surface or sub-surface, are limited to the waters of the earth and cannot penetrate continental land masses, it follows with irrefutable logic that the final decisive factor in establishing and maintaining control of land areas and their inhabitants is the force that can be brought to bear by ground forces. They are confronted with no such narrow choice of means. They cannot be stopped by any terrestrial barrier, nor, with proper training, armament, supply and leadership, can they be stopped by any human obstacles, provided they receive the full support of the air and sea arms, and provided *the will to win* dominates the whole military establishment and the civilian leaders who control it.

These truths — and, for my part, I cannot see how any reasonable person can challenge them as truths — point to but one conclusion: ground forces have the ultimately decisive

GEN MATTHEW B. RIDGWAY, now retired, was Army Chief of Staff until 1955. Prior to that assignment he was Commander of SHAPE. During the Korean conflict he commanded the Eighth U. S. Army and later the United Nations Command.

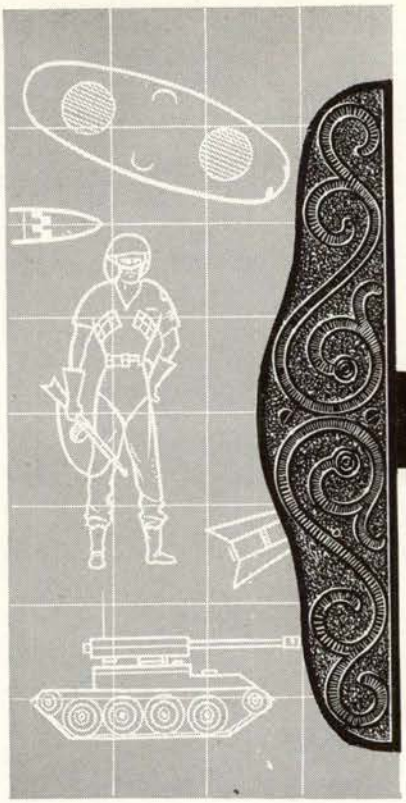
role. However complete the mastery of the seas achieved by naval forces, however great the devastation inflicted on land areas by air forces, inevitably there will come a time when some trained, disciplined, well-led force must move in on the ground for the final kill, and then must remain until the basic requirements of humanity are met and orderly processes of social and political organizations restored to viable levels.

From all of this, from the ultimately decisive role of ground forces, emerges the heroic figure of the individual fighting man on the ground. He is not just the Infantryman, though that name symbolizes the whole ground fighting force. He is the Infantryman, the tanker, the artilleryman, the communications man, the engineer, the medico and the supply man. Of course, his inseparable and essential colleagues in the air, and on and under the sea, must play their full and indispensable roles.

But in the courage, skill, stamina and indomitable spirit of this ground fighter, symbolized by the word "Infantryman," is the distillation through all the ages of the final arbiter of war — not machines but men, not missiles but muscles, not money but mind and spirit.

With full appreciation of the opportunities open in all of the other military services, I believe there is no finer field for the exercise of man's finest qualities of leadership than among those men who fight on the ground.

This is why I think our Army, in spite of all obstacles, frustrations and at times severe hardships, offers our youth as fine a career as any on earth — a career of utmost purposefulness in the service of others — his countrymen and their ideals. And this is why, when his career is ended, and his fight is over, he will have attained the best of all rewards — the admiration and respect of his associates. Kipling's words provide an apt conclusion — "And what is more, you'll be a man, my son."



WHY DON'T WE?

Perhaps you have an idea for some item or technique that would help the Infantry. Send it to the Editor of INFANTRY. *If it is published you will receive a free one-year subscription.*

Why Don't We . . .

. . . develop a simple range finder for the recoilless rifle? The success or failure of our recoilless rifles depends upon first-round hits. Assuming that the rifle is properly boresighted and manned by a proficient gun crew, the primary consideration in obtaining a first-round hit still depends predominantly upon the human element of determining the exact range from gun to target. Why don't we develop a small, accurate range finder similar to that found in the modern camera? It could be carried by the squad leader in much the same manner as a pair of binoculars.

Maj William H. Guinn, Jr.

. . . speed up notification of promotion? Promotion is one of the most important factors influencing the morale of the individual and prompt notification is extremely desirable.

Since it takes up to seven days for DA special orders to reach an installation, officers, in many cases, see the announcement of their promotion in one of the service publications days before receiving official notification.

Why don't we prepare a standard message of congratulation, in the name of the Secretary of the Army or the Army Chief of Staff, with a space left blank for the name, promotion order and date, and the date of rank of the officer being promoted, and distribute it to all installations and major headquarters. TAG need only TWX the installation the name of the person promoted, the promotion order number and date, and the new date of rank. The installation would then complete and dispatch the prepared message to the individual concerned. This plan would insure prompt notification of the officer but, perhaps even more important, would add a personal note to an important landmark in an officer's career.

Capt Alfred W. Matthews

Continued on page 71

A Tent — for the Modern Battlefield?

By Lt Col Gus W. Schlitzkus

This new all-purpose tent may be an unexpected answer to our need for a light, highly mobile shelter for battle group and company command posts and other combat activities.

WHAT! A tent on the modern battlefield? In mobile nuclear warfare?

That's right! We still need a tent. Specifically, we need a lightweight, insulated, roomy and easily pitched tent—one that can be quickly and compactly stowed, that can be carried by the battle group and the company anywhere they go.

To many Infantrymen this suggestion may appear ridiculous. Our doctrine calls for highly mobile Infantry units which sweep rapidly over the battlefield in personnel carriers and ground-hugging aircraft. We are preparing to face unprecedented nuclear and non-nuclear firepower. To recommend that we use a tent under such conditions may seem preposterous. But is it?

In any kind of warfare the Infantryman needs some form of shelter. Commanders and staffs must have a dependable, readily available place in which to plan, work and issue orders—night or day, in any kind of weather or climate. At times, suitable shelter can be found or made on the

The new tent can be carried on or in the carrier and other vehicles, with no interference to normal loads.

battlefield, but more frequently it must be provided.

Although much attention has been given the development of weapons and tactics for fighting on the future battlefield, it is apparent that similar effort has not been devoted to the development of control and administrative facilities which will keep pace with fast-moving combat units.

Experiments have been made with wheeled vans. The battle group, in fact, is now equipped with a makeshift shop van for use as a command post. While this is a step in the right direction, vans are bulky and cumbersome. Their value in combat may be exceeded by the problems they present. Certainly vans could not keep up with track-mounted Infantry units in fast-moving situations, particularly in areas with limited road nets. Also, in helicopterborne operations the van must be left behind.

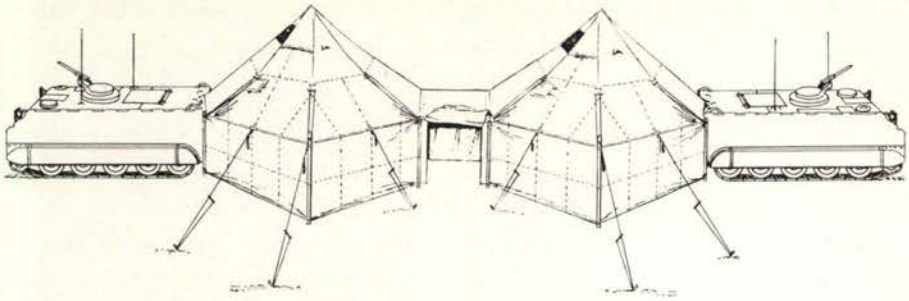
Other experiments have been made with portable "boxes" which can be mounted on trucks, trailers and tracks or lifted by helicopter. These specially designed and equipped "rooms" are flexible and have many other desirable characteristics, but again they are bulky. They present logistical problems and, most important, they require for their movement vehicles or aircraft which may not always be available.

Some Infantrymen feel that the tracked personnel carrier is the best answer to the problem. Significantly, the recent World-Wide Infantry Conference recommended that tracked carriers of the T113 type be issued as mobile command posts for both the battle group and the company. Carriers are ideal for situations in which the commander must make decisions and issue fragmentary orders on the move. But, for detailed planning and staff work the space provided by existing carriers is quite limited, and future carriers may be even smaller. Furthermore, the carrier is an expensive item. It doesn't seem likely that carriers will be available in sufficient numbers to provide tracked office space for all members of staff sections. Obviously, we must supplement the carrier with some other means. A highly practical means is a tent. But it can't be just any kind of tent.

The heavy, cumbersome canvas now organic to the battle group definitely is not the answer. A satisfactory tent must be suitable for use in all climates. It must be light and permit rapid erection and striking. The U. S. Army Infantry Board and the U. S. Army Infantry School believe that the 10-man arctic tent, with a number of important modifications, fills this need.

The arctic tent has been standard issue for cold regions since 1952. It has a number of unique features. Although it can withstand 60-mile-per-hour winds and a heavy load of snow, its only rigid support is a magnesium pole nine feet long which telescopes to a length of 57 inches. All other support is furnished by cotton lines anchored to aluminum pins. The skin is a nine-ounce cotton sateen fabric, lined with fire-resistant white-cotton sheeting. This lightweight liner performs a triple function. It provides insulation, prevents frost from falling on the occupants and makes the interior brighter. Four ventilators near the peak have inside ducts which may be closed by tie cords. These vents and two doors are provided with insect screens. Six-sided and pyramidal in shape, the arctic tent incloses 200 square feet of

In five minutes erection is well under way.



Tents can be joined in tandem with a single blackout vestibule.

floor space—enough room for 10 men in sleeping bags or eight men on cots. Yet for all this roominess, it folds into a compact bundle 57 inches by 30 inches by 7 inches, and weighs only 76 pounds.

The many desirable characteristics of this shelter led the Infantry Board and the Infantry School to recommend, in 1957, that it be modified and tested as *the* small general purpose tent for the Army. However, the Quartermaster Research and Engineering Command had been interested in a variety of experimental tents of original design to fill this requirement since 1953. Five new tents were tested, each of which was designed around a different method or principle of support, or a new fabric.

However, none of these tents met military requirements for one or more reasons. Either they were too heavy, too fragile, too small or too expensive. While this testing was going on, the Quartermaster decided to modify one arctic tent along the lines previously suggested, and requested that the Infantry Board make simple performance observations. The observations showed that the insulation qualities of the tent were applicable to hot climates as well as to the arctic. When the tent was pitched in the direct sunlight, the inside temperature registered lower than the outside temperature in the shade until the mercury reached 90 degrees. At higher temperatures the readings inside the tent were higher than in the shade, but by only a few degrees. Informed of these results, the Quartermaster made two more tents available and a full service test was initiated.

Five major modifications were made to the arctic tent for this test. The sidewalls were raised two feet and the screen doors were lengthened the same amount. Six telescoping aluminum sidewall poles and four door poles of the same design were added. An aluminum center pole, capable of telescoping from 10½ feet to 43 inches was substituted for the magnesium pole. An additional insect-screened ventilator was cut near the apex, and a blackout vestibule was added which doubles as a cover for the rolled tent.

The tent is easily attached to the carrier. There is no light leak.

After ten minutes equipment is moved into the tent without interrupting operations within the carrier.

During the test this modified tent was compared with the three small tents now used by the battle group—the command-post tent M1945, and the large and small wall tents. In every respect the modified arctic tent proved to be superior, and without any additional major modification it satisfied every military requirement specified for the general purpose small tent.

This new tent is completely compatible with mobile warfare. In spite of its increased height and other added features, it weighs only 140 pounds, about half the weight of the 272 pound M1945 tent. It will fold

into a bundle only 44 inches by 25 inches by 14 inches. Split into two loads, it can be jumped in general purpose bags by parachutists. It can be pitched or struck quite easily by three men in 20 minutes—in daylight and under ideal conditions this time can be considerably reduced. And it has an extremely high usable-space to packed-bulk ratio: 200 square feet to 8 cubic feet. The small wall tent by comparison has a ratio of 138 square feet to 8 cubic feet. As an example of what this space means to the battle group, the 10 personnel of the S2 and S3 sections, with their working gear set up, occupy less than one half the floorspace. Ample room is left for the men who operate in and out of this control center. For additional space, any number of tents can be easily linked in tandem.

All of these characteristics—low weight, low bulk, speed of erection and striking, and ample space—add up to a tent that matches the Infantryman for versatility. It is suited to any climate. It can be transported by man or animal carry, or free-dropped by aircraft. It can fit into the back seat of a ¼-ton truck, ride the top of a tracked carrier, or fill the passenger seat of a light helicopter.

While it was tested specifically for use as a command post, fire direction center and aid station, it can have many other uses. During the testing process commanders of Infantry, Artillery and Medical units were asked for comment. Without exception those who saw it were enthusiastic about it and claimed it to be suitable for *all* their tentage needs. They particularly liked the light-reflecting liner, the full insect protection and the provision for ventilation while blacked out.

Applications for this tentage are limited only by the imagination of the commander. There is no reason, for instance, why this tent could not be issued to the rifle company. In addition to serving the command post, it could also function as a kitchen and feeding tent, a warming tent and even as a maintenance tent—all these uses are made possible by its lightness and simplicity. Giving such a tent to the rifle company could have special significance in dispersed operations of the future.

Some Infantrymen will claim that the tent is unsuitable for the modern battlefield because it offers no protection against enemy fire or the effects of nuclear weapons. The point is that we do not look for this kind of protection in a tent any more than we would expect to find it in vans or similar alternatives. The carrier, since it normally will be attached to the tent in mobile operations, will help to provide such protection. Or, whenever possible, we will continue to use our best form of protection—a hole in the ground.

The modified arctic tent appears to be the best solution to the problem of providing sheltered working space for the command post and other activities in the battle group and the company. Coupled with the tracked carrier, it gives us an ideal arrangement for mobile operations. Even when the Infantry takes to the air in helicopters or zero-ground-pressure vehicles of the future, the tent can still go along. This new all-purpose shelter is indeed a necessity for modern combat.

This tent has many uses. Note the blackout vestibule.

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TRAINFIRE II: Part Two

This additional material on the Trainfire II program describes the ranges required and discusses the conduct of instruction. It shows how this new squad training can be implemented now.

By Maj Edward J. Collins

IN THE last issue of *Infantry,* we discussed Trainfire II, the projected combat training program for the rifle squad. That discussion covered the basic principles and goals of Trainfire II and paved the way for further discussion.

In this issue we shall consider the ranges and training areas required for this instruction, and we shall take a close look at how the training is conducted.

Four ranges are required for Trainfire II instruction: Technique of Rifle Fire, Defense Training, Assault Fire and Attack Training ranges. These ranges duplicate, insofar as possible, situations and conditions the rifle squad is likely to encounter on the battlefield. Combat realism is injected by extensive use of small-arms and artillery simulators[1] and by pop-up targets and other target devices, which are so arranged that they simulate enemy movement or other actions. These devices require the trainee rifleman to employ the same countermeasures

[1] These simulators were discussed in "Trainfire II," Oct-Dec 1958 issue of *Infantry,* pp. 24-25.

he would use against an actual enemy.

In addition to the ranges, special training areas are used to give the rifleman further direct experience in applying the instruction he receives.

While proper ranges and other facilities are essential for this training, the real core of the Trainfire II program is the training itself and the manner in which it is conducted. To insure that the instruction is presented uniformly and effectively, a specific lesson plan for each period is included as a part of the program.

Period 1

Trainfire II instruction begins with a short orientation on the role of the rifle squad in combat and a discussion of its organization and equipment. At this time also, the course is outlined briefly so that every individual will have a clear understanding of the nature and purpose of the instruction he will receive (Figure 1).

The training unit is then divided into two groups, Group I and Group II, and the men in each group are arranged into consecutively numbered eight-man squads.[2] Since one of the important objectives of Trainfire II is to teach teamwork, the trainee remains throughout the course with the squad and group to which he is initially assigned. On the other hand, versatility is also required. To achieve this, positions within the squad are rotated.

After the orientation the two groups separate. Group I receives training in combat formations and Group II gets instruction in sound commands and arm-and-hand signals. As indicated in Figure 1, the two groups then change over so that both groups receive identical instruction, although in reverse sequence. Cadre teams are used to demonstrate both the proper formations and signals, following which the trainee squads are given practical work.

Period 2 and 3

In Period 2, Group I receives tactical training for the squad in the defense while Group II gets Part I of technique of rifle fire. In the middle of the period the two groups rotate. The squad in defense instruction includes the defense mission, defense order, SOPs for movement into position, and sector of fire for the squad, fire team and individual. Also covered are occupation of the position, work priority, security and chain of command.

Part I of technique of rifle fire teaches the distribution and concentration of fire and provides specific experience in responding to fire commands. This instruction is given in an area near the Technique of Fire Range. The group then moves to the range for its first live firing.

At the beginning of Period 3, Group I receives tactical training for the squad in the attack. This includes the attack mission and order, attack terminology, sequence of actions in the attack, SOPs for fire and maneuver, and consolidation and reorganization on the objective. A special training area is employed in which the trainee squads get practical experience in the attack. At the same time, Group II is given Part II of technique of rifle fire. As in Part I, preliminary instruction is given near the range and is then followed by live firing. Stress is placed on distribution of fire on a target deployed in width and depth, concentration of fire on point and split targets, and fire and maneuver. Again, at the end of two hours the groups rotate.

Technique of Rifle Fire Range

The Technique of Rifle Fire Range actually consists of two identical subranges (Figure 2). This arrangement permits squads operating on one subrange during Period 2 to be shifted to the other during Period 3, so that the second exercise will not be a simple duplication of the first.

Ideally, this range is located in rolling or moderately hilly terrain with both the firing line and the target area on high ground and a depression intervening. The "plunging" fire which results aids in the observation and adjustment of fire. Also, since maximum visibility and

[2] Throughout Trainfire II training, the squad leader and the two team leaders, who complete the 11-man squad, are cadremen.

Figure 1. Trainfire II Training Program.

TRAINFIRE II TRAINING PROGRAM

Period 1 (2 hours)		
All	Orientation, Formations, Means of Control (20 min.)	
Group I	Combat Formations	Groups rotate
Group II	Means of Control	after 45 min.
Period 2 (4 hours)		
Group I	Tactical Training—Squad in Defense	Groups rotate
Group II	Technique of Rifle Fire, Part I	after 2 hours
Period 3 (4 hours)		
Group I	Tactical Training—Squad in Attack	Groups rotate
Group II	Technique of Rifle Fire, Part II	after 2 hours
Period 4 (8 hours)		
Group I	Live Firing—Squad in Defense	Groups rotate
Group II		after 4 hours
Sub-Group Alpha	Reorganization, Consolidation	Groups rotate
Sub-Group Bravo	Technique of Assault Fire	after 2 hours
Period 5 (8 hours)		
Group I	Live Firing—Squad in Attack	Groups rotate
Group II	Squad in Semi-Independent Action	after 4 hours
Period 6 (4 hours)		
All	Squad in Independent Action, Blank-Firing Exercise	
Total hours 30		

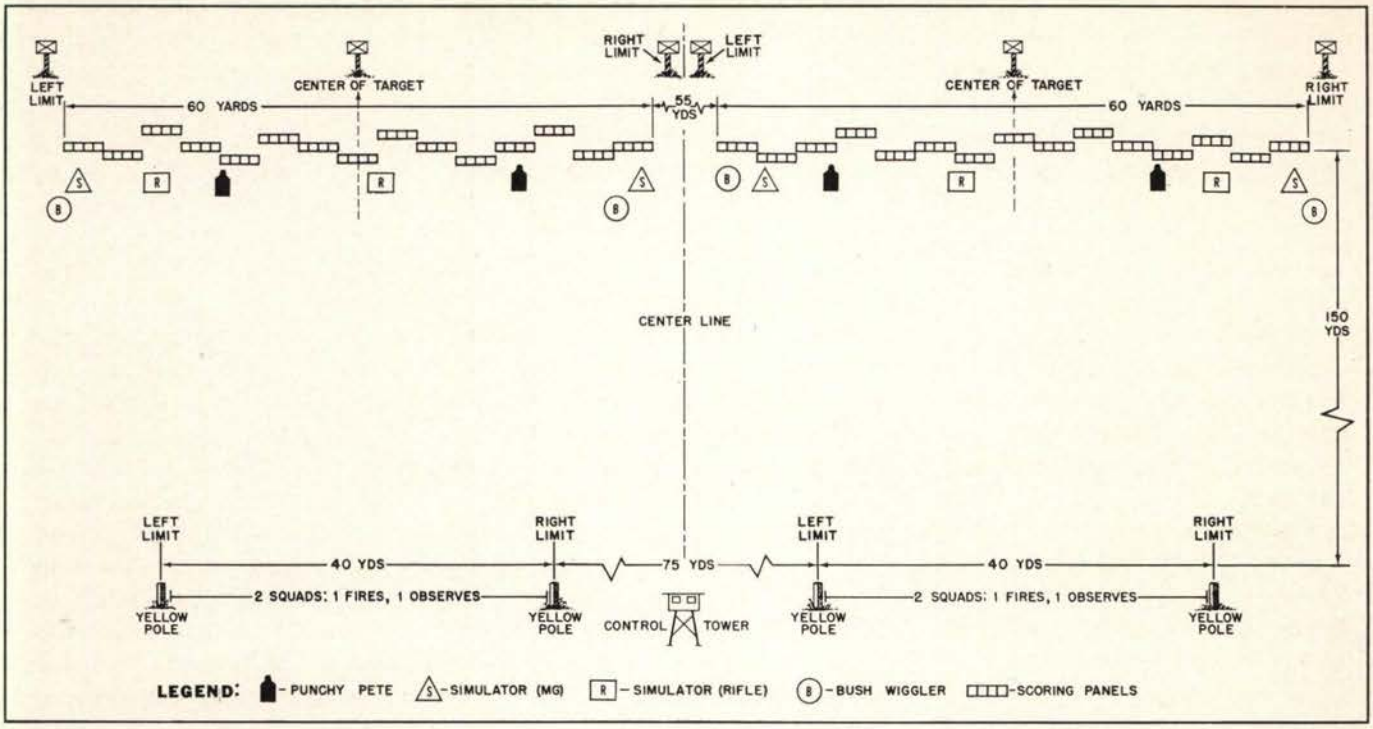


Figure 2. Technique of Rifle Fire Range.

unobstructed fields of fire to the target panels are necessary, this arrangement eliminates excessive removal of natural growth and keeps the target area from being too obvious.

However, the limits of the camouflaged targets are clearly marked *center, left* and *right*. Immediately prior to their firing on this range, the squads on the firing line are checked to assure that all riflemen are proficient in proper searching and target detection techniques. To accomplish this, the pop-up targets are momentarily exposed and the riflemen are required to report this information and to indicate to cadre squad leaders how they would fire. The simulators are then activated and the firing exercise begins. Squad and team leaders designate the target, using the man-made limit markers as the target limits. The firing consists of two 10-minute periods during which each man fires two clips in each period (a total of 32 rounds). The hits of each squad, which are registered on automatic counters, are scored separately. The scores are announced and the firing is critiqued. The points stressed in the critique are target detection, distribution of fire, rate of fire, the Search-Fire-Check technique, shifting of fires and fire effectiveness (scores). The next order, which has been observing and giving practice fire commands during this firing, moves to the firing line and the process is repeated.

For the advanced technique of rifle fire exercises in Period 3, squads formerly on one sub-range move to the other. The range itself is set up exactly as it was for Period 2, except that the target-limit and center-of-target markers are removed. Consequently, the location of the enemy must be determined from the sounds and movements of the simulators and target devices. Full proficiency in target detection, target designation and application of fire is required. Here again, each rifleman fires 32 rounds.

Period 4

In Period 4, the squads of Group I participate in a live-firing defense exercise on the Defense Training Range. Concurrently, they receive instruction in a target detection area. For this period only, Group II is further divided into Alpha and Bravo sub-groups. The Alpha portion is given a conference and a practical exercise on reorganization and consolidation on the objective and the Bravo portion receives a conference and demonstration on the technique of assault fire. The assault-fire demonstration is followed by live firing on the Assault Fire Range. After two hours the Alpha and Bravo sections rotate. After four hours Groups I and II change over and Group I is subdivided into Alpha and Bravo subgroups.

Defense Training Range

The Defense Training Range (Figure 3) is 300 yards deep but varies in width from at least 70 yards at the firing line to 150 yards at its outer edge. The riflemen of the trainee squads occupy two-man standing foxholes which are staggered to permit better observation and to prevent enfilading enemy fire from the flanks.

The range is located in a lightly wooded area containing grass, stumps and other natural camouflage. Rolling or moderately hilly terrain with an approach that would naturally channel an attack towards the squad em-

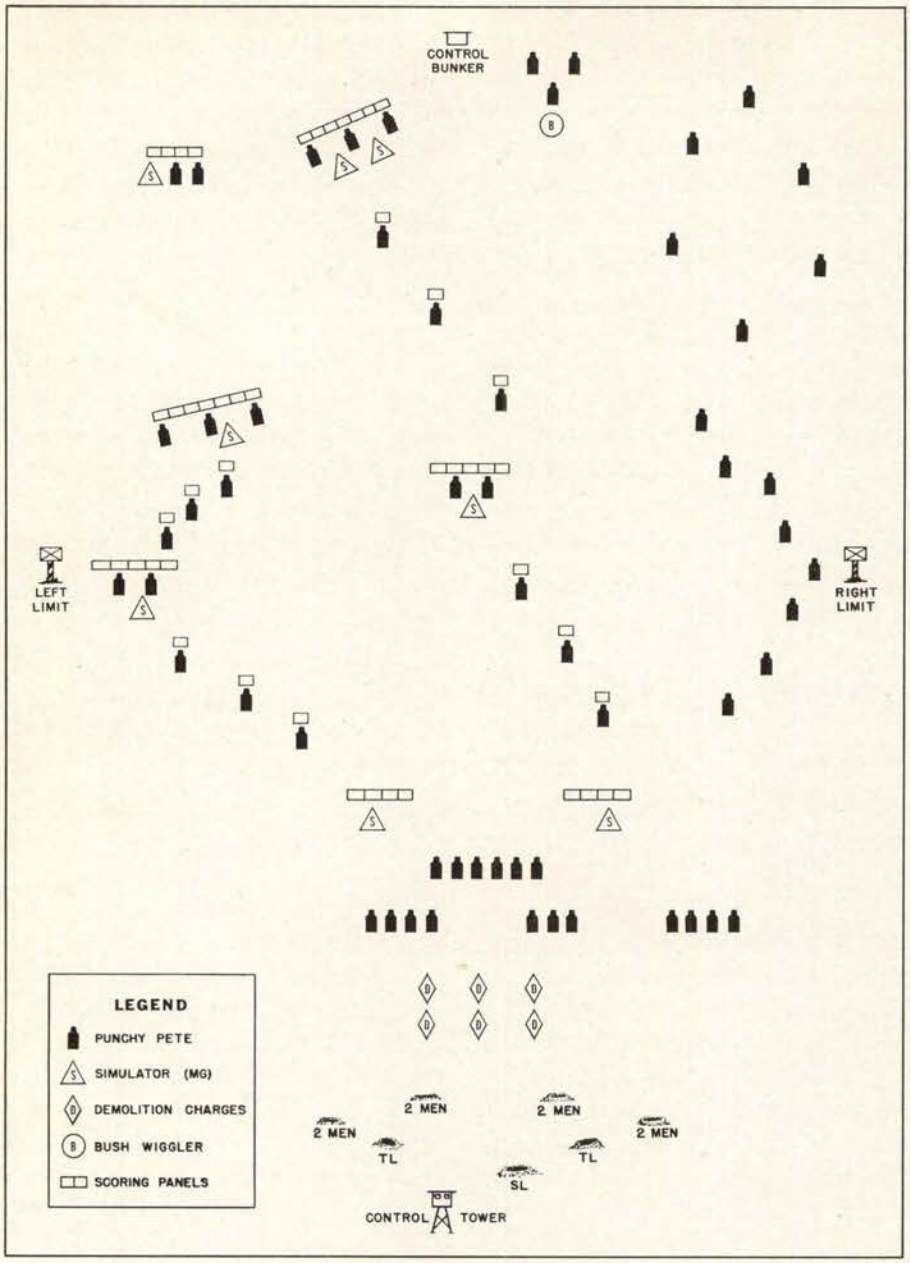


Figure 3. Defense Training Range.

placements is desirable. The location of targets and target clues should take advantage of the attack potentialities of the terrain.

Again, during this exercise, one squad fires while another observes and critiques. The firing exercise itself consists of 10-phase enemy "attack" on the defensive squad. The "attack" proceeds logically, with the use of simulated artillery support, target clues and appropriate enemy "maneuver." Each rifleman fires a total of 56 rounds.

Assault Fire Range

The Assault Fire Range consists simply of an open area approximately 90 yards wide and 100 yards deep, which rises slightly from the assault line to the objective. Engineer tape is laid across the rear of the range to indicate the assault line, and a similar tape is placed about 30 to 35 yards from the objective to indicate the point of change-over to the underarm firing position. In addition, the range is divided by tape into individual lanes, each of which is five yards wide. Each lane is indicated by a numbered marker and accommodates one rifleman. Three pop-up targets per lane are located on the objective. This arrangement permits two squads to fire at a time.

After demonstrations and dry runs, two squads form on the assault line, and, with bayonets fixed, advance in assault formation toward the objective, keeping to their assigned lanes and delivering assault fire upon the targets located on the objective. When they reach the second tape, they change over to the underarm firing position and complete the assault. A total of 96 rounds per rifleman is allotted for this firing.

Period 5

In this period the squads of Group I initially participate in a live-firing attack exercise on the Attack Training Range and Group II receives a conference and demonstration in tactical training for the squad in semi-independent offensive action. The attack-firing exercise tests the application of SOPs and techniques previously presented. Additional instruction in the target detection area is given concurrently.

The training in semi-independent action emphasizes techniques and procedures employed in situations when the squad is semi-isolated, is the point of an advance guard or performs flank security missions.

Attack Training Range

The Attack Training Range (Figure 4) is constructed to create a combat situation in which a rifle squad as part of a larger force attacks an enemy position. Since this instruction requires trainees to move in squad formations with loaded weapons, concessions to safety may be made by clearing away heavy vegetation.

After receiving a tactical orientation and the attack order, the participating squad moves to the line of departure. The actual attack is conducted in four phases. During Phase 1, the squad crosses the line of departure in an appropriate formation, moves through or around artillery fire and advances until it is stopped by fire from enemy security forces. Phase 2 consists of the destruction of the security troops by fire and ma-

neuver. Fleeing targets are fired on and the advance continues. In Phase 3, the squad receives machinegun fire from the enemy main battle position. Friendly artillery begins to fall on the enemy position as the squad again advances by fire and maneuver. Assault fire is delivered during Phase 4, and when the objective has been overrun, the squad reorganizes and consolidates. The problem is complete when the squad is in position and ready to repel a counterattack. The Attack Training Range accommodates one squad every 15 minutes. Each rifleman is allotted 40 rounds of ball ammunition.

Period 6

During this period the training unit is not divided into groups. All squads receive practical experience in semi-independent offensive action. Primarily, the squad learns to deploy and to deliver team fires in any direction. The instruction consists of an exercise which requires a thorough knowledge of relevant SOPs and allows maximum use of combat formations. The training area is composed of two blank-firing courses, designated as Problem Areas I and II. Conduct of the problem is the same in each area, except for minor modifications caused by variances in the terrain. Moving out from a march outpost, the squad encounters a series of enemy outposts, destroys them by fire and maneuver, and regroups to continue the advance. After each squad has completed the course, it is moved to a holding area and critiqued. Related concurrent training is conducted in the holding area both before and after squads run the problem.

Variations in Times and Ranges

The TOE rifle company, since it has only nine squads as compared to the 28 squads of the training-center rifle company, probably will complete range firing and practical exercises in less than the allotted time. This time should be used for additional practical training and live firing.

The ranges illustrated in this article are guides. To achieve the realism and flexibility which characterize Trainfire II training, the ranges should be tailored to the terrain. Local variations in terrain and tactical considerations will cause variations in the sequence of actions and in the number and distribution of targets and devices.

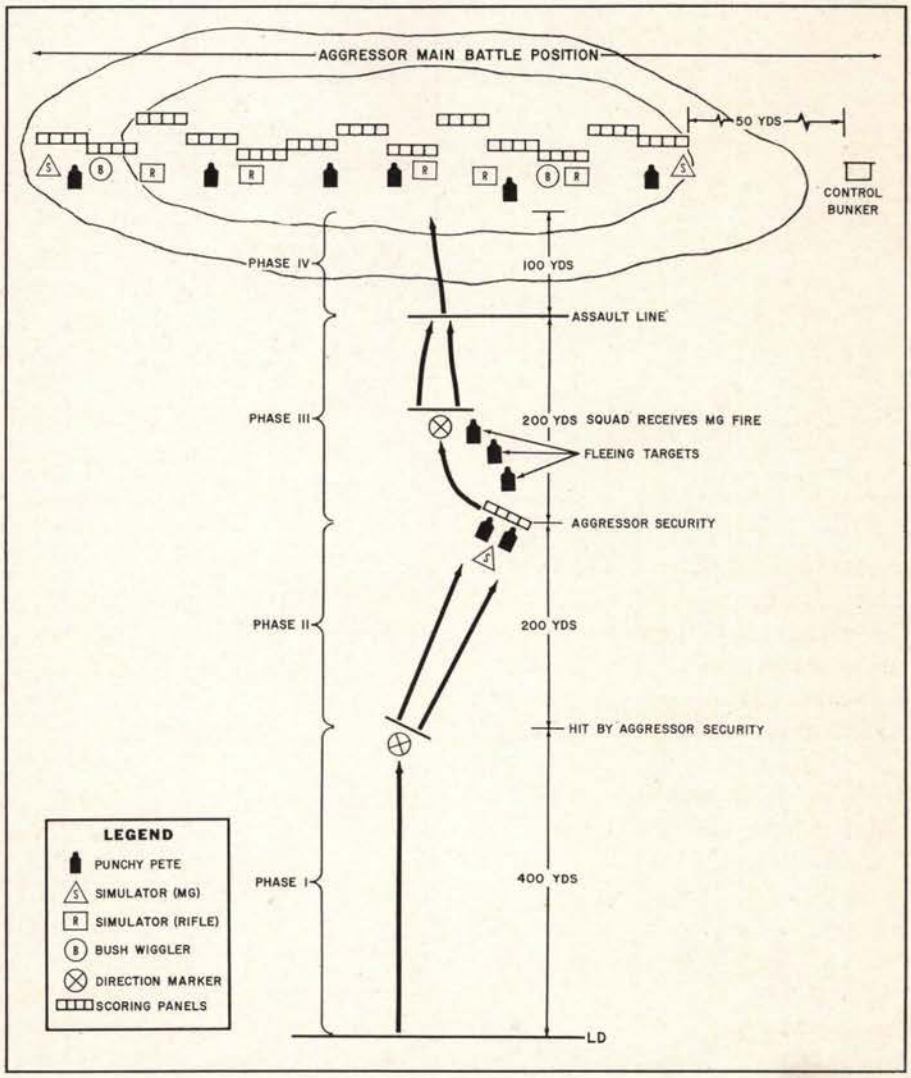
Advantages of the Program

As was previously pointed out, the aims of Trainfire II and those of the conventional training program prescribed by ATP 21–114 are the same. Much of the material itself is identical. Nevertheless, Trainfire II represents a major step forward because of its unique and effective methods of organization and presentation.

In the conventional training program, squad tactics and technique of rifle fire are not integrated. In Trainfire II, however, the integration of these subjects gives the rifleman a complete, consecutive picture of his battlefield responsibility. Also, in this new program the individual marksmanship training presented during Trainfire I is reviewed. Cover and concealment, camouflage and other subjects concerned with the movement of the individual are used and reemphasized throughout the Trainfire II program.

Breaking of the training unit into groups is economical since facilities and equipment are required for only

Figure 4. Attack Training Range. The direction markers orient the squad on the range. The arrows indicate the direction of the squad's movement.

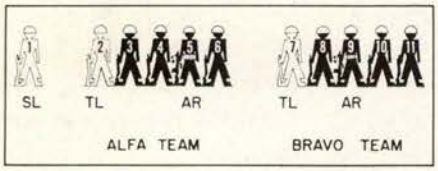


a part of the unit in any one element of the program. Moreover, the use of groups and sub-groups allows greater attention to detail and more careful supervision of training. Trainfire II is a well coordinated undertaking and full use is made of every instructional hour. Every member of a unit receives important related instruction at all times, even those who are waiting in holding areas for their turn to fire on one of the ranges.

In conventional training the rifleman fires 56 live rounds. In Trainfire II he fires 256 rounds. The value of this additional live firing cannot be exaggerated, especially in view of the realistic environment in which it occurs. The conventional program generally represents the enemy by abstract symbols and purely verbal situations. In Trainfire II, however, the enemy is realistically represented on the ranges and the squad must detect him and destroy him by maneuver and the application of team fires. Since field firing, without the tactical environment, is the only type of live firing used in conventional training, Trainfire II produces an unmatched degree of battle indoctrination. In short, Trainfire II teaches the rifleman to function as a more effective member of his squad with a minimum of leader direction and control.

In Trainfire II, frequent use is made of SOPs for fire and maneuver. On the one hand these SOPs insure uniformity of instruction, and on the other they give the rifleman definite, automatic procedures to be applied in a variety of battlefield situations, insuring that under the stress of fear and confusion he will react properly as a coordinated member of his squad.

Figure 5. Team Organization of the Rifle Squad. This chart (Chart 1) is employed in conjunction with a demonstration squad during Period 1.



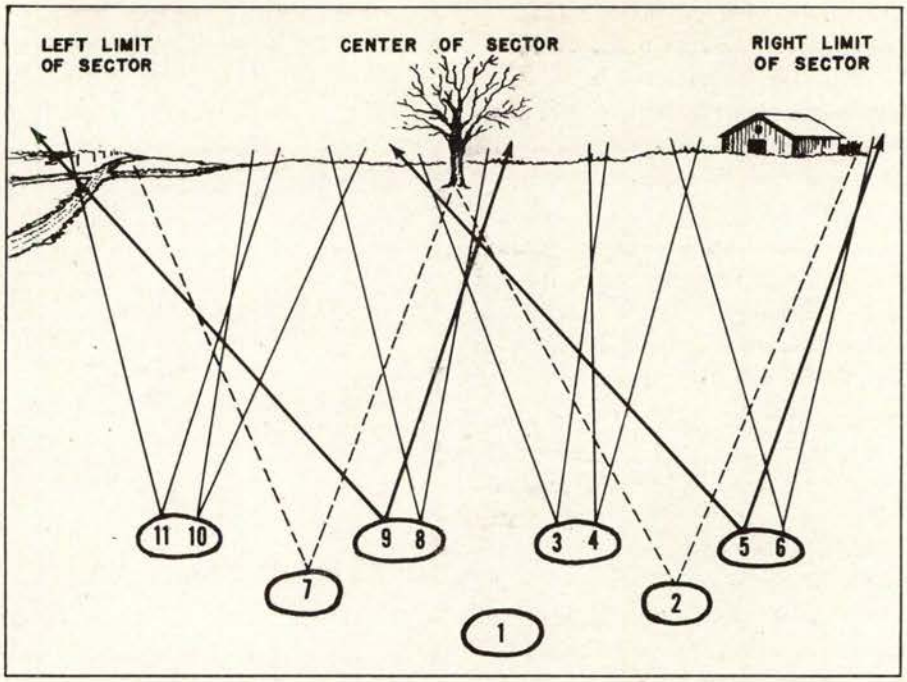


Figure 6. Squad in the Defense and Sectors of Fire. This chart (Chart 7) is used in Period 2. See Lesson Plan, page 38.

So that every rifleman who completes Trainfire II will have demonstrated proficiency in squad fire and maneuver, cadremen are employed as fire team and squad leaders in every exercise. Their expert leadership and guidance permit close control of trainee squads, contributing to safety and organization, and allowing proper supervision of each individual rifleman. In this way every rifleman who completes Trainfire II will have demonstrated full proficiency in squad fire and maneuver under a variety of conditions.

For clarity and impact, a number of training aids are employed in Trainfire II instructional periods. Among these are the charts illustrated in Figures 5 and 6. In addition, a "tilt-table," which can be raised to the near vertical for easy viewing, is used to give riflemen graphic instruction in formations, and in the conduct of the defense and the attack. The top of the tilt-table is a slapboard upon which magnetized figures, weapons and terrain features can be arranged to illustrate a wide variety of situations. The miniature figures used on the table match the colors on the helmets of the cadre demonstration squads, thereby creating an inescapable continuity between illustration and demonstration. The demonstration squads themselves contribute materially to the effectiveness of Trainfire II instruction.

Lesson Plans

Instructor lesson plans are an integral part of the program and establish the essential structure of Trainfire II. They have been designed to combine explicitness with real impact in presentation. The lesson plans are explicit so that every rifleman, wherever he receives Trainfire II instruction, will be given the same clear, authoritative information and practice. Consequently, short narratives are employed in the presentation of major points and a detailed time schedule governs the progress of every period. Subsidiary points are logically outlined, full use is made of SOPs, and instructors are required to have a thorough knowledge of all pertinent texts and other reference materials used in the lesson plans.

On the other hand, instructors are directed to use the lesson plan outlines as the basis for full discussion.

A representative lesson plan, derived from the Instructor's Guide,

Trainfire II, United States Army Infantry School, Fort Benning, Georgia, 1958, is reproduced on page 38. This lesson plan, for Part I of technique of rifle fire, covers two of the four hours of instruction presented during Period 2. It provides pertinent examples of Trainfire II instructional techniques and, in particular, gives some idea of how technique of rifle fire and squad tactical training are combined to form a consistent and more effective whole.

Proposed Revisions

Based primarily upon recommendations made by Fort Carson following the troop tests, the United States Army Infantry School has proposed to USCONARC several revisions in the Trainfire II test program. Troop tests recently completed at Fort Jackson generally substantiate these proposals. The suggested changes reduce the total hours in the Trainfire II Program from 30 to 26 by eliminating Period 6. In addition, live-firing battle drill is added to Period 4 without increasing the training time allotted to that period (Figure 7).

TRAINFIRE II TRAINING PROGRAM
Proposed Revision

Period	Subject	Hours
1	Orientation, Formations and Means of Control	2
2	Tactical Training for Squad in the Defense; Technique of Rifle Fire, Part I	4
3	Tactical Training for Squad in the Attack; Technique of Rifle Fire, Part II	4
4	Live-Firing Exercise for Squad in the Defense; Live-Firing Battle Drill (Two-Man and Team); Tactical Training for Squad in Reorganization and Consolidation on the Objective; Technique of Assault Fire.	8
5	Live-Firing Exercise for Squad in the Attack; Tactical Training for Squad in Semi-Independent Action	8
	Total	26

Figure 7. Proposed Revision of the Trainfire II Training Program.

A Trainfire II program similar to the Infantry School's program is currently used at Fort Carson. The live-firing battle drill which is conducted by riflemen in their seventh week of basic training has proved not only feasible and safe, but is a realistic step in preparing the soldier to participate with maximum effectiveness in live-firing attack exercises. A Two-Man Battle Drill Range and a Fire Team Battle Drill Range are used for this instruction.

The Infantry School has further recommended to USCONARC that Trainfire II, with modifications, be presented during Infantry advanced individual training. This would replace the 32 hours of squad tactical training now prescribed in ATP 7–17.

The repetition of Trainfire II would have a number of advantages. It would provide live-firing experience during the second eight weeks of Infantry training. It would also permit the use of live mortar and machine-gun support during training exercises and would give the rifle trainee experience in working with and calling for friendly fires. The ranges employed in the basic Trainfire II program would be utilized in the advanced program, thus making fuller use of these facilities, and giving additional tactical experience with little increase in expense.

Furthermore, repeating Trainfire II during advanced individual training would continue and emphasize the valuable integration of technique of rifle fire and squad tactical training. In this phase selected trainee squad and team leaders would be employed —a distinct advantage since it would give leadership experience and assist in the detection and encouragement of leadership ability. Most important, this type of training would provide TOE units with replacements better trained for combat and ready to function as well-coordinated members of the rifle squad.

USCONARC has approved Fort Carson's request to eliminate the Close Combat Course as a POR requirement for riflemen completing Trainfire II.

The recent World-Wide Infantry Conference recommended that the Infiltration Course also be eliminated as a POR requirement when Trainfire II is implemented, since the individual will receive comparable battle indoctrination during this and subsequent tactical training.

Trainfire II Now

The troop tests have indicated that Trainfire II is not the least expensive way to train. Targets and other devices used to portray realistic enemy fire and maneuver are relatively expensive. One set of ranges at Fort Carson cost $68,000 (the pop-up target was the major item of expense). However, Trainfire II is *economical,* because it produces a rifle squad in which every man knows when, where and how to shoot whether his squad is attacking or defending.

Furthermore, the major advantages of Trainfire II are the concepts which lie behind it. Facilities, devices and equipment can be simplified or improvised, and expedients can be substituted on present ranges at little cost. An "austerity" version of the program can be implemented now.

Certainly the integration of tech-

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nique of rifle fire and squad tactical training provided in Trainfire II can be applied right now, and at no cost. And instruction can be made more effective by using training methods prescribed in Trainfire II lesson plans.

Ultimately, of course, we should strive for full utilization of all prescribed ranges and devices which create in Trainfire II instruction the conditions of actual combat. When this is done, the Trainfire II squad will be combat trained and the rifleman in effect will be a veteran before he ever sees action.

TRAINFIRE II LESSON PLAN

This is a typical Trainfire II lesson plan. Similar plans are provided for all periods of training.

Technique of Rifle Fire, Part I

HOURS: 2 (concurrent with tactical training for squad in defense).

PURPOSE: To instruct the trainee in the technique of fire of the rifle squad.

1. Introduce Technique of Rifle Fire (1 minute).
Explain that technique of rifle fire trains rifle squads to act as effective teams in the application and control of collective fire.

2. Technique of Fire (4 minutes).

a. *Squad sector of fire.* Explain that a squad sector of fire is an area of primary responsibility for the squad; that the squad leader will point out the *center, left* and *right* limits of the sector, using landmarks. The squad is responsible to search for and fire at the enemy within the squad sector.

b. *Target sectors of fire.* Explain that when targets appear in the squad sector of fire the squad leader points out the *center, left* and *right* limits of the target. This does not relieve the individual of his responsibility for search and fire in his portion of the squad sector.

c. *Firing by technique.* To employ his maximum firepower the enemy most often will deploy initially into a line formation, presenting an irregular wide or linear target. Therefore, each member of the squad must know where, how and when to distribute his fire on the designated targets without detailed instructions on the battlefield.

d. *Sequence of techniques.*

(1) Target detection (find).

(2) Target designation (pinpoint target limits).

(3) Fire team sectors (where).

(4) Individual sectors (where): riflemen, automatic riflemen, team leaders, squad leader.

(a) Nr 9, automatic rifleman, covers the BRAVO team sector, overlapping the left limit of sector and the center of sector.

(b) Nr 5, automatic rifleman, covers the ALFA team sector, overlapping the right limit of sector and the center of sector.

(c) Nr 11, squad sniper, initially provides overlap with the left adjacent squad, firing outside the left limit of sector and to the right to cover the left portion of his (BRAVO) team sector. When employed in his sniper role, Nr 11 is located in a position from which he can best accomplish his sniper mission.

(d) Nr 10 covers the center portion of the BRAVO team sector, overlapping with Nr 11 and 8. When Nr 11 is moved for a sniper mission, Nr 10 may be assigned to the sector of Nr 11, as well as his own.

(e) Nr 8 covers the right portion of his (BRAVO) team sector, overlapping with Nr 10 and 4.

(f) Nr 3 covers the left portion of his (ALFA) team sector, overlapping with Nr 8 and 4.

(g) Nr 4 covers the center portion of his (ALFA) team sector, overlapping with Nr 3 and 6.

(h) Nr 6 covers the right portion of his (ALFA) team sector, overlapping with Nr 4 and the right adjacent squad.

(i) Nr 7, BRAVO team leader, normally occupies a position in the center of his team. He is a fighter-leader, directing his fire anywhere within his team sector at known or suspected enemy, as well as controlling his team fire.

(j) Nr 2, ALFA team leader, normally occupies a position in the center of his team, firing and controlling in the same manner as Nr 7.

(k) Nr 1, the squad leader, occupies a position from which he can best control his squad. Primarily he exercises control through his team leaders. He fires only when his firepower becomes more important than controlling the squad.

(5) Distribution of fire(how): riflemen, automatic riflemen, team leaders, squad leader.

(6) Conduct of fire.

(8) Fire control.

3. Description of Techniques (20 minutes).

a. *Target detection.* Point out that combat targets are usually obscure or hidden. Trainees must search for target indications and apply the techniques of target detection learned in Trainfire I.

b. *Target designation.* All squad members are responsible for target designation. Use the following methods to designate squad targets.

(1) Fire commands (display chart).

(a) Fire commands contain six essential elements of information about the target—alert, direction, target description, range, method of fire, and command to open fire. The *alert* brings the squad to a state of readiness and may tell who is to fire. The *direction* element states which way to look to see the target. The *description* element gives a brief, accurate description of the target. The *range* element, given in yards, tells the squad how far to look to see the target. The words "range" and "yards" are not used. The *method of fire* element tells who is to fire on the target and specifies the amount of ammunition, if applicable. Frequently this has already been announced in the alert element, and in such cases will be omitted here. When the squad leader intends to alert the entire squad but plans to use only part of the squad's fire, the method of fire element is included. The *command to open fire* element gives the command or signal to open fire.

(b) Each squad member is aware of or sees this information, or receives it orally or by signal from the squad leader. The elements are placed in sequence as an aid to memory. This fire command is standardized for use by all of our armed forces and our allies. Only the necessary elements are given to the squad, whether by voice, signal or SOP.

(c) During a fire fight the squad leader and fire team leaders have various methods by which they can control and direct the application of fire of the members of the squad. These methods of control are: oral commands; arm-and-hand signals; orders passed from man to man; personal contact; prearranged signals and SOPs; use of team leaders.

(2) Reference point (landmark) and lateral measurement by finger measurement.

(3) The strike of ball ammunition or path of tracer ammunition to mark center and flanks. This is the most rapid and accurate method.

(4) Pointing with the arm, or sighting along the rifle.

c. *Fire team sectors.* Display chart and explain that the ALFA (or right) team is primarily responsible for the sector of fire from the *center* to the *right limit;* the BRAVO (or left) team from the *center* to the *left limit.*

d. *Individual sectors of fire (where).* Emphasize that to insure maximum coverage of the squad sector of fire, the sector must be further divided into sectors for each member. Point out individual sectors for each member on Chart 7[3].

e. *Distribution of fire (how).*

(1) The rifleman fires initially on that portion of the target corresponding to his position in the team. His initial rounds are fired at known or suspected enemy personnel in his sector of the target. When there are no known or suspected targets in his sector, he fires anywhere on the team target at known or suspected enemy personnel.

(2) Each automatic rifleman initially begins firing just outside the flank of the team target. In short, accurate bursts, he fires across the team target, overlapping at the center of the squad sector of fire with the automatic rifleman on the other team. After gaining fire superiority, he fires at known or suspected targets anywhere on the team target, or at priority targets designated by the team leader.

(3) The team leader normally participates in the fire fight, firing at known or suspected targets anywhere on the team target where his fire is most effective.

(4) The squad leader must control rather than participate in the fire fight. He fires to defend himself and when the enemy assaults.

f. *Conduct of fire.*

(1) Explain that in the defense the squad opens fire on order from the squad leader, unless immediate danger requires individual action.

(2) Discuss Search-Fire-Check. Display chart. Explain that each man searches his team's part of the squad sector of fire as well as his individual sector of fire. He fires one clip at known or suspected targets, then checks his team leader for orders while reloading. Point out that when the enemy assaults there will be less time for searching and checking; emphasis is then placed on firing.

(3) Rate of fire initially should be rapid and accurate to gain superiority, and then rapid enough to maintain fire superiority. When the enemy assaults, the squad fires at its maximum rate.

g. *Fire control.*

Narrative:

"Control is accomplished primarily by teamwork. The means of control which you have previously learned aid in communication between you and your squad leader. The most difficult problem of control for your squad leader is to gain attention. The Search-Fire-Check SOP develops alertness in the squad and gives your squad leader a periodic opportunity to convey his instructions and orders."

(Emphasize accuracy and firing aimed shots. Point out that the rate of fire should increase as range decreases and consequent danger increases. The more distinct the target, the greater the justification for a high rate of fire.)

4. Conduct of Firing (85 minutes).
5. Movement to Tactical Training for Defense (10 minutes).

[3] See Figure 6 for illustration of this chart.

• Service Club

The Changing Face of

THE INFANTRY

IN this issue we feature several of the new or improved facilities at the Infantry Center for the enlisted Infantryman. Centrally located on the Main Post are a wide variety of accommodations for relaxation and recreation. Among these is the Main Post Service Club with game rooms, music rooms, lounges and kitchen facilities for "do-it-yourself" home cooking. Half a block

• Top. A home away from home

• Center. For quiet study

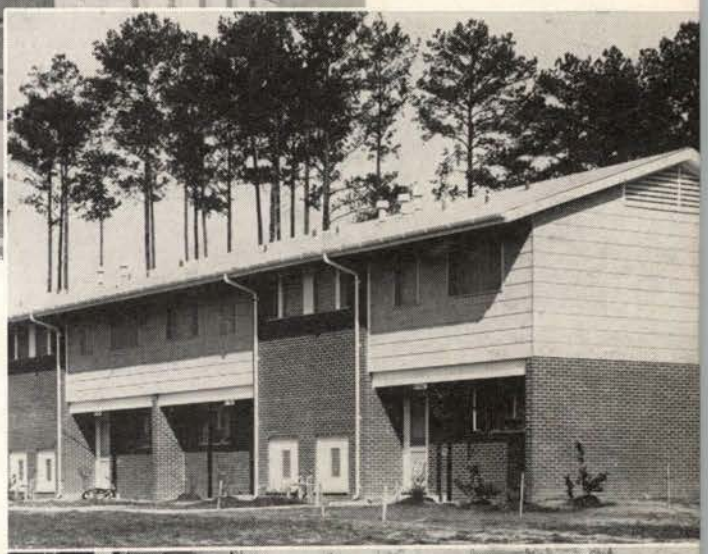
• Right. Main Post Library

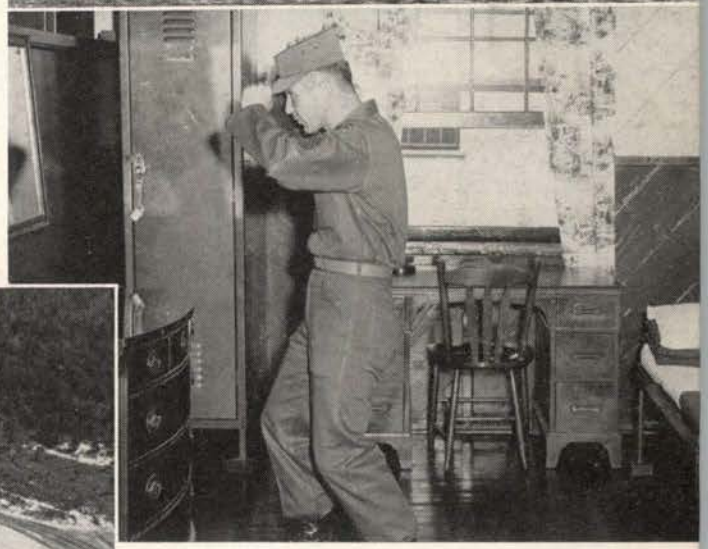
• Theatre

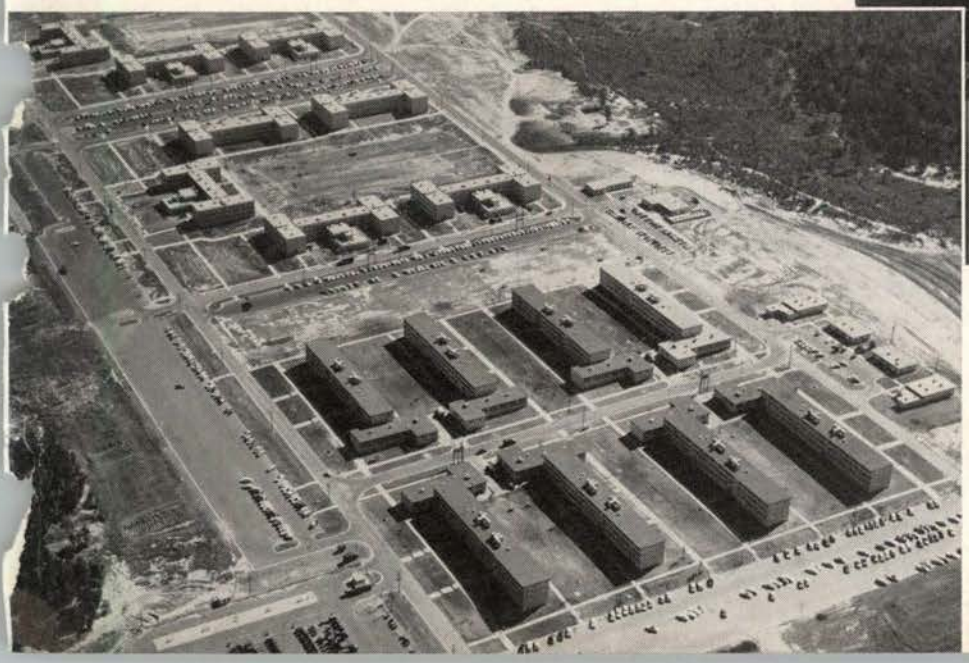
CENTER

away are the beautiful Main Post Theatre and the Main Post Library.

Recently constructed living quarters for enlisted Infantrymen include Capehart homes for the NCO family and new barracks for troop units. Attractively furnished individual cubicles are provided for the bachelor NCO in quarters adjacent to Crain Hall, the new NCO Club.







• Top. New NCO family quarters

• Center, Privacy for the bachelor NCO

• Left. New Kelley Hill barracks

SELECTED EXCERPTS FROM

Sinai Victory

By Brig Gen S. L. A. Marshall

The author has selected and especially edited for *Infantry* this material from his most recent book.

Fundamentally, "Sinai Victory" was written with the hope that it would be helpful to the American Infantryman. While there is nothing really original here, it does provide an object lesson of particular value—that we get out of troops in battle just what we put into them during training, nothing more nor less.

My purpose in following the war in the Sinai Peninsula was to get at the nature of the winning army by examining in detail its movements, motives and moral forces under battle stress. There is a marked tendency in modern armed forces to believe that science may find a secret key to the strengthening of moral forces which in times past has eluded the most gifted captains. But certainly any mention of a possible key must suggest the necessity for holding to the best of what we already know. It does no good to hitch your wagon to a star if you forget to lock the tail-gate.

My observations covered not only what happened on the fire field but included the training system and the doctrine of the winning army as well. I found nothing new under the sun. Every rule of action, every precept and example set for and by leadership must have been old when the Philistines held Gaza. Yet, there is a lesson in the Sinai Campaign. At the high tide of danger, leaders took the boldest risks. They counseled their men to audacity by being themselves audacious. Amid dilemma, they resolved decision by taking the line of greatest daring. Exercising tight control amid crisis, they still bubbled with good humor.

One other command attitude was conspicuous. Men were pushed to the fringe of exhaustion but never beyond it. Right on the battlefield, with an attack pending, leaders halted everything to order a rest or a sleep if they felt that the condition of the troops demanded it. For this lesson alone the Sinai Campaign warrants our close attention. We know the principle but we are less sedulous in applying it.

S. L. A. MARSHALL

IN Sinai, the action of Israel's soldiers was distinguished by a uniform decisiveness—the ability to give an intrepid order almost instantly or to move on impulse against danger with no hesitation. If the character of the force in combat reflected directly and in accurate proportion what the training system sought to make of its human material, there might be lessons out of Sinai of interest to soldiers everywhere.

My conclusion while in Sinai—and it stays unchanged—is that Israel's Army did it by extending the limits of military daring. Hitting forces traveled farther over more formidable country in less time than any other combat body in history. Decision was won in three days. By the fourth day some of the brigades (the Israeli term for regiment) were mopping up two hundred miles beyond their assembly points.

This alone is a feat at which to marvel. A fortified area about half the size of Nevada and far more repellent than the harshest wastes in that state was conquered by a small field army fighting as it drove forward almost at the rate of an unopposed motor caravan.

* * *

The mediocrity of the opposition had something to do with the phenomenal pace of the invading army. But it is only through the close-range view that the opposite and more significant truth stands clear: *the soldiers of Israel invariably looked their best in those hours when they were beset by the greatest combat difficulty and the enemy pressure became such that total disorganization should have ensued.*

Motorization and tracks made possible the record marks in mobility. Without tanks, without half-tracks, Israel's Army could not have started. But there is no bright new magic in that. The United States Army, which has had such vehicles for a generation, has not assured itself the same *sustained* mobility.

What made the difference? Certainly not professional zeal and efficiency, for Israel's Army is not professional in the way Western nations use that term. The campaign was

BRIG GEN S. L. A. MARSHALL received his commission as an Infantry lieutenant in World War I. During World War II he was Chief Combat Historian in the Central Pacific area and Chief Theater Historian in the European Theater of Operations and served in Korea as Infantry Operations Analyst for the Eighth U. S. Army. General Marshall is a well-known commentator on military affairs and is the author of numerous books on military subjects, which include *Island Victory, Bastogne: The First Eight Days, Men Against Fire, The River and the Gauntlet,* and *Pork Chop Hill.* He is military analyst for the *Detroit News.*

not aided by any new secret making possible a more adequate supply in the fighting zone. *Israel's ranks are not particular wizards at motor maintenance and battlefield repair.*

To the contrary, Israel's Staff professes an ignorance of logistics, which in more sophisticated circles has become a kimono-like word, covering everything and touching nothing. Staff members claim—so earnestly as to invite skepticism—that the governing principle is to "send the combat force against the decisive object and then order the supply people to keep up."

Within their training system there is relatively little schooling in the problems of field maintenance, and in the field no such elaborate echeloning of technical skills and parts stores as we know. During fighting operations the fighters do most of the repair. They explain, "Many of us are farmers. We learn the knack on trucks and tractors."

Briefly then, Israel's Army is a fighting body in spirit and not a balanced aggregation of highly trained specialists. In a frontier sort of way, it looks the part . . . . All that counts is the end object which discipline elsewhere is supposed to serve—undeviating performance of the task. Israel gets that from its soldiers without polish or spit, except as the latter is applied to the hands.

* * *

This Army, composed for the great part of men who had to spring from the plow or rush from the office, was given only three days to form and move on Sinai. In that time, its reservists had to assemble, equip, deploy and get such limbering up training en route as the hours permitted. Brigade and battalion commanders were read into the plan only after mobilization and movement were well under way. With rare exception, their own parts, including sectors and in some cases main objectives, were not preassigned. They still had to shape their attack plans, contrive such basic reconnoitering as was possible and issue their orders. . . .

Commanders were told to keep battle losses minimal and not encumber their columns with prisoners if it was more opportune to let them get away. All efforts were to be directed toward squeezing out and destroying opposing fortifications. This stricture, imposed because it suited both the political nature of the fighting problem and the moral standard of Israel's troops, made an utmost requirement of movement, while lessening the normal accent on fire.

It would work if communications held up most of the time and if the Egyptians, with their advantages of owning the high ground, where they were relatively safe under deep earth cover, fronting flat fields of fire, were not overly resolute. Both calculations proved accurate. Communications broke down a few times, and usually, as is to be expected, at the highest pitch of the local fire fight. The Egyptians broke down more frequently, giving way time and again in these same minutes of heaviest pressure.

Strength overcame disorganization because Israel's Army fights that way. When the attack becomes disjointed, when radios are muted by fire and lower commands are out of touch with the steadying hand higher up, Israel's soldiers nearest the enemy invariably follow their standard procedure. They close up on the defender's works.

That is the main lesson from the battle story. The phenomenal mobility of Israel's Army isn't generated out of machine power but out of the unanimous acceptance and application of a fighting doctrine which of its essence becomes unifying in the hour of greatest danger. Gideon's band may have held to the same simple rules. There is not one new idea in the doctrine. The startling tactical pace of the Army comes of applying sedulously those methods and precepts which all armies tell their Infantry and Armor will best maintain unity in battle. The difference is that Israel's soldiers hear and believe.

It's a short list.

- Leading means moving to the point of main danger if decisive pressure is to be maintained. There is no excuse for holding back.
- When orders can't get through, assume what the orders would be.
- When in doubt, hit out. The short route to safety is the road to the enemy hill.
- Don't attack head-on; there is usually a better way.
- When troops are truly exhausted, hold back and rest them.
- Waste no energy in useless movement. Maintain the pace of the attack so long as physical resources seem sufficient.
- If the force designated to attack is not suitably armed to overrun the position, pull off and call for what is needed. Avoid useless wastage.
- Don't delay the battle because of supply shortages which lie beyond its probable crisis.
- Keep your sense of humor if you would save your wits.
- When trapped by sudden fire,

movement means salvation more surely than a foxhole.

- Always try for surprise in one form or another.
- When local surprise is possible, don't expose movement with premature fires.
- In the attack, risk, risk, risk.

. . . What a few men thought and dared to order is perhaps more instructive than what many men did. The campaign was won in a whirl with such slender forces that it is almost a miracle they were not beaten by space alone. They did it on nerve more than with fire and deception. It does not cheapen their performance that the resistance was spotty: full courage is not a relative thing. The record is not without blemish. Here and there a leader hesitated, either trying to command from too far back or bending his ear more to the beat of danger than to the call of tactical opportunity. When detected, he was relieved. No excuses tolerated. No explanations asked.

Commander of an Infantry Brigade conducts a briefing prior to the attack on Rafah.

Israel's High Command says: "Success comes when leaders lead instead of pushing." The Army guides by that rule on the battlefield. Squad, platoon and company commanders go first into the fire. Should the attack temporarily stall because of strong resistance, or become unhinged from severed communications, battalion and brigade commanders go posthaste to the center of action and restore movement. If there are two points of disarrangement, the second in command also goes forward.

In the Sinai campaign, these personal-risk missions seldom recatalyzed the attack. The reason is that the people lower down had already acted strongly to restore movement. Would they take hold as vigorously unless they knew that the boss man would soon be there? is a good question.

Measured in bodies only, the cost of this code comes high. Of Israel's soldiers killed in the Sinai war (less than 200) half were leaders. Yet the Army believes that this ratio of expendability among its best-qualified fighters is more to be honored than deplored. The Staff says: "That kind of leading, exemplified at all levels, inspires more men to become leaders."

. . . Mobile in the extreme, the campaign was made so in part by the linking of adroit movement with extraordinary economy of fire. It was in no sense a cut-and-dried, factory-contrived victory. A bit too patronizingly, experts writing about the military power balance in the Middle East tend to stress the great superiority of Israel to its neighbors in the count of fighting machines. This is an oversimplification which ignores the controlling fact that whether one may apply more power or less at the decisive point is according to the radius of operations . . . .

Perhaps more significant than the straight narration of how . . . manual tasks were managed is the rather clear indication, out of this campaign, that in the fighting man usually physical endurance seems ever the by-product of sustained spiritual boldness. One other highlight deserves equal attention: though physical fitness in ranks and an intrepidity of decision in command, which at times bordered on recklessness, set the pace of the battle, Israel's Army seemed to be acutely sensitive to the limits of its human material. There are many shining examples in the campaign of commanders' pausing deliberately in the crisis of action to rest their troops.

Over the world the operation which swept Sinai clean has been praised by soldiers as a "masterpiece of mobility." Statistics support the description. But statistics never win a battle. The proof of whether the masterpiece was made by the mobile mind and the willing heart rather than by the machine is to be found only in the small picture of the fire fighting. The men of this small army did the best possible with what they had. They responded as if what is all-important is to live life fully while one may. To regard their effort in

Sand presents problems for wheeled vehicles—9th Brigade desert route.

any other light is to miss what counted most in the Sinai adventure. . . .

All hands were ready to gamble. But they did not risk blindly. They gave orders only after doing their best to learn the odds. That was why so many leaders died. They went forward to learn rather than to try to play the hero. . . . Contagion of courage is the source of all battlefield unity; the power of decision has no other essence than the acceptance of superb risk; action itself increases mental resilience to a degree unsuspected until it is experienced. Military history reveals this truth on every page, and its most recent chapter, written in the Sinai sands, is but another object lesson in the binding and uplifting effect on military forces which comes of the bold gamble. The immediate corollary to this is the weakening influence of the merely calculated, rationally planned way of doing things.

* * *

True decision, by its nature, in combat and elsewhere, consists in determining a line of action when choices are equally difficult. All war is a gamble. Its chief prizes fall only to the player who, weighing the odds carefully as he moves from situation to situation, will not hesitate to plunge when he feels by instinct that his hour has arrived.

Of necessity military training systems instill in leaders respect for the high virtues of careful planning and closely reasoned estimates as a basis for action. This is the main stream of all education preparatory to battle. If any other course were taken, military forces could not even conduct an approach march in an orderly manner, and their hopes would be at the mercy of the most impetuous but thoughtless spirits among them.

But there always comes a time in battle when the most careful planner must also be foremost in willingness to take a superb risk if there is to be inspired leading toward the desired object at minimum cost. The ablest young battalion and company commanders that are to be met in combat are men of this type. They are sedulous in planning and preparation. They make their dispositions painstakingly. They insist on personal reconnaisance to a point where it nettles their subordinates. Thus they have at all times the feel of their own situation, which is one half the battle. But at the opportune moment they are ready to "shoot the works."

This is the essence of real generalship at all levels. It is a quality of the spirit that any man may bring forward in himself, provided that he has become truly the master of his work. But if he is careless of detail, his spirit will be possessed of a false bravado, rather than a well-placed confidence, and he cannot even make the start. The spirit of thoroughness combined with daring is the mainspring of action in all military forces.

Israel's Army in Sinai is a case study in how group power is generated by consummate daring in the command. To the limit possible, leaders looked to their own forces, kept check on the sufficiency of supply, sought all information which might be helpful and exercised steady control over the whole. But when forces seemed too few, supply drained low and intelligence of the enemy was lacking, they still marched forward.

* * *

Israel's Army believes that it takes a minimum of 30 months' hard training to make a fit combat soldier. Every reservist has that much steady service behind him before qualifying for stand-by duty in a home-town unit. Both in the reserve and in the active Army, training is more rigorous, puts heavier emphasis on field combat exercises and makes heavier demand on the physical powers of the individual than in the United States Army.

There is no minimum educational requirement for induction. There is none for promotion or for elevation to, and within, the officer corps. All officers are made from the ranks. The average field-grade officer has less than a twelfth-grade education.

There is a minimum intelligence requirement for retention in the Army once the man is inducted. Every recruit must pass a basic examination designed to test his common sense, reasoning power and reaction time.

During training, the soldier is thrown more on his own than under the United States system. All instruction is pointed toward sharpening the power of decision in the average individual. Physical exercise and lecture courses are aimed to test and

increase personal initiative. Israel's trainers believe that teaching the man to think clearly, observe keenly and report accurately is the main object in the school of the soldier. Accordingly, relatively little importance is attached to perfection in the manual of arms, parade-ground drill and other routines familiar in Western armies.

Troops are kept moving about in open country as much as possible. The average recruit is strong in the legs, having hiked around since childhood. From the hour of his entry into service, he needs that muscle power, for it is pushed hard.

The Army wastes no time in road marching, believing that a 30-mile movement across ridges does more to condition troops than 70 miles on the flat. Most marches are an approach to a combat exercise. Even when the reserves take their periodic training, they are kept in the open and are put over rough ground, traveling by night. Every camp is an armed bivouac on a position suitable for defense; no time is spent at a training base. Say the trainers: "That would be a waste. The men would be put on police tasks; we don't call that training." While in uniform, the reservists live away from their families, as would soldiers fighting a campaign, and they seem to like it better that way.

During training, the reservist subsists on hard field rations. No blankets or overcoats are issued for the bivouacs. The staff feels that the toughening process is furthered by letting the man sleep cold on the ground.

What the Army requires physically of its troops is illustrated in the testing course given the recruit, after it is decided that he is potential NCO material. Such aspirants are divided into packets of three; then each member of the team is put under a 20-pound load, including his rifle and ammunition. Next, the team is given a march schedule which keeps it moving 40 miles per day for three days running, through sharp ridges, such as are found in the Galilee Country. Two thirds of the route is covered by day, the other by night, the whole taking approximately 30 hours of the three days.

In another test, the body of NCO candidates must march 40 miles and finish in eight and one-half hours. No starter is permitted to fall out. If he shows signs of faltering, his comrades must help him along. If he fails, they must carry him.

The obstacle course, which tests the same class, is taken under pack and rifle. There is first a 400-meter run, which includes the scaling of a six-foot wall and the walking of a 20-foot parallel bar. In the next 400-meter lap, the recruit must crawl of his belly 15 yards under barbed wire, go through three ditches filled with running water, walk the plank over a fourth ditch 10 feet deep and throw a live grenade at a target. He then runs another 600 yards free of obstacles. Provided he finishes the 1400-yard course in less than 11 minutes, he qualifies for a "silver rating."

Though a night-fighting body, Israel's Army does not put preponderant emphasis on night training in its schedules. Rather, it follows the principle that programs of night and day training should be balanced according to a reasoned estimate of what will be required of a particular facility, or tactic, during combat.

As things work out, about one third of all training is done at night, including specialist training. But if, for example, it were estimated that 95 percent of all mine-laying would be done during the daylight, mine-laying would get little attention in night-training schedules.

Upon entering the Army, the inductee must serve at least six months as a private. But he may be tabbed for leadership immediately because of his personal qualities and a high IQ showing. In that event, he is sent quickly to section-leaders school, where he spends five months learning to handle what Americans call a squad.

Every week he works 52 hours or more. At first, he listens and obeys rather than attempting any leading. His instruction in the use of small arms will be divided 12 hours by day, 4 by night. On terrain study, the use and making of maps and how to take up ground, he will spend 54 hours by day and 30 by night. On how to direct and control eight men during combat, he will get 22 hours of practice by day and 8 by night. All of this will be field work, away from the desk.

At the stage when he takes over and begins directing the squad (section) in its exercises, the work equation is as follows:

Ambush operations—12 hours day, 11 night.

Attack on a village—5 hours day, 3 night.

Squad in the general attack—34 hours day, 12 night.

The totals are 103 hours' day training and 51 hours' night training. Beyond that, he gets 181 hours of lecturing on how to lead a section, which includes 10 hours on the principles of war and 12 hours around a sand table. Then he spends another 98 daytime hours and 64 nighttime hours in exercises where his section operates within a platoon. At the

Desert track near Abu Agueila.

end he is qualified to be a corporal and is posted to a unit, either to lead a section or to become an instructor.

As a basic soldier, he is paid 10 dollars per month, with no allowance to his family. The reservist is paid the same, but gets compensation for his family from both government and his employer, which brings his total income to 80 percent of civilian pay.

All training programs, including the first instruction given the recruit, stress the conservation of human energy during combat and the danger of overextending operations by assigning tasks which are not within the physical limits of men.

"Never overload the soldier; rest him whenever possible." Reiterated at all stages of training, the two rules became ingrained in the junior leader. Says the Staff: "We learned the hard way that this is the road to salvation."

During training, one third of body weight is the maximum load permitted the soldier. That includes uniform, pack and all else. During combat, the load is lightened, according to the theory that his energy will be less under fire, rather than more.

Training exercises are kept "realistic." This is to say that a platoon or battalion in the simulated attack is not required to make a longer approach march than it could well do, were fire present, without pushing itself to exhaustion.

"Don't be too eager; don't pile on the pressure," has an odd sound, coming from a General Staff. It's said in Israel to junior leaders by way of emphasizing that men should be rested at every opportunity, instead of settling on them that extra fatigue during the mounting-up proess which comes from needless anxiety in the command chain.

Elsewhere, it's a too familiar story. The colonel says, "Be ready at 0900." So the captain tells his platoon leaders, "Be ready at 0800," and they tell the section leaders, "Be ready at 0700."

Israel's Army shuns this practice like a plague. The recruit, on his way to become an NCO, is told that if he checks his men, and they look relatively ready, even though they are still sleeping, it's a sign of weakness in him if he routs them out ten minutes too early merely to further his own peace of mind.

Once a month, the Education Department of the Army's GHQ publishes a pamphlet about the land, its social problems, political goals, etc., for the benefit of troops.

The information is the precis for an orientation lecture. Each unit commander is supposed to give such a talk to his troops at monthly intervals. Like the average American officer, he dislikes the chore, tries to brush it off and sometimes succeeds.

Though Israel is a new nation and a melting of peoples with many tongues coming from everywhere, the Army attaches relatively little importance to the proposition that training for better citizenship, and clearer understanding by the soldier of his cause, is the one best way to build military unity and stimulate the fighting spirit.

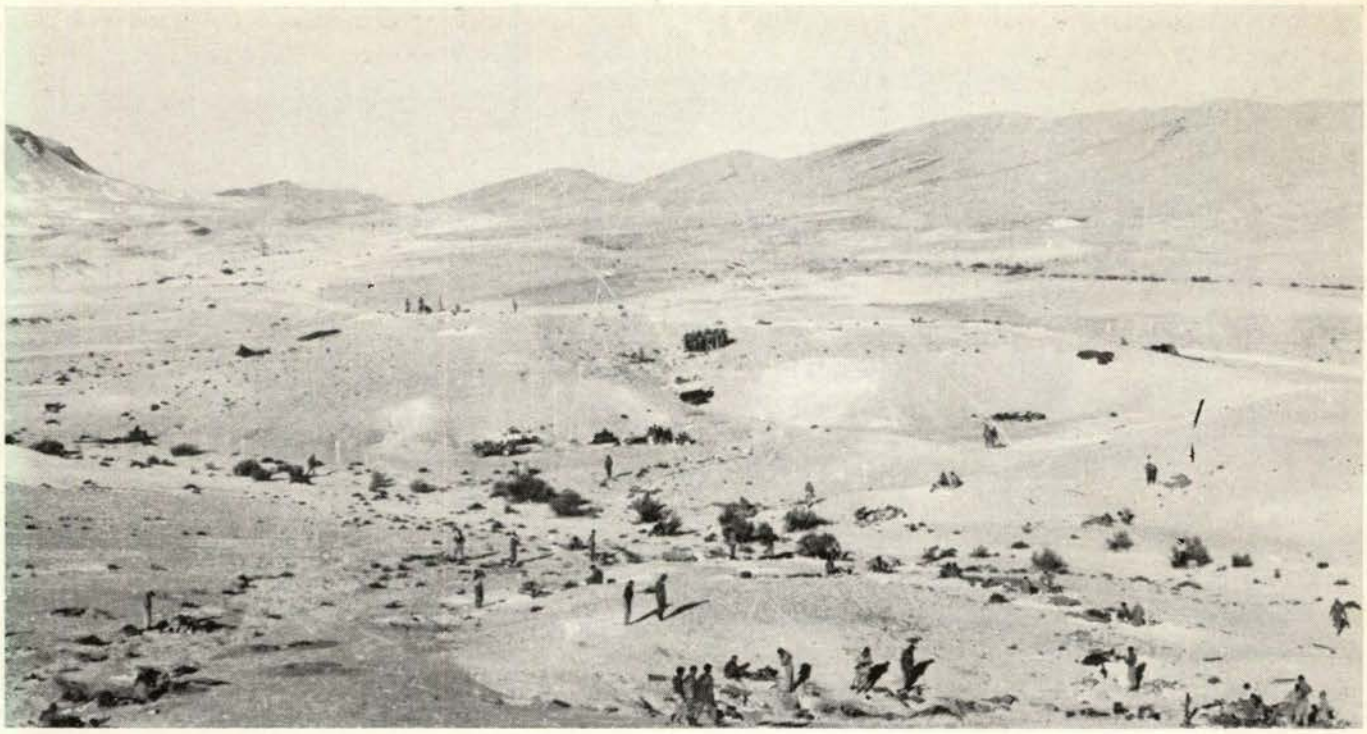
The General Staff regards indoctrination as one more means of habituating officers to stand before their own people and talk—the chief value deriving from the program. The General Staff spokesman said, "It is our contract to take an average civilian and make of him an efficient, successful fighting man, skilled at arms and proud of his unit because it has combat power; we believe that out of his Army experience, he will almost automatically mature into full, cooperative citizenship."

Toward heightening the power of decision in all ranks, the Army's doctrine, as published by High Command, or expressed by a section leader, emphasizes task, mission, objective above everything else.

"The battle will never go as you planned it; but you still have your task," epitomizes the main idea. Along with positiveness of aim, there is proportionate emphasis accordingly on flexibility of means. When given a mission, the leader is told that he will exercise his own judgment about how to perform the task if his instructions prove unsuitable. But he cannot withdraw without permission.

Such phrases as "at all costs" are avoided in Army orders because of

Paratroopers dug in at Mitlah Pass.



Paratroopers organize a position near Mitlah Pass.

their ambiguity. The patrol sent to reconnoiter with instructions to avoid detection may return at will if sighted by the enemy. On the other hand, a patrol of the same size, if sent to destroy a roadblock, must stay with the task as long as any chance remains that it can be accomplished.

The patrol can't quit simply because it has been badly shot up. But if in the judgment of the leader, it has taken so many casualties that the able-bodied have been immobilized by the weight of the wounded, he may withdraw without permission, and his decision will be accepted if the facts prove consistent with the Army's rigorous standard.

The radical disregard of supply sufficiency which marked Army operations in the Sinai campaign directly reflects teaching by the Army trainers. Leaders are told: "Logistical means are of secondary importance. Things are never perfect. It's more risky to wait. So go on and hit. Don't drag your feet because supply is short. The means will come to you. You've got to take a chance."

One brigade commander expressed the doctrine this way: "In combat I plan my move. Briefly I go over it with my staff to sharpen their appreciation of the next action. If I learn that ammunition and fuel supply are less than that minimum which would certainly enable me to close on the enemy position, I reconsider. Then if the essential supply is less than 50 percent of what I think I need, I would think twice before moving, and would feel justified in postponing action. But if supply is half or more of my estimated need, I would attack, unless the reading of the situation convinced me I had no chance whatever."

Another said: "The principle holds all down the line that each level has discretionary power and nothing is absolutely rigid, but we of the line have a right to demand of the logistical system that it keep up. Why not? It's geared to the same pace we are. If I let fears about it dictate my moves in combat, that would lessen the pressure on it to stay abreast of me. The result would be watered-down decisions from front to rear."

Where the combined arms move together on the battlefield, the governing principle is that continuity in integration and in general assignment of task is the best insurance of performance.

Relationships between Armor and Infantry, hitting as a team, remain flexible; where command is placed depends on the nature of the tactical task, the ground and the personalities of the several commanders. The one guiding rule is to avoid change, according to the observation that every reintegration of forces during combat diminishes hitting power.

As much as possible, Infantry is directed to attack by night, thereby to further both surprise and protection, since darkness is a form of cover. Where there is no choice but to attack by day, Infantry is supposed to move with close support by Armor, though not using it as a shield. The Infantry should be within five minutes' closing distance of the enemy line when the preliminary air strike comes in so that it can grapple before the shock is gone. Except that it puts less accent on field-artillery support, this part of the Army's doctrine has a familiar pattern.

During the Sinai fighting, the Gen-

eral Staff concluded that reserve officers have less capacity than "regulars" for a quick shift of direction amid battle and the making of a bold decision.

The civilian leader undeviatingly responded to orders. He was less apt to see the opening clearly and change his line abruptly when the battle became fluid. That was understandable; 30 days' training per year provides too little exercise in "adaptability."

So something new was tried to test and make more acute the decision-making faculty in reservists. It is a three-day command-post exercise which starts at a slow trot and finishes like a cavalry charge.

The battalion commander is taken into the field with his staff, communications people, his company commanders and their operations network. Then he is given a tactical exercise out of a variety—capture of a tank-defended town, attack on a fortified ridge, breakthrough of a fortified pass, destruction of a major roadlock, etc.

On the first day, all of his means for careful calculation of decision are present. He is given 22 hours to form a plan. Air photos and maps are available. Any amount of reconnaissance is permitted, as is unlimited consultation with his staff, though all hands must act as if they are in the presence of the enemy. He commands through written orders. Control officers are down with his company commanders and they feed back information about how the situation is developing. In the end, he delivers his plan and movement order to the brigade.

The charge at Abu Agueila.

At that moment, he's told, "Everything's changed. Your H-Hour remains the same. But the brigade is making a 90-degree change in direction. It's been stopped on the right. So that's your target—that hill over there. There's no time for reconnaissance. Here are the maps and air photos. You'll have to move in 30 minutes. We want your decision before then."

In the interval, the control officers are shoving information to the companies and it comes back to battalion in full flow while the chief and his staff are weighing what to do. The pressure builds up, up, toward the climax.

The worst bump comes as the battalion commander presents his second plan. He is told, "Again, everything's changed. The enemy is cracking on the right. You've lost half your force. You attack straight ahead against Hill 300. There's no time for map checking or staff talk. We want your decision right now."

In the final phase, the statement of enemy strength and the distance to be traveled makes sound solution of the problem barely within his limits of time and men. It remains just possible to take the objective. The commander's decision therefore initiates a workable plan only if, in his mind, speed of thought presages rapidity of movement and daring improvisation. The primary idea is to sharpen faculties; the secondary idea is to test their sufficiency under emergency conditions.

Every battalion commander is put through this mill. Change in the character of the exercise is constant. Some of the preparations have general application. But it is left to the brigade commanders to write the exercises according to what patterns they judge will provide the most practical and decisive tests. GHQ reviews the plan and makes the controlled stores and umpire personnel available.

Some battalion commanders, given this processing, become completely shocked. Others meet its challenge without turning a hair. Along the road, higher command learns which officers excel at planning, which at on-the-spot improvisation and which at control. As personal weaknesses become revealed, further training is directed toward producing balanced "adaptability."

* * *

Maj Gen Moshe Dayan (Army Commander) as a fighting man holds to the conviction that in battle boldness usually pays off. The spontaneous unity when under fire of the men who form the brigades hardens out of this controlling idea.

While the Sinai campaign lasted,

General Dayan with the late General Simchoni (left) and Colonel Yoffe (right).

nothing else made possible the command resolution which held ranks to an almost excessively demanding line of duty. So it has ever been. There is little virtue in combat leadership except as the masterminding of tasks is based upon accurate, applied knowledge of the physical and spiritual limits and resources of the men who must fire the rifles, jockey the half-tracks, get the caissons rolling or, for that matter, man the Nike battery.

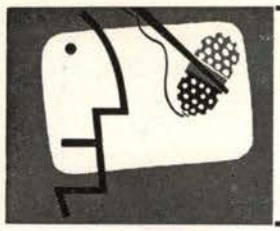
This fundamental truth, as it bears upon the complex task of getting the best possible performance from men in their hour of greatest danger, is best expressed in what was written almost half a century ago by John Masefield. He said:

"The efforts of men are limited by their strength. The strength of men, always easily exhausted, is the only strength at the disposal of a general. It is the money to be spent by him in the purchase of victory, whether by hours of marching in the mud, digging in the field, or in attack. Losses in attack are great, though occasional. Losses from other causes are great and constant."

There could hardly be a more dire loss to national strength than occurs when generalship itself rejects the main lesson, neglecting the resources of the human spirit because of the hope that they flourish almost unattended and the illusion that the foundation of decisive power is formed of superior materiel.

Exalting super-weapons, the new age promotes that danger. Such is its strident tone and such the endless quest after great technological sensations that one watching it in detachment might well believe that man himself, his ability to endure, his readiness when trained to match courage with courage, no longer weights the balance in human affairs.

Maybe it is only in this frame that the story of a last, small and rather old-style war would be found worth the reading. When the lamps are trimmed a little, we may return somewhat closer to the heart of things.



QUARTERLY QUIZ

Answer the following questions. Determine whether you are a Bolo, Recruit, Marksman, Sharpshooter or Expert. Each of the questions is worth 10 points.

1. In a night attack, the weapons squad of the rifle platoon:

a. moves in column at the rear of the platoon during movement to the probable line of deployment.

b. supports the assault from on or near the line of departure.

c. forms a reserve for the platoon.

d. deploys with the rifle squads at the probable line of deployment and moves forward in the assault delivering assault fire.

2. When a tourniquet has been applied to control arterial bleeding, it should be loosened:

a. every 30 minutes.

b. when shock is evident.

c. by the person who applied it.

d. only by trained medical personnel.

3. The approved method of purifying a canteen of drinking water in the field is to add:

a. one salt tablet and boil for 30 minutes.

b. two halazone tablets and wait 30 minutes.

c. two water purification tablets (iodine) and wait 30 minutes.

d. one calcium hypochlorite ampule and wait 30 minutes.

4. Military equipment and vehicles exposed to the effects of a nuclear detonation are primarily damaged by:

a. thermal radiation.

b. prompt nuclear radiation.

c. residual nuclear radiation.

d. blast.

5. Due to the rapid lethality of nerve gas, the gas safety rule is to don the protective mask whenever mass shelling, air or spray attack occurs, or when the enemy places smoke on friendly positions. The protective mask is removed only after:

a. the shelling stops or smoke lifts.

b. no odors are detected.

c. ten minutes have passed.

d. a check has been made with the chemical agent detector kit.

6. The officer on the battle group staff who has primary staff responsibility for determining the risk to our forces from enemy use of nuclear weapons is the:

a. executive officer.

b. S2.

c. S3.

d. S4.

7. What rates of fire are prescribed for the machinegun, 7.62mm, M60, and how many rounds per minute are fired at each rate?

8. The SS10 antitank guided missile may be launched from (check all correct items):

a. the ground.

b. a wheeled or track-laying vehicle.

c. a helicopter.

d. a fixed-wing plane.

9. Command maintenance inspections are performed:

a. once a year on a minimum of 50 percent of an organization's vehicles.

b. twice a year on a minimum of 10 percent of an organization's vehicles.

c. twice a year on 100 percent of an organization's vehicles.

d. once a year on 20 percent of an organization's vehicles.

Continued on page 54

PRO & CON

A REGULAR FEATURE

This column provides a forum for open discussion on both sides of controversial subjects. If you and your associates hold opposite views on a topic of interest to Infantrymen let us have your thinking. We want both viewpoints.

Stick with the Bayonet!

By Capt Carlton G. Barber

IN THE future, as in the past, the United States will continue to place high value on the life of the individual. To this end, our soldiers are equipped not only with weapons of mass effect, but with weapons which provide individual protection and which can mean the difference between life or death.

While the rifle itself is most effectively employed against the enemy when a unit coordinates its fires according to plan, individual use of the rifle is not ruled out. It is also a weapon of personal defense.

By giving the Infantryman the means of personal protection we contribute to his security and safety, and in effect make him a better offensive fighter. The bayonet is one of these means. Nobody claims that the bayonet is a major weapon. It is, however, a necessary one because—in addition to its more positive roles—it gives every rifleman last-resort protection.

Regardless of increases in magazine capacity and ammunition availability, ammunition still runs out. This can be especially true in wide-ranging nuclear conflict, when mobility outstrips supply.

Regardless of advances in weapons reliability, malfunctions still occur. However much we improve our weapons, they will still be subject to failure. Here again, the bayonet fills in.

Certainly, advances in weapons design have not yet produced the "ultimate hand-held weapon." Even the operation of automatic weapons is not continuous. In confused, close-in action, the rifleman at times must destroy his enemy immediately, without time to reload or fire a rifle. In such a situation, the bayonet may be the difference between success and failure—between life and death. It is always "loaded" and a split-second thrust "operates" it.

This capacity was well-demonstrated in the attack upon Hill 180 in Korea by Company E of the 27th Infantry. Led by Capt Lewis Millett, E Company made what Brig Gen S. L. A. Marshall calls "the greatest bayonet attack by U. S. soldiers since Cold Harbor in the Civil War." Captain Millett himself rushed an enemy position and killed its three defenders with the bayonet. It is doubtful whether Captain Millet would have had the same success in such close quarters without the bayonet. Whatever else is said about the battle for Hill 180, the fact remains that 18 enemy soldiers were killed by cold steel during that assault.

It is claimed that a bayonet assault exposes the rifleman to unnecessary danger, since he must employ the bayonet in a standing position. Obviously, there is some danger in any advance against the enemy. Moreover, it is difficult to see how the rifleman can be considered safer when he delivers marching fire during the assault than when he assaults with his bayonet.

There are some situations in which the bayonet will have the primary role, not merely an alternate one. For instance, when our own men and the enemy are intermingled, indiscriminate rifle fire is particularly dangerous. The bayonet, however, can be used with safety and effectiveness. The bayonet is the most selective weapon we have. It kills only the soldier it touches, not someone who is yards away. As long as Infantry closes with the enemy. this capability will remain an important one.

At night and during conditions of poor visibility, the bayonet permits the same selectivity, and may by its presence alone discourage premature firing and the tragedy which can result from it.

Where stealth is required, obviously the rifle cannot serve in place of the bayonet. The flexibility of the bayonet, which permits it either to be hand-held or fixed to the rifle, is an advantage not offered by any other blade-type weapon. Moreover, when it is fixed, the bayonet gives the rifleman a dual capacity—blade and bullet. His rifle is not put out of action when he uses his blade.

These are the direct advantages of the bayonet. There are many indirect ones. To begin with, the bayonet has become a symbol of courage and determination, and therefore has a valuable effect upon our psychological preparedness. One of the intangible means of preparing our men for combat is to impress upon them the grim demands of war. Their duty is to kill. If they can kill at a distance, using a complex weapon which requires only the pressing of a button, this is well and good. But they must be just as ready to kill face to face with a bare blade, if it comes to that.

This is especially true of the Infantry soldier who meets the enemy in personal, hand-to-hand combat. His mission is to close with the enemy and destroy him. The bayonet prepares him to do this. In some quarters, the bayonet is regarded as just one of many alternate symbols of the Infantry mission. Actually, there is no other Infantry weapon which so clearly represents the Infantry role. The bayonet conditions the Infantryman to his job.

This weapon has a definite psychological impact on the enemy, as well. Of course, he cannot be expected to turn and run as soon as he sees us fix bayonets. At first he may not even notice. But this much, at least, is sure—when the bayonet is close enough to kill the enemy, he cannot help noticing it and he may very well be demoralized by it.

Bayonet drill has another function besides the obvious one. It provides excellent physical training. The bayonet assault course is a strenuous exercise which demands a combination of fitness and skill. It therefore helps to create the "total military fitness" which has been identified as the major aim of our efforts toward preparedness. Calesthenics, though they improve physical conditioning, do so in a non-combat environment. Bayonet drill, however, gives direct and immediate point to physical fitness and helps to create the proper orientation of fitness as an end to combat superiority.

It is significant that the Red Army has continued to place full emphasis upon the role of the bayonet. In fact, the Soviets even equip their automatic weapons with a short bayonet. They have always placed a great emphasis upon fighting under cover of darkness and in conditions of reduced visibility. The bayonet, of course, is particularly adapted to this kind of fighting, and equipping our own riflemen with the bayonet may therefore be a plain question of preparedness. There could be a very definite psychological effect upon our Infantrymen if the enemy were prepared for bayonet fighting and we were not.

The value of the bayonet cannot be measured by the number of kills or by the frequency of use. It has specialized reliability which makes it an indispensable weapon. Certainly nothing can replace the confidence and willingness to close with the enemy which the bayonet breeds.

CAPT CARLTON G. BARBER was commissioned in the Infantry upon graduation from Officer Candidate School at Fort Benning in 1952. Two years later, after serving as a company commander at Fort Jackson, he was ordered to Korea where he served as S4 and later as Chief of the Inspection Division, 7th Transportation Port Command. He was then named aide-de-camp to Maj Gen Norman H. Vissering, who held successive assignments as CG Korean Communications Zone, Senior Advisor to the Second ROK Army and CG Gulf Transportation Training Command. After attending the Infantry Officer Advanced Course, Captain Barber remained at the Infantry School as an instructor with the Rifle Committee of the Weapons Department.

Goodbye Bayonet!

By Capt James R. Semmens

THROUGH the years, the primary purpose of the bayonet has remained unchanged—to give the soldier an alternate means of protection when he can no longer fire his rifle. However, as firearms have been perfected, the necessity for the bayonet has diminished.

When reloading was a time-consuming process, the combat soldier needed the reliable protection of bare steel against a sudden enemy charge. But since the development of semi- and full-automatic weapons, defensive use of the bayonet has been limited largely to situations in which the rifleman ran out of ammunition, or his weapon malfunctioned.

It is true that the bayonet also has had an offensive role. In close-in fighting, it can compensate for a lack of flexibility in firearms. Again, however, continuing weapons development has given the Infantryman a weapon which is lighter, more adaptable and much more reliable.

These improvements in reliable firepower raise questions about the place of the bayonet on the modern battlefield. A place cannot be justified solely on the grounds that the bayonet in the hands of selected individuals is occasionally an effective weapon—for even the saber could still have such an isolated utility.

Our combat experience in World War II and in Korea should give some indication of the bayonet's usefulness on the modern battlefield. Actually, the most significant fact about its employment during these two con-

flicts is that there were so few instances of its use. Recent historical examples in which the bayonet was employed on a unit scale are relatively few.

Probably the most publicized example concerns the use of the bayonet by Easy Company of the 27th Infantry in Korea. Commanded by Capt (now major) Lewis Millett, Easy Company used a bayonet charge to seize Hill 180.

The men of Easy Company, in common with many riflemen in Korea, had discarded their bayonets. Captain Millett, however, obtained a resupply and gave his men four hours of intensive training with this weapon, eliminating many standard maneuvers which he deemed impractical.

In a preliminary engagement to the battle for Hill 180, Easy Company fixed its bayonets, but they were not used since the enemy departed hastily without offering resistance. Brig Gen S. L. A. Marshall, in his article, "Bayonet Charge," in the June 1951 issue of *Army Combat Forces Journal,* remarks that in this attack, "in common with the greater number of 'furious bayonet charges' reported from the Korean War, there had been no use of cold steel."

The assault upon Hill 180 occurred two days later, and once again the bayonet was used on a unit scale. The 14 men of the first platoon, including Captain Millett, attacked first, and later were joined by the third platoon. In the ensuing battle, a total of 47 enemy soldiers were killed, 18 of them with the bayonet. "Kill 'em with the bayonet," Captain Millett had yelled to his men, and they followed his lead.

While Easy Company's assault proved that aggressive leadership makes a major difference in unit effectiveness, it did not prove, as many commentators have believed, that the bayonet has indisputable value on the modern battlefield. S. L. A. Marshall has this to say: "What had been shown mainly was that Millett and Easy Company together formed a combination ideally suited to shock action, and that a man standing upright to go in with a bayonet is a sucker for a bullet in the back of the head."

This last remark of General Marshall's is a telling one. The fact is that the bayonet must be employed in a standing, "free-wheeling" position and, now that weapons have become so accurate, it can be fatal for a rifleman to get into that position during battle. Moreover, the bayonet is not a weapon that requires the Infantryman to remain upright for only a few seconds. Instead, it is necessary for him to stand, and to keep standing until he has dispatched his opponent. This, of course, gives every enemy rifleman in the vicinity time to draw a leisurely bead on him.

Furthermore, this danger is not compensated for by any special capability of the bayonet. Actually, the lighter weight, greater accuracy at long distances and greater flexibility at short ranges, larger magazine capacity and increased reliability of modern weapons have reduced the necessity for bayonet fighting. Again, it is not that the bayonet can't kill, but rather than the rifle *can.* Even where stealth is demanded, a dagger-type weapon probably would be more effective than the sometimes unwieldy bayonet.

Some attempt to justify the bayonet is made on the grounds that, even though its battle effectiveness is not great, it has psychological values which benefit our own men and reduce the enemy's will to fight. There is no doubt that aggressive spirit is of primary importance. However, there is also no doubt that at a range of approximately 150 meters, it is virtually impossible for an enemy soldier—even a specially trained one—to determine if we are attacking with or without fixed bayonets. At this distance the bayonet is not likely to make the enemy turn and run, for the obvious reason that he probably won't even see it. The enemy can, however, see that he is outnumbered, he can tell when the ratio of firepower is against him and he can detect determination in the assaulting troops. These factors account for a large number of "successful" bayonet charges.

As for our own men, it is claimed that the bayonet infuses them with an aggressive spirit which wins battles. To a degree this is true, but there is no reason why any personal weapon cannot develop courage, stamina and the will to assault equally as well as the bayonet. Instilling an aggressive spirit into the soldier is a matter of effective leadership and training—not specifically a matter of 10 inches of steel.

CAPT JAMES R. SEMMENS was graduated from the United States Military Academy in 1951. He served as platoon leader with the 112th Infantry Regiment, 28th Division, until 1954. After completing the Infantry Officer Advanced Course he was assigned to the Weapons Department of the Infantry School as a team chief on the Rifle Committee. Early this year he transferred to the Corps of Engineers.

QUIZ (Continued from page 51)

10. The division CG/command radio net is normally restricted to traffic between battle group and division. Therefore, it is not used for lateral communication between battle groups. The procedure to be used by a battle group commander for direct contact with an adjacent battle group commander using his FM radio is:

a. to use the division command/operations net.

b. for the calling commander to enter the command net of the called commander.

c. to use the division intelligence operations net.

d. to use the special net designed for this purpose.

For answers turn to page 60

SOLDIER MANAGEMENT & MORALE

The practical rules offered by General Clarke in this two-part article provide a valuable checklist for establishing a climate of good leadership and followership.

By Gen Bruce C. Clarke

THE subject of leadership is complicated to the theorist. Many and large books have been written on the academic side of being a good leader. Fortunately, the rules are capable of being reduced to a few simple and practical terms. The two short outlines which follow were prepared to do just that. Together they might well be used as a closely related leadership check list which officers and noncommissioned officers can use to an advantage in their units. On looking back upon my experience in the Army serving under many immediate commanders whose ranks have varied through the years from corporal to four-star general, I recall no case where any one of my superiors was able to establish a *climate of good leadership* in his unit if he violated many of the simple rules given here. Conversely, all who observed well the simple rules were looked upon by their subordinates as good leaders. Many of them were outstanding.

General Clarke commands the U. S. Continental Army Command. Prior to this assignment, he commanded the Seventh U. S. Army in Europe and the I and X Corps in Korea.

Part I. Soldier Management

from the Viewpoint of the Company Officer

FROM the company officer's viewpoint, soldier management and leadership go hand in hand. The purpose of this outline is to assist the young officer and the senior noncommissioned officer in his everyday problems of handling and managing soldiers.

There were fair, good and outstanding units of all echelons in the past war. Primarily this variation in units was in direct ratio to the qualities of leadership displayed by the unit officers.

Leadership which produces success in battle can easily be adapted to other activities and produce equal or greater success.

What Men Except from Their Leaders

1. Men have a right to expect from their leaders:

a. Honest, just and fair treatment.

b. Consideration due them as mature, professional soldiers.

c. Personal interest taken in them as individuals.

d. Loyalty.

e. Shielding from harassment "higher up."

f. The best in leadership.

g. That their needs be anticipated and provided for.

h. All the comforts and privileges practicable.

i. To be kept oriented and told the "reason why."

j. A well-thought-out program of training, work and recreation.

k. Clear-cut and positive decisions and orders which are not constantly changing.

l. Demands on them commensurate with their capabilities, not too small or too great.

m. That their good work be recognized—and publicized where appropriate.

2. To the military leader, men are tools. He is successful to the extent that he can get the men to work for him. Ordinarily, and on their own initiative, people run on only 35 percent capacity. The success of a leader is measured by the extent to which he can "tap" the other 65 percent.

3. It is the men below who make or break an officer. Sometimes, but not often enough, those above recognize what the ones below do for them in this respect. Regardless of the recognition, the officer should not lose sight of the basic truth.

Some Pointers on Leadership

Some people are natural-born leaders. Others, possessing the ordinary attributes, can be fine leaders through the observation of certain procedures. Some of these are:

1. Almost every man wants to do what is expected of him. When he does not do so, it usually is because he has not been properly instructed. This is the only tenable attitude an officer or noncommissioned officer can take toward his subordinates. He will recognize the exceptions and know what to do about them.

2. Men admire a strict officer if he is also just.

3. An officer who tries to be a "good fellow" loses his grip early.

4. A new officer cannot be easy at first and then get strict. He can, however, be strict at first and then ease off as circumstances warrant.

5. Company and platoon leaders should know every man in their organizations.

6. Men must look to their titular leaders for rewards and punishments. The company commander, himself, must decide who shall be promoted. He can and should accept recommendations, but it must never be thought that he rubber-stamps the first sergeant's list. The company commander personally assesses company punishment, not the first sergeant. He usually does this in the first sergeant's presence.

7. One should be able to select competent subordinates. If the commander makes a mistake in choice, then the man should be replaced. Do not carry dead wood along for fear of admitting an error in selection. Handle your own mistakes; do not pass them along.

8. An officer should not look for cheap popularity with his subordinates. They expect the officer to play his part according to his position. They do not begrudge him his rank, pay, or prerogatives if he uses them in the interest of his subordinates and superiors.

9. Military courtesies start between officers. Observation of these courtesies between seniors and subordinates is not belittling to either; they are evidences of alertness, pride and good manners.

10. An officer can expect the same attention from his men that he gives them—it works both ways.

11. The officer should give orders in a manner which indicates he expects compliance. He should be clear and positive and should follow them up.

12. An officer should not issue orders which he cannot enforce. Along that line, it is a wise officer who refrains from criticism of a situation until he learns the reasons therefor, and can make logical, constructive suggestions.

13. An officer must develop initiative in his subordinates. They learn by doing. In so learning they make mistakes. Learn to underwrite the honest mistakes of your subordinates.

14. An officer must not belittle the importance of his subordinates. He must give them responsibilities and then back them up. A good officer does not by-pass subordinate commanders. He uses his noncommissioned officers and adds to their prestige by so doing.

15. An officer should be as good as

his word. He should not make promises of rewards and punishments he cannot fulfill. He should fulfill those he makes.

16. A good officer will know the names, background and individual characteristics of his men. He must have a genuine personal interest in them or they will not have it in him. Each individual has problems. There is no easier way of getting a grip on men than by helping them to solve the personal problems that give them great concern.

17. Be enthusiastic and cheerful. These attitudes in a leader, as well as their opposites, are contagious.

18. Do not be too familiar with your men. Good soldiers do not expect it. It is not necessary to call your men by their first names or nicknames even if you sleep in the same foxhole with them. Doing so does not increase your leadership ability or your grip on your men.

19. Morale is a natural product of good leadership. Morale is not produced by USO shows, etc. Diversions are important, however. Good morale comes from doing well a worthwhile job and receiving recognition for it. (See "Soldier Morale" which follows.)

20. Every man experiences fear in a crisis. The leader cannot show it. He must fortify himself by building up a scale of values which enables him to control his emotions. The only fear that should worry a good leader is the fear of being afraid.

21. Do everything you can to increase the personal pride of your men. Cleanliness, neatness and orderliness are evidences of personal pride. A proud outfit is a good outfit.

22. When a man has punishment coming to him, be sure to give it to him, but in an impersonal way and to a degree that fits the circumstances and the offense. When he pays his debt, forget the incident.

23. Listen to the suggestions of your subordinates. If they are adopted, pass on the credit to them.

24. Be intellectually honest. An officer cannot be expected to know everything. He cannot bluff his men and retain their respect. When he does not know he should say so.

25. Be loyal. Criticism of your superiors in front of subordinates lays you open to the same treatment. Remember, loyalty works both ways.

26. Rank should be used to serve your subordinates. Rank is not a reward nor a license to exercise your idiosyncrasies. Rank has one object: to enable the officer to fulfill his responsibilities.

27. An officer's presence when the conditions are unpleasant and when the going is tough—"sharing the situation with the men"—is all-important.

28. Above all, set the proper example. Men will look to the officer for their model. The higher the rank the greater the obligation to those below to set the proper example.

Conclusion

Basis of the officer-enlisted man relationship in the American Army. We have heard the charge that the officer-enlisted man relationship is based upon the Prussian system as brought to this country by Baron von Steuben. There is nothing wrong today with the following instructions written by Baron von Steuben at Valley Forge and published by the Continental Congress. It is when we get away from them that we get into difficulties.

"Instructions for the Captain"

"A captain cannot be too careful of the company the state has committed to his charge. He must pay the greatest attention to the health of his men, their discipline, arms, accouterments, ammunition, clothes, and necessaries.

"His first object should be to gain the love of his men by treating them with every possible kindness and humanity, inquiring into their complaints, and when well founded, seeing them redressed. He should know every man of his company by name and character. He should often visit those who are sick, speak tenderly to them, see that the public provision, whether of medicine or diet, is duly administered, and procure them, besides, such comforts and conveniences as are in his power. The attachment that arises from this kind of attention to the sick and wounded is almost inconceivable; it will, moreover, be the means of preserving the lives of many valuable men."

"Instructions for the Lieutenant"

"He should endeavor to gain the love of his men, by his attention to everything which may contribute to their health and convenience; he should often visit them at different hours; inspect into their manner of living; see that their provisions are good and well cooked, and as far as possible oblige them to take their meals at regulated hours. He should pay attention to their complaints, and when well founded, endeavor to get them redressed; but discourage them from complaining on every frivolous occasion."

Part II. Soldier Morale

THE one question most frequently asked by visitors to military units is: "How is the morale?" This question usually leads to a discussion of many things and usually ends in an agreement that the morale is "excellent." I am aware of no commander who ever rated the morale of the men in his unit as anything but "excellent." But I am sure that the morale in some units is "more excellent" than in others.

What is morale? Our manual on leadership defines morale as the men-

tal and emotional state of the individual. As such, it is naturally influenced by many factors.

Although morale is a complex and intangible quality, it must have a solid basis of the following three factors which lead to a general feeling of confidence, well-being and accomplishment. Military leadership and management play a large part in providing the three factors, although the military commander alone cannot provide them all to the full extent needed:

1. Doing well,
2. An important job,
3. And receiving recognition.

During the course of this article I will refer to these elements, but first let's consider the several adjuncts to morale which have an influence on units but which in themselves alone do not produce good morale if the basis of good morale is missing.

1. *Good Management.* We all like to be in a unit where there is good management, where things run smoothly, where things are planned, where men do not have to "hurry up and wait." The basis for good management is prior planning, thorough organization and continuing supervision.

2. *Well Informed.* Men like to be kept informed ahead of time as to things that affect them or are apt to affect them. It is far better for the commander to keep his men informed, than to have them seek to get such information from rumors. Most soldiers enter into training programs and other military activities with vigor and enthusiasm if they know their purpose and the reason.

3. *Well Trained.* This is an important part of the first factor. If a unit is not well trained its men know it. This fact adversely affects their confidence, especially if they anticipate there is a possibility of using that training in a critical situation. Every soldier likes to feel that he is playing on a winning team—he knows he can't win if he isn't well trained.

4. *Chances for Advancement.* Making progress is morale-raising to all men. Knowing that there is an opportunity for advancement and that only excellent performance and preparation lead to promotion in a unit helps the morale.

5. *Good Physical Condition.* Good physical condition goes hand-in-hand with good mental condition. These two elements are basic to achieving good morale.

6. *Good Administration.* Men like to know that the administration in their unit is good, that their pay accounts and individual records are correct, that the date they are due for rotation home will not be overlooked, that their allotments are going through on schedule. These matters are very personal to a man and affect his confidence in his unit.

7. *Confidence in their Equipment.* We are the best equipped Army in the world. There is always better equipment under development than is in the hands of troops. There would be no progress unless that were true. The talking down of our equipment as being obsolete, the statements that we do not have the latest and best are detrimental to morale.

8. *Confidence in their Leaders.* Men expect their leaders to know their jobs, to share the hardships with them and to take a personal interest in their problems. The men like to see their leaders where things are going on—where the weather is bad or the night dark and wet.

9. *Comfortable Quarters.* With a little encouragement men will fix up comfortable quarters under most any condition. They should always be made as comfortable as the circumstances permit.

10. *Good Mess.* The food issued to the American soldier is the best that any army ever received. There is no excuse in the Army for other than a good mess. Where messes are not good, command attention is lacking.

11. *Good Mail Service.* The importance of this should be apparent to all. The soldier counts on his mail—he looks forward with anticipation to every mail call.

12. *Good Medical Attention.* Confidence in the medical service is of tremendous importance to any unit, especially to a combat unit.

13. *Post Exchange Facilities.* The Post Exchange gives the man a source of small necessities and little luxuries so that he can vary the routine of issue items and have some things in accordance with his own wishes.

14. *Leaves and Passes.* A constant and well-implemented policy in such matters provides breaks in routine which are most beneficial. The leave program should be planned so that each individual knows approximately when he is going. He can then plan for it.

15. *Religious Services and Character Guidance.* It is especially important that an Army made up mostly of young soldiers be provided with facilities for religious services in accordance with their preferences and a program of character guidance with a view to continuing in the service the wholesome influence of home and community life.

16. *Awards and Letters of Commendation.* These means of recognition of good work play a most important part in factor three of the basis of good morale. A good commander is ever alert to detect and recognize good work.

17. *Diversions.* There are many important activities that fill up spare time, thereby keeping the soldier pleasantly and profitably occupied and adding to his contentment. Among these are:

   a. Movies
   b. U.S.O. Camp Shows
   c. Dayroom and library facilities
   d. Athletics
   e. Well-equipped hobby shops

18. *Standards.* Soldiers like to be in a "sharp" unit. They appreciate the achievement of high standards in discipline, dress, housekeeping, police, maintenance, training, athletics, etc. The lift in morale that comes from impressive military ceremonies is an important factor.

Most of the various adjuncts to morale are expected by troops as a matter of course. Therefore, the presence of them does not necessarily add to morale, but the absence of any of them is quickly noticed and adversely affects the morale substantially.

In discussing the subject of morale with visitors, I often ask and am asked: "What do you look for in a unit in order to gauge the morale?" Since morale is influenced by so many factors, there are naturally many indications of the state of morale in a unit. The things I look into and note in making a quick size-up of a unit include:

1. *Saluting.* Is it well done? Do the men speak? Do they seem pleased to greet you? Do they come forward to report?
2. *Dress.* Is it uniform, neat, clean, worn smartly?
3. *Good Housekeeping.* Is the area neat, orderly, clean? Are offices cluttered up? Are bulletin boards neat? Are signs clean, neat, uniform? Are barracks neatly arranged? Has there been an effective effort to make the unit attractive?
4. *Pride.* Are they eager to show their accomplishments? Are they eager to point out their history? Do they have something good to sell and try to sell it?
5. *Participation in Charities and Unit Improvement Projects.* These extracurricular activities indicate the unit spirit in an organization.
6. *Athletic Program and Support of their Teams.* An athletic program, enthusiastically supported, on the small-unit level so that many men actually participate, is always a favorable indication of morale as is the support of unit teams in competitions. Competition between platoons is most beneficial.
7. *Church Attendance.* This is a good indicator.
8. *Soldiers Deposits and Other Savings.* A man who is saving his money each month is "banking on his future" and is usually a well-adjusted and confident soldier. When there are many such soldiers in a unit there is a depth of stability in the organization.
9. *Enlistment and Reenlistment Records.* Except where unusual conditions exist, the records of enlistment and reenlistment are good indices of the relative morale in the units.
10. *AWOLs.* Where situations exist to make such offenses on the part of the man reasonably easy to commit, this item is an indicator of morale.
11. *Size of Sick Call.* Unless there are special reasons for it, a continuing large sick call is a danger signal in a unit.
12. *Venereal Disease and Courts-Martial Rates.* These often indicate morale in a unit, but they must be analyzed carefully for extraordinary influencing factors. For example, a very low court-martial rate may indicate not good morale, but a lax discipline.
13. *Incidents and Accidents.* Usually these occur in sizeable numbers only as a result of conditions existing over a period of time which set the stage for them. Because of this, they are an indication of the soundness of the basic structure of a unit which includes the state of morale of its members.
14. *Complaints to the Inspector General.* These come about when men are not well informed and properly handled. Thus, they are an indication of morale.

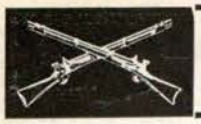
The factors, adjuncts and indications of morale covered so far have to do with those things that are generally within the ability of military leadership and management to influence. But there are influences on the morale of soldiers, especially those on duty in a far-off land, which stem from attitudes of officials, members of Congress, the press, radio commentators and the public at home. These factors have to do with the last two elements of the basic premise: an important job, and receiving recognition.

It is necessary that the soldier feel that he is needed where he is in an important mission, that his sacrifices are of both immediate and of long-range benefit to his country, his home, his family and himself. He will feel that importance so long as the people at home feel it. He is very sensitive to public opinion at home and, because of good radio, newspaper and mail facilities, is constantly abreast of the attitude at home toward the importance of his job. The "home-town" and other releases by the public information officers play an important part in the attitude at home. Unless the people at home help maintain in him the feeling that he is doing an important job for them, the heart of the basic premise upon which good morale is built is eliminated. Then the several adjuncts to morale cannot fully fill the void regardless of the efforts made.

The third element—receiving recognition—generally follows from the second, insofar as the attitude of the public is concerned. Visits, speeches and actions of officials, articles by newspaper correspondents and contents of letters which the soldier receives from home all affect morale. Because of this, every citizen shares with the military leaders the responsibility for the morale of the service personnel.

The morale of a man in a military organization comes from many factors. It may well be summed up in one word, "confidence"—confidence in his training, equipment, leadership, in himself, in his unit and in the support from home. The military commanders play a big part in it, but so do civilian officials, members of Congress, the press, radio commentators and the general public at home. Together they must insure that the soldier does well an important job and receives recognition for it. So long as this is accomplished there is a general feeling of confidence, well-being and progress in a military unit; and the report which states that the "morale is excellent" will be sound.

Part II of this article was published initially in the March-April 1954 issue of Armor *magazine — Editor.*



ANSWERS TO QUARTERLY QUIZ *(See page 51)*

Possible score 100 points. Expert 90-100, Sharpshooter 70-80, Marksman 50-60, Recruit 30-40 and Bolo 0-20. For a more detailed discussion of the answers check the references listed.

1. **a.** The weapons squad of the rifle platoon normally moves in column at the rear of the platoon during the movement to the probable line of deployment. Depending on the visibility, the squad may follow the assaulting squads at a specific distance, support the assault echelon, or protect the flanks and rear. The weapons squad should not be so close to the assaulting squad that it becomes involved in close combat; yet, it must be immediately available to support the consolidation. Because of difficulties in fire control, it normally is not advisable to fire machineguns in the assault at night. (Chap 2, Sec XI, par 77c, Advance Sheet, Rifle Company, Infantry Division Battle Group)

2. **d.** Once a tourniquet has been applied, the wounded man should be seen by a medical officer as soon as possible. The tourniquet should not be loosened by anyone except a trained medical person who is prepared to stop the hemorrhage or bleeding by other means and is also prepared to replace the blood volume adequately. Repeated loosening of the tourniquet by inexperienced personnel is extremely dangerous and can result in considerable blood loss and endanger the life of the patient. (Chap 1, par 3a(2)(b), FM 21–11, March 1954)

3. **c.** Water in issue canteens can be easily disinfected with issued purification tablets (iodine). Two tablets are needed for every quart or canteenful of clear water, though four tablets should be used if the water is muddy or off-color. Shake well to dissolve the tablets. In 30 minutes all the bacteria will be destroyed. Then the water will be safe to drink. Halazone tablets are no longer issued. (Chap 3, par 57, FM 21–10, July 1945)

4. **d.** All types of field equipment and vehicles are subject to damage by blast. If peak overpressures are high enough, these items will be crushed. However, the violent winds (dynamic pressures) generated by the detonation are the most destructive part of the blast effect. Radiation has little or no damage effect on materiel. It is most effective against living tissue. While heat will have some effect on equipment and vehicles, the radius of this effect is small in comparison with the radius of the blast effect.

5. **d.** The protective mask should be removed only after a test has been made with the chemical agent detector kit. After determining the absence of gas with the detector kit, two or three men should unmask for five minutes and then remask. After 10 minutes, these men should be examined in a shaded area for constricted pupils, running noses and tightness in their chests. If none of these symptoms occur, personnel may unmask. (Chap 13, Sec II, par 114f(1), FM 21–40, November 1958)

6. **c.** In his planning, the S3 must analyze the dispositions of the battle group with respect to the enemy's known nuclear capability and inform the commander of the risks involved in the various courses of action. This should be part of the analysis portion of his estimate of the situation. (Par 19c(5)(c), FM 101–5)

7. The rates of fire prescribed for the machinegun, 7.62mm, M60, and the number of rounds per minute fired at each rate are:

Sustained	100 rounds.
Rapid	200 rounds.
Cyclic	66 rounds.

8. **a, b, c, d.** This missile can be located at a hidden site in a trench or ravine and controlled by a gunner in a forward position or observation post. The weapon can also be launched from a ¼-ton truck, an armored carrier, or other ground vehicle. The missile may also be mounted on, fired and controlled from a helicopter or a slow-flying, fixed-wing plane. (Article, "Death to the Tank!" by Lt Col Albert A. Merglen, *Infantry* magazine, July-September 1958 issue)

9. **a.** Command maintenance inspections are performed at least annually. Inspection is scheduled as far in advance as possible and is included in the annual master training directive. If a unit has 20 or more major TOE items, 50 percent of these items of equipment will be inspected. When the total number of major TOE items in the unit is less than 20, the percentage of items inspected is increased. (Pars 4, 5, p.223, "Commander's Handbook for Preventive Maintenance," 1957)

10. **b.** The division CG/command net is intended primarily for communication between the division commander and staff and the commanders of all immediate subordinate units. The large number of radio stations in the net dictates restrictions on its use. While specific employment of the net will be governed by the individual division commander's desires, it is expected that lateral radio communication between subordinate unit commanders will be established by the calling commander. (Chap 2, Sec III, par 19c(2), FM 11–10, July 1957)

A Squad with Two Wings

A formation for the fire team will simplify tactics of the squad and give the squad leader better control. The wedge formation suggested here is one possibility.

By Capt James H. Bremer

In 1951 Brig Gen S. L. A. Marshall wrote about the Infantry rifle squad, "As now set up, it does not appear sufficiently flexible and well guided. . . . A squad with two wings, each working under its own leader, but both working toward the same object, is demonstrably capable of stronger action and closer direction than eight men operating under one man. . . . [Such a] squad has balance and flexibility within itself. Either of its wings is ready for semi-independent action. Each can give equal support to the other in fire and movement."

Much has been done toward achieving these objectives. On the other hand, the substitution of the new squad with two five-man fire teams for the old nine-man squad does not alone guarantee optimum flexibility and maximum control in combat. Our squads will not be stronger in the field until doctrine and training reflect the concept of two teams, each working under its own leader. And at this level doctrine and combat formations are inseparable. Our present combat formations have fallen into disuse because of their comparative complexity. Whatever men are expected to remember and use under the strain of battle must be the very essence of simplicity.

If our fire teams are to be capable of semi-independent action, our formations should begin at that level. To begin with, consider the role of the fire-team leader.

He is, presumably, the most aggressive, skillful and experienced man on the team. Our doctrine specifies

Figure 1. The basic wedge formation.

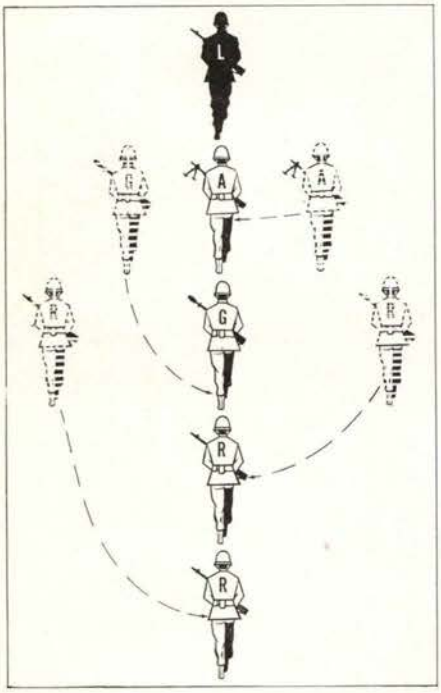


Figure 2. Closing from wedge to single file.

that he will control his men primarily by his personal example as a fighter-leader. He initiates the action and they follow suit. Accordingly, he should be located at the head of his team. He can control his men by example only if they can see him. Also, bear in mind that the leader provides a significant proportion of the team's fire power, especially after one or two casualties.

To hold him to the rear to control the fire of two, three or even four others would measurably lessen the combat power of the fire team.

When there is no time for plans, orders, or even signals, success and survival often depend upon an aggressive and intelligent reaction from the team as a whole. From his vantage point at the front of the team where he could be seen by all of his men, the leader's personal example would suffice to unite the team in effective action. At less pressing times his silent example would serve to set the pace, to indicate the direction of march, and generally to facilitate control.

The two next most important members, the automatic rifleman and the rifle grenadier, should be immediately adjacent to the leader, one on either side of him and both slightly to his rear. Presuming that he is right-handed, the leader, when he takes up a firing position, can most easily control the fire of the man to his right. Consequently this position should be reserved for the automatic rifleman, and the grenadier should be to the leader's left. Of course, this positioning would be reversed for left-handed leaders, and teams in an advanced state of training would be able to switch over at will, depending on the situation.

The two remaining riflemen will in most cases be the less experienced members. Posting them to the rear of, and outside of, the remainder of the team would enable them to observe the more experienced fighters in action and still be in a position to participate actively. One would be the alternate automatic rifleman and the other the alternate rifle grenadier, and as such each would carry extra ammunition and would automatically replace the key men, should they become casualties. In addition, each would be in position to protect his respective flank and the rear.

Obviously the only formation which allows such an arrangement is the simple wedge (Figure 1). There is certainly nothing new about the wedge formation. It is common knowledge that it permits excellent fire to the front and good fire to either flank, facilitates control and favors sustained effort while, simultaneously providing flank protection. Both Infantry and Armor doctrine presently make prominent use of of the wedge at the platoon level.

Deployed in a wedge the fire team has at once excellent flexibility and effective control. By taking full advantage of its flexibility, the wedge can be used in practically any tactcal situation. It can fold back into a single file or column-of-two's or open up into a small skirmish line (Figures 2, 3 and 4). At first the team leader would use voice and arm-and-hand signals to open and close the formation. As the men advanced in training and became accustomed to working together, they would learn to fit their wedge to the situation automatically.

Although understanding his men as individuals is one of the most im-

Figure 3. Closing from wedge to column of twos.

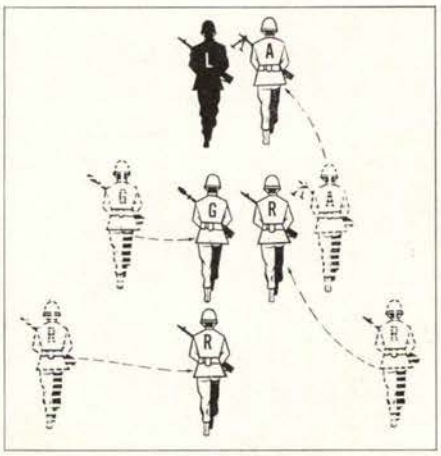
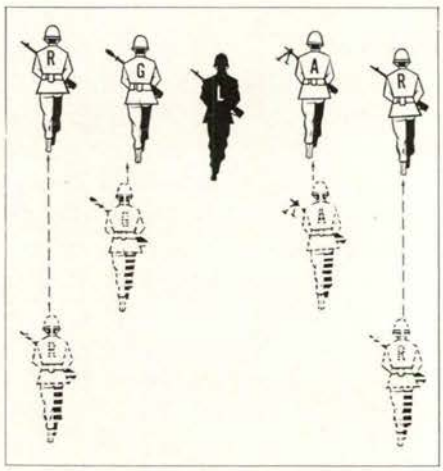


Figure 4. Opening from wedge to skirmish line.

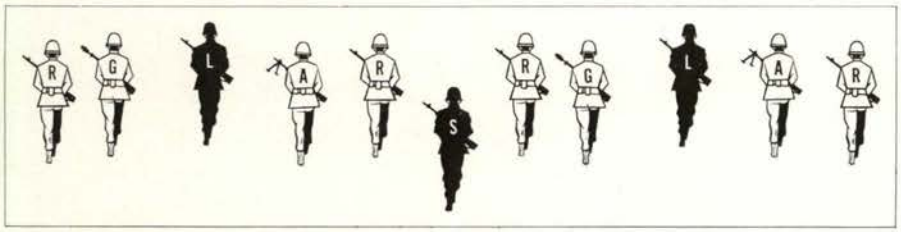


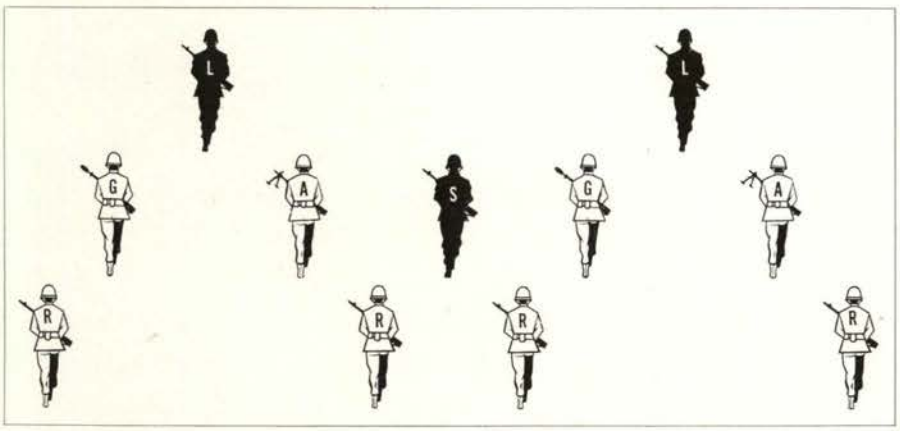
portant duties of the squad leader, tactically he could habitually consider his squad as two separate and indivisible fire teams rather than as ten men. The fire team has only one basic formation; the squad needs no more than two. In the column the teams are one behind the other, and in the skirmish line they are abreast of one another. The column or skirmish line is appropriate to practically any tactical situation, providing of course that the team wedges are opened and closed intelligently (Figures 5, 6, 7 and 8). When a skirmish line is needed, the squad leader could move the rear team on line with, and to either side of, the leading team. Ordinarily, when moving into a squad skirmish line, both fire teams would open up their wedges all the way. However, it would be perfectly feasible to keep one or both of the teams closed up to any degree desired and still keep them abreast of each other. The squad leader would have no fixed position within the squad but would post himself wherever he could best control his two fire teams. Normally he would accompany or lead the forward team in the column, and in the skirmish line he would probably take a position between the two teams.

Figure 5. Squad in column of wedges Wedges may be extended or closed according to the situation.

Figure 6. Squad in skirmish line. Bravo Team may be either to right or left of Alpha Team.

Figure 7. Squad with wedges abreast can move quickly into a skirmish line.





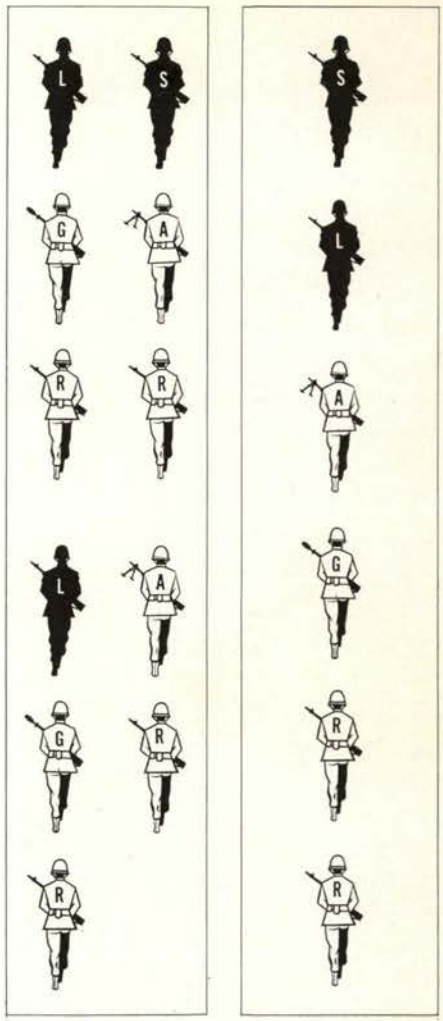


Figure 8. Left: Squad in column of twos, Bravo Team following Alpha Team. Right: Squad in single file showing only the squad leader and Alpha Team. Bravo Team follows Alpha Team in identical order.

Note that no formation is included specifically to provide dispersion, since either the column or the skirmish line can, by increasing the interval between men, opening the fire-team wedges, and increasing the distance between fire teams, disperse the men to any degree necessary. These measures can be taken one at a time, all at once, or in any combination by either one or both of the teams and to the degree called for by the situation. The squad thereby gains flexibility without any loss of its inherent simplicity.

This is not to say that there is no longer any need for a diamond formation. That formation, however, is far better suited to patrol-type ac-

CAPT JAMES H. BREMER was graduated from the United States Military Academy in 1952. Following the completion of the Infantry Company Officer Course and the Basic Airborne Course at the Infantry School he went to Germany, where he served as a platoon leader and as a liaison officer in the 109th Infantry, 28th Infantry Division, and later as a platoon leader in the 28th Reconnaissance Company. When the 28th Division was redesignated the 9th Infantry Division, he served with the 9th Reconnaissance Company, and was later named executive officer of headquarters company, 60th Infantry Regiment. Upon his return to the United States he joined the 2d Battle Group, 101st Airborne Division, where he was a company executive officer, battle group assistant S4 and administrative center chief. Captain Bremer is currently attending the Advanced Course at the Infantry School.

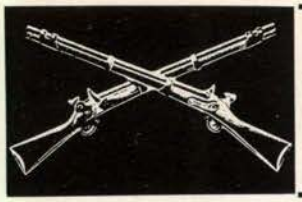
tions than to the approach march or the attack. Troops almost never use a diamond formation in the field unless they have had an opportunity to rehearse it. Normally patrols have time for such rehearsals, but squads in the attack do not. Patrols have a relatively greater need for all-around security, the primary advantage offered by the diamond, whereas the primary requirements of attacking squads are control, flexibility and momentum. Training in the diamond formation should therefore be presented during the instruction on patrolling. The diamond should be considered a patrol formation rather than a squad formation.

The training methods used to teach doctrine are not less important than the doctrine itself. It is not an oversight that the positions of the men within the fire-team wedge have not been given numerical designations. With at most five men per team, there is no reason why job titles cannot replace the numbers that have been used so long and forgotten so often. Soldiers will certainly experience far less difficulty remembering the duties of the "alternate rifle grenadier" than those of the "number four man." And when a rifleman replaces a wounded automatic rifleman he would have no doubt about his proper position within the team.

While the designation of the two teams as ALFA and BRAVO is necessary for convenience and clarity both in training and in combat, both teams should be used interchangeably in the squad formations. For example, ALPHA should not always be to the front of the squad column.

The rifle squad most often attacks as a part of a rifle platoon, and the proposed combat formations were developed with this in mind. Consequently, combat training should progress from individual skills to fire-team training and thence to squad training and finally to platoon exercises. Only then should the idea of one squad independently attacking a small objective be presented as a not-too-rare case. Such an attack would involve the use of battle drill as now taught, and the proposed formations are equally well adapted to this phase of training. A simple, easily remembered name for each maneuver in our battle drill would probably facilitate training.

These recommendations represent the conclusions of one Infantry captain, drawn after about five years of studying rifle squads, although never in combat. Perhaps my conclusions oversimplify a vital problem. They are based, however, on the assumptions—borne out by comprehensive battle reports—that some system of close combat formations is necessary, that only a truly simple system will prove workable, and that the system should feature fire team leaders who really lead. This proposed system should materially reduce training time, provide for quicker, more positive actions in combat, break in replacements more easily, and function more smoothly at reduced strengths than the system we now use.



THE SOUNDING BOARD

This regular feature gives Infantrymen a chance to "sound off" on a wide variety of subjects. It provides an outlet for thinking which need not conform to doctrine. We are looking for constructive ideas—well-conceived and concisely expressed—which challenge or inform. Articles will be paid for at regular *Infantry* rates.

The Infantry Needs Mobility-Not Armor

By Capt Harold J. Meyer

TREMENDOUS advances in firepower, both nuclear and non-nuclear, require that the Infantry make similar advances in the vital counterpart of firepower—mobility. The effectivness of Infantry on the modern battlefield will be predicated on its ability to mass and disperse its forces rapidly.

In matching increased firepower with greater mobility, we should keep in mind a maxim of Napoleon: "The strength of an army, like momentum in mechanics, is estimated by the weight multiplied by the velocity. Therefore, where mass is constant, increased mobility can serve to increase strength (or effective mass) by providing the wherewith to quickly concentrate mass at a critical point or to shift mass from one point to another."

The historical 2½-mile-per-hour foot mobility of the Infantryman will not permit him to capitalize on today's firepower. He must have faster means of movement over the battlefield. The present state of the art dictates motorized, cross-country mobility in the form of personnel carriers and weapons platforms. In the future he will require more advanced means. And, since this mechanized mobility will be so essential to his combat operations, he must be concerned with the weight and design of these vehicles.

The thinking Infantryman asks the question, "Do we need armor protection on Infantry carriers?" What the Infantry really needs is a vehicle which will deliver the combat-ready soldier and his weapons to a point of decision in the shortest possible time and with the greatest flexibility. While the purpose of the relatively thin-skinned armor-plating on current and proposed carriers is to provide protection for the passenger against small-arms fire and low-velocity artillery fragments, and while this same armor also gives some protection against nuclear effects, are these overriding considerations?

Steel and even aluminum plating adds considerable weight to the carrier and reduces its velocity—reduces its speed and trafficability, reduces its airlift capability, increases its cost, and by increasing fuel consumption reduces its range. Since protection for the passenger varies according to the thickness of the plate, we can expect requirements for heavier armor due to the increased muzzle velocity and penetration capabilities of current and projected small arms, and to the increasing potency of artillery.

Some Infantrymen feel that greater mobility, increased air-transportability, more flexibility, less fuel consumption and similar advantages are the primary considerations in the design of the Infantry carrier. While there may be occasions on the modern battlefield when the mounted Infantryman will be able to sweep over the objective and accomplish his mission without dismounting, it is not the purpose or function of Infantry to fight from an armored "fighting" vehicle. To attempt to protect such a vehicle from the kind of direct fires which an armored fighting vehicle is bound to attract would require heavy armor plate and the vehicle would end up a tank. The Infantryman's fundamental role, irrespective of how he moves over the battlefield, is to dismount and fight on the ground. Why waste material and effort in attempts to achieve protection which doesn't really protect and sacrifices the very capabilities the Infantry seeks?

Many Infantrymen believe that a reasonable and satisfactory degree of protection can be obtained without the use of armor. The Infantry carrier must be designed to avoid hits, not to accept them. Our own increases in firepower, coupled with greater speed, lower silhouette, increased maneuverability and proper tactical doctrine will provide acceptable protection against the small-arms and artillery fire to which the Infantryman has always been subjected anyhow. For those who still insist on additional shielding, possibilities are offered which would not add significant weight to the carrier. We could provide the individual soldier with body armor. This would give him some protection when he dismounts. However, such body armor could be left on the carrier if

not needed or if it hampers his ability to fight. Another possibility is the development of lightly armored blankets or covers which could be used both on the carrier and on the ground, for the protection of foxholes and emplacements. Still another possibility would be light, armored shields which could be slipped into slots or otherwise attached to the carrier when such protection is considered essential. And, of course, there is always the possibility of making a concentrated effort on the development of a really lightweight substitute for armor.

Those who insist on armor for protection against nuclear effects also overlook certain facts and possibilities. Under normal conditions the Infantryman is not likely to move directly over *ground zero* of a nuclear strike in any kind of vehicle. With the increased speed and maneuverability of light carriers, however, he will be better able to skirt the area directly under the burst and to move rapidly through or outside areas of serious fall-out. Also, with proper dispersion and tactical employment, which would be facilitated by its increased capabilities, the lighter carrier would be a fleeting target for enemy nuclear weapons. Protection against flash and heat would be more economically provided by proper clothing and by protective measures which can be taken by the individual. We simply cannot afford the weight and sacrifice of capabilities imposed by armor for these purposes.

Efforts are being made, with some success, to take some of the load off the Infantryman's back. Now is the time to lift the weight of armor from the Infantry carrier. We cannot subscribe to armored vehicles which will limit the Infantry's capabilities on the modern battlefield.

CAPT HAROLD J. MEYER enlisted into the Army in 1943 and graduated from OCS in 1945. He served in the European Theater of Operations until 1946, when he left active service and joined the Ohio National Guard. In 1948 he returned to active duty, first attending the Armed Forces Information School and then serving with the 26th Infantry Regiment of the 1st Division. He was subsequently assigned to duty as assistant PMS&T at Kent University, Kent, Ohio. Captain Meyer was graduated from the Advanced Course at the Infantry School in 1956 and later joined the 24th Infantry Division in Korea. He is presently Assistant Operations Officer with the Weapons Department of the Infantry School.

Call Your Own Fire

By SSgt Ben Moskowitz

A COMMON problem which Infantrymen have encountered over the years has been a lack of artillery support when and where it was most needed. As likely as not, the lack of fire was not due to the unavailability of support. Very possibly it was due to the fact that no fire had been called for, and very possibly no fire had been called for because no one on the spot at the time knew how to do so.

Such a possibility looms even larger in the pentomic Army. Mobility and rapid movement are keywords, but if you lose your artillery forward observer or liaison team in a quick move, you just about lose your artillery support as well. A good many Infantry officers and NCOs can effectively call for artillery fire, and the loss of the FO, while keenly felt, shouldn't necessarily cripple the company or the battle group. But there is no getting away from the fact that not all Infantry officers—and very few Infantry NCOs—really know how to call for fire.

This lack of training isn't the soldier's fault, and it isn't the S3's fault. The plain truth is, as we all realize, that since Infantrymen aren't in the artillery business, they tend to consider a thorough knowledge of such matters none of their concern.

Since the chance of your losing the FO is extremely high—and may become even higher—it is clear that Infantrymen need this training. The proper methods of calling for fire should be carefully instilled in Infantrymen, particularly in the senior noncoms and junior officers. It is not enough merely to raise your supporting artillery units on the radio or telephone and tell them where you are and what you face in the way of enemy. You must be quick and you must be sure—and this takes training.

Why all this emphasis on proper methods of requesting fire? The reason, of course, is that laying in upon a target can be a rather complex process. Adjusting the piece involves such things as "site," weather, desired height of burst, deflection, elevation and fuze. This job, when performed by a trained gun crew and fire direction center, takes a minimum amount of time, but unless the crew and the FDC are prepared beforehand with stock corrections for a given target area, it is rarely less than five or six minutes before a round can be put on the way to the target. If the target is called incorrectly, we risk casualties among our own troops and that time is wasted. Since those five or six minutes can be crucial to the Infantryman, it behooves him

to know *how* to be accurate—and to *be* accurate—when calling for fire support.

Furthermore, methods of calling for fire, like voice communication procedures, are standard among the three services and among the NATO nations (artillery FOs can call for fire from the Navy as easily as they can call for fire from a 105 battery). Because of this standardization, variations in the correct methods of calling for fire are apt to cause confusion. And as any Infantryman who has ever been shelled by friendly artillery fire knows, confusion in the FDC can be mighty uncomfortable if not fatal—to himself.

Actually there just isn't too much to learn about calling for fire that the Infantryman doesn't know already or can't pick up easily and quickly. First off, he must know the types of ammunition available (HE, HEAT, smoke, WP, illuminating) and their particular advantages. These he should be familiar with from his experience with Infantry heavy weapons. Also, he must be able to judge distance accurately. This he should also know from his Infantry training. And he should already know good voice communication procedure. A few things he may have to learn are the advantages of the different kinds of artillery fire, such as salvo and volley fire, and—what is important for the effective employment of artillery—the various types of fuzes available, along with their advantages and disadvantages.

How can arrangements be made to have these things taught? One approach is to call on division artillery. My own experience in an Infantry division indicates that the Artillery is always more than happy to conduct classes in observation of fire for Infantrymen, especially during the unit training phases when training schedules are somewhat flexible. Better still, the battle group commander should have to go no farther than his heavy mortar platoon for trained officers and NCOs to conduct these classes.

Any such program of instruction must be stripped of frills and bits of useless information that tend to detract from the essentials. It is enough for the student to learn the amount of fire he'll be provided and to understand that this is decided at the FDC based on the target information he provides. He doesn't have to be bothered with the tactical or logistical reasons why the FDC makes this decision. He doesn't have to learn how an FDC operates—merely that the information he provides the FDC must be as accurate as he can provide. He needn't be taught to convert angles to mils, for the FDC will understand that someone other than an Artilleryman is calling for fire, and will make this correction for him. However, he does have to be taught that his angle measurements must be extremely accurate to compensate for the larger error factor at the greater ranges of artillery. And of course, he must learn the importance of speed and sureness, and that one must not be sacrificed at the expense of the other.

By knowing how to work with artillery fires in normal circumstances, and how to call for accurate artillery support when no one else can, Infantrymen will be surer of getting the fires they need—when and where they need them.

SSGT BEN MOSKOWITZ enlisted into the Army in 1951. After duty with Port Operations at the Sondrestrom Air Force Base in Greenland, he was assigned to the Joint United States Military Mission to Thailand. Subsequently he served with the 3d Infantry Division at Fort Benning and the Army Reserve Center in Norfolk, Va. Sergeant Moskowitz, a frequent contributor to military publications, is now assigned to the 15th Artillery of the 2d Infantry Division at Benning.

Who Will Command the Infantry in 1965?

By Lt Col Grat B. Hankins

THERE is a serious flaw in the current career pattern for Infantry officers. Unless something is done about it, we may find relatively few Infantry officers with command experience above company level by 1965.

Replacement of the regiment by the battle group, and elimination of the Infantry battalion in the ROCID division, limits the Infantry officer to staff duties throughout his service as a major and lieutenant colonel. In peacetime, this approximates a span of 14 years without opportunity to receive a command assignment.

On the other hand, the reorganization has had no such effect on command opportunities for officers in other branches. In fact, the ROCID organization actually enhances the career picture for these officers as compared with their Infantry contemporaries. Officers of several other branches are provided command opportunities at company or battery level, at battalion level and at group level. Since great emphasis is placed on command experience in the selec-

LT COL GRAT B. HANKINS was commissioned in the 115th Infantry, 29th Infantry Division, Maryland National Guard, in 1941 and served with the Division throughout World War II. While with the 115th, he advanced from platoon leader to battalion commander. In 1944, he became Assistant G3 of the Division. Returning to the United States in 1946, he was assigned as an instructor with the Maryland National Guard and then was ordered to the Office of the Assistant Chief of Staff, G1, Department of the Army. He then attended the Command and General Staff College after which he served with the Military Assistance Advisory Group in France. He is now chief of the Plans Section of the Special Subjects Department at the Infantry School.

tion of officers for early promotion, promotion to general officer rank, key assignments and other important career advancements, it is apparent that an Infantry officer above the grade of captain will be at a disadvantage in competing with his contemporaries in other branches. In short, it must be recognized that other branches now provide a better career pattern.

The impact of this situation is not readily apparent today. The Infantry still has many officers who received command experience under the old organization in both World War II and Korea. By 1965, however, we will have a very different picture. Eight years will have passed since an Infantryman commanded a battalion and the current list of command experienced officers will have been depleted by retirement and attrition.

It may be claimed that the battle group executive officer gets command training. This is true to a degree, but certainly not to the same degree as a battalion commander. Furthermore, the executive officer in peacetime is so frequently used for courts, boards, inquiries, extended TDY assignments, umpiring and maneuver control that the actual command training he receives is severely limited.

The basic problem confronting the Infantry officer is that of maintaining proficiency in command techniques during the long period of time he serves in the grades of major and lieutenant colonel.

The most desirable solution from a career-pattern standpoint would be to reestablish the battalion echelon in the Infantry. This, however, may defeat the purpose of its elimination, i.e., obtaining faster reaction to orders by reducing the number of intermediate headquarters involved in their transmission. Furthermore, we cannot expect our combat organization to be governed by a career pattern. Other solutions must be found.

A partial solution which may merit exploration is to authorize the rank of lieutenant colonel for the battle group commander, major for the battle group executive officer, and colonel for the brigade commander.

The flaw in our current Infantry career pattern is a serious one. While the weakness will not become fully apparent until we lose the field-grade officers who commanded battalions and regiments under the triangular organization, the young Infantryman who looks ahead a few years is genuinely disturbed by the reduced possibilities for command above company level. We can't wait to improve the Infantry career pattern until almost all Infantry officers of field grade lack command experience. We must do something about it now.

The recently announced addition of a deputy commander for the battle group (lieutenant colonel, MOS 1542) may help a little.—Editor.

The opinions expressed in these articles do not necessarily reflect official thinking of the Infantry School.

WHERE IN THE WORLD ARE YOU?

It's a small world — until we try to follow an *Infantry* subscriber who has forgotten to send us a change of address. We'll move heaven and earth to locate you, no matter where in the world you go. But you can help. When you go globe-trotting, your first step should be to drop us a note to let us know where you are. Write:

***INFANTRY*: BOOK DEPT., U. S. ARMY INFANTRY SCHOOL, FT. BENNING, GA.**

Selection for promotion will be made on a best qualified basis. Non-selection is not a pass-over as such and will not be a bar to future consideration for promotion.

Concurrently with the convening of this selection board, all *unit* USAR lieutenant colonels who meet lesser time in grade and total commissioned service requirements, and who are recommended, will also be considered. Personnel in this category will be considered to fill vacancies in USAR units.

Notification to individuals will be made shortly after the adjournment of the board.

Appointment of USAR Officers

Area Commanders are authorized to accept and process applications from eligible individuals for appointment in the USAR without concurrent active duty. Such appointments are made to fill an appropriate position vacancy in a USAR unit. Prior to appointment in Chaplains Corps, JAGC, Army Security, Military Intelligence, Staff Specialist or Civil Affairs/Military Government, approval by Headquarters, Department of the Army, must be obtained.

With the exception of OCS and ROTC graduates, and participants in the Senior Medical-Dental Program, all appointments with concurrent active duty are made or approved by Headquarters, Department of the Army. The provisions of Paragraph 15, AR 140–100, as changed, apply to these types of appointments and are only made where there is an active Army procurement program.

It should be pointed out that omission of information on the application or supporting papers causes undue delay. Care should be exercised to insure that DA Form 398, Statement of Personal History, is completely filled out. Omission of conviction by civil or military court reflects on the integrity of the applicant. Care should be taken to enter all offenses and, if doubt exists, legal counsel is suggested.

Processing of applications takes time and unless an unusually long lapse occurs, follow-up action on the status of an application should be carefully weighed before submission.

Appointment of Warrant Officers — USAR or AUS

From time to time programs are announced for appointment as warrant officers to fill active Army requirements. Such appointments are made in the USAR for the most part, with some being made in AUS when the applicant is already a Reserve commissioned officer serving in an enlisted status.

While satisfactory completion of a service school course is of utmost importance in considering applicants, completion alone does not guarantee appointment. The large number of applicants who have completed a particular course far exceeds the number of warrant officer vacancies in the active Army. In addition, there are many vacancies for school-trained personnel in enlisted grades.

Competition among applicants is keen and only after careful evaluation is appointment denied. Applicants nearing voluntary retirement may be disapproved for appointment because of the short period of remaining service. Applicants cannot enter into any agreement to remain in active service for a specified period of time if appointed. Many factors preclude entering into such an agreement, such as less desirable overseas areas, fluctuation in authorized strengths of the active Army, etc.

Army Reserve Aviation Officer Training Program

The Army Reserve Aviation Officer Training Program continues to expand. Eligible officers who wish to qualify as aviation officers may apply for Army flight training. The training consists of three phases: basic flight instruction of approximately 18 weeks at Camp Gary, Texas; tactical flight training of approximately 10 weeks at Fort Rucker, Alabama; and instrument training of approximately 8 weeks, also at Fort Rucker. Upon successful completion of the Aviation Tactics Course, graduates will be designated Army Aviation Officers, MOS 1980 (Fixed Wing Aviator), and will be required to participate in regular and frequent aerial flights. The instrument training is optional, but aviators who complete this phase of the training qualify for the Army Instrument Card.

Previous flight training is not a prerequisite for Army flight training. To be eligible, an applicant must be a commissioned officer in an active Reserve status, meet Class I physical standards for flying, and volunteer for the training. Applications should be submitted through Reserve channels to the Department of the Army in accordance with provisions of AR 611–110. Reserve officers who are serving on active duty either as officers or as enlisted men are not eligible for this training.

Mobilization Designees

The Department of the Army has an established program for the selection and designation of Army Reserve officers not on active duty, either in commissioned or enlisted status, to fill certain key augmentation positions authorized in mobilization designation tables of distribution listed in the Army Reserve Troop Program. During mobilization, functions of certain active Army table of distribution units are expanded, resulting in a requirement for additional key personnel not readily available on active duty. Reservists selected for such assignments must be available for recall to active duty during the first three months of mobilization.

Army Reserve officers in an active status who possess scientific, technical or highly specialized knowledge, and are otherwise qualified, may request assignment to a mobilization designation position through appropriate Reserve channels. Officers who are selected are required to participate in active-duty training for a 15-day period

annually in order to maintain proficiency in their designated assignments.

USAR Research and Development Program

The Department of the Army is encouraging qualified reservists who are not on active duty and who possess professional and scientific backgrounds to participate in the USAR Research and Development Unit Program. This program is designed to maintain useful affiliation with the Army Reserve of personnel who are professionally qualified to engage in research and development. The program will provide peacetime assignments and mobilization designations which will enable maximum utilization of the professional and scientific competence of individuals in research and development activities within the limitations of military requirements and policies, and will adequately prepare these individuals for mobilization.

Qualified individuals, including reservists of other services, may be assigned or attached to presently organized research and development units or to new units which may be organized in geographical locations where there are at least 10 qualified individuals who desire to participate in the Program. To be eligible for assignment or attachment, an applicant must possess at least a bachelor's degree from an accredited college or university, and be qualified to engage in a professional capacity in research and development work.

Applications should be submitted on DA Form 2074 to the commanding officer of a USAR Research and Development Unit, or to the U. S. Army Corps (Reserve) or U. S. Army military district if there is no appropriate unit yet established.

SCHOOL LISTS 1959-1960

The following Infantry officers have been selected to attend service school courses for FY 1960. All current lists are shown except the Infantry Officer Advanced Courses at the Infantry School. These will be published later.

National War College

COLONELS
Blakefield, William H.
Collins, Kenneth W.
Finn, John M.
Koster, Samuel W.
Lindner, Kenneth R.
Long, Glen C.
McCaffrey, George W.
Middleworth, Henry V.
Roecker, Frederick C.
Rosson, William B.
Ward, Donald R.
Williamson, Ellis W.

Industrial College of the Armed Forces

COLONELS
Crownover, Robert L.
Witter, Vincent M.
LT COLONELS
Guerin, Vincent C.
Nathan, Aubrey P.

Army War College

COLONELS
Ballard, James L., Jr.
Balliett, Howard D.
Barney, John C., Jr.
Besson, Robert
Black, Edwin F.
Crosby Ralph D.
Dickson, Donald D.
Edwards, Bob E.
Fraser, Powell A.
Homan, Sammie N.
Kirkbride, Max V.
Kolb, Roland L.
Maixner, Harold V.
Maness, Lewis E.
Mendes, Louis G., Jr.
Mitchell, Burt L., Jr.
Purdy, William A.
Sage, Jerry M.
Sedberry, George R., Jr.
Stillman, Richard J.
Summers, Robert R.
Wallace, Kenneth W.

LT COLONELS
Baden, Clyde H., Jr.
Boggs, Adelbert D.
Bolton, Donnelly P.
Brown, John P.
Canella, Charles J.
Coleman, William S.
Conaty, Francis S., Jr.
Comny, Joseph B., Jr.
Cowan, Alvin E.
Cross, Thomas R.
Doupe, Robert L.
Drye, Clarence W.
Duddy, Robert R.
Dwan, John E., 2d
Eney, John K.
Greenwalt, William J.
Hickman, Don R.
Jones, Bruce B.
Kapp, Ronald A.
Kendrick, Robert C.
Laughlin, Virgil V.
Logan, Edward O'N.
McGregor, Edward W.
McKnight, John T.
Milloy, Albert E.
Naughton, Francis E.
Rogers, Bernard W.
Smith, Albert H., Jr.
Smith, Anderson Q.
Ugalde, Jesse G.
MAJORS
Daniel, Charles D.
Hennessey, John J.

Navy War College

COLONELS
Acuff, John N., Jr.
Hicks, Herbert C., Jr.
LT COLONELS
Callaway, John W.
Kellett, Donald T.

Air War College

LT COLONELS
DeReus, Clarence C.
Herrington, Jay W.
Kehe, Arlin J.
Singlaub, John K.

Armed Forces Staff College

Bagley, James C.
Burdell, Frank E., Jr.
Jackson, Charles A.
Restani, Raymond
Romstedt, Gerhart O.
Rosoff, Martin
Tisdale, Tyron E.
Wedster, Raymond S.

MAJORS
Carter, Doniphan
Daugherty, Robert M.
Herbert, James A.
Hill, Benjamin H.
Hodson, Fremont B., Jr.
Long, William F., Jr.
Mace, John S.
McClellan, Stan L.
Mulhern, John F.
Powers, John J., Jr.
Tyson, Charles M.
Zook, William E.

Command and General Staff College

LT COLONELS
McCullar, Francis M.
Newell, Roscius C.
Welch, George P.

MAJORS
Adkins, Walter R., Jr.
Anderson, Charles W.
Bailey, James
Bland, George E.
Braim, Paul F.
Brenner, John A.
Buckley, Harry A.
Burley, Roy W.
Butler, Olva B.
Clarke, Carter W., Jr.
Coggins, Clyde A.
Cortez, Clyde A.
Cosby, Warren G.
Douglas, James S.
Edmunds, Joseph A.
Ellett, Charles C.
Elliot, Pat K.
Ellison, Paul P., Jr.
Etchemendy, Leon
Fell, Thomas F.
Geer, John C.
Geraci, John P.
Giboney, Thomas B., Jr.
Gibson, Floyd S.
Goldes, Joseph A.
Gregory, Arthur P.
Gruenther, Richard L.
Hisaka, Masakatsu
Hornstein, David H.
Hussey, Stanley J.
Kelley, Eugene, Jr.
Kennedy, John L., Jr.
Kerr, Edwin B.
King, John E.
Knudson, Wade E.
Kotzebue, Albert L.
Lambert, Robert O.
Lavite, Anthony, Jr.
Lehman, Raymond G., Jr.
Leonard, Robert W.
Limpus, Charles E., Jr.
Lober, William J., Jr.
Long, Eldredge R., Jr.
Longbotham, Ralph M., Jr.
Love, Joseph B.
MacKinnon, Robert N.
Mahone, Worthington M.
Meadows, Byron D.
Middleton, Troy H., Jr.
Nielsen, Carl H.
Nix, James H.
Olney, Gregory L.
Park, Joseph D.
Ponder, Lewington S.
Pooley, Nardeth W.
Posich, Lewis V.
Prater, Robert M.
Rawls, Louis T.
Reese, Robert M.
Rheault, Robert B.
Rhodes, Clifford D.
Roberts, Donald L.
Rock, Fairfield
Rolfe, Richard L.
Russell, Robert C.
Saxby, Edward S.
Scharth, Otto P.
Senechal, Jack F.
Sieber, Charles F., Jr.
Sine, Robert R.
Stevens, Carlton E., Jr.
Stiles, Lester W.
Sunski, Chester F.
Taylor, Raleigh O.
Tierno, Ralph T., Jr.
Tolar, Robert A.
Tumlinson, Jack M.
Veaudry, Wallace F.
Ward, Richard H.
Ware, Thomas A., Jr.
Webber, Kenneth E., Jr.
Whalen, Thomas F.
Wilkin, John M.
Winkeller, Herbert B.
Wolaver, Harold D.
Zilian, Carl M.

CAPTAINS
Allen, Edwin W., Jr.
Anderson, Richard L.
Bashore, Boyd T.
Baumann, Lewis R.
Baxley, William J., Jr.
Bayard, Louis P.
Bell, Clyde B., Jr.
Biglione, Normand J.
Bishop, Bertram J.
Blake, Thomas B.
Bradley, William J., Jr.
Buchanan, Crawford
Buck, James H.
Burke, Lloyd L.
Burns, James R.
Bush, Leonard R.
Carlson, Carsten D.
Cerrone, Michael J., Jr.
Converse, Stanley P.
Coyle, Marcus W.
Dashiell, John C.
Diaz, Victor F.
East, Charles M.
Ellis, Calvin W.
English, Allan J., Jr.
Floyd, Harry A.
Forrest, John F.
French, Harry W.
Garner, Francis
George, Jack M.
Gibbs, Cyrus L.
Giglio, Rudolph F. L.
Hale, Richard E.
Hall, Reginald W.
Hanlon, Charles W.
Hanna, Mark J.
Harris, Audley C.
Hilmar, James E.
Johnson, James H.
Jones, Hugh H., Jr.
Kavanaugh, Martin J.
Kingston, Robert C.
Kovalsky, Michael
Lee, Myron E., Jr.
Legg, Elbert E.
LeGro, William E., Jr.
Lewis, John L.
MacNeill, Francis W.
Mallett, Charles S. T.
McGarity, James M.
Messinger, Lucien E., III
Mewborn, Needham P.
Meyer, Edward C.
Morley, Leonard A.
Murphy, Paul J. B., Jr.
Nicewander, Dennis R.
Nolan, John M.
Norman, William C.
North, Louis J.
Okawachi, Toru M.
Ondishko, Joseph J., Jr.
Oxford, William B.
Pence, Authur W., Jr.
Pendleton, Elmer D., Jr.
Philips, Robert H.
Phillips, Y. Y., Jr.
Procter, Gilbert, Jr.
Puckett, Ralph, Jr.
Quarstein, Vernon A.
Robinson, Norman L., Jr.
Rogers, Richard C.
Romano, Frank, Jr.
Russell, Carl K.
Scandling, John D.
Scovill, Thomas M.
Shank, Richard G.
Smith, Charles A.
Smith, Wilfrid K. G.
Smithers, Samuel W., Jr.
Stauffer, Joseph R.
Steele, Robert L.
Steele, Sidney R.
Stogsdill, Charles H.
Story, Robert P.
Swett, Trevor W., Jr.
Tallman, Richard J.
Tavzel, Harold S.
Thams, Robert W.
Tierney, William P.
Tracy, George W.
Unger, Guinn E.
Verhey, William J.
Wallace, Bruce E.
Walsh, John J., Jr.
Walton, John M.
Watters, Clarence M.
Whitelaw, Robert E.
Whitesel, William M.
Wilmot, Fred W.
Wilson, James R.
Yadon, James C.
Yow, Harold D.
Zufelt, Dick

Naval War College C & S Course

Maj John W. Kiely

Marine Corps School (Senior Course)

LT COLONELS
Sullivan, John F.
White, Wolfred K.

Air University C & S Course

MAJORS
Armstrong, John R.
Kingston, Joseph P.
Lee, James M.

British War College

Col William E. DePuy

Canadian War College

Col Robert E. Connor

Australian Staff College

Capt John C. Lippincott

British Staff College

MAJORS
Collins, Joseph E.
Forrester, Eugene P.

Canadian Staff College

Capt William R. Richardson

French Ecole D'etat Major

Capt Frederic Ackerson

Pakistan Staff College

Capt Adrian S. Cloninger, Jr.

Spanish Staff College

Theodore A. Seely, Jr.

Continued from page 26

Why Don't We . . .

. . . make the AN/PRC-6 easier to carry? Despite its excellent characteristics, the AN/PRC–6, for its size, is one of the most uncomfortable pieces of equipment to carry in the Infantry. Why don't we design a truly comfortable sling which will keep the AN/PRC–6 out of the crook of your arm while marching and still leave both hands free? Presently, some Infantrymen strap the radio across their back and utilize a speaker hand-set clipped to the helmet. However, such a hand-set is not always available. Others loop the sling around the neck and position the radio so the earpiece is close to the ear. This arrangement is not too stable and requires frequent adjustment. Still other Infantrymen carry the set in the sling position using empty bandoleers. The sling must be tied with a slip or bow knot so that the radio can be put into action rapidly.

Even though the AN/PRC–6 may be replaced, we will have to live with it for quite a while yet. With a little ingenuity a sling could be developed and the set could be designed so that it could be operated comfortably with one hand.

Lt William R. Perry

. . . develop realistic training ammunition? Live-fire exercises are unrealistic because of the many safety precautions which must be taken. Also, field firing targets cannot take the place of live targets. Why don't we develop a new training ammunition and an adapter for our small arms so we can fire at individuals at ranges of one to five hundred meters without causing serious injury. The projectile should be filled with some type of non-injurious colored liquid or dye which will stain a uniform upon impact but which can be removed by laundering. Personnel participating in such training would wear some type of face and head mask to prevent injury from the projectile.

Such a system would be invaluable in teaching individual soldiers and small unit leaders the principles of sighting and aiming, cover and concealment, fire and maneuver, etc., against live targets. It would add needed realism to our training.

Capt Stanford R. Wilson

. . . develop a wash and wear combat uniform? Most Infantrymen who wear the fatigue uniform are required to have it clean, pressed and heavily starched. Obviously our Army in garrison should present a neat, clean appearance. However, it is unrealistic to require or encourage men to wear starched clothes during training or while performing housekeeping duties.

The soldiers should be able to maintain their own combat uniform. Yet most men haven't the time, facilities or ability to wash, starch and properly press their fatigues. They must pay to have it done either by Quartermaster Laundry or by a civilian laundry. The cost is sizeable.

Capt Mark C. Rhoads

. . . develop a real "fatigue" uniform? Most commanders at all levels of command require the present fatigue uniform to be highly starched and neatly pressed.

When the soldier is engaged in fatigue-type details or in training, he is reluctant to participate vigorously because his appearance will be substandard the remainder of the day or because he hopes to stretch another day's wear out of the uniform.

The average soldier cannot turn out a uniform that meets the standard demanded by commanders. Thus he is required to spend 50 cents or more each day to insure an acceptable appearance. A small amount of arithmetic shows that in a two-week period the soldier spends a sum equal to the original cost of the uniform.

Why can't we develop a "drip-dry" fatigue uniform which will look good with no starch and little or no pressing? The design might be along the lines of the "bush jacket."

Capt Herman H. James, Jr.

...expand the functions of the Self-Service Supply Center to include issue and turn-in of all classes and categories of supply? With modification of the present system, non-expendables as well as expendables can be handled through the self-service system. This would require increasing the scope of the Supply Center to include the processing of all items of supply (a department store in comparison to the present five-and-dime). Reins would be placed on the purchaser to restrict his non-expendable item procurement to items which he is authorized. This could be done by requiring the purchaser to present an approved requisition. The Supply Center would also act as agent to receive items for turn-in. In the case of items turned in for salvage and replacement, the Center would issue a like item. It would also issue items upon evidence of report of survey, statement of charges or statement of collection process. Administrative restrictions would be imposed in garrison to insure supply economy. Such a system would closely relate combat and garrison supply procedures. It would permit immediate replacement or issue of needed items and lead to stock economy.

Capt L. W. Dyment, Jr.

Throughout history, there has been one element which has invariably decided the success or failure of battle—the ground combat soldier. On any battlefield of the future when the air and artillery bombardment lifts you will see, silhouetted against a rising, tell-tale mushroom cloud, the ground combat soldier emerge from his foxhole, rifle and bayonet in hand.

GENERAL BRUCE C. CLARKE

LETTERS *(continued from page 3)*

At present I find *Infantry* invaluable source material for evaluation and discussion of trends.

R. ERNEST DUPUY
Col, USA, Ret
McLean, Va.

For Memories and Comradeship

Sir:

Infantry magazine keeps me current with U. S. Infantry tactics, techniques and new developments. . . .

It is also a means of keeping alive memories of my instruction at the U. S. Army Infantry School and it promotes a feeling of comradeship with Infantrymen all over the Free Western World.

KURT F. HOPPE, Capt
Grenadier-Battalion 41
German Army
Hoexter/Weser, Germany

Lifesaver

Sir:

I would like to say that *Infantry* magazine has been a lifesaver since I was assigned to the Engineers stationed at Fort Knox. It has kept me abreast of the Infantry subjects and will do so until I am placed in an Infantry unit again.

DON T. KERSTING, Jr.
Lt, Infantry
Company C, 54th Engineer Bn.
Fort Knox, Ky.

Battle Group Commanders Say . . .

Sir:

I require each company to subscribe to *Infantry* out of its unit funds and strongly recommend that all officers and noncommissioned officers subscribe personally. . . .

G. A. SHARPE
Col, Infantry
1st BG, 34th Infantry
APO 112, New York

Sir:

Every company in this battle group subscribes to *Infantry* and I keep a copy in my office and also one in the S3 office. It is one of the great est aids that any officer with troops can have available. . . .

There ought to be a closer liaison between battle group commanders in the field and the people who write the doctrine at the Infantry School. The Infantry School should make every effort to obtain officers who are fresh from troop duty for the staff and faculty.

ROLAND M. GLESZER
Col, Infantry
2d BG, 21st Infantry
APO 25, San Francisco

Sir:

I have long subscribed to *Infantry*. . . . It is the most informative publication available to the professional Infantryman. . . . We award a one-year subscription to *Infantry* to our battle group "Warrior of the Month."

OTTO R. KOCH, Jr.
Col, Infantry
2d BG, 5th Infantry
Fort Carson, Colo.

Sir:

Infantry magazine is the best magazine of its kind available . . . it should be read by all Infantrymen.

At my present level, there are no doubts whatever of the important role of the Infantry soldier. There are many doubts, however, on present organization and materiel. If these ideas can be circulated there is no question that some of them will take root and we will have a better Army.

ROBERT L. ASHWORTH
Col, Infantry
1st Abn BG, 501st Infantry
Fort Campbell, Ky.

Sir:

. . . In our battle group, we have an officers' research and study program. This program was established to provide our officers with a comprehensive and objective training medium through which they can study and research selected subjects of current professional interest.

We are adding the writing of material for *Infantry* magazine to the objectives of this program.

POWELL A. FRASER
Col, Infantry
2d BG, 13th Infantry
Fort Carson, Colo.

Why Not the M84?

Sir:

Recent articles in *Infantry* entitled "Short Cut to Mobility" and "Mortar Mobility" have stressed the need for a tracked carrier for the 4.2 mortar.

I can find nothing but praise for the idea of adapting the 4.2 to the M56 carrier. However, I cannot help but wonder if the M84 mortar carriage, currently used by the Reconnaissance Squadron, armored rifle battalions and armored battalions of the ROCAD armored division, would not be an acceptable vehicle for the battle group.

Consider the advantages: the M84 is a vehicle in production at this time. It has side and overhead armor protection and of course is amphibious. The M84 is also indistinguishable except at close range from its sister, the M59 APC, thus rendering the location of weapons by visual or image means difficult. And of course usable fire power is furnished by the OVM caliber .50 machinegun.

On the debit side, we of course must pay the penalty of increased ground pressure for the protection afforded by armor. However, at 7.1 pounds per square inch, the vehicle is still "light on its feet." The M84 is not air transportable as is the M56 but a mortar carrier version of the T113 could be carried by present cargo aircraft.

Considering all factors, perhaps a longer look should be taken at the M84 as today's most practical and available mortar carrier, with the thought of a mortar carrier version of the T113 for tomorrow.

ROBERT W. SMITHSON
Maj GS (Artillery)
2d Armored Division
Fort Hood, Tex.

WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Specific or General Interest to Infantrymen

Contract Awarded for M14 Rifle

Award of a contract for commercial production of the Army's new lightweight M14 rifle has been announced by the Department of the Army. This contract, which totals $4,116,250, is the first of two, each of which will be awarded for the production of 35,000 rifles. The second contract is expected to be announced shortly. Initial delivery of rifles is scheduled to be made within 12 months after the signing of the contract. Delivery of rifles from the pilot line at the U. S. Army Ordnance's Springfield Armory will start in July of this year.

The M14, designed and production-engineered at the Springfield Armory, is capable of both automatic and semi-automatic firing. It is chambered to fire the standard NATO 7.62mm cartridge, and replaces four hand weapons currently in use by the Army—the M1 rifle, the .30-caliber M2 carbine, the .30-caliber Browning automatic rifle and the .45-caliber M3A1 submachinegun.

The Lobber

A new missile has been developed by Convair division of General Dynamics Corporation for use as a supersonic ballistic cargo missile. Called the "Lobber," it could be useful in place of regular airlift to deliver food and supplies to embattled or isolated troops in combat.

Fired from a hand-carried launcher, the Lobber would also have other uses. It is being developed for the additional capabilities of transporting small radio transmitters, putting cables across rivers for engineers, building bridges and stringing communication wire. Another application of the equipment may include use as a weapon to deliver napalm or high explosives.

In initial testing of the solid-propellant missile at Camp Irwin, a nine-foot Lobber reportedly delivered a 50-pound payload intact a distance of six miles. Payloads up to 200 pounds can be delivered.

Mobile Communication Center

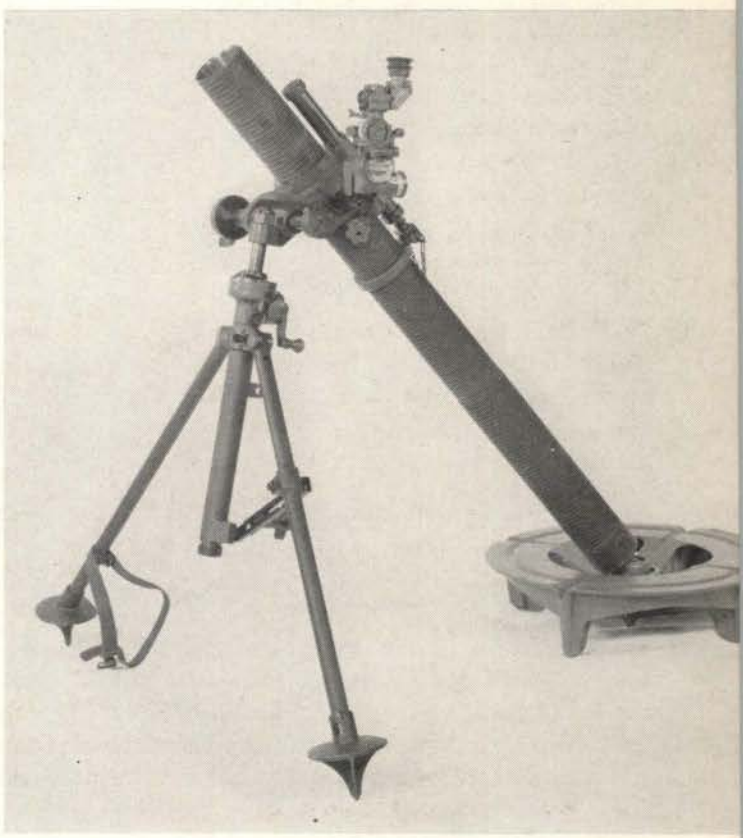
The U. S. Army Signal Corps has developed a highly mobile, air transportable communication center. The system can be set down almost anywhere by helicopters and be flown out immediately for relocation elsewhere. It can also be moved rapidly by conventional Army trucks.

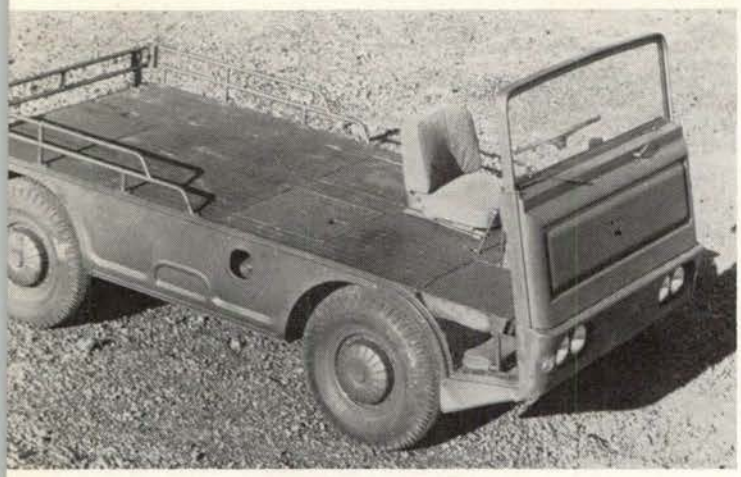
The new center provides the vital nucleus for a communication network of radio, telephone, telegraph and teletypewriter combat links. Composed of separate aluminum shelters, the number of which varies according to the mission, the center can be tailored to serve either frontline units or large headquarters. Each shelter has an integral power source or can be connected to a central system.

New 81mm Mortar

A new 81mm mortar, the T227, has been designed to replace the present M29. The T227 weighs 75 pounds, 18 pounds less than the 93-pound M29. Each component of the T227 mortar—the tube, the baseplate and the mount—weighs 25 pounds, making three even loads for the mortar squad. In outward appearance, the T227 is very similar to the M29, the only noticeable difference being in the construction of the mount.

The new 81mm mortar.





XM443E1 cross-country vehicle.

Cross-Country Truck

Department of the Army has contracted for further development work on the XM443E1, a new four-wheel drive, cross-country vehicle. Service-test models of this vehicle should be available later this year. Weighing three quarters of a ton, the truck is designed to carry a ¾-ton payload. It is being developed for possible use as a personnel or cargo carrier, a command and reconnaissance vehicle, or a weapons platform.

Wind Chill Chart

A wind-chill chart has been developed by medical researchers in the Office of the Surgeon General. The chart is designed to provide information on the effect of cold and wind on military personnel.

The purpose of the chart is to reduce the incidence of cold injury among troops during the winter months. Everyone knows that it feels colder when the wind blows but most people don't realize how much colder. The chart gives a standard wind-chill rating when compared to temperature and wind velocity. For example, the chart shows that if the temperature is expected to be 35 degrees Fahrenheit and the expected wind velocity is 20 miles per hour, the effect on exposed flesh will be the same as -38 degrees with no wind.

A table of equivalent temperatures on exposed flesh with varying wind velocities up to 45 miles per hour has been published in DA Circular 40–33, dated 3 November 1958.

New Pathfinder Beacon

A lightweight, air-droppable pathfinder beacon light has been developed to mark assembly points for airborne troops.

The beacon light has an infrared range of two miles when viewed from the ground and a visible light range of five miles when viewed from an altitude of 1000 feet.

The light is mounted on a telescoping mast which can be extended to 23 feet. Six signal lenses are provided in white, red, amber, green, blue and infrared. A mechanism can be set so the beacon flashes a preplanned sequence of four Morse Code characters, either manually or automatically. It can also be set to provide a continuous beam.

The beacon mast telescopes to 30 inches for placement in a carrying case. The case also contains a 12-volt rechargeable nickel-cadmium battery and the coding sequence mechanism. Total weight of the case and components is 20 pounds.

The pathfinder can be erected and operated by one man. Developed by the U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia, it is now undergoing user tests at Fort Bragg, North Carolina.

Battle Group Radar Set

A lightweight, medium-range radar set, the AN/TPS–21, has been authorized for issue to the Infantry battle group. Designed to search out and pinpoint moving targets on the battlefield, this new radar has a maximum range of over 18,000 meters. Capable of automatic search or "sector scan," the equipment can also be operated manually to track a detected target. Accurate range and azimuth readings can be obtained with the set.

Weighing 431 pounds and operated by a team of three men, this radar equipment can be broken down for packboard carry if necessary. However, it normally

AN/TPS-21 radar set.

will be transported in the ¼-ton truck and trailer assigned to the team.

The on-target indication is a characteristic audio tone in the operator's earphones. Since different targets produce different audio tones, a well-trained operator can distinguish a group of moving men from a moving tank or other vehicle.

The AN/TPS–21 operates on a line-of-sight principle. Consequently, large hill masses, densely wooded areas and sizeable buildings will obstruct surveillance with this equipment.

SD1 Surveillance Drone

The new aerial surveillance platoon, authorized for the Infantry division aviation company by the revised ROCID TOE, will be equipped with the SD1 surveillance drone system.

A radio-controlled aircraft which weighs 420 pounds fully equipped, the SD1 is 15 feet long and has a wingspan of 12 feet. It is zero-launched from a track similar to that used by some rockets, and, although propeller-driven, is assisted at launching by two JATO bottles. Each JATO bottle provides 5200 pounds of thrust to send the small craft roaring into the air at speeds better than 220 miles per hour.

SD1 Surveillance Drone

Once launched, the drone is tracked by radar and controlled by radio. It can attain an altitude of 15,000 feet and is capable of penetrating enemy territory for approximately 50 miles and then returning to its home base.

The SD1 can be equipped with television, motion-picture and still cameras. The cameras are rigged to

SD3 "Snooper"

operate on radio command from the controller. Photography missions can be flown at night using integral infrared equipment. Other specialized sensory equipment may be carried to fulfill particular mission requirements.

The drone uses a 44-foot extended-skirt parachute for landing. The recovery is made by bringing the craft over its base and cutting its engine by radio impulse. A second radio command releases the parachute which eases the drone to the ground.

An automatic parachute device floats the drone back to earth. Special inflatable rubber mats in the drone itself cushion the fall.

The "Snooper"

A remote-controlled drone designated the SD3 has been built for the U. S. Army Signal Corps by the Republic Aviation Corporation. It is designed to observe enemy battlefield activities and installations.

The "snooper" weighs less than 1000 pounds, is only 15 feet long and has a wingspan of 11 feet. The drone is packed with electronic and other more advanced sensory devices for guidance control and observation. It has interchangeable nose units which permit rapid switching from one surveillance technique to a different type, depending upon mission requirements.

The drone is powered by a 140-horsepower Continental engine. It is launched from a mobile trailer by two rocket motors. Once in the air the reciprocating engine takes over.

The assembled "Snake".

Improved Minefield "Snake"

An improved version of the World War II mine-clearing "Snake" has been developed by the U. S. Army Engineer Research and Development Laboratories and in undergoing tests by troops in the field.

The new model, which consists of a series of prefabricated sections, can be assembled in less time than its predecessor. Sections of the Snake are transported to an assembly point by truck. After assembly, the unit is towed by tank to a minefield. To clear the field, the Snake is pushed over the mined area and detonated.

Improved mine-clearing performance with less explosive is achieved by the new device through the utilization of specially designed charges in place of the conventional charges formerly used. Detonation of the explosives-laden sections is accomplished by firing a machine-gun from the tank into a bullet-sensitive fuse.

The Snake, made of extruded aluminum, is over 400 feet long when assembled.

New Language School

To maintain and improve the skills of Army linguists, a new language training center has been opened at Fort Hood. The school is one of three new facilities planned by the Army. The others will be located at Fort Bragg and Fort Meade.

In addition to an "electronic language laboratory" accommodating 48 students, the facilities at Fort Hood include a tape library, a reference library with books in 127 languages, a film and record room, classrooms, reading rooms and a maintenance shop.

The electronic equipment in the language laboratory makes it possible to conduct training in several languages at one time. Dual-channel tape recorders and a master control panel enable an instructor to talk to any one of his students without being overheard by the others.

ROTC Flight Training

The Army's Reserve Officer Flight Training Program has been extended to include 70 colleges and universities and this year has a total enrollment of 625 senior cadets.

Aims of the program are to motivate college students to seek a career in Army Aviation, to screen applicants for Army Aviation training, to act as a career incentive in the Regular Army and to create a reserve pool of qualified aviators.

The program was initiated in 1956 at 25 colleges and has already graduated a total of 656 flight-trained cadets.

Fallout Survey Unit

Compact radiological survey teams designed to plot and predict fallout in combat zones have been organized by the Army.

The five-man units—one officer and four enlisted men—will be known as Radiological Control Centers, or RADCs. The units will be established at field army, corps and division level to evaluate and report radiological data gathered by aerial and ground monitors.

Members of RADC teams will be highly trained, since their work demands speed, accuracy and skill. It is expected that RADC teams may be required to handle several hundred readings an hour.

A prototype RADC was first organized during tests at Desert Rock in 1957.

CP Trailer

A CP-type trailer, the XM158, is being tested by the United States Army Infantry School and the United States Army Infantry Board.

The tests will determine the suitability of the new two-wheeled 1½-ton trailer for use as a field office for the staff sections of the battle group or higher headquarters. Adaptability of the vehicle for other uses—as a communication van trailer or a mobile aid station, for instance—will also be investigated.

The trailer is equipped with heater and ventilator, and has both 24-volt and 110-volt electrical systems. With a highway payload of 3000 pounds, it requires a 2½-ton truck as a prime mover.

Floor space of the test vehicle is 99.2 square feet. Over-all height is 118 inches from ground level. Fully equipped, the trailer has a curb weight of 6000 pounds. Its fording depth capability is 60 inches. Leg-type jacks, located at each corner of the trailer, provide stability for the vehicle when it is parked.

Emergency Medical Packet

An emergency medical packet has been devised by the U. S. Army Medical Service. This new medical packet, the Phase I Emergency Medical Treatment Unit, is designed to meet conditions immediately following a military disaster or other mass casualty situation in which the number of persons injured is out of proportion to the medical resources available. The problems of mass casualty care are not confined to nuclear warfare, but can result from fires, floods, hurricanes and other civil disasters. It has been assumed that during these periods no direct professional medical help may be expected, and casualties will either treat themselves or be cared for by other non-medical personnel.

Containing 23 items, the emergency packet will provide medical material for treatment of approximately 100 casualties for about 72 hours.

This packet is, however, designed for much more than first aid. The items included have been carefully selected, and training in their use will be carried out by all three services.

Representatives of the Assistant Secretary of Defense (Health and Medical) and a professional supply representative from each of the military departments selected the items to be included. The emergency care packet was developed at the tri-service Medical Equipment Development Laboratory, Fort Totten, New York, and at the Army Medical Supply Depot, Louisville, Kentucky.

Packaged as one unit, the emergency care packet has nine component cartons: two master packs containing a synthetic plasma expander, surgical instruments and other items; one fracture pack; two burn packs; and four wound packs.

Thermograph — Night Vision Aid

A new photographic device, which uses the "heat" or infrared radiation emitted by the subject, has been developed as a night vision aid.

Called the Thermograph, this infrared device does not require sunlight or artificial light to produce an image. It depends solely on radiation from the person or object at which it is focused. Since this radiation is present day and night, the thermograph can operate in total darkness.

Infrared radiation emitted by the photo subject enters the optical system of the device and forms a thermal image on photographic film in a polaroid camera for quick development.

The Thermograph was developed as a research instrument to determine the basic characteristics for a military thermal imaging device which would provide a means for night reconnaissance, terrain mapping, target location and detection of camouflage.

Normally, the Thermograph would be operated by two men. In an emergency it could be operated by one man.

MANUALS

The following manuals have been published by Department of the Army and are available to instructors through normal supply channels:

FM 21–77, Evasion and Escape.

FM 21–77 (A), Evasion and Escape (C).

FM 22–5, Drill and Ceremonies (revision).

FM 22–100, Military Leadership (revision).

FM 23–5, U. S. Rifle, Caliber .30, M1.

FM 23–90, 81mm Mortar, M29.

ROTCM 145–4–2, The Junior ROTC Manual, Vol II.

ROTCM 145–100, Service Orientation (revision).

The following manuals have been forwarded by the United States Continental Army Command to The Adjutant General for printing and publication:

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Groups (new).

FM 21–75, Combat Training of Individual Soldier and Patrolling (change).

The following manuals and training literature are being written or rewritten. Publication cannot be expected until later this year.

FM 7–21, Headquarters and Headquarters Company, Infantry Division Battle Group (revision).

FM 7–24, Communication in Infantry and Airborne Divisions (revision).

FM 7–40, Infantry and Airborne Division Battle Groups (revision to include ROCID TOE changes).

FM 7–( ), Combat Support Company, Infantry Division Battle Group (new).

FM 20–( ), Ground Flame Warfare (new).

FM 23–( ), U. S. Rifles, 7.62mm, M14 and M15 (new).

FM 31–50, Combat in Fortified Areas and Towns (revision).

FM 57–21, Headquarters and Headquarters Company, Airborne Division Battle Group (new).

TC 20–( ), Airmobile Operations (new).

TC ( )–( ), The Antitank Guided Missile Platoon, Infantry and Armor Units (new).

TRAINING FILMS

The following training films have been approved for release to requesting units:

GF 11–40, The AN/TCC–7 System—Part I—Introduction to the System, 15 minutes.

GF 11–41, Introduction to Telephone Terminal AN/TCC–3 and Telephone Repeater AN/TCC–5, 15 minutes.

GF 55–43, Highway Regulation, Use of Circulation Map, 18 minutes.

MF 5–9019, Engineer Air Reconnaissance, 29 minutes.

MF 11–8931, United States Army Signal Equipment Support Agency, 23 minutes.

MF 30–8865, Free Europe—Part I—The Lands and the People, 31 minutes.

MF 30–8866, Free Europe—Part II—The Lands and the People, 30 minutes.

MF 46–8907, Helicopter—Emergency Procedures—Part I—Blade Stalls, 12 minutes.

MF 46–8909, Helicopter—Emergency Procedures—Part III—Emergency Procedures in the H19, 8 minutes.

TF 3–2651, Effects of Mustard Gas on Individuals, 4 minutes.

TF 3–2652, Individual Protection Procedures Against Mustard Gas, 8 minutes.

TF 3–2653, Protective Mask Fitting, 5 minutes.

TF 3–2654, Protective Mask Inspection, 8 minutes.

TF 3–2655, Automatic Masking Procedure, 6 minutes.

TF 3–2656, Individual Combat Protective Equipment, 5 minutes.

TF 3–2657, Individual Protective Equipment, 8 minutes.

TF 3–2659, Portable Flame Thrower M2A1–7—Pressure Charging, 9 minutes.

TF 3–2660, Portable Flame Thrower M2A1–7—Filling by Pressure Using Fuel Filling Kit M10A1, 9 minutes.

TF 3–2662, Surveillance of Chemical Corps Material—Surveillance, 6 minutes.

TF 3–2663, Handling and Storage of Equipment for Chemical Agents, 8 minutes.

TF 5–2598, Operator's Adjustment D7 Tractor—Part VI—Caterpillar Cable Control, 8 minutes.

TF 6–2505, The Corporal Missile—Defueling Process, 25 minutes.

TF 8–2676, Management of Mass Casualties—Part VIII—Management of Mechanical Injuries, 20 minutes.

TF 8–2754, Nursing Care with a Stryker Frame, 15 minutes.

TF 9-2599, Automotive Electricity for Military Vehicles—Part V—Principles of Operation of the Generator Regulator, 16 minutes.

TF 9–2686, Bleeding the Brake System, M135 Truck, 6 minutes.

TF 9–2687, Steering Brake Band Adjustment, Full Track Armored Infantry Vehicle M59, 4 minutes.

TF 9–2688, Transmission Band Adjustment of the CD 850, 90mm Gun Tank M48, 4 minutes.

TF 9–2689, Transmission Brake Adjustment, 90mm Gun Tank, M48A2, 4 minutes.

TF 9–2691, Steering Gear Adjustment, M135 Truck, 7 minutes.

TF 9–2692, Manual Shift Control and Throttle Linkage Adjustment, 2½ Ton, M211 Truck, 10 minutes.

TF 9–2699, Automotive Trouble Shooting—Part VIII—Carbon Pile Voltage Regulation, 30 minutes.

TF 10–2698, Packing the T10 Troop Back Parachute, 40 minutes.

TF 10–2728, Petroleum Testing Kit, 15 minutes.

TF 10–2729, Pipeline Pump Station Operations, 12 minutes.

TF 10–2730, Collapsible Petroleum Containers (10,000 gallons), 17 minutes.

TF 10–2731, Gauging and Sampling Petroleum Products, 18 minutes.

TF 11–2696, The AN/TCC–7 System—Part II—Initial Adjustments of Carrier Telephone Terminal, 23 minutes.

TF 11–2697, The AN/TCC–7 System—Part III—Lineup Procedures of Carrier Telephone Terminals, 18 minutes.

TF 11–2714, Pole Line Construction—Part I—Laying out a Pole Line, 19 minutes.

TF 11–2715, Pole Line Construction—Part II—Preparing to Erect the Pole, 19 minutes.

TF 11–2716, Pole Line Construction—Part III—Erecting Poles and Attaching Crossarms, 26 minutes.

TF 11–2717, Pole Line Construction—Part V—Installation of Anchors, 12 minutes.

TF 11–2718, Pole Line Construction—Part VI—Installation of Guys, 20 minutes.

TF 16–2737, Ambition, 7 minutes.

TF 16–2738, Are You Really a Man, 7 minutes.

TF 16–2739, Perserverance, 6 minutes.

TF 17–2587, Armor Team Security, 24 minutes.

TF 20–2596, Soviet and Satellite Employment of Mines, 20 minutes.

TF 20–2597, Soviet and Satellite Employment of Booby Traps, 18 minutes.

TF 30–2562, Resist, 29 minutes.

TF 41–2589, Military Government in an Enemy City—Part I—Initial Entry, 16 minutes.

TF 46–2670, Helicopter Aerodynamics—Rotor Blade Angles, 12 minutes.

TF 55–2721, LCM–8 Refueling at Sea, 17 minutes.

TF 55–2722, DUKW Operations—Part II—Loading and Unloading at Sea from an LST, 13 minutes.

WA–8, Communist Propaganda, 41 minutes.

The following instructional material is suitable for resident as well as non-resident instruction and may be obtained from the Book Department, United States Army Infantry School, Fort Benning, Ga., at the prices shown:

The Battle Group S1, 6401–USAR, two hours. A conference covering the principles of personnel management, the personnel management and administrative organization within the Infantry battle group and division, responsibilities of the S1 and his relationship to the division and battle group staffs. A practical exercise is presented on S1 responsibilities. 50¢.

Command Post Organization and Displacement, 6431–USAR, one hour. A conference covering division of battle group headquarters to facilitate control, composition of command post, coordination by S1 with unit and special staff officers pertaining to command post displacement, selection of exact site, interior arrangement of command post and displacement of command post by echelon. A practical exercise is presented on selection of exact site and interior arrangement of a command post. 45¢.

Personnel Procedures, 6436–USAR, two hours. A conference covering command and staff responsibility for classification and assignment of enlisted men, assignment of officers in the battle group and promotion and reduction of enlisted men. 45¢.

Military Management, 6467–USAR, two hours. A conference which familiarizes the student with command and staff responsibilities for the application of management principles and techniques, functions of the comptroller, the Army Program System and the Army Management Improvement Program. A practical exercise is presented on military management problems. 25¢.

Concept of Intelligence, Weather and Terrain, 6607–USAR, three hours. A conference covering the principles of military intelligence, the value of intelligence in the exercise of command and the concept of combat intelligence. A conference and map-and-terrain exercise covers weather and terrain, the military aspects of terrain and terrain analysis. 40¢.

Collection: Reconnaissance Duties of the S2, 6616–USAR, three hours. A conference and practical exercise covering S2 reconnaissance responsibilities including necessary coordination with other staff officers, operation of observation posts, employment of organic reconnaissance elements, patrol planning and the briefing and debriefing of patrols. $1.00.

Processing Information, 6627–USAR, four hours. An integrated conference and map exercise in the recording and analysis of information concerning weather, terrain and the enemy, and how resultant intelligence forms the continuous intelligence estimate. It includes techniques used in recording information, posting an enemy situation map and keeping an S2 worksheet. Analysis includes effects of weather and terrain. Instruction includes preparation of an intelligence estimate. 95¢.

The S2 at Work: Use of Intelligence, 6629–USAR, eight hours. An integrated conference and map exercise in the production and use of combat intelligence during a battle group defensive operation followed by an attack. Requirements combine collection and processing information and the use of resultant intelligence. Students perform the normal combat duties of a battle group defensive S2, which includes maintaining a situation map, worksheet, collection plan and the preparation of an intelligence estimate. Instruction includes use of intelligence in orders, records and reports. $1.20.

Counterintelligence, 6646–USAR, one hour. A conference covering counterintelligence including the fundamentals of counterintelligence and familiarization with AR 380–5, "Safeguarding Military Information."

Air-Ground Operations, 6954–USAR, two hours. An integrated conference and practical exercise covering Army requirements for air support, the air-ground sys-

tem, target selection and marking, the ground liaison officer and air operation planning. 45¢.

Tactical Psychological Warfare, 6956–USAR, one hour. A conference discussing the role of psychological warfare as a supporting weapon within the Infantry unit, command and staff responsibility in employment of psychological warfare, the media available to Infantry units and defense against enemy propaganda. 10¢.

Training Programs and Schedules, 7187–USAR, six hours. A conference and practical exercise covering training programs, master training schedules, principles of schedules and techniques of preparing a company weekly training schedule. $1.50.

Preparation and Conduct of a Field Exercise, Rifle Platoon in the Attack, 7251B–USAR, six hours. The preparation of field exercises for small units, planning and preparing a field exercise, rifle platoon in the attack. 70¢.

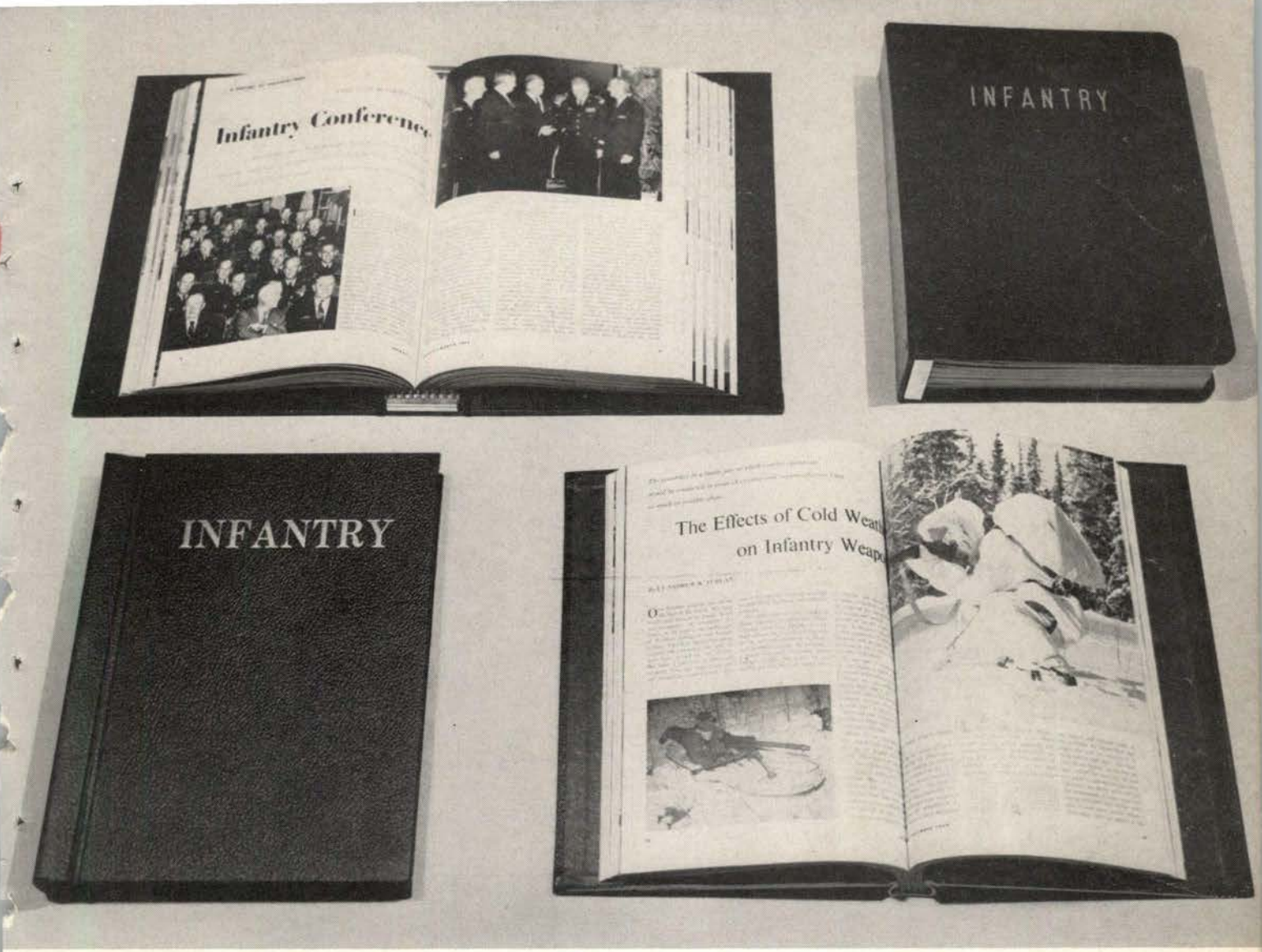
Organization of the Infantry Division, 7305–USAR, two hours. A conference on the principles of organization; detailed instruction relative to the organization, equipment, capabilities and functions of the elements of the Infantry division battle group; general information concerning the organization, equipment and functions of the elements of the Infantry division. Explanation of differences between Infantry, armored Infantry and Airborne units. 35¢.

Logistical Organization, Operations and Systems, 7563–USAR, eight hours. An integrated conference and practical exercise covering the duties and responsibilities of the battle group S4; the organization, functions, employment, capabilities and limitations of the Infantry division battle group supply and maintenance platoon; definitions, characteristics, basis of issue and requisitioning procedure for each of the classes of supply; supply systems of the battle group to include methods of distribution, personnel and transport utilization, characteristics of supply point locations and employment of unit trains. 60¢.

Area Damage Control, 7574–USAR, one hour. A conference covering the organization and measures taken to reestablish administrative support when a condition of mass destruction exists. These measures include fire prevention and protection, bomb disposal, protection against chemical agents, biological warfare and radiological hazards, first aid, ambulance service, control of civilians and traffic regulation and control. 60¢.

Rail Movements, 7647–USAR, four hours. An integrated conference and practical exercise covering the principles and procedures used in moving the Infantry division battle group by rail, to include decision as to order of movement, computation of rail car requirements, loading and lashing of equipment, and duties of key personnel required for the rail movement and train staffs. 40¢.

Logistical Support of Armored Infantry Battalions, 7669–USAR, three hours. An integrated conference and practical exercise which introduces logistical organization within armored units. Emphasis is placed on the duties and responsibilities of commanders, S4s and other logistical personnel in providing necessary logistical support. It covers the systems of supply employed in combat to include battalion and company trains, requisitioning and distributing of all classes of supplies, the evacuation of salvage material and the dead in combat, and the organization, function and employment of medical detachments of armored units. 50¢.



Binders for Your Copies of Infantry

Two handsome binders are now available for *Infantry* magazine. Both covers are sturdily constructed of dark-blue, grained leatherette and are richly stamped with gold lettering.

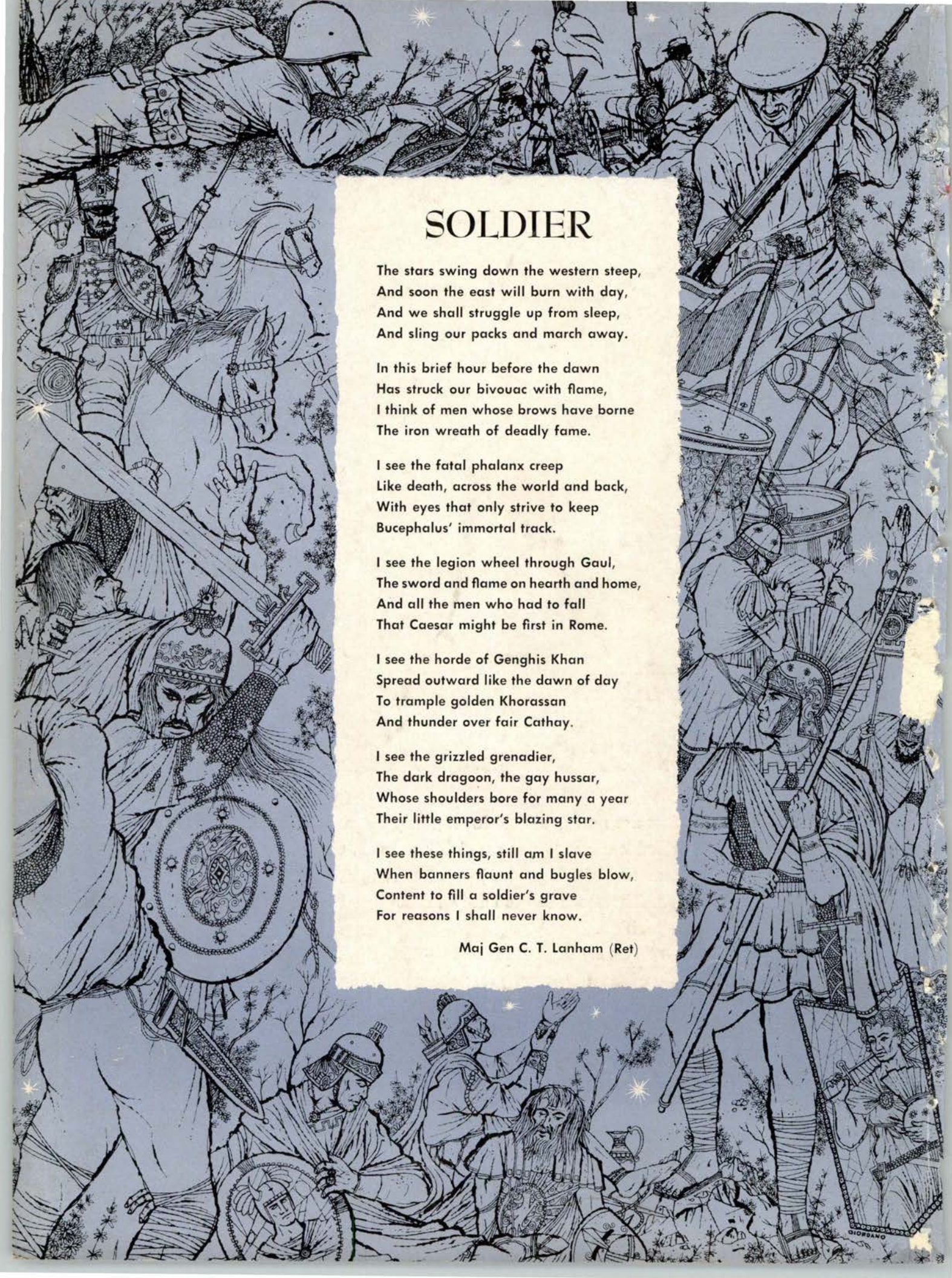
Post-Type Binder (shown at top of illustration) — This compact binder holds eight issues — a full two-year's subscription. The magazine is easily inserted and lies flat for convenient reading. Price $2.50, plus $.35 for mailing.

Grip-Type Binder (shown at bottom of illustration) — The grip-type binder holds four issues — a one-year's subscription. This beautiful cover gives the appearance of a permanently bound book. While it does not lie as flat as the post-type binder, the magazine can be removed for easy reading simply by pressing down on the opened front cover. Price $1.50, plus $.35 for mailing.

Infantry is not a magazine to be hastily read and thrown away. Either of the new binders provides a handy means of protecting your professional journal for ready reference and study.

We will stamp your name in gold on the front cover for an additional $.25. Foreign subscribers (not APO) add an additional $.50 for postage.

Write: The Book Department, United States Army Infantry School, Fort Benning, Ga.



SOLDIER

The stars swing down the western steep,
And soon the east will burn with day,
And we shall struggle up from sleep,
And sling our packs and march away.

In this brief hour before the dawn
Has struck our bivouac with flame,
I think of men whose brows have borne
The iron wreath of deadly fame.

I see the fatal phalanx creep
Like death, across the world and back,
With eyes that only strive to keep
Bucephalus' immortal track.

I see the legion wheel through Gaul,
The sword and flame on hearth and home,
And all the men who had to fall
That Caesar might be first in Rome.

I see the horde of Genghis Khan
Spread outward like the dawn of day
To trample golden Khorassan
And thunder over fair Cathay.

I see the grizzled grenadier,
The dark dragoon, the gay hussar,
Whose shoulders bore for many a year
Their little emperor's blazing star.

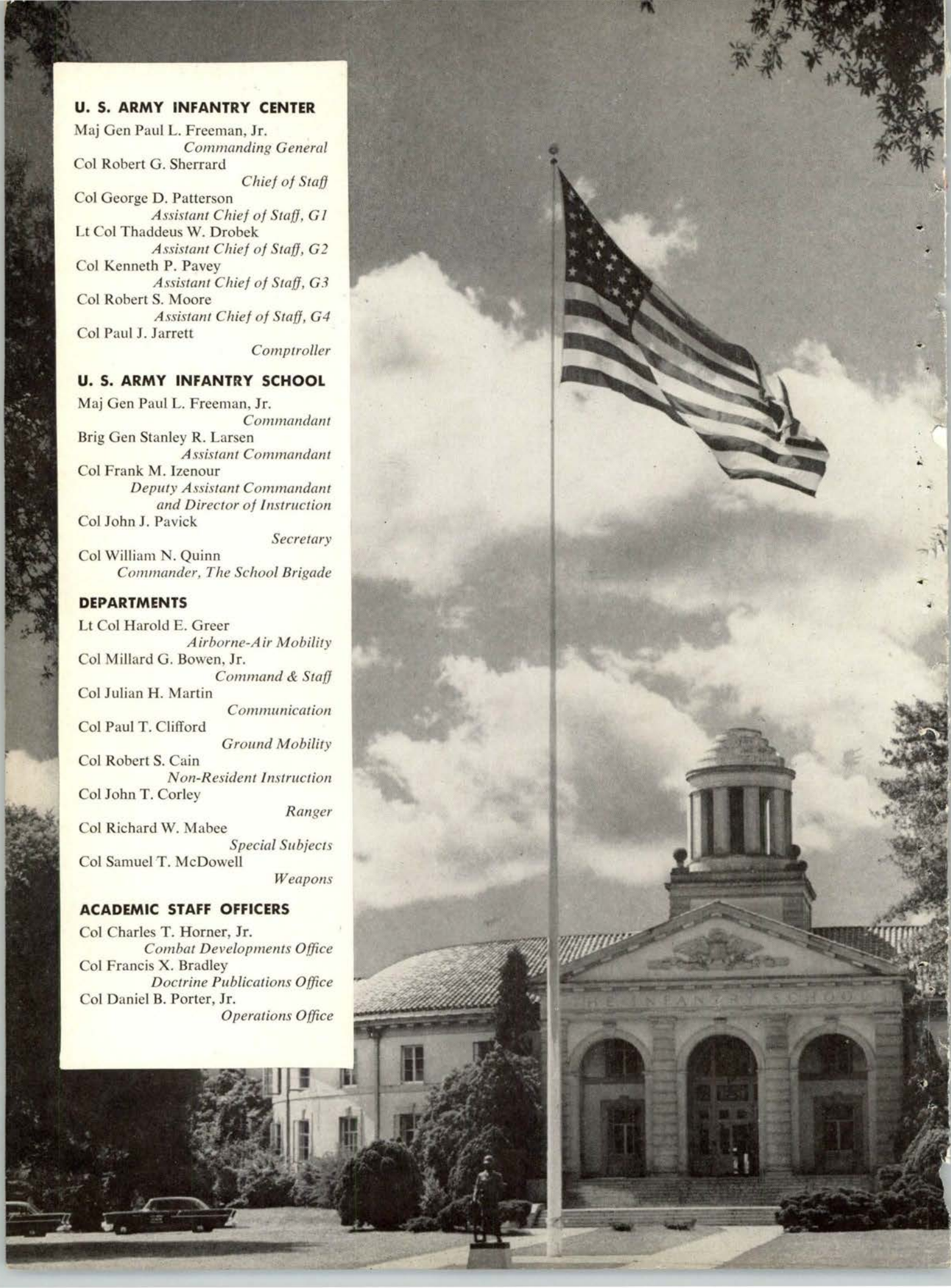
I see these things, still am I slave
When banners flaunt and bugles blow,
Content to fill a soldier's grave
For reasons I shall never know.

Maj Gen C. T. Lanham (Ret)

Infantry

The Professional Journal for Infantrymen

July-Sept 195



U. S. ARMY INFANTRY CENTER

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Commanding General
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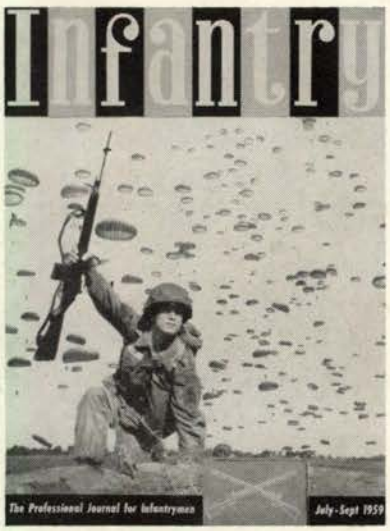
THE COVER

The "straight-leg" Infantryman superimposed on a backdrop of his Airborne brothers is symbolic of the Infantry's continued interest in both ground and air mobility. Today, as always, the doughboy stands ready to employ any and all means of transport to increase his mobility and to enhance his versatility.

The back cover is by Pfc Joseph Giordano.



Infantry

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Dear Infantrymen:

As I assume my duties as Chief of Staff I am aware, not only of the important requirements of the present, but also of the future requirements of our Army and of the security of our Country.

In this era of constantly changing conditions, the future becomes constantly more difficult to predict. Unprecedented technological advances and the intransigency of a militant communist leadership permit less reliance on past experience in determining the essential needs of national security. To avoid incorrect decisions which conceivably could be disastrous, we must rely increasingly on accurate foresight and intrepid thinking.

This is true of our officers and men at all levels of our military structure and particularly of the members of the Infantry.

As Infantrymen, you are an important part of our Army team, and you have a major role—both individually and collectively—in the future of that team. It is vital that your thoughts and decisions stem from the widest possible knowledge of the Infantry and of the Army. Individually, you must keep abreast of organization, weapons and equipment, and tactics—both present and projected. You must be aware of our present capabilities and the extent to which they fall short of our goals. And you must be able to recognize problems, to anticipate changes, and to be prepared for future events before they occur.

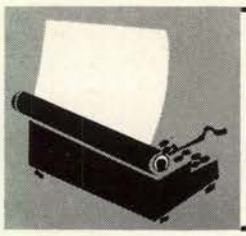
Our success demands a high degree of professionalism that cannot be provided solely by duty assignments and service schools. It requires additional, personal effort on your part. I know of no better way for you to contribute to your own growth than by the regular reading of professional journals such as this official publication of the United States Army Infantry School.

I urge that you fully exploit all means of keeping up with changes, new developments, and trends. The knowledge thus acquired can be an important springboard to progressive thought. Exchange your thinking with others so that you can contribute to our advancement by building upon and extending our best ideas.

Of this we can be certain: An Army that is resistant to change is resistant to effectiveness. I am counting on you to provide a full measure of the bold, forward thinking so necessary to our continued progress.

FROM THE CHIEF OF STAFF

L. L. LEMNITZER
General, United States Army
Chief of Staff



THE EDITOR SAYS

IN the past issues of *Infantry,* many articles have explored the Infanman's requirement for tracked combat vehicles. To a degree, the thinking reflected by these articles was one-sided and a strong case was made for 100 percent mechanization of the Infantry battle group. In addition to these articles, the World-Wide Infantry Conference held last December went on record as favoring a step-by-step progression towards full mechanization.

As a consequence of this heavy emphasis on mechanization, some Infantrymen may be led to believe that the branch is irrevocably committed to a program of mechanization. Nothing could be further from the truth. While Infantry is turning to tracks to gain a degree of battlefield mobility, this step has been taken only because there is nothing better available today.

The Infantry Conference stressed the fact that mechanization is only an interim measure calculated to put us on a par with our potential enemy and to enable the Infantryman to fight more effectively on a nuclear battlefield. The Conference further declared that Infantry will phase into complete battlefield air mobility when industry produces a practical and dependable aerial vehicle with the desired characteristics.

The issue of 100 percent mechanization is by no means closed, nor is the matter of what kind of tracked vehicles best suit Infantry needs. We like to feel that it is never too late to consider new ideas, provided they are good ones. In the interest of promoting constructive and progressive thought, we are presenting two articles: *Infantry's Mobility Crisis,* which starts on the next page, and *Weight—Nemesis of Mobility,* which begins on page 8. Both of these articles depart from the official position of the Infantry School, but nevertheless contain ideas which are worthy of careful study.

Our readers are invited to comment on the problem of mobility so that we can have an exchange of ideas on this subject. Dependent upon length and thought content, comments will be published in Letters to the Editor and the Sounding Board, or as regular articles.

LETTERS TO THE EDITOR

"Tracks for the Infantry"

Sir:

As an old "4.2" company commander in the 9th Marines, the article on the 4.2 and the M56 really impressed me with its tremendous potential ("Tracks for the Infantry, Part II—Mortar Mobility," by Maj Frederick M. McConnell, January-March issue of *Infantry*).

W. M. TATUM, JR.
Capt, United States Marines
Norfolk, Va.

Sir:

I enjoyed reading your article, "Tracks for the Infantry—Mortar Mobility" . . . . Having been assigned to an Armored Division for nearly six years, I know the advantages of mobility in Infantry units.

In our Infantry battalions, our 81mm mortars are carried in the M59 and the 4.2s are mounted in the M84. This vehicle is a sound and well-tested one, but the maintenance problem is one you cannot imagine unless you have been a company commander and have had the responsibility for 17 of these "iron monsters." I am glad a vehicle such as the M56 has been developed to cut down on this maintenance requirement. . . .

JAMES W. BRICKER
Lt, Infantry
3d Armored Division
Germany

As has probably already come to your attention, M56 modification as a platform for the 4.2-inch mortar and other weapons is no longer an active project, primarily because the M56 lacks a "swimming" capability. It is important that carrier development along the lines of the M56 be vigorously carried forward, for the demand for flexibile, trouble-free tracked mobility is certainly pressing.—Editor.

Another Tent

Sir:

We in the 2d Battle Group . . . noted with great interest the article, "A Tent—for the Modern Battlefield?" by Lt Col Gus W. Schlitzkus (April-June 1959 issue of *Infantry*). . . .

The fact that something is being done to provide commanders and staffs some form of shelter is indeed gratifying. Faced with a similar problem . . . we decided some time ago to do something about it, utilizing TOE equipment presently available to the battle group.

. . . . First we tried a GP tent (medium) by locating it adjacent to a van and trailer, but it was too big, too awkward and inflexible. Our second experiment was a kitchen tent . . . . The additional space it provided was adequate, but the problems of awkwardness and inflexibility were still with us.

Then we turned our attention to "old reliable"—the CP tent, M1945. The results were amazing! By experimenting we found that two (or more) CP tents could be joined in tandem, or side by side. . . . We also found the entrance of one tent fit snugly between the van and trailer, and with a litlte salvage canvas, it was practically waterproof.

So now we had our model command post; our van with trailer and two CP 45s provided us with ample room for briefings . . . while operations continued uninterrupted inside the van and trailer. In addition, we had flexibility. . . .

ROLAND M. GLESZER
Col, Infantry
2d BG, 21st Inf
Hawaii

Photo Flub

Sir:

The title-photo on page 31 of the April-June 1959 issue of *Infantry* really hit me. . . . That AR man in the assault line was not utilizing a sling to free both his hands for work other than carrying his AR.

CHARLES J. HUBBARD
Lt, Infantry
1st BG, 21st Inf
Hawaii

The photo was posed, and our photo supervisor slipped up in not requiring proper use of the AR sling.—Editor.

"Hierarchical Arrangements"

Sir:

One basic reason given . . . for the pentomic structure . . . was that control, communication and span of command were such that five battle group commanders could report directly to the division commander.

But now what is the tendency of organizers? They want a battle group com-

Continued on page 67

Infantry's Mobility Crisis

We stand squarely at a Y in the road. One way is marked "permissible speed 35 miles per hour". The other route is labeled "the sky's the limit".

By Col Francis X. Bradley and Maj Sanford H. Winston

ALTHOUGH much of Infantry's preeminent reputation is derived from its accomplishments in World War II, Infantrymen have been aware for some time that the old, proven tools and techniques are not wholly adaptable to a World War III tactical environment. In searching for new ones, Infantry has eagerly modified the philosophy that governed its operations against Germany and Japan. It has condemned as dated and inadequate the doctrine of a continuous line of ground forces with big buildups and surging advances that characterized combat operations in Europe, the Pacific and Korea.

Infantry concurs without reservation that the future battlefield will be wide, deep, porous—and perhaps nuclear. It subscribes to a concept of fluid, decisive, Sunday-punch offensive operations to be executed speedily at points of our own choosing. It visualizes semi-independent actions by smaller yet more powerful organizations. It supports the precept that combat power comes from a blend of firepower and mobility applied in the proper amount at the right time and place. It seeks hardware and doctrines that will maximize its combat power.

In nuclear weapons, Infantry has the granddaddy of all firepower, available at the movement of a press-to-talk switch. These weapons have advanced the doughboy's versatility to the point where he can have all the firepower he needs at his call or even under his own control. Now comparable battlefield mobility is required to complete a picture of combat power that is virtually limitless in potential.

It is precisely in the area of mobility that Infantry faces a crisis. Figuratively speaking, we now stand squarely at a Y in the road. Needless to add, most of our trip thus far has been made on foot. One road ahead of us is marked *permissible speed 35 miles an hour—beware of obstacles*. The other route is labeled *no restrictions on speed—the sky's the limit*. Which road should Infantry take? Does is gamble on the slower road of ground mobility, the faster road of air mobility, or does it try to travel both? If it chooses ground mobility, does it move forever along the slower route? Or do the two roads again come together?

This article does not attempt to recommend a detailed final solution to this dilemma. Rather, its purpose is to present another point of view, a point of view different—at least in part—from the one generally being advanced. It is offered in the hope that it will foster an exchange of ideas and information so that in the long run our course will lead to true battlefield supremacy.

There is a strong feeling within Infantry that a greater number of tracked vehicles—armored personnel carriers, weapons carriers and cargo vehicles — will solve the mobility problem. Many want complete mechanization to provide every Infantry battle group with the capability of moving in tracked vehicles, preferably its own organic vehicles. This group argues that the nuclear battlefield is no place to have to wait for a taxi. It feels that transportation must be constantly available. Some advocates foresee the later development of an Infantry fighting vehicle.

Unquestionably, increased mechanization — whether complete or almost complete, whether organic or non-organic—does offer many advantages. The principal one is that it could, under some conditions, improve Infantry's tactical mobility fairly soon. But is this the right course for the long run? And how high is the

Which Way Do We Go?

100% Mechanization?
100% Air mobility?
A Blend of Both?

toll? Can we pour our talents, efforts, men and money into 100 percent mechanization now, and then switch in five or six years to something that holds greater promise? Aren't our doctrines and organizations likely to take on a trademark that may turn out to be indelible?

In declaring that armored tracked carriers will provide the battlefield mobility Infantry requires, it may be that we have listened too closely to some of Webster's more colorful adjectives—to some phrases like "true cross-country mobility," overpowering shock action," "semi-independent operations" and similar examples of bold euphony. If Infantry gets complete mechanization, or anything approaching it, we will pay a high price. Initial outlay is just the down payment. Total cost must be measured in coin of another kind: in manpower diverted from combat to logistic tasks, in the cost and weight of fuel and heavy support equipment, and most of all in the ceiling we place on our own combat potential.

Just what can we expect in the way of true cross-country mobility from armored carriers? For the record it must be explained that true cross-country mobility is the battle cry of

the "weather clear, track fast" school of thought. This school employs the rosy operational environment to gather supporters. The scene of combat is always presented as gently rolling, sparsely wooded terrain that extends as far as the electronic eye can see. Multiple columns of sleek, tracked vehicles streak toward the horizon under maximum r.p.m. Naturally, the blue sky is cloudless and the sun seldom sets. Mud? Snow? Mountains? Darkness? Steep river banks? Unfordable streams? Jungles? Swamps? City rubble? Blown-down trees? Dense forests? Defiles? Mines? *Go away, boy, you bother me.*

At this juncture it is appropriate to pause and examine the disappointment of one of the charter members of the "weather clear, track fast" school. In his initial campaigns, he scored a wave of combat successes. These were against relatively immobile foes, and were brought about largely by deep armored penetrations along good road nets. Thus entranced, he succumbed to the illusion that true cross-country mobility was attainable with tracked vehicles. He paid dearly for his error.

When Hitler took off to the east in the summer of 1941, the forecast was "weather clear, track fast." As the German herd of iron steeds raced across the Russian steppes, tankers and truck drivers could not help but notice the little *Panje* horses as they struggled off the road to make room for the onrushing columns. The sight of these small,awkward-looking animals pulling heavily loaded carts drew the disdainful words: "a hundred years behind the times."

A few months later the *Panje* horse was judged quite differently. He came into sudden demand during the muddy season when motor vehicles could not operate and mechanized columns stalled because fuel tanks were bone-dry. *Blitzkreig* turned into *sitzkreig* as the logistical effort sputtered and died. Who effected POL resupply? The *Panje* horses. Who moved heavy guns and ammunition into firing positions? The *Panje* horses. Who evacuated the wounded? The *Panje* horses. When the mud gave way to snow, it was the same story.

During the first months of 1942 some panzer divisions had as many as 2000 horses but scarcely a serviceable motor vehicle. How different might have been the lot of the Germans had transport helicopters been available to pick their troops out of the muck and redeploy them in areas where they could fight. Picture the tactical advantages if *both troops and vehicles* could have been airlifted to sectors where reinforcements were sorely needed.

The point of this episode is obvious: let's not get trapped by the same snare. In the future when the Infantryman fights, he cannot afford to divide his time between mobile combat and static combat. If his carrier cannot take him to points of decision whenever such maneuver is required, it is not in itself a solution to the problem of battlefield mobility, whether in limited or unlimited war.

Reflect for a moment on the 17 limited wars that have been waged since 1945. Some of these have been fought in the mountains of Korea, the hills of Greece, the swamps of Malaya, the rocky islands of Matsu and Quemoy, the jungles of Indo-

Our Number-One Problem: Mobility

THE *most important problem which we face in the Infantry today is, by far, the problem of mobility. The way we solve it will determine not only our present effectiveness but our future role as well.*

There are any number of possible solutions to this problem and all of them have ardent supporters. Some Infantrymen feel that we must continue to move primarily on foot, others argue for partial or complete mechanization, still others visualize all Infantrymen sweeping over the battlefield in zero-ground pressure air vehicles.

Here at the Infantry School we have our own ideas about mobility. We presented those ideas to the Infantry Conference last December, and the conferees almost unanimously accepted them. We admitted at the time, however, that we did not have all the answers and felt that if we could accurately define our problem we would be taking a most important step. We knew that by fostering an exchange of ideas and stimulating new thoughts, we would move a long way toward a sound solution.

Recent issues of Infantry *have presented some of the views held here at the Infantry School. An unclassified report of the recommendations of the Infantry Conference was included in the Jan-Mar* Infantry.

In the current issue, other points of view are presented, for it is vital that all views be heard. We feel that we must weigh each against the others, choose the best from all of them, combine and refine them, and then take vigorous action to pursue the course which we believe to be right.

We must solve this problem and solve it soon. We must exchange ideas and build upon each other's thoughts. We must develop new operational concepts which maximize advances in weapons and equipment. We must think intrepidly so that American science and industry will have to scramble to get abreast of our new concepts and tactics.

There are many things about which I have doubts, but not about this: There must continue to be a free exchange of thought on all Infantry subjects, and Infantry *magazine should be used as a forum for this exchange. Of this I am also sure: If Infantry is ever through changing, Infantry is through—period.*

Stanley R. Larsen

STANLEY R. LARSEN
Brigadier General, USA
Assistant Commandant

nesia, and the rice paddies of Indo-China. Would complete mechanization have been an asset or a hindrance in these environments? And how would complete mechanization have affected our strategic mobility? How quickly could we have moved all of these vehicles plus fuel and heavy support equipment to the areas of combat?

We in the Army have argued that limited war is more likely than general or all-out war. Look around the world at the points of tension. Trace the periphery of the communist empire. Examine the most likely areas of conflict. You will find most of these areas unsuitable for large-scale mechanized operations. You will find these areas a long way from our own shores and any increase in mechanization would multiply the problems of strategic lift and logistic support. Interestingly enough, the area most suitable for mechanized operations—the plains of Europe — is the very area in which the Commander-in-Chief has said there would be no limited war. In other words, if we go for 100 percent mechanization, we prepare, in effect, for the war that the Army feels is least likely to occur.

Another case for complete mechanization has been made on the grounds that it will facilitate exploitation of nuclear fires. Of course it will. With its own ground transport, Infantry will be able to exploit the effects of Honest John and other nuclear weapons of similar range. But who will exploit the Corporal, the Redstone and the Pershing? It is apparent that Infantry has a compelling interest in the target areas of corps and army missiles. Do we intend to forfeit our responsibilities to other arms and services? Armor has some talent for long-range exploitation but this capability is restricted by the range and relatively slow speed of its combat vehicles and by ground obstacles. Heavy mechanized vehicles threaten to impose similar tactical penalties on Infantry.

There is argument that mechanization will improve our position vis-a-vis the Soviet Army. They have carriers, we will have them too. But how about our position vis-a-vis domination of the battlefield? *Do you win by matching your enemy where he is strong or by devising a different means to overcome his strength?*

Partial mechanization of Infantry, as in the ROCID division, is an advancement of no small significance. We have had to pay a price, as we do whenever we adopt heavier vehicles, but for the time being the gain in mobility has been worth it. We have purchased increased range, flexibility and mobility. The rub comes, however, when we try to move from partial mechanization to complete mechanization. Then we burden ourselves with additional heavy vehicles that we can use only in certain areas of the world under certain conditions of weather and terrain. Even in these areas we can hope to employ the vehicles profitably only part of the time. At other times they will be standing idle or will be used to move through areas or along roads where lighter, more economical vehicles would serve better.

Complete mechanization sounds like a plausible goal, and it is quite understandable why some of our planners are pleading for an organic vehicle for every Infantry squad. *But is the price worth it?* Why must these vehicles be organic? So that they are immediately responsive to the will of the commander? Why can't they be apportioned as they are needed? No one battle group or company will need them all the time. Hasn't Artillery, for example, done a pretty fair job of responding to the will of the Infantry commander?

Rather than additional tracked vehicles in our Infantry divisions, we should provide additional Army aircraft. Presently available air vehicles can move our soldiers anywhere in the battle area. They can carry nuclear weapons to support them. They can resupply them as required to inject staying power. They can ferry them to other points on the battlefield where combat power must be applied. Finally, they can pull them out when missions have been accomplished. These aircraft are far from perfect, but they will be improved. Meanwhile, they will continue to have signal shortcomings which should not be glossed over. Vulnerability is indeed a matter for concern. They are noisy, sensitive to weather, require considerable maintenance, and are greedily dependent on an uninterrupted flow of fuel, spare parts and logistic effort.

Infantry is on record as stating that its future is in the air—or to be more accurate, just off the ground. Apparently Infantry is waiting for more sophisticated air vehicles to appear before taking the air mobility plunge. It considers complete mechanization as simply an interim means of attuning to the demands of modern warfare. There are many pitfalls to this position. The most serious one is that the more Infantry travels on the ground, the tighter becomes its tie to ground mobility.

Continued on page 64

Col Francis X. Bradley was commissioned in 1937. During the early part of World War II, he was assigned to the Antiaircraft Artillery School. He was graduated from USACGSC in 1944 and then became Assistant G3, Anitiaircraft Command. Colonel Bradley later served in the IE Division, DA, and from 1949 to 1953 he was an Assistant Secretary of the General Staff, receiving during this period an M.A. in international affairs from Columbia University. Before attending the Army War College in 1958, he served in Berlin as a battalion commander and in the Office of the U. S. Commander. He is now Chief of the Infantry School's Doctrine Publications Office.

Maj Sanford H. Winston, who was commissioned in 1942, has graduated from the Infantry School, the Armor School and the USACGSC. During World War II, he commanded a rifle company of the 136th Infantry in the Pacific. Following the war, he prepared a wartime history of the 33d Infantry Division. He later served at Fort Dix, New Jersey, and after a tour as an advisor at the Turkish Infantry School, he went to Germany where he commanded a battalion of the 102nd Infantry. From 1953 to 1956 he was assigned to the G3 Section, USCONARC. He came to USAIS in 1958 after completing a tour with MAAG, Vietnam, and is now in the Doctrine Publications Office.

WEIGHT

Nemesis of Mobility

"JUST AS THE ARMOR PLATE OF THE TANK NO LONGER JUSTIFIES ITS WEIGHT, ITS LIMITED DEGREE OF MOBILITY NO LONGER JUSTIFIES ITS FUEL CONSUMPTION."

By Capt Harold J. Meyer

GEN NATHAN F. Twining, Chairman of the Joint Chiefs of Staff, speaking at the last annual meeting of the Association of the United States Army, described the Army's role.

". . . the Army," he said, "should be a compact, mobile, hard-hitting outfit with a minimum of supporting impedimenta. The majority of combat equipment should be capable of movement by air or fast ship. In the past we have paid a lot of attention to protective measures such as heavy armor on tanks and other vehicles. The resulting weight has created mobility and engine-efficiency problems. I believe the emphasis should be on firepower and speed. Let the protection come through those characteristics."

Since they have immediate bearing upon organization and equipment, the concepts General Twining has outlined are of great significance to all ground forces. Though our firepower has undergone a vast increase since World War II, speed and mobility are areas in which—despite the somewhat limited improvements already made—more substantial progress must be achieved if we are going to develop the fighting forces required for our national security.

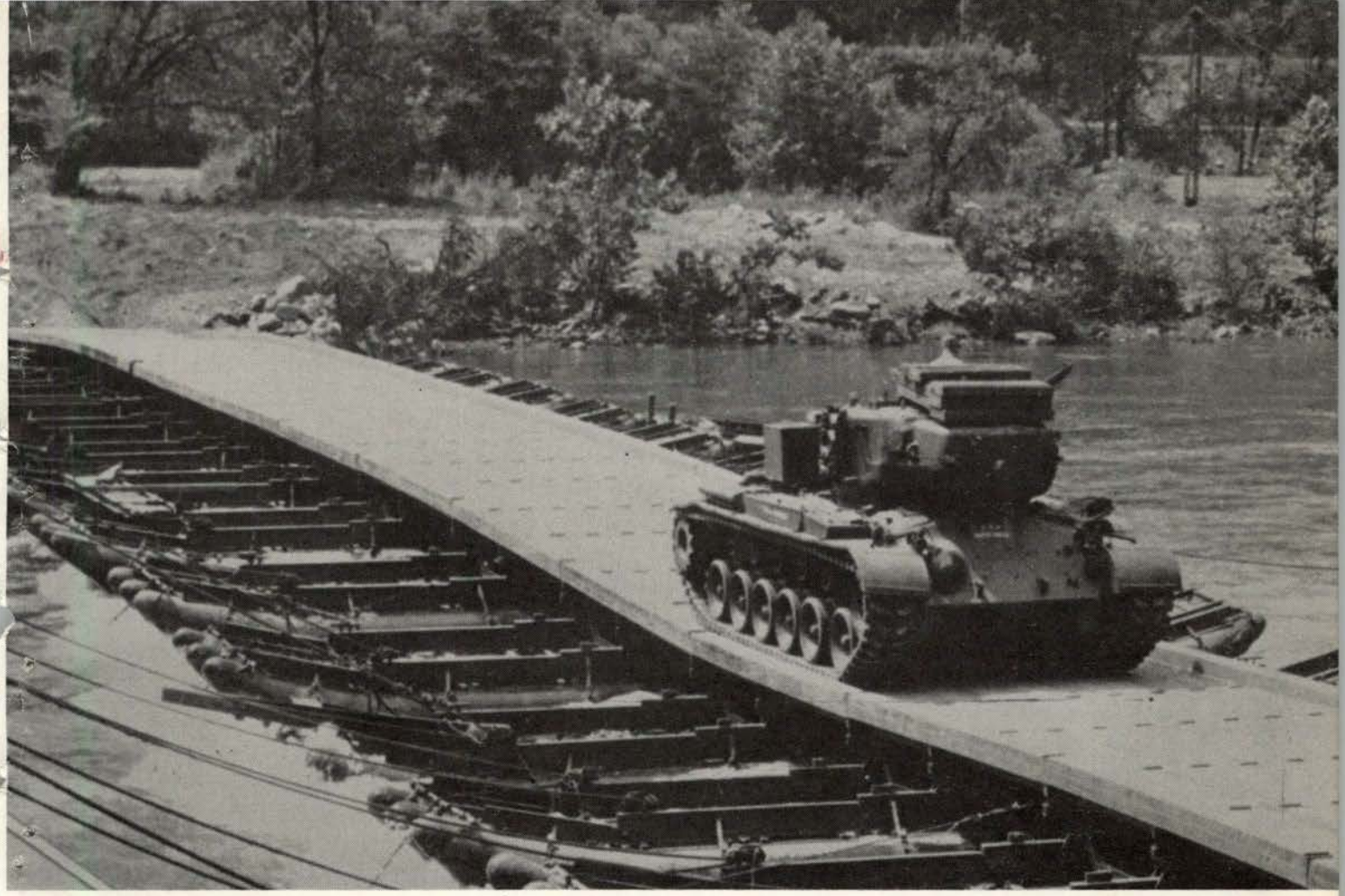
Obviously, greater mobility demands less weight, and the problem of weight versus mobility gives rise to many questions. Can we, for instance, continue to include relatively immobile heavy weapons and equipment in the combat division? Does reliance upon a World War II type of mobility mean that we have failed to create a flexibility and responsiveness equal to the nuclear and improved non-nuclear firepower now in our hands?

The future small-unit commander is probably going to have low-yield nuclear weapons immediately available for tactical use. Visually guided or homing rockets—carrying either nuclear or other extremely efficient warheads—will replace conventional artillery systems. Firepower will be greatly increased, and it will be effective over far greater ranges. To a large degree, the commander may depend upon this firepower to compensate for the increased width and depth of his tactical dispositions.

Every combat commander will be faced, therefore, with the problem of exploiting this increased firepower. It will be available not only to us, but to our enemies, and victory may be determined by our ability to use our new weapons effectively, and to develop concepts which will permit this. Exploitation, then, becomes one of the commanding requirements of future warfare, and exploitation depends upon advanced mobility.

In effect, weapons of increased power demand an increased mobility to balance that power. To employ these more powerful weapons—and to avoid the destructiveness of similar weapons in the hands of the enemy—our combat forces must be capable of swift and responsive action.

On the other hand, of course, nuclear capabilities must not exclude capabilities for "conventional" war, and vice versa. This dual capability requires a careful coordination between mobility and firepower. Yet it seems clear that, as far as mobility is concerned, the problem is one-sided. It is entirely possible to have too little mobility. It is not possible to have too much.



The type of mobility we now need, in fact, approaches absolute mobility. Never before—certainly not during World War II—have we had it. We must have it now, even at the expense of eliminating items of equipment which merely provide comfort or convenience, or which are limited in their applications. Every piece of equipment must be examined in the light of its contribution to tactical success through mobility.

There are many varieties of equipment which ought to be appraised in this manner. The vehicular category, however, is perhaps the most important, simply because of the weight it involves. Heavy supporting equipment falls in this class—dozers and graders, for instance, and tractors and trailers. Also in this class is the tank.

In many ways the tank is representative of the organizational items whose inclusion in the combat division must now be questioned. It is heavy, it is cumbersome, it requires complex echelons of logistical support and it actually has only a limited mobility.

Mobility was the hallmark of the tank. World War II demonstrated that tank mobility, coupled with imaginative tactics and dynamic leadership, could produce victories—on the World War II battlefield. Tank mobility, measured in speeds of 15 miles per hour on hard surfaces and other favorable terrain, did a creditable job.

But the tank is only "relatively mobile." This is the same as saying it is "relatively immobile." Such limited mobility cannot be tolerated on the contemporary battlefield. It is no longer enough.

Too often we speak of a "high degree of cross-country mobility." We must, instead, learn to speak of mobility in unqualified terms. The division's mobility must not falter at the river bank or the edge of the desert. Arctic ice or the mountains of Tibet should not seriously impair it. Swamp and snow alike must be traversed with whatever speed tactics require.

Besides defeating terrain, that advanced mobility must also defeat distance. If we fail to develop vehicles which are totally independent of cargo

---

Capt Harold J. Meyer, author of "The Infantry Needs Mobility — Not Armor," enlisted into the Army in 1943 and graduated from OCS in 1945. He served in Europe until 1946, when he left active duty. In 1948 he returned to the active Army. He has served as Assistant PMST at Kent University and is a graduate of the USAIS Advanced Course. He is now Publications Officer with the School's Weapons Department.

These heavy vehicles available to a direct-support engineer company are considered the minimum necessary to keep a mechanized, tank-supported battle group moving.

This heavily armored combat engineer vehicle (CEV), three of which are in the Infantry division, is considered a must for clearing obstacles and "bunker-busting" while under fire. Weight: over 54 tons. Fuel consumption: over two gallons per mile on good roads.

Three of these 23-ton trucks carry the Infantry division's 114 feet of fixed bridge. A floating bridge company with 730 feet of class 60 bridge (see photo preceding page) requires 60 of these trucks and 2525 gallons of fuel to move 100 miles.

aircraft for long-distance movement, then they must at least be air-droppable or air-landable in a hundred square feet of most types of terrain. In addition, they must place no measurable strain upon the division's logistical organization.

Such advanced mobility would have far-reaching effects. When achieved, we actually would gain effective fighting strength with no over-all increase in manpower.

But this kind of mobility is incompatible with excessive *armor plate,* other sources of *weight* and the *logistical dependence* which weight necessitates.

One of the principal reasons for the dominance of the tank during World War II was its ability to withstand the shock of counterweapons available at that time. The tank could not be penetrated consistently, especially when it was employed in large numbers under a protective umbrella of air support. It achieved and maintained a mobility that was, by the standards of the time, quite significant.

Actually, the tank's capacity to accept hits was, even then, imperfect. Most weapons used against it in World War II—including light weapons—almost invariably caused mechanical difficulties of one sort or another which sometimes seriously impaired the fighting efficiency of the crew.

This fault, however, matched the limitations of the firepower directed against the tank. Antitank weapons were only as mobile as, and often less mobile than, the tank itself. By present standards, their capacity for tank destruction, even when they were on target, was not great.

Since the tank was designed to *accept* hits, as more powerful antitank weapons were developed, the natural response was to pile on more armor plate. Yet, in time, anti-armor weapons were developed which met each successive challenge—such weapons as mines, grenades, rockets, recoilless weapons and missiles; the shaped charge, the proximity fuze, the hom-

FIGHTING VEHICLES OF EXCESSIVE WEIGHT SPAWN A HOST OF EQUALLY HEAVY SUPPORTING VEHICLES AND EQUIPMENT WHICH IN TURN REQUIRE HEAVY LOGISTICAL SUPPORT.

ing or visual-guidance mechanism, the nuclear warhead. Today, anti-tank weaponry can destroy the heaviest armor. There remain no mountains of steel to conquer, for all armor plate can be efficiently defeated.

The fact that armor plate is no longer impregnable leads us to the problem of weight. Every increase in tank armor has meant a relative decrease in mobility. Weight is the nemesis of mobility, and if the division is to be agile and responsive, it cannot tolerate excessive weight. That weight was once a good bargain, since it purchased protection. Now that that protection is at best limited, weight has become a very bad bargain indeed.

Tank mobility is not only unsuitable for these reasons, but because it is logistically centered. The supply-base dependence of the tank is perhaps best evidenced by the experience of the Third U.S. Army in the campaign east of the Seine during World War II. The mobility of this, the most mobile of the World War II armies, was seriously curbed when its gasoline supply was restricted to two thousand tons per day. This, Gen Omar N. Bradley points out, "was barely enough to sustain it in an almost totally uncontested advance." Obviously, tanks accounted for only a part of the gasoline demand. The fact remains, however, that the logistical effort required to maintain a single tank in battle is enormous. Gen Bruce C. Clarke has stated that for each mile of an armored division's movement, fifteen hundred gallons of fuel are required.

Whatever improved mobility we achieve in the near future will, of course, be based on the fuel to power

Even the crane used to erect a class 60 bridge is a behemoth. The 36-ton equipment-set eats two gallons of fuel per mile.

Then there are the small gaps to span. This job calls for a specialized and heavy (62 tons) vehicle which drinks gas like a tank.

And when the tank finally gives out this 37-ton tractor-trailer is needed to haul it in for repairs. The Infantry division is weighted down with two of these vehicles.

this mobility. The point is that, just as the armor plate of the tank no longer justifies its weight, its degree of moiblity no longer justifies its fuel consumption. And the tank, in addition, requires a large logistical effort of other kinds, for maintenance, repair, supply, and movement over barriers and obstacles.

It is clear that no combat unit is absolutely mobile when it is shackled to a supply base. What we need is a mobile self-sufficiency, independent of a constant supply of vast quantities of POL products, or upon complex echelons of support. We need a mobility which is more efficient than tank mobility—which will get us where we want to go more quickly and dependably, and more economically as far as fuel and supply are concerned.

Advanced mobility can give us a considerable advantage on both the nuclear and non-nuclear battlefield. We can achieve this mobility only if we deliberately and actively seek it—that is, if we destroy the lag between our firepower and our mobility.

More than a decade ago Dr. Vannevar Bush predicted, in view of mobile firepower developments, that the tank would no longer occupy the position of prominence it gained during World War II. The tank was developed to combine the limited firepower then available with the limited mobility which was practicable at that time. Though its lethal effectiveness was limited to hits or near misses, in its day the tank had a formidable effect.

Already the same kind of firepower has, in the interest of advanced mobility, been more effectively exploited in the 90mm gun, M56 "Scorpion." In the M56, the 90mm gun has been divested of armor plate. Its protection comes from its firepower and from mobility. Here is an example of the union of World War II firepower with improved mobility.

The firepower of the 90mm gun, of course, is small compared to some of the other tactical weapons available today. The "Scorpion" is only one small step in the right direction. The next step, obviously, is to combine improved firepower with improved mobility. Both steps leave the tank and tank-like equipment far behind.

It is not to be argued here that on the modern battlefield modern rocket and missile firepower requires a specific means of mobility. Such mobility may come from light tracked vehicles, aircraft, zero ground-pressure vehicles, air-ducted cars, or other vehicles not yet visualized.

Also, it is not my point that the tank is "obsolete." Tank units should be readily available at corps or field army level for use under suitable conditions in both nuclear and non-nuclear combat.

I want only to emphasize that weight is the nemesis of mobility. At division and battle group level we need an advanced mobility which is incompatible with the weight and bulk of heavy weapons and equipment like the tank and its supporting impedimenta.

We have made great strides in firepower. But, as General Twining says, "When I speak of mobility, I am thinking of both rapid movement and fast reaction. . . . Firepower is not much good unless it can be applied quickly and flexibly."

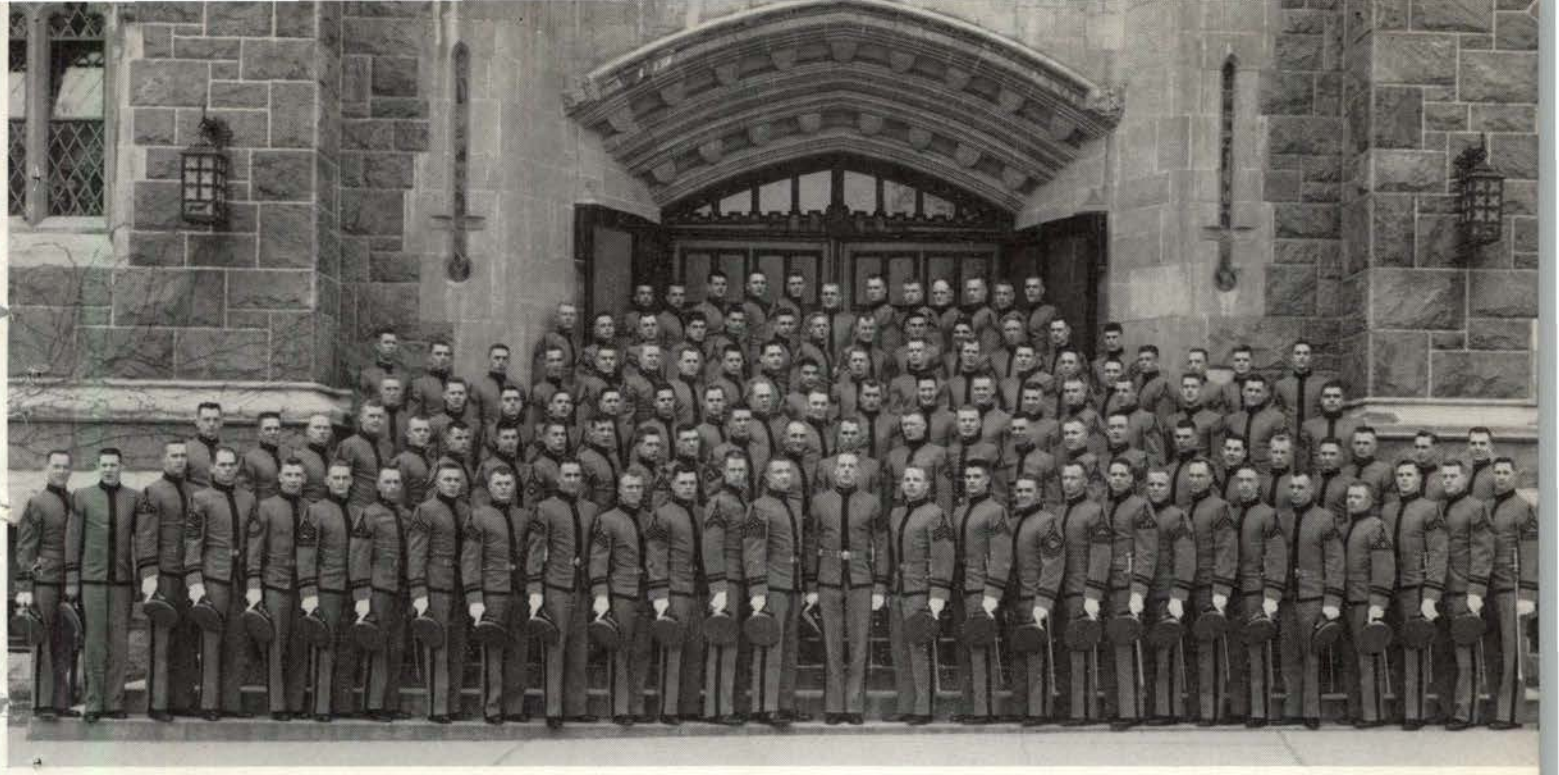
Worth Repeating

"New conditions require . . . new and imaginative methods. Wars are never won in the past." — *MacArthur*

"The same Infantry mounted in armored carriers and teamed with tanks for mobile operations must also be ready to move in aerial vehicles about the battlefield." — *General Maxwell D. Taylor*

"Considering that petroleum products have represented as much as 50 to 75 percent of military supply tonnage in World War II and Korea it is evident that as vehicles are equipped with more powerful motors, as more aircraft and more self-propelled equipment come into use, this aspect of supply will become increasingly important." — *Maj Gen A. T. McNamara*

I am one of those who feel that much remains to be done to lighten our equipment. We talk a lot about it but, in many cases, it seems that much of our equipment like our automobiles is becoming large and more ponderous in our efforts to include every feature known to man. — *General Lyman L. Lemnitzer*



First row, left to right: P. L. Stromberg, G. E. Roesler, C. E. Lytle, R. McDonald, G. H. Dyer, P. J. Elias, T. K. Seybold, T. G. Bolick, D. Markham, H. C. Lymn, J. C. Smith Jr., I. D. Gerhardt, R. R. Moore, R. A. Turner, P. M. Dawkins, R. W. Riordan, J. F. Orndorff, W. Gailey, F. D. Anderson, F. E. Herrera, H. H. Covington, G. F. Harrison, J. F. Milton, J. F. Campbell, A. V. Goodpasture, H. McCracken, T. D. Roberts, R. Q. Gaines, R. F. Bowers. *Second row:* B. D. Faber, M. J. Fletcher, T. H. Fletcher, L. E. Sullenberger, L. V. Hightower, G. P. McLaughlin, S. L. Steinberg, C. L. Boyle, B. Dishman, A. B. Phillips, W. B. Guild, G. E. Day, F. G. Gercz, D. T. LeClere, A. K. Kuschner, P. N. Sper, J. E. Bryer, H. B. Dorshow, W. T. Brown Jr., F. S. Besson III, W. J. Mullen, J. P. Johnson III, J. F. Enright, D. Luedtke, J. E. Williams, W. H. Bechthold. *Third row:* A. Bair, R. M. Novogratz, L. E. Burchell, D. T. Monroe, F. H. Chandler, W. E. Clarke, J. C. Franz, D. M. Duggan, J. S. Dick, J. W. Wheeler, H. T. O'Conner, T. H. White, R. S. Frey, D. L. Roush, S. H. Cummings, D. D. Ingram, W. B. Tully Jr., R. M.Barry. *Fourth row:* T. Boyd III, P. K. Keogh, M. A. Gabel, W. L. Schwartz, M. E. McCahan, R. E. Losey Jr., P. A. Chalmers, J. N. Melroy, D. J. Morrissey, C. E. Getz, M. Z. Santos, P. E. Gibbs, W. F. Train, R. R. Ramsey, D. M. Ludlam, N. H. Rosner, C. E. Lynch, G. Parolini, K. S. Kapp, W. M. Schepps. *Fifth row:* R. T. Boyle, A. C. Houltry, H. Walters, L. Katsavsky, R. Shapiro, R. B. McPeek, J. R. Cox, R. T. Harle, S. H. Yateman, W. R. Lehrfeld, H. J. Stiles, D. H. Fuller, C. H. Groth Jr. *Sixth row:* R. M. Conway, F. J. Redding, T. V. Borlund, M. F. Graven, G. Kadlec, J. E. Weisler, R. G. Shain, S. K. Werbel, M. H. Mamnussen, M. G. Hilliard, G. N. Dorland, C. A. Fannin. *Absent:* D. L. Baker, H. H. Boggs II, E. H. Burba, L. Caruso III, D. E. Fried, M. Isacco, R. B. Johnson, S. Klein, F. V. Malek, T. McInerney, R. J. Meyer, E. A. Netzloff, J. J. O'Brien, J. R. Paschall, J. F. Ray, D. H. Rogers, R. C. Schmidt.

Welcome to the Infantry

We are proud to welcome into our ranks the newly commissioned Regular Army lieutenants from the United States Military Academy's Class of 1959 who have selected Infantry Branch as their career choice. All Infantrymen extend greetings to them, and to the Distinguished Military Graduates of other colleges who now wear crossed rifles.

In selecting Infantry, these young men have made an intelligent choice—they have accepted the challenge of leading the world's finest soldiers. We have every confidence that they bring with them the courage and resourcefulness that have always typified the American Infantry leader.

Nearly all of these young Infantry leaders elected to take both Ranger and Airborne training, though only one of these courses is required. Their voluntary acceptance of a "double dose" of rugged training is in itself evidence of an exceptional interest in their new profession, and, moreover, of the kind of aggressiveness and conviction which the Infantry role requires. It is an important assurance of future Infantry strength.

Among these Infantrymen are many distinguished names, already known in the fellowship of Infantry service. We are pleased that old traditions are being renewed, and we anticipate the creation of many new ones, equally notable.

We are proud of each of these young men. We know that they will find in Infantry an opportunity for singular personal satisfaction.

The Infantry Battle Group – in the Offense

By Maj E. B. Moore, Jr. and Lt Col Edwin C. Gibson

THE FUTURE battlefield is visualized as an area without the lines of entrenchments we have known in the past. There will be no masses of men waiting in reserve, no roads jammed with trucks moving to the front. In fact, there will be no front —only a battle area. Within this battle area, small mobile units will be deployed with intervals and depths measured in miles rather than yards.

As the first step in meeting our requirements for this type of battlefield, the pentomic Infantry division—one of the most dramatic and significant changes in the long evolution of the Army—was adopted.

After two years of field test and evaluation, Department of the Army recently announced a number of changes in the organization and equipment of this division.[1] While these changes do not materially affect doctrine for the employment of the battle group, they do give it a greater combat capability. An analysis of the revised organization (Figure 1) shows considerable improvement in areas which are essential to effective military operations—firepower, surveillance and control.

The fifth rifle company and the new combat support company enhance the battle group's flexibility and increase its ability to strike the necessary balance between dispersion and concentration. While the battle group commander's span of control is increased, compensation is provided by the addition of a deputy battle group commander. Experience with a deputy battle group commander in the Airborne division has shown that this individual will be invaluable to the commander in coping with the problem of control on a porous battlefield. The deputy commander will be prepared at all times to assume command of the battle group in an emergency or to control any of its elements as directed by the battle group commander. In the attack, he will locate himself so that he can establish an alternate command post. To ensure that he will

[1] See "ROCID Changes." April-June 1959 issue of *Infantry*.

IMPROVED FIREPOWER, SURVEILLANCE AND CONTROL IN THE REVAMPED BATTLE GROUP GIVE ITS OFFENSIVE TACTICS A NEW LOOK.

have personnel familiar with the situation, certain assistants to members of the battle group staff may accompany him. Other necessary personnel and equipment may be provided by elements of the combat support company headquarters or headquarters company.

Before proceeding to a discussion of offensive tactics, we should consider, briefly, concepts for the employment of the new units. Such concepts may be typical of offensive action on the modern battlefield.

In the new organization, the heavy mortar battery has been replaced by an Infantry unit, the *heavy mortar platoon.* In the attack, this platoon is employed in general support whenever possible to provide the flexibility which can be gained through centralized control of fires. Usually the platoon is positioned so it can support the main attack. If separation of the rifle companies makes centralized control impracticable, the platoon or its sections may be placed in direct support of, or attached to, the attacking companies. The fires of the heavy mortar platoon are integrated with those of the direct-support artillery battalion, and the platoon fire direction center is tied in with the FDC of the direct-support artillery. The heavy mortar platoon accepts missions from the fire direction center of the direct-support artillery battalion in order to integrate the fires of both units more effectively.

The new *assault weapon platoon* (consisting of five squads armed with the SS10 missile) is employed in a variety of ways. These weapons are the principal means of antitank defense for the battle group and there is no hard and fast rule for their employment in the attack. The battle group commander may employ the entire platoon or elements of it in general support or he may attach it by squads to attacking units. Usually, the platoon is employed to provide antitank protection for units which have no attached tanks. One or more squads may be attached to units which have a flank protection mission. In some situations it may be desirable to attach assault weapon squads to one or more of the attacking companies. This is particularly desirable if the enemy is strong in armor or if insufficient tanks have been provided.

In the attack, the new *radar section* is usually employed in general support. However, under conditions of poor visibility, short-range radar teams may be attached to the attacking companies. It also may be desirable to attach short-range radar teams to units which are responsible for screening the flanks. The medium-range teams are retained in general support and employed well forward as required by the situation. The greater range of the medium-range radar enables it to be used during daylight (terrain permitting) as a supplement to visual ground surveillance. Radar teams may be used as a means of vectoring attacking elements during periods of darkness or poor visibility. They may be used to conduct surveillance of critical areas or avenues of approach into the zone of action of the battle group. Radars should be kept as far forward as the tactical situation and terrain will permit.

We should also review basic concepts for several other elements which are organic to or which support the battle group.

The *reconnaissance platoon* performs reconnaissance and provides security for the battle group. In the attack, it usually screens the more dangerous flank while the other flank is screened by elements of a reserve company. Normally, the platoon does not precede the advance when it is expected that a strong enemy defense will be encountered.

The *engineer platoon* is usually retained in general support and employed to assist the advance of the attacking elements. When additional

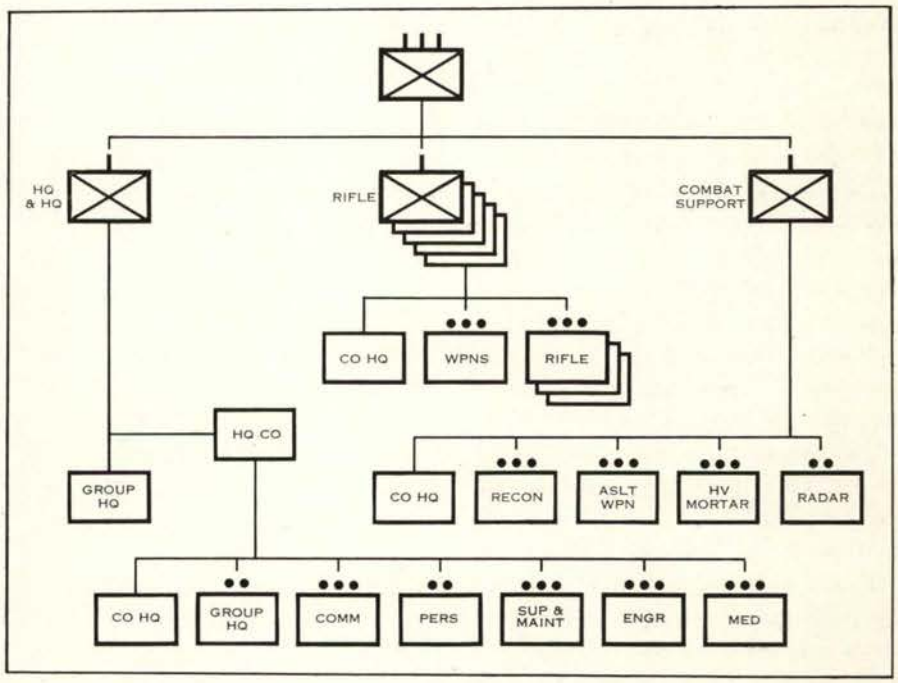


Figure 1. The organization of the Infantry battle group. A fifth rifle company has been added and the former mortar battery has been replaced by the combat support company.

engineer support is provided, as it normally will be, the battle group engineer platoon is directed to accept missions from the supporting engineer unit. This is done to facilitate control and coordination of engineer effort.

When tanks are attached to the battle group, the commander integrates them into his organization in such a manner as to capitalize on the firepower, mobility, shock-action and control facilities of the armor unit. By cross-attaching tank platoons and Infantry platoons, the commander takes maximum advantage of the tank company headquarters with its excellent control and command capabilities. He thus creates an additional maneuver element which gives greater flexibility and strength to his command. In fluid operations over open terrain of good trafficability, tank-heavy teams often lead. In close terrain or against strong enemy antitank obstacles and weapons, Infantry-heavy teams normally lead. The tank-heavy units are committed when the terrain and enemy situation permit their effective use.

Normally, a divisional field artillery battalion is employed in direct support of a committed battle group. This direct-support battalion obtains additional artillery fires from higher and adjacent units, when such fires are required, and if they are available. The artillery battalion commander is the battle group fire-support coordinator.

Now, let's take a look at some of the tactical concepts for the operations of the battle group in the offense. We shall be concerned with both nuclear and non-nuclear combat. While less dispersion may be required in some non-nuclear situations, the decrease will be small, due to the threat of enemy nuclear employment.

The effective employment of any unit depends upon a proper consideration of the mission, enemy, terrain and weather, and the troops and supporting fires available. However, these factors will not be analyzed here, since it is not feasible in a short discussion of this type to cover all

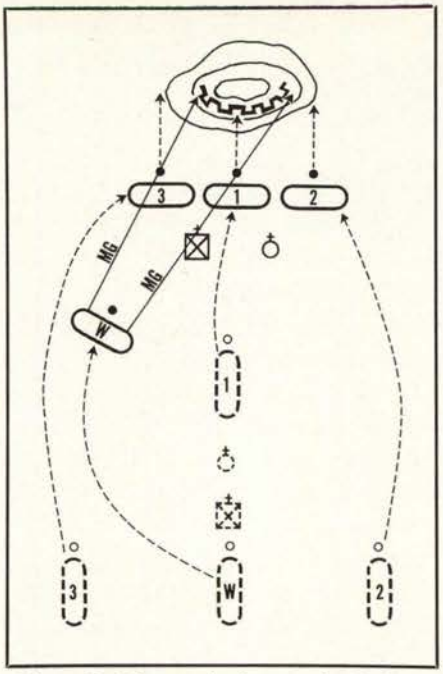


Figure 2. Platoon in the attack—before.

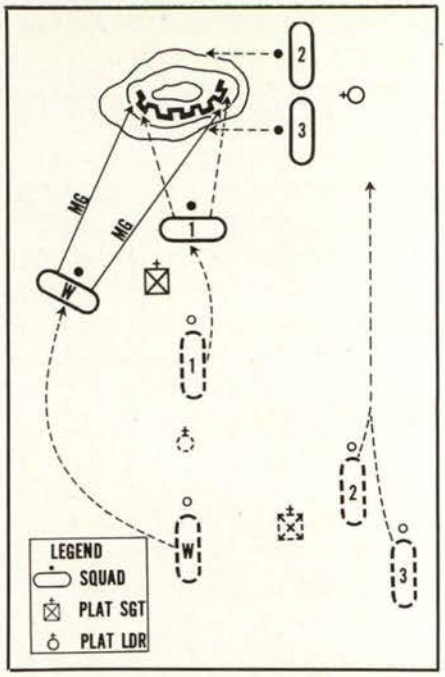


Figure 3. Platoon in the attack—now.

of the possible combinations of factors. In order to present basic doctrine we shall assume that optimum conditions prevail. But keep in mind that the doctrine discussed here cannot be applied as a template on any piece of terrain. Terrain and other factors will modify the application of this doctrine. Each situation must, of course, be analyzed individually.

The concepts presented are based on the weapons, ammunition, and communication and surveillance equipment organic to the new battle group. In addition to these items, the battle group usually can expect to receive other required fire support, mobility means and armor from higher echelons. When such attachments are made, logistical support from the higher echelons must be increased accordingly. For example, when tanks or armored personnel carriers are attached, a proportional share of the logistical support elements from the division trains must be provided.

A discussion of offensive operations logically begins with the rifle platoon, since it is considered the smallest unit which can be effectively employed in offensive action. It is the smallest unit with internal communication for adequate control, and the smallest unit capable of developing a base of fire and a maneuver element. With the addition of greater firepower and intra-platoon communication, the squad has a stronger offensive capability than heretofore. More dispersed formations within the platoon may therefore be possible, since it will not be necessary to mass to the degree formerly required in order to deliver a heavy volume of fire in a specified area.

The rifle platoon normally attacks as part of the company and uses all organic, attached and supporting weapons to neutralize the enemy. In many situations, the platoon will continue to assault from one direction with three rifle squads (Figure 2). With its improved capability for control, however, the platoon is now able to strike the enemy's flanks and rear with greater facility than ever before (Figure 3).

The platoon develops maximum combat power with its organic means on frontages of 460 meters or less. The communication equipment organic to the platoon provides for communication at ranges up to one mile. The weapons organic to the platoon are effective at ranges up to 500 meters. Since it is estimated that a

platoon can sustain itself for approximately 30 minutes without being subject to defeat, mechanized platoons may be separated at distances of 2250 meters and retain a satisfactory reinforcing capability. Platoons so separated are still within range of the organic company mortars, provided the mortars are located near the center of the company zone.

Accepting separation of platoons at distances of 2250 meters, the mechanized company is capable of attacking on frontages of up to 7500 meters (Figure 4). The limiting factor is the range of the 81mm mortar. Communication equipment in the company radio net provides for control at distances of from three to five miles. The portion of the zone actually used will depend upon the mission, the enemy, terrain and combat power available. When adequate combat power in the form of fire support is available from higher echelons, emphasis is placed upon seeking, locating and determining suitable targets by the attacking forces. In situations where such fire support is not available, concentration of elements of the company may become necessary in order to accomplish the mission. The same may be true when attacking in close terrain or when clearance of the zone is required. The disposition of attacking elements over these frontages gives excellent capabilities for the development of nuclear targets. At the same time, dispersion is adequate to reduce the company's vulnerability to enemy nuclear weapons of nominal and subkiloton yields. Yet, the company is not so widely separated that it is unable to concentrate when required.

With the companies so disposed, the battle group, under optimum conditions, can reasonably be expected to conduct offensive operations on frontages up to the range of weapons under its control—15,000 meters. Figure 5 shows the battle group attacking on such a frontage in two columns. It is anticipated that the leading company in each column will be disposed essentially as shown in Figure 4, utilizing multiple routes to gain maximum flexibility.

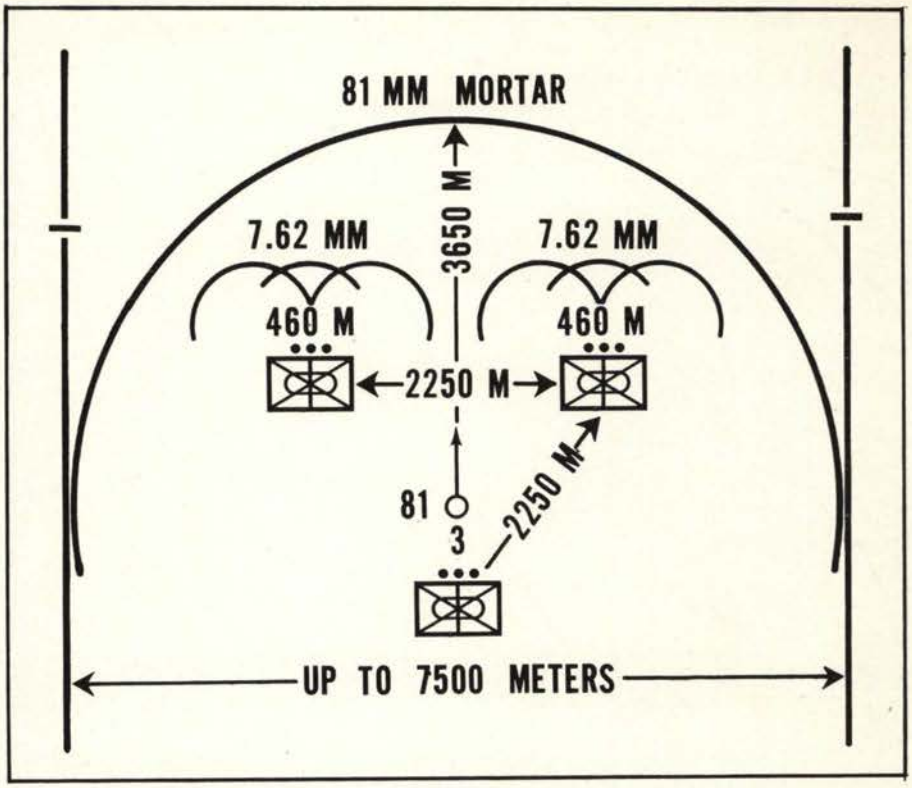


Figure 4. Guide frontages for a mechanized company in the attack.

The heavy mortar platoon, in general support, marches well forward in the formation because of its limited range, and the direct-support artillery battalion also moves well forward to provide maximum fire support for the leading elements. The 105mm howitzer battery is placed in the column making the secondary attack, while the battalion (–) marches in the main attack column. Initially, the artillery is in march order and the necessary fire support is furnished by general-support artillery which is in position and within range. Once enemy resistance has been uncovered which requires the employment of artillery with the battle group, elements of the direct-support artillery battalion will be positioned to furnish the required support. Then, to provide for continuous fire support, elements of the fire-support units will displace by echelon so that some supporting weapons are in position and ready to fire at all times. By this disposition, non-nuclear fires are provided for all elements of the battle group. In addition, the companies are mutually supporting with 81mm mortars. Surveillance, provided by both surface and aerial means, ensures security of the advancing elements by screening the flanks and the area between the columns. The force in each column is sufficient to sustain itself for limited periods. In short, this formation provides maximum flexibility, low nuclear vulnerability and excellent capabilities for the development of targets.

In establishing control over his attacking elements, the commander utilizes only those measures which are required to ensure that the operation proceeds in accordance with his plan. The size of the objective assigned to a particular unit depends upon the unit's ability to control the objective once it has been seized. The depth of zones of action depends upon the unit's ability to secure itself and keep lines of communication open. If aerial lines of communication are utilized, then the depth is limited only by the requirement to remain within reinforcing distance. This will vary at each echelon ac-

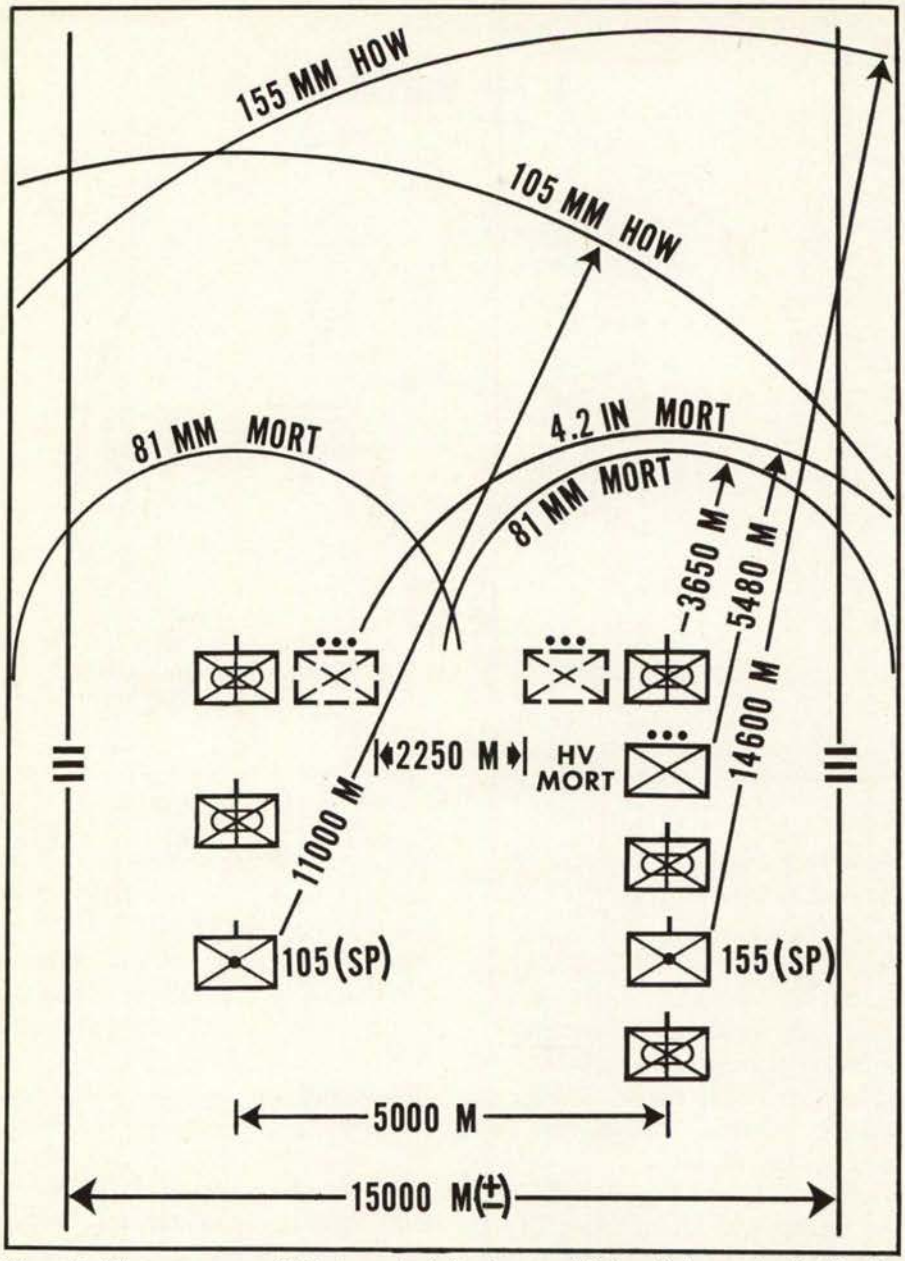


Figure 5. The weapons available to and reinforcing capabilities of the mechanized battle group allow it to attack on a frontage of 15,000 meters.

cording to the unit's capability for sustained independent action. It is anticipated that the fire-support elements will displace by echelon in a manner which will ensure close and continuous fire support. Once the objective has been seized, only sufficient forces remain thereon to control the area and to ensure its retention against ground or airborne attack. The remaining forces move beyond the objective to provide security and to achieve maximum dispersion of the command. This tactic also tends to deceive the enemy into believing that the attack is continuing.

Now let's examine more closely the employment of the battle group in a two-column attack (Figure 6). Such a formation is indicated when the enemy situation is deteriorating, relatively detailed information of the enemy is available, an adequate road net is present, sufficient fire support is available, and there is a need to keep pressure on the enemy. The axes selected cause the attacking units to converge on the dominating portions of the battle group objective. They are separated as much as is practicable so that an enemy nuclear weapon used on one axis will have minimum effects on the other. Yet, they are not so widely separated that the force on one axis is subject to defeat before the force on another can move to its assistance. Each attacking company is assigned objectives within its capability. No intermediate objectives are selected since their use may slow the operation and cause undue massing of forces. If, as the attack progresses, enemy resistance delays the advance and interferes with accomplishment of the mission, suitable objectives may be assigned.

To facilitate understanding of these basic tactics, it might be well to look at the organization and operations of a battle group in a simple, hypothetical offensive operation (Figure 7).

In this situation, the battle group has been provided with sufficient personnel carriers to mechanize its elements. An engineer company is attached and a self-propelled artillery battalion is in direct support.

Company E, 2d Medium Tank Battalion, makes the main attack on Axis MARY, the best approach to the battle group objective. The objective assigned to this company is the one which is expected to achieve the most decisive result. The main attack is weighted with tanks and priority of fire support.

By making full use of all the control headquarters available to the battle group (a total of six including the tank company) and by providing two of these headquarters with Infantry and tanks, the battle group commander achieves maximum flexibility in the conduct of the attack. In this situation we are assuming that enemy resistance is deteriorating and that the approaches are excellent. Tank-heavy units could be employed advantageously on both axes. However, we have also assumed that insufficient tanks are available for such employment. Therefore, Company E, 2d Med Tank Battalion, less one platoon, forms the nucleus for a tank-heavy team to make the main attack. Company A is provided with a platoon of tanks to increase its com-

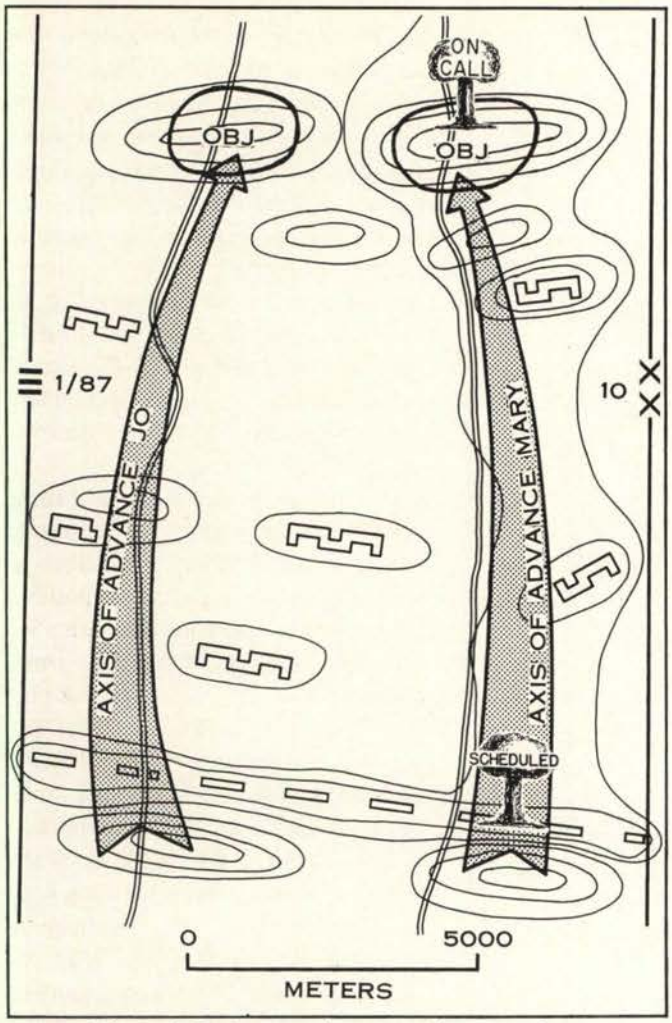


Figure 6. Battle group in a two-column attack.

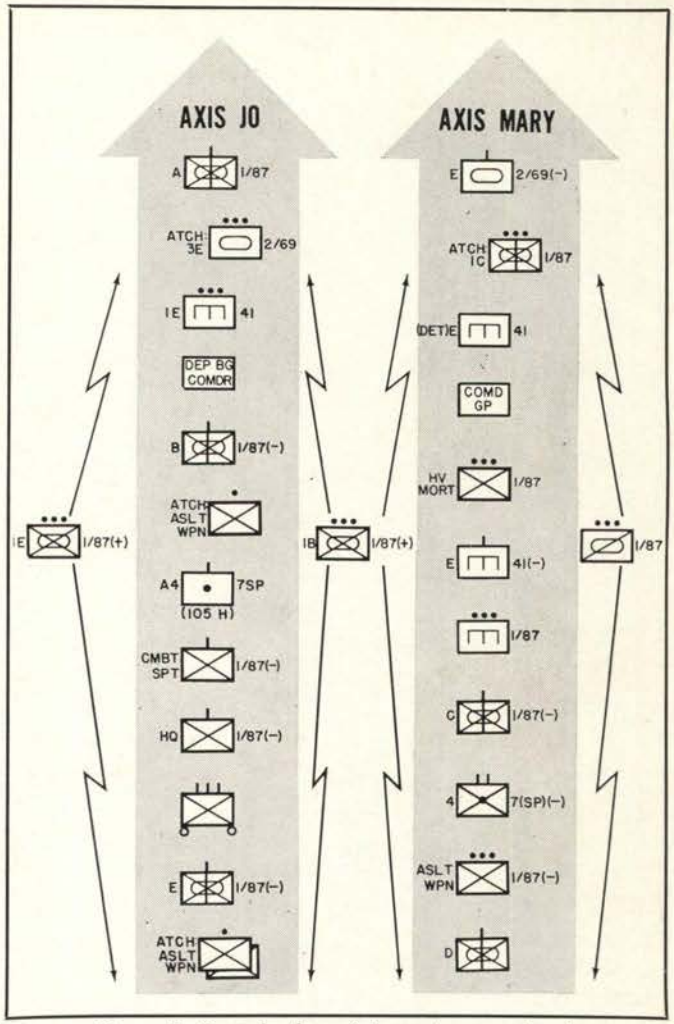


Figure 7. Organization of elements on each axis.

bat capability. Company C, the first rifle company in column on Axis MARY, attaches one rifle platoon to Company E, 2d Med Tank Battalion. In making such cross-attachments, it is desirable that the units exchanging platoons be part of the same column. This is not possible in the case of the tank company but can be followed in the case of the Infantry companies.

To insure adequate fire support, to reduce the length of the columns, and to decrease their vulnerability to enemy nuclear weapons, the fire-support elements are split. The 105mm howitzer battery marches on Axis JO while the remainder of the artillery battalion and the heavy mortar platoon march on Axis MARY. Even though these elements are split as to location, they are retained in general support under centralized control. The range capability of the artillery battalion is such that it can mass its fires to support any portion of the battle group attack. Priority of fires is given the main attack.

Assault weapons have been furnished the force on each axis to provide antitank protection in depth. Assault weapon squads are attached to the elements on Axis JO which are responsible for security missions. The assault weapons platoon (less three squads) is retained in general support and marches on Axis MARY.

The battle group commander's command group marches well forward on Axis MARY where it can best influence the action of the main attack. Included in this group are the S2, S3, FSC and necessary signal personnel. The deputy battle group commander moves on Axis JO. He uses the elements and facilities of the combat support company headquarters to form the nucleus of an alternate command group, which may include the assistant battle group staff officers. This group provides a duplicate command structure in the event one of the command elements is destroyed through enemy action or is unable to control the entire operation. Although the battle group trains are shown with the force on Axis JO, elements of the trains will move on both axes as required to provide the necessary logistical support. The battle group executive officer, S1 and S4 may be found with headquarters company (–), where they can effectively supervise and coordinate the battle group administrative-support system. In an emergency, this group can also control the force on one of the axes, or elements thereof.

The reconnaissance platoon screens the right flank of the battle group

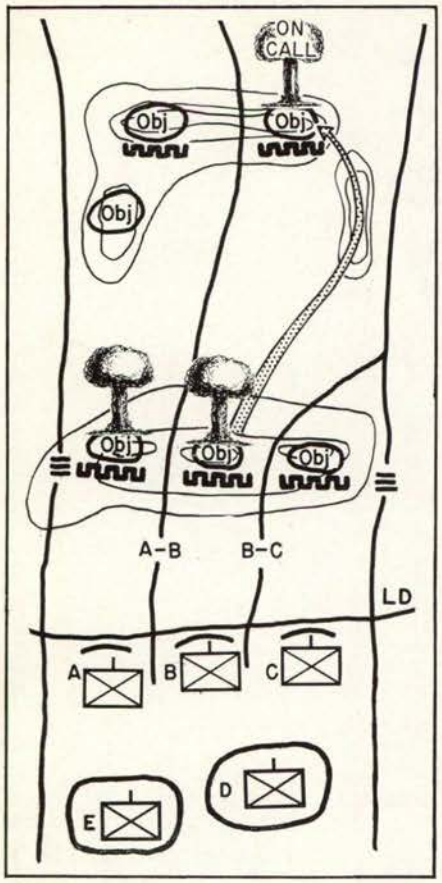


Figure 8. Battle group attacking dismounted.

and Company E, 1st BG, 87th Inf screens the left flank with a reinforced rifle platoon. Company B is responsible for screening the area between the axes and maintaining contact with the forces on Axis MARY. This leaves the leading elements free to focus their attention upon the seizure of the assigned objectives.

Engineers are placed on each axis, with the bulk of the engineers marching on Axis MARY to support the main attack. Engineer reconnaissance detachments march well forward in each column.

In addition, supporting elements of the division aviation company are employed, in conjunction with security echelons, to assist in command and control, for resupply and to assist in medical evacuation.

In developing the plan of fire support, the commander provides for both nuclear and non-nuclear preparatory fires. Scheduled nuclear weapons are planned for use on located enemy positions which will be encountered early by attacking forces, and on enemy reserves which may be able to reinforce forward enemy positions. Non-nuclear fires are closely integrated with the nuclear fires and are scheduled after detonation of the nuclear weapons. On-call fires are also planned on known or suspected targets.

While considerable emphasis is placed today on mechanized operations, this should not be taken to mean that the dismounted attack is a thing of the past. We can still expect to find requirements for dismounted operations—particularly against well organized positions which must be assaulted in width. We should, therefore, consider briefly the conduct of a dismounted attack by the new battle group. As illustrated in Figure 8, the dismounted battle group frequently attacks with three or more companies in the attacking echelon because of the greater opportunity afforded to exploit the effects of nuclear weapons. The size of the reserve is still considerable, and by attacking with a substantial portion of combat power forward, the possibility of finding and exploiting weak spots, which the detonation of nuclear weapons should create, is increased. While plans for the battle group under non-nuclear warfare conditions called for an attack on a narrow front, with a heavy concentration of force in the zone of the main effort, the use of nuclear weapons permits a sizeable reduction in depth and a corresponding increase in the width of the attack formation. Even though dismounted, the battle group nevertheless strives for rapid closing with the enemy and for maximum dispersion consistent with accomplishment of the mission. The control measures most frequently used include zones of action and objectives. Again, the battle group commander imposes only those measures required to insure that the operation is conducted according to his concept.

As the Army continues its effort to obtain a greater combat capability through evolutionary progress, the Infantry—as the basic arm of close combat—steadily approaches the day when it will have a superior differential of sustained, mobile combat power which is capable of delivery at the decisive point in time and space, under any condition of combat.

The recent changes increase the Infantry's versatility. As an organization, the battle group has great internal flexibility in the formation of subgroupings around its rifle companies. With more facility than ever before, it can detach elements, or accept attachments of direct-fire weapons and other units, to accomplish missions formerly considered beyond its day-to-day capabilities.

This is the first of a series of articles on the employment of the reorganized battle group and its subordinate units. The defensive operations of the battle group will appear in the October-November issue of Infantry.

—Editor.

Lt Col Edwin C. Gibson completed OCS in 1943 and received a Regular Army commission in 1947. He served in Europe during World War II with the 157th Infantry. After the war, he joined the staff of the Mountain and Winter Warfare School. He graduated from the Advanced Course at USAIS in 1949, and then became an instructor at the Army Arctic Indoctrination School. He completed the Regular Course at USACGSC in 1952. Colonel Gibson served in Korea prior to his present assignment with the Infantry School's Command and Staff Department.

Maj E. B. Moore was graduated from OCS in 1943. In 1950, he received a Regular Army commission. During World War II, he served with the 260th Infantry in Europe. After the war, he was assistant adjutant of the Manhattan District and, later, of the Armed Forces Special Weapons Project. In the Korean War, he was assigned to the 179th Infantry, 45th Division. Major Moore has attended the Associate Advanced and Advanced Courses at the Infantry School, and the Command and General Staff College. He is now studying for the M.A. at Syracuse University.

The Lancers of Simon Bolivar once again patrol the passes of the Andes Mountains. The Lanceros, Colombian counterparts of our Rangers, endure a rugged training course that pays off in large dividends.

MIDNIGHT in the Colombian Andes. A twig snaps. The slight noise brings the aggressor troops—waiting in bunkers strung along the slope—to a quiet alert and they ease into position behind their weapons. A whispered command is passed along: *"Esperen, esperen.* Wait."

Below the line of bunkers a small group of dirty, tired, hungry men crawl slowly up the boulder-strewn mountainside. Their leader, sweating and exhausted, makes an error which exposes his men.

"Fuergo!" The aggressors open fire, their rifles and automatic weapons singing the familiar, discordant song of death, the tempo increasing as men in the flank bunkers pour a crossfire over the rocky ledges. Flares light the area, grenades arch down and bounce among the rocks. Machinegunners scream, *"Que vengan!* Come and get it!" It is the end for the patrol of seven Colombian soldiers.

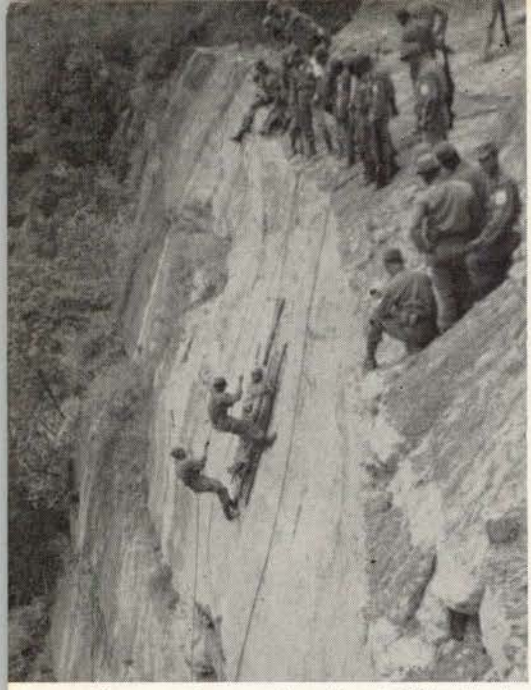
Then from the darkness an instructor steps forward and takes charge of the hapless patrol. He dismisses the leader who erred, appoints a new commander and once again steps back into the shadows to observe. The patrol, now under new guidance, comes to life and moves on, just as spent and just as dirty as before, but with renewed determination to complete the mission.

This patrol was composed of student *Lanceros,* men striving to earn the badge which marks Colombia's newest, toughest and best-trained junior leaders. As a group, these Colombian soldiers symbolize the rebirth of the old tradition of honor and sacrifice which inspired the lancers of Simon Bolivar. It was his small, elite group of Colombian mountain troops whose lances, arrows and determination opened the passes of the Andes for Bolivar's army of liberation. Now at the *Escuela de Lanceros* situated in the foothills of the Andes near the village of Melgar, modern-day Lancers undergo a grueling 11-week course designed to develop the rugged type of small-unit leader the Colombian Army needs and is determined to have.

By Capt Ralph Puckett, Jr. and Lt John R. Galvin

The School of Lancers was established in 1955 and has a mission almost identical to that of the United States Army Ranger Course at Fort Benning: *To develop to the maximum, by practical field training, the potential for military command and leadership of selected company-grade officers and noncommissioned officers throughout the Army in order to improve the leadership and training capabilities of all units.*

The Colombian Army is especially interested in Ranger-type training because of the problems it has in combatting the large numbers of guerrillas and bandits which operate in the wilder areas of Colombia. Bands of these irregulars have long been a continuing menace to the peace and safety of the Colombian people. Wise in the ways of the mountain and jungle, they are extremely difficult to track down and subdue, and the Colombian Army had been achieving little success in quelling them. Specific training in this special type of operation was clearly necessary, and since small units were normally used to combat the marauders the solution was evident: selected company-grade



Rope work on a sheer-faced cliff calls for both courage and skill.

The student Lancero is hardened physically early in the course.

officers and noncommissioned officers would have to be trained to fight the enemy on his own ground, using his own methods. The *Escuela de Lanceros* does this and does it well. The results obtained in actions against the guerrillas by graduates of the first six classes were outstanding—so much so that the Colombian Army now requires all second lieutenants to attend the school.

The underlying principle of Lancero instruction is that to learn, one must do, and that principle is applied to the maximum. From arrival day to graduation, the student Lancero is required to do, do, do. Significantly, this practical application takes place mainly on terrain similar to that which will be met in guerrilla actions—mountain or jungle.

In addition to the accent on doing, the Lancero candidate is subjected to a heavy, unrelenting pressure, both mental and physical. He lives in an atmosphere of continual observation and supervision. Few of his errors in judgment or knowledge go undetected, for not only is he under the scrutiny of instructors, but he must also withstand the critical eye of his fellow candidates, who are required to rate him. Since competition is so strong among the students for the coveted Lancer Badge, no favors can be expected when the ratings are made out.

The program of instruction for these highly motivated young men is divided into three phases. The first of these phases is very similar in subject matter to the Infantry Officer Leader Course at Fort Benning, but there the similarity ends. As soon as he reports for duty, the Lancero candidate is thrown into a rigorous training program. He works 12 hours every day. There is no holiday schedule. He faces daily examinations to make sure he is keeping up with the instruction and, to add to the pressure, there are exacting daily personal inspections. During this first six-week phase, the student receives extensive instruction and practice in the use of Infantry weapons, map reading, methods of instruction, leadership, small-unit tactics, survival, field expedients, forward observation, physical conditioning, troop-leading procedures and combat formations. The basic knowledge and skills which he learns or brushes up on during these initial weeks are vital to his successful completion of the remaining phases.

Without a pause, the Lancero candidate begins the second phase—a three-week period of field exercises, as much like combat as the use of

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Capt Ralph Puckett enlisted into the Army in 1943. He was commissioned upon graduation from the United States Military Academy in 1949. He commanded the Eighth Army Ranger Company during the Korean War, joining the Ranger Department at Fort Benning in 1951. Subsequently, he became a company executive officer, company commander, battalion S4 and commandant of the NCO Academy with the 296th Infantry and the 65th Infantry in Puerto Rico. After duty as Ranger Advisor with the U.S. Army Mission to Colombia, Captain Puckett was assigned to the staff of the USMA Preparatory School, where he is now Assistant Commandant. He is a graduate of the Infantry School's Advanced Course.

Lt John R. Galvin, who graduated from the United States Military Academy in 1954, served as a platoon leader and NCO Academy instructor with the 65th Infantry in Puerto Rico after completing the Ranger Course in 1955. Beginning in 1956, he served as Ranger Advisor with the U.S. Army Mission to Colombia. In 1958, he was assigned to the 501st Infantry, where he is now a company executive officer.

Confidence tests such as this pulley ride are calculated to inject the fear of death into the training.

Patrol work simulates the actual rough-country combat the Lancero may face soon after graduation.

blank ammunition permits. Every other effect is duplicated: the exhaustion, the anxiety, the back-breaking work, the necessity for split-second, sound decisions—even the fear of death is injected into the training. This last effect is obtained in confidence tests which include a pulley ride on a high wire from a 100-foot cliff out over the Sumapaz River and a leap into the same river from a high suspension bridge.

During this second phase, the patrol is used as the training vehicle. This allows realistic situations to be constructed for small-unit actions and thereby increases the effectiveness of the instruction. Such combat situations are recreated in detail, and change from day to day as they would in actuality. Friendly and enemy positions are occupied by veteran troops from the *Battalion Colombia.* Aggressors, who are led by Lancero School graduates, outnumber the students two to one. Most of the troops used as aggressors have fought against the guerrilla bands of the interior and are able to portray the enemy with great accuracy.

The Lancero candidate participates in seven night patrols against these skilled aggressors. Each patrol has a different mission: reconnaissance of an outpost line, attack of an outpost, reconnaissance and demolition of a bridge, reconnaissance of one supply point and attack of another, and an ambush exercise five miles behind enemy lines. For each patrol all students must write and submit a warning order and a patrol order. One of the students is named as leader of the patrol, but the rest must be alert at all times since no one knows who will be ordered to take command when the leader is "killed." This practical instruction is calculated to teach the Lancero candidate to think clearly in difficult situations and to react well under stress. Also, by working with his comrades in overcoming obstacles that would defeat individuals, the student is impressed with the necessity for teamwork in all operations.

The third phase of the course is similar to the second, except that the eight patrols are conducted over longer distances and more difficult terrain. Each patrol must cross rivers, mountains and areas of dense jungle undergrowth. The distance to the objective usually requires more than one night's travel, the patrol holing-up in the daytime and completing the mission during the second or third night. It is during this phase that the student is taught how to operate effectively against guerrillas. He faces a formidable enemy in the aggressors and cannot overlook a detail, either in planning or in execution, if he wishes to accomplish the mission successfully. All of the cards are stacked against him. He must lead well or fail. After a few patrols he finds himself hating his "enemy" and devising ingenious methods of overcoming or eluding him. To the instructor, this tell-tale reaction serves as one indicator that the training is having its effect.

Like his Ranger counterpart, the Lancero must work hard to complete the challenging and demanding course. He must suffer physical discomfort and he must learn through his own errors. In the end he finds that he has increased his forcefulness and assurance and has developed many important qualities of leadership. Most of all he finds that he is imbued with the *will* to fight and win.

Each year the *Escuela de Lanceros* adds 200 of these well-trained, rugged and aggressive junior leaders to Colombian combat units. Through this program the Colombian Army gains much in effective small-unit leadership, but most important, the example set by the Lancero infuses every combat unit with the spirit of the Lancer.

This feature provides an open forum for discussion of both sides of controversial issues.

COMPETITIVE MARKSMANSHIP

PRO & CON

It Pays Off!

By Lt Col Thomas J. Sharpe

THE Army Competitive Marksmanship Program, inaugurated in 1954, is designed to preserve, develop and teach marksmanship, the Infantryman's basic skill. Since that time, it has become an essential part of the preparedness training of today's Army. The program encourages high standards of individual marksmanship. It permits the perfection of firing skills and equipment. It promotes national civilian interest and participation in marksmanship activities, with a view toward increasing total preparedness; trains expert instructors and coaches, both for precision marksmanship and trainee programs; and materially increases the prestige of the Army and the Country by providing consistently excellent representation in competitive shooting at all levels.

The program, however, is not without its critics. They claim, among other things, that Competitive Marksmanship is too expensive. They feel it is too limited, and gives too specialized a knowledge of marksmanship to too few soldiers. They even seem to feel that, in the era of Trainfire, marksmanship is somehow outmoded.

It is true that participation in the Competitive Marksmanship activity that attracts the most attention—high-level matches—is limited to a relatively few individuals. These are the most expert of the experts, and a process of elimination has naturally thinned out their ranks. It is important to note, however, that this thinning-out process represents a wide and continuing means of encouraging marksmanship at all levels. At every echelon of command, from company to division to All-Army, the best marksman earn the right to represent their unit at a higher level. In the latest Third Army match, conducted during the month of April at Fort Benning, 60 individuals participated in the automatic rifle matches, 299 participated in the M-1 rifle matches and 200 participated in the pistol matches, nine-tenths of all of these returning to their units on completion of the matches. Multiply these numbers by the number of army areas and overseas commands, and it is apparent that the direct participation in the Army Competitive Marksmanship Program is by no means restricted to "just a few."

Indirect participation, through "tyro" matches for novices and through instruction by direct participants, is very large. In the spring of 1954, for instance, the 82d Airborne Division sent six of its men, members of the Third Army Rifle and Pistol Team, to the national matches. Upon the return of these six men to their parent organization, an intensive tyro program was organized under their supervision. Six competitions were held during a period of eight months. Approximately 1000 men were given instruction in the rifle or pistol, and 600 fired in tyro matches. A three-week training period preceded each of these monthly matches. Statistics compiled at this time indicate that the improvement in scores was at least 25 percent, and sometimes as high as 50 percent. In addition, the Division went on to supply 15 men to the Third Army Team the following year, 1955. Over 80 percent of the men who participated in the tyro instruction and firing came from the Infantry companies of the Division, and the vast majority of them returned to their units.

The immediate effects of Competitive Marksmanship activities of this kind are impressive. As impressive are the longer range effects. Tyro graduates exert a constant and durable effect not only upon general standards of marksmanship, but upon the quality of marksmanship instruction. They have a desirable influence upon unit *esprit*. And, of course, tyro programs encourage and develop the kind of experts who bring credit upon the Army and the Nation.

Such activities operate on a continuing basis. In May of this year the annual Army Championships were held at Fort Benning. At every level participants underwent training designed to perfect their individual performance as marksmen. Many of them are now applying this knowledge as instructors.

It should be emphasized that the "post-graduate" marksmanship training offered by the Competitive Marks-

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The Price of the Prizes!

By Capt James R. Semmens

COMPETITION in Small Arms, AR 611–10, outlines the purpose behind the Competitive Marksmanship Program in these words: "Competitions are held for the primary purpose of promoting training interest and raising the standard of performance in the use of individual arms, improving firing techniques and equipment by assembling individuals who excel in the use of small arms, and classifying competitors according to merit after firing under prescribed conditions."

The fact is, however, that this program applies only to a selected few within the Army establishment. It benefits almost no one. It has little effect on the average soldier. And it is notoriously expensive.

With these few points in mind, let's look at the Competitive Marksmanship Program to find out for ourselves whether this "sporting event" has any place in the modern Army.

Early in our national history the average male citizen acquired proficiency in the use of small arms in order to protect himself and his family, and to provide food for his table. As our frontiers disappeared, this national excellence in small-arms marksmanship diminished considerably. Today, outside of the Army the art of shooting is losing its prominence in a growing America. There are a large number of tightly knit shooting clubs, and many Americans hunt for pleasure, but with the development of rural areas and the reduction in the necessity for small-arms proficiency, the vast, unorganized shooting skill which once was part of the American tradition no longer exists. As a consequence, within the Army we should be doing everything in our power to increase the shooting ability of our combat rifleman, because he generally will have only the small-arms background we ourselves give him.

Advocates of the Competitive Marksmanship Program claim that it is an integral part of the over-all marksmanship effort. Nothing is further from the truth. As has been the case in the past and will be the case in the future, only a limited number of military personnel are classified as competitive shooters. These rare birds find themselves a niche in the Army establishment at division, corps, or higher headquarters, and there they perch. The pinnacle of the competitive-shooter pyramid is the United States Army Advanced Marksmanship Unit (USAAMU), presently located at Fort Benning. From year to year, as long as they fire well, the marksmen assigned to the Unit do little more than train in the field of competitive shooting and, occasionally, conduct a limited amount of instruction in coaching and firing. Their main efforts—to which all else is secondary—are directed toward winning the annual national matches at Camp Perry, Ohio. There is an international flavor to this competition, and a great deal of ceremony surrounds it. It is questionable, however, whether the shooters who ably represent the Army in such matches are of much value to the over-all marksmanship program.

To exert a large and continuous effect upon the total program, the competitive shooter should, first of all, be trained under the same marksmanship program used for the remainder of the Army. In the past, when the Army trained all its riflemen under the known-distance system of individual marksmanship training, the competitive shooter's training paralleled that of the combat rifleman up to a point. Because of this, the competitive shooter who returned to a unit was able to impart some aspects of his specialized knowledge to the ordinary rifleman he left behind. However, with the adoption of Trainfire I as the standard marksmanship program for the Army, the competitive shooter loses a large part of his value as an instructor. He is not a combat marksman, and because Trainfire I and Competitive Marksmanship training have little in common, has a specialized knowledge of techniques which apply only to known-distance firing.

Second, the competitive shooter must also be a *trained instructor*. The mere fact that a competitive shooter is himself an excellent marksman does not qualify him as an instructor in marksmanship. Admittedly, it is better if an instructor in small arms has a thorough knowledge of external ballistics, the use of optical instruments, coaching and similar information, but this knowledge is secondary to the ability to present basic instructional material in a logical, understandable and interesting manner.

During the conduct of the Small Arms Firing School held in conjunction with the national matches at Camp Perry in 1958, personnel of the USAAMU acted in the capacity of assistant instructors. Some of these men were unfamiliar with the nomenclature of certain parts of the M1 rifle. Obviously these individuals—however well they may represent us in high-level matches—are not equipped to teach trainees such basic information as rifle assembly and disassembly.

Third, the competitive shooter must be made available to a unit during the period that unit is undergoing marksmanship training, and must be placed in a position from which he can influence the ordinary trainee. All too often, competitive shooters cannot be made consistently available during such periods of training because of match commitments or their own training requirements. In addition, many competitive shooters are now acting in capacities which preclude their being used as marksmanship instructors.

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COMPETITIVE MARKSMANSHIP
It Pays Off! *continued*

manship Program represents the only organized opportunity for exceeding customary unit standards of rifle skill, and thereby creates a general upward pressure upon these standards.

Those who participate in the training discover through proper instruction that private "trade secrets" are largely figments of overactive imaginations. The only secret of good shooting is the application of three basic principles: (1) obtain the steadiest possible position within the time allotted; (2) align the sights correctly on the target; and (3) squeeze or press the trigger without disturbing this sight alignment. Regardless of the target—man, deer, Trainfire silhouette or bull's-eye—these fundamentals must be practiced in order to hit the target. Special equipment used by competitive marksmen, whether spotting scopes or shooting jackets or match-grade ammunition and weapons, has a training-aid function, and marksmanship is by no means dependent upon such equipment. Techniques of marksmanship are as essential to the combat rifleman on the battlefield as to the expert on the range.

Much has been said about the record left by the 44 men of the Advanced Marksmanship Unit at Benning who fired the Trainfire Course last November and December in an effort to obtain information on the relationship between Trainfire and expert marksmanship. Thirty-nine riflemen and five pistol experts were assigned this job. They were unfamiliar with the course and some of the silhouettes were heavily camouflaged. Despite these conditions, the most impressive fact which emerged from the test was that in the initial firing of the course, the overwhelming majority of the targets "missed" *were not fired at because they were not seen.*

After additional instruction, consisting primarily of target detection, these same 44 shooters fired again, 36 of them scoring Expert and eight Sharpshooter. Actually, these marksmen are specialists at marksmanship, not target detection. There is no question, of course, that target detection is an essential element of the general marksmanship program, particularly in the final training stages, before combat firing exercises for the squad and platoon. But without proper basic marksmanship, no soldier will be able to hit his target, regardless of how well he may see it.

The three principles of basic marksmanship apply just as much to Trainfire as to any other kind of firing. If the individual soldier is not well-grounded in these fundamentals, the Trainfire methods may very well be less successful than known-distance methods which are properly taught.

So far I have stressed the broad participation of the Competitive Marksmanship Program, and the great importance of rifle marksmanship. I have mentioned the effect of the program upon all levels of marksmanship instruction. This subject deserves more attention.

For some years, instead of employing expert coaches on our basic training ranges, we let two recruits, one as much of a novice as his partner, "coach" each other. Anyone who knows marksmanship realizes that 90 percent or more of the recruits make exactly the same errors the first few rounds they fire. These errors must be detected and corrected by a competent, trained coach when they occur. If not corrected on the spot, they become habitual, and the rifleman must be retrained if he is ever to achieve any degree of accuracy. Too often assistant instructors stand aloof while a student shoots miss after miss, despite the "instruction" he is getting from the student-coach. The assistant instructor, as he is presently employed by the Weapons Department of the Infantry School, is no instructor at all, but has only the functions of a control NCO. We need real coaches, not "assistant instructors," whose well-shined helmet liners and glossy boots give an appearance of instructional efficiency where such efficiency is very much lacking.

The pupil-and-pupil method still in use at the moment on known-distance ranges has recently been superseded by new directives. Training centers are now required to have at least one trained coach per four students on the firing line during all marksmanship training. Other units must have one trained coach for each student. This is a sound policy and should produce a definite improvement in the quality of marksmanship training.

A large responsibility rests with the coach, both in precision marksmanship and basic instruction. He should be an expert marksman who knows the fine points and has had considerable experience in marksmanship. He must be willing to get down with the student on the firing line. Men who have been through the Competitive Marksmanship Program are ideally suited to teach precision marksmanship, and, particularly, to provide trainees with the expert individual coaching which has distinguished the best combat marksmanship training of the past. Many of these experts have received general instructor training, and specific Trainfire I instructor training might easily be provided. In the latter case, they could be well employed in Trainfire I's preparatory marksmanship training, and in the Trainfire I "corrective platoons" which provide remedial instruction to selected trainees. Most trainees need remedial instruction to bring them up to Expert level.

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Lt Col Thomas J. Sharpe received a reserve commission in 1940, and in 1941 an RA commission. During World War II, he served as executive officer of G3 in Headquarters, III Corps, in Europe. After the war, he was S2 for the 14th Armored Cavalry of the U. S. Constabulary. In Korea he commanded the 1st Battalion, 224th Infantry. Later Colonel Sharpe served in the Office of the Assistant Chief of Staff, Intelligence. A graduate of USACGSC, he now commands the USAAMU.

The Price of the Prizes!

continued

Capt James R. Semmens was graduated from the U. S. Military Academy in 1951. He served as platoon leader with the 112th Infantry, 28th Division, until 1954. After completing the Advanced Course, he was assigned to the Infantry School's Weapons Department as a team chief on the Rifle Committee. Early this year he transferred to the Corps of Engineers and will soon receive a Korean assignment. This is the second article Captain Semmens has contributed to *Infantry*.

Fourth, a sufficiently large number of these competitive shooters must be returned to units to supervise rifle marksmanship training. Under present policy, approximately one third of the members of the USAAMU return to units annually. This policy varies with respect to other marksmanship organizations. The number of competitive shooters returning to units is therefore so small that their effect on the over-all program is rarely felt.

ONE OF the missions of the Competitive Marksmanship Program is to provide training interest. The program does this, but only for the select few who actually qualify as competitive shooters. For the rest of the riflemen who are permanently assigned to a TOE outfit, it has no effect. Once the competitive shooter reaches a division-or-higher match, he disappears from view on these lofty heights. He is, in effect, lost to his unit, and his buddies forget about him. Marksmanship interest as a whole is not encouraged by the isolated fact that one or two men from a unit are capable of shooting well enough to be classified as competitive shooters. Even if these men do return to their unit, without constant practice their prowess soon becomes only a memory.

The fact is that the Competitive Marksmanship Program raises the standards of performance in the use of individual arms only among the marksmen themselves. The vast majority of riflemen continue their normal training and fire their weapons for annual qualification only.

We have said that in order to exert a favorable influence upon the ordinary combat rifleman, the competitive shooter should be trained in combat firing. He should be able to fire his weapon under all conditions with the accuracy upon which his reputation rests.

However, when members of the USAAMU at Fort Benning fired on the realistic new Trainfire I marksmanship course, they scored lower than an Officer Candiate School class which fired under similar conditions. On November 10 and 12, 1958, candidates from OCS Class #2 fired on the Benning Trainfire I Record Firing Range after receiving 51 hours of instruction under the Trainfire I individual marksmanship training program, the standard course presented to both Officer Candiate School and Trainfire Instructor Course classes. On November 14 and 15, 1958, marksmen from the USAAMU fired the same record course, without the benefit of Trainfire I's modern combat training, but with many years of experience in the field of competitive shooting. The members of the USAAMU used match-grade weapons, match ammunition, and a 300-yard battlesight zero (which corresponds very closely to the 250-meter battlesight zero used by the OCS students). A comparison of firing results—which matched scores man for man, order for order, firing point for firing point, and time of firing for time of firing—gives the following results:

Record Firing I (p.m.)

	OCS	AMU
Av. Hits	32.22	31.30
Av. Misses	17.91	15.37
Av. No-Fires	5.85	9.35

Record Firing II (a.m.)

	OCS	AMU
Av. Hits	28.24	24.00
Av. Misses	19.61	19.24
Av. No-Fires	8.25	12.80

The qualification results for both groups are equally revealing.

	OCS	AMU
EXPERT	10	8
SHARPSHOOTER	29	20
MARKSMAN	6	17
BOLO	1	1

Lighting and weather conditions for the days when the two groups fired were not significantly different, with the exception that during the USAAMU's second record firing there was a slight wind of approximately eight miles per hour.

Later, the USAAMU group received the same Trainfire instruction, including target detection, as had the OCS company. With this background, USAAMU tried again and this time fired much more effectively. If soldiers trained under the standard Trainfire I course of individual marksmanship training (only 51 hours) can outshoot some of the best men in the competitive shooting business, then it seems doubtful that any material benefit could be derived from instruction by competitive shooters.

How does the Competitive Marksmanship Program improve firing techniques? The few men engaged in this program possess their own trade secrets which are not as a rule passed on to the average combat rifleman, and many times are of no use under combat conditions. The combat rifleman cannot fire match-grade weapons with match-grade ammunition. He does not have a spotting scope, shooting jacket, or shooting glove. He has to fire under combat conditions in a combat uniform, with an issue rifle and issue ammunition. The techniques of rifle marksmanship which evolve from competitive shooting are rarely, if ever, applicable to the combat rifleman.

Marksmanship techniques which cannot be employed on the battlefield are of no use to the Army. We need soldiers, not merely marksmen —and there's a large difference between the two.

PERHAPS the program might still be tolerated if it were kept within

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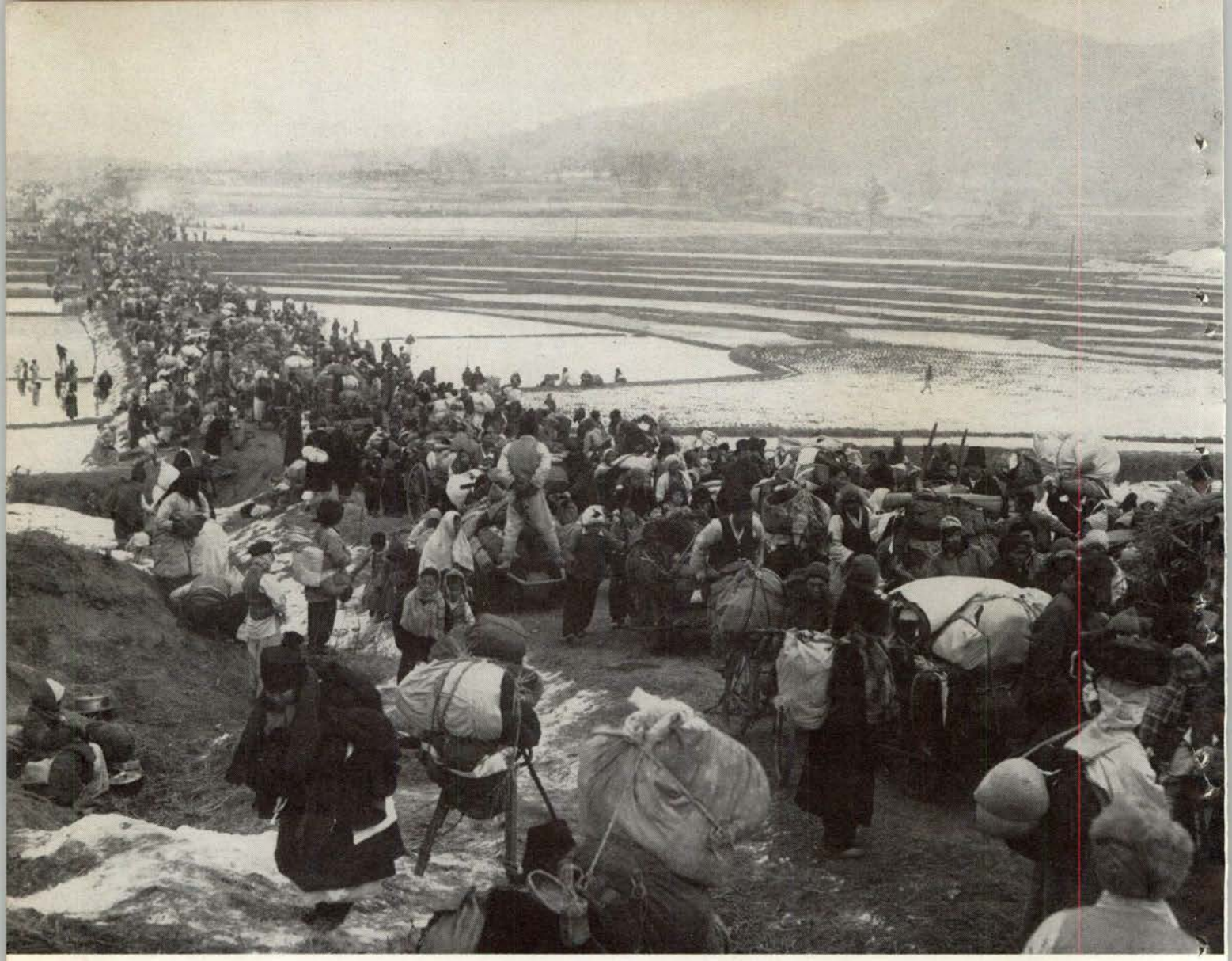

Civil Affairs

What It Means to the Battle Group

By Col Karl S. Landstrom

MOST Infantrymen have a general knowledge of the support provided by Civil Affairs units. From past experience and from schooling, they know that Civil Affairs supports military operations and deals with the relationship between military and civil activities in an area where military forces are present. However, many individuals think of CA as an agency that operates at high echelons—in the communication zone or other rear areas. Few fully understand or appreciate the support which Civil Affairs units can give in the combat zone, down to and including the battle group.

The battle group, now the basic tactical unit of the Army, must be capable of operating with substantial gaps between groups on a battlefield of ever-increasing width and depth. Against an enemy who can use nuclear weapons, airborne and air-landed troops, infiltrators and guerrillas, the battle group must be able to maintain an all-around defense and to establish defensive areas in great depth. Reserve battle groups must often provide division rear-area secur-

CA support of combat operations can free the battle group for combat, while increasing security, collecting intelligence and making use of civilian manpower and materiel.

ity and such security elements must be particularly alert. To successfully accomplish its missions under these conditions, the battle group requires the support of Civil Affairs units.

There are a number of factors which indicate that the battle group needs this support. One of these is the increasing number of civilians and civilian activities which can be expected in the battle group zone or sector of operations. Others are the greater number of injured and helpless civilians who will require medical or other aid, the increased movement of civilians which will be necessitated by the use of nuclear weapons, the greater widths and depths of battle group zones of attack or sectors of defense, and a lesser degree of division control over the details of battle group operations.

CA Operations

The basic objectives of CA operations are: to support military operations; to fulfill obligations arising from treaties, agreements or international law; to support and implement national policies; and to provide for the transfer of responsibility from the military commander to a designated agency of civil government.

The theater commander is responsible for all Civil Affairs activities in the theater. However, CA authority is often delegated to division commanders.

Since battle groups conform to the CA policies and procedures of the division and higher commands, CA units within a division area will support the division commander's combat mission. They will do this by assisting the commander to control and to handle relationships with civilians, refugees and displaced persons; by assisting the technical services to secure labor and supplies; and by furthering our national policies.

CA activities (based on previously prepared plans) should begin as soon as the battle group moves into a new area, and should be carried out concurrently with other activities. Ordinarily, CA activities will consist of measures taken to control civilian affairs in the area. The proper handling of civilian problems will often mean the difference between success and failure of a combat mission. Furthermore, effective civilian control and the resulting cooperation can insure sizeable savings in men and time. Contrary to antiquated concepts of the functions of CA in combat, only those functions essential to the accomplishment of the combat mission are performed.

CA units are trained and prepared to assist the battle group under a wide variety of conditions which may affect its operations. Specifically, the units are trained to help with the control, or if necessary, with the evacuation, of large numbers of refugees or displaced persons who would interfere with troop movements, resupply or combat operations, either in progress or proposed. They can assist when the battle group faces unfavorable governmental conditions such as a breakdown of civil administration, disorganized public safety, civil disturbances or a lack of civilian medical care. They can help when combat operations are affected by unfavorable civil economic conditions such as a lack of food or shelter, and when public facilities such as water or sanitation are disrupted. And they can assist when emergency supplies are needed for civilian consumption, or when civilian labor or supplies are required for military use.

Of these functions, the control of civilians is probably the most important to the battle group commander. It was demonstrated in Korea that refugees, when left unchecked, clog MSRs, interfere with the movement of troops and generally play havoc

When necessary, CA evacuates civilians out of the battle zone. This wounded Alsatian woman and her baby were moved to a place of safety by a CA unit in World War II.

Cooperating with civilian relief organizations, CA fulfills the commander's responsibility under international law. Here, townspeople of Argancy, France, line up for "chow."

with an operation. Preventing such situations is not a difficult task for Civil Affairs units. These units are specially trained to carry out the combat commander's responsibility under international law or agreement for the care and control of refugees and displaced persons. Under CA supervision, such persons are cared for through civilian relief and welfare organizations.

Public safety is another essential function of CA in support of combat operations. As used here, public safety includes police protection, fire fighting, civil defense and traffic control. CA doctrine calls for existing civilian public-safety organizations to be used to the maximum, thus effecting tremendous savings in military manpower.

A special Rockefeller Brothers Fund report on international affairs concludes that "civil defense must be a part of our over-all strategic posture." In a foreign theater of operations, civil defense of the local population becomes a matter of military necessity, and with the appearance of mass-destruction weapons on the battlefield, it becomes a major one. The CA officer and his unit are best suited to relieve the troop commander of many of these time-consuming activities. Also, in this connection, the CA officer is a valuable man to consult if it becomes necessary to plan for the use of nuclear fires in heavily populated areas.

CA units supervise and assist civilian health services to protect the health of the civilians and in turn the health of troops in the area. And, in cooperation with signal and transportation agencies at all echelons, CA aids the military commander in the use of the civilian communication and transportation systems.

Every Infantryman knows how extremely important combat intelligence is to the battle group commander. CA officers work closely with military intelligence, counterintelligence and psychological warfare agencies, and the CA platoon, through its close contacts with civilians in the area, is an excellent source of information. Information can often be provided which is unavailable from other sources.

CA Staffs and Units

CA staff functions are performed at all levels of command. The Assistant Chief of Staff, G5, who will be provided to the division on an augmentation basis, advises and assists the division commander in all GA matters. Although there should be a CA staff officer in the battle group, none is provided in the present organization. Consequently, the S3[1] has been given primary staff responsibility for the Civil Affairs activities in this unit.

The CA units which support the combat units consist of CA platoons, companies and groups. These units are formed from TOE cellular units and may be changed as required. The cellular units are combat trained and specialist qualified.

The platoon is the smallest CA unit capable of administrative and command functions. The platoon consists only of a platoon commander, administrative officer, platoon sergeant, public safety supervisor and two clerk-typists. However, it is designed as a nucleus around which a larger, more versatile unit may be formed by the addition of service and/or functional teams from TOE 41–500D and 29–500D.

In the past, one or more CA platoons have been attached to, or placed in support of, a division. One platoon normally moves with the division. If another is required and is

[1] The United States Army Infantry School now teaches that the S1 of the battle group is responsible for Civil Affairs. While FM 41-15 states that the G3 will handle this function at division level, the Infantry School feels that this is an error brought about by the increasing importance of Civil Affairs to operations in peacetime. Draft FM 101-5, recently reviewed by the Infantry School, establishes operational groupments in which the G1, G4 and G5 work at one CP and the G2 and G3 at another. This appears to bear out the School's feeling that at echelons in which a G5 section is not established, the G1 (S1) should have Civil Affairs responsibility.

[2] See Footnote 1, above.

available from corps, it may be further attached to, or placed in support of, a battle group. In this role it may be used during combat operations to supervise recurring tasks such as controlling or relocating civilians, collecting refugees and posting curfew proclamations, or to assist in any other required relationship with the civilian population.

When a platoon supports a battle group, the platoon commander functions under the supervision of the S3[2] but he must coordinate with S1 regarding civilians, with S2 concerning intelligence and with S4 for supply and evacuation matters.

Future Doctrine and Support

Doctrine for CA support was formulated before the adoption of our present pentomic organizations and our current tactical concepts for fluid, highly mobile warfare. Nevertheless, the employment of CA platoons in recent field exercises has indicated that CA doctrine and policies are still basically sound. Only minor adjustments may be required to insure adequate CA support.

Potentially, each of the five battle groups in the division needs CA support. It is unlikely, however, that all five battle groups would require the direct support or attachment of a CA platoon simultaneously. Therefore, to preserve flexibility, CA platoons undoubtedly will be held at division or higher level for employment on a priority basis at battle group or comparable level when the need arises.

When the battle group operates in a sparsely populated area, when its zone or sector is narrow or shallow, or when its operations are under close division control, CA support probably will stem indirectly from that given to the division as a whole. However, when it operates in densely populated areas, when its zone or sector is wide or deep, or when it operates independently, direct CA support should be given to the battle group.

Attachment of a small composite CA unit to combined-arms task forces would also appear to be particularly desirable in view of the independent missions which can be anticipated for such units.

Manilla, 1945. Civilian control is among the most important functions CA performs for the battle group. It promotes security and freedom of military movement and action.

Several methods of providing continuing and effective CA support at battle group level have been proposed. These include the temporary detail of two or three men from the platoon supporting the division, a continuous attachment of one or two men from any available source during a current campaign, or the formation of a new unit tailored to support the battle group. Each of these proposals would appear to have some merit. However, when tested in field exercises, the temporary detail of a few men to a battle group from the division's CA platoon was unsuccessful. The personnel detailed were not sufficiently acquainted with the immediate situation of the battle group and their loss to the platoon greatly reduced its ability to perform its primary mission of providing overall support for the division.

The attachment of CA advisors to battle groups was also tried and found to be satisfactory only where operations were relatively simple. This cannot be considered a permanent solution to the support problem.

While no CA units specifically

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CA utilizes local authorities like this Burgermeister to perform a wide variety of administrative and control functions.

designed for battle group support have yet been authorized or tested, this would seem to be a fruitful field for thought and experimentation.

Another means of support for the battle group might be to provide a self-sufficient unit consisting of a CA officer (MOS 8104) and a combination driver-clerk. Specialist personnel in the form of functional teams could then be made available as needed, in the same manner as is now prescribed for larger CA units.

Relationship to Supported Units

The personnel of CA platoons must be combat trained and must possess the highest character and integrity. Both the combat commander and the Nation depend upon them to implement our national policies with reference to civilians in the areas of our operations. They lay the foundation stones upon which our future relationships with the combatant nation rest. They are the commander's primary contact with civilian leaders and the government.

The relationship between the CA unit and the supported combat unit must be close and constant. A sense of cooperation and teamwork must prevail. This can best be developed by the continued attachment of the same CA unit. The personal actions of the combat commander and his troops, as well as those of CA personnel, shape our relationship with the civilian population. The inhabitants of an area closely watch the actions of our troops. In this vital field, the CA unit is our best means of achieving effective contact between the commander and the civilian community.

In both offensive and defensive actions, the battle group can be aided by a favorable attitude among the civilians in its area. Such an attitude will not occur by chance, but must be developed by planning and hard work on the part of the CA officer and his unit. It will require the strong and willing backing of the CA officer by the combat commander.

In some situations, with CA assistance the local area can provide needed facilities, labor, equipment and supplies. And, where conditions permit, local labor sources can often be used for engineer tasks such as repair of roads, bridges or communication systems.

Training for CA Support

Active Army CA units (a part of STRAC), are trained at Fort Gordon, Georgia, where much of the instruction is directed toward the handling and control of displaced persons and refugees. All of the instruction stresses that the primary purpose of CA is to support the combat commander during military operations and that, while occupational duties are important, the first consideration must be winning the war.

Practical aspects of CA activities are taught at the Army War College, the Armed Forces Staff College, the Command and General Staff College and at the United States Army Infantry School and other branch schools. Participation in Army maneuvers, CPXs and logistical exercises provides valuable CA training and orientation for both active Army CA units and combat units.

The CA groups and companies of the USAR receive training in CA support of the division. Field training exercises provide the vehicle for this instruction. Under consideration for the future is the attachment of CA companies to National Guard and USAR divisions for annual unit training. Such attachments would add realism to the training of CA units and permit the further familiarization of division and battle group personnel with their responsibilities for Civil Affairs. From such experience the CA support of the Infantry battle group may be further developed.

Civil Affairs is not a new field in our Army. Actually, it is as old as warfare itself. But the importance of its function is not always recognized or understood by the combat commander—particularly at battle group level.

Trained CA units are ready to perform their mission. It is important that you learn to use them now. You will need them in your future combat operations.

Our country calls not for the life of ease, but for the life of strenuous endeavor. The twentieth century looms before us big with the fate of many nations. If we stand idly by, if we seek merely swollen, slothful ease, and ignoble peace, if we shrink from the hard contests where men must win at hazard of their lives and at the risk of all they hold dear, then the bolder and stronger peoples will pass us by and will win for themselves the domination of the world. Let us therefore boldly face the life of strife, resolute to do our duty well and manfully; resolute to uphold righteousness by deed and word; resolute to be both honest and brave, to serve high ideals, yet to use practical methods.

President Theodore Roosevelt

Regardless of the sophisticated weapons systems and the varied mobility of the modern army, the ultimate role of the ground combat soldier is to close with the enemy in the . . .

ASSAULT!

By Maj Thomas H. Jones

THE ultimate test, the final challenge of the soldier in combat is the assault. It has been thus throughout military history, though techniques have changed considerably. The ancient Greeks assaulted with the phalanx, a compact body sixteen men deep and armed with 21-foot pikes. The Roman legion employed three lines of maniples, or companies, with combat-tested veterans in the last line because it took men of proven courage to join the fight after observing the slaughter which occurred in the first and second maniples. Gustafus Adolphus wisely incorporated the musket into tactical formations, employing six ranks of musketeers, which closed into three to fire.

As the range and power of weapons have increased, assault formations accordingly have become more widely dispersed. Killing has been done at greater and greater distances with more and more effectiveness. Certainly hand-to-hand combat in ancient days produced fantastic numbers of casualties, but this was due principally to merciless pursuit and the lack of fires to cover withdrawal. In the battle of Cynoscephalae, the Romans under Flaminius suffered seven hundred killed; the opposing army of Philip of Macedon lost eighty thousand. Marius, after the

battle of Aix, surprised the Teutons from behind, killing one hundred thousand and losing only three hundred. At Cannae it was the Romans' turn to die. Hannibal virtually annihilated a splendid Roman army of eighty-seven thousand men, while losing barely six thousand.

However, the proportionately fewer casualties of close combat in modern times does not lessen the conclusiveness or importance of the assault. This critical phase of the attack will always represent the final, decisive act in accomplishing the mission of armed forces—the destruction of the enemy and the seizure of the ground he holds.

Nor is the dismounted assault likely to become obsolete. As Army Chief of Staff, Gen Lyman L. Lemnitzer states, "It is true that the Infantryman no longer walks everywhere he goes, but even in this age of wheels and tracks we must rely in the last analysis on the individual mobility of the foot soldier."[1]

Demands on the assaulting soldier are greater today than ever. When men fought shoulder to shoulder, rank behind rank, they sustained, encouraged and supported one another. But as the man and the unit stand more and more isolated amidst the confusion, complexity and horror of battle, the test of courage and character becomes greater.

All footnotes will be found at the end of this article.

War of 1812. Assaults were massed formations.

For all its importance, the assault is probably the least understood of all the phases of attack. A sense of order and system pervades the mind when we think of assembly areas, attack positions, supporting fires and maneuver. Even in fluid operations, when minimum control measures are used and mission-type orders are issued, it is easy to see an orderly pattern of operations.

But the assault is something different. Maneuver during the assault consists of moving straight into the face of a very real and personal foe. Orders are simple: close with and destroy the enemy! Even combat-experienced soldiers are wary—no matter how often they go through it—for the infinite combinations of the enemy, the positions he occupies and the ground he holds determine the nature of each engagement.

It is difficult if not impossible to present a real concept of the assault to men who have never participated in one, for the true feeling, the violent mental impact of the assault, comes only by personal experience in combat. However, in an effort to visualize the assault more clearly, we shall look at what soldiers who have experienced this phase of combat have to say about it. Men who have survived the assault describe it thus:

"*When daylight came the men moved out, Lieutenant Wilson out in front, leading. Near the objective an enemy bullet struck his arm, knocking him to the ground. He got up and went on. Another bullet struck him in the arm or chest.*

"*'That one bit,' he said, continuing. A second or two later, an-*

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other bullet struck him in the forehead and killed him.

"Sfc Fred Sugua took charge and was in turn killed within a few minutes. Eventually, the remaining men succeeded in driving the Chinese out of the perimeter."[2]

"On plodded the Infantry—many of them half dazed by the concussion of the German counter-barrage which had already blown many gaps in the lines and left hundreds of limp bodies strewn along the way, some with helmets bashed through the skulls, some doubled up, with blood still dripping from their ears and mouths."[3]

"Our battalion fixes bayonets and charges. Through the tall grass run trip wires. With our own feet we set off thousands of mines—legs and arms turning over in the air and flopping heavily beside us. Terrified shrieking men—running to the rear —one legless man going hand over hand through the tall grass—are there any normal minds left?"[4]

"All my squad leaders were either on line or in front of their men. The wounded were either crawling down the hill, or firing from the position where they had fallen. The walking wounded, of their own accord, continued to attack. Some men were hit as many as three times before they left the hill."[5]

Yes, the assault is a dangerous business and one which we must thoroughly understand—both to minimize danger and to maximize success. For if the assault fails, all has failed.

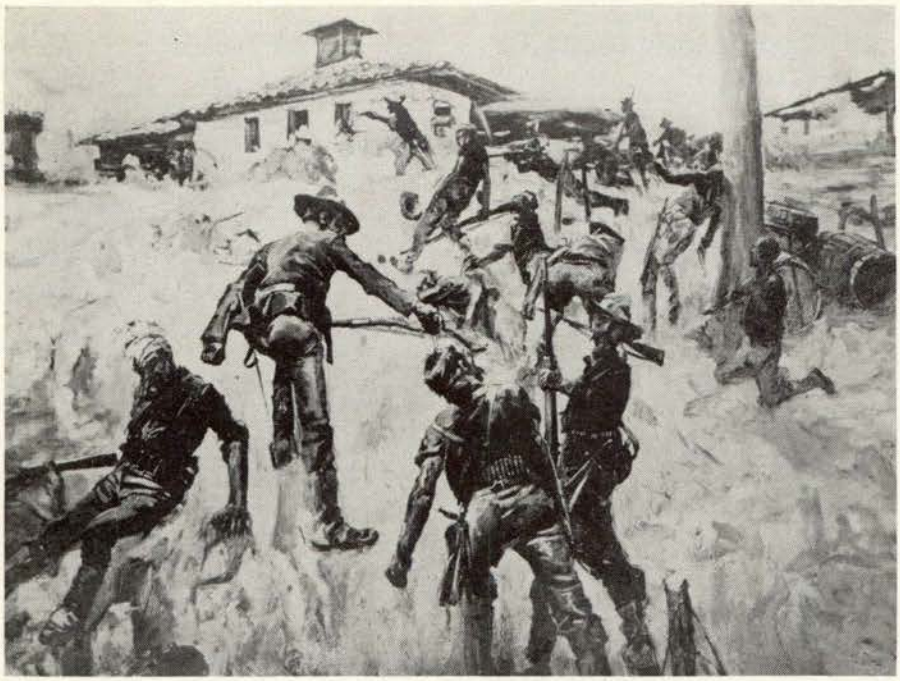
Our basic assault techniques are not particularly controversial. We strive to deploy fully at the last possible moment, when enemy dispositions are sufficiently clear to allow our assaulting troops to concentrate their full firepower on the enemy. Normally we move into the assault in a line of skirmishers. The distance between men is wide enough to avoid presenting a good target, but close enough to permit the concentration of all their firepower. We strive to follow supporting fires closely—even at the risk of a few casualties—for this contributes to success and in the long run results in fewer killed or wounded. If at all possible, we avoid movement by rushes or by creeping and crawling. Though moving in this manner may sometimes be necessary or desirable, more often it causes our assault to lose momentum, for the earth feels good and there is reluctance to leave its protection when enemy shells await.

We recognize the need for constant fire by an assaulting unit, and we teach battle drill for use when a stubborn enemy position defies supporting and assaulting fires. However, our basic aim is to get the men to move and keep moving until the enemy position is ours and its occupants have been killed or captured. But even the best conceived and conducted assault is doomed unless the higher commander gives it a reasonable chance of success through the proper application of supporting fires, the exploitation of enemy weakness and commitment of adequate assault strength.

While the assault is not as thoroughly covered in military literature as the strategy and tactics which lead to it, nevertheless there are sufficient examples to demonstrate the salient principles and techniques which produce success and the errors which result in failure. Let's examine a few statements which soldiers of the past have made about the assault and discuss some of the lessons they illustrate:

"He got his soldiers across the canal and formed them into two ranks in the murk of the fading day, and it seemed to him that the only possible chance was to keep going without a halt. If his men ever stopped to fire, they were lost. . . . He issued his orders accordingly, his rookies fixed bayonets and forward they went. As they came up through all the human debris of all the previous charges the unwounded men on the ground reached up and tried to hold them back, telling them it was no use to go on. . . . Just then a great sweep of fire lit up the entire

Civil War. Shoulder to shoulder assaults were still massed . . . and bloody.



Spanish American War. Automatic fire first supported the assault.

length of the stone wall (the defenders' position) and farther up the hill and far off to the right and left there were incessant quick flashes from the rebel cannon, and the staff officer was shot down and so was nearly half the division. The men staggered to a halt—as close to the wall . . . as anyone got that day, and it simply was not in them or in any men to get any closer!"[6]

The commander who ordered successive assaults against such a position blundered, but let us not be too hard on him. It is an easy matter to review results and criticize. It is a far different matter to be in the field and know that *one more,* and then *just one more* assault will carry the enemy position and justify the dead from so many attempts. The really great commanders, and there are few, are those whose judgment correctly indicates when to stop and try something else, and when to continue.

This example points out the necessity for continuous movement, for even though the last assault failed, it came closer to success than the previous tries against the Confederate-held stone wall. In former attempts the troops had stopped to fire, and they were torn to bits as they did so. It is also clear in this case that supporting fires were insufficient to weaken the enemy. Consequently the assaulting units faced an insurmountable preponderance of force.

A report of a Korean War action provides a more recent example of the need to keep moving and keep shooting.

"The company assaulted at a steady walk, firing continually. Every time a Chinese soldier would lift his head he would be immediately hit, so heavy and accurate was the assault fire. Lieutenant Hagan said that 'our people were being hit all the way' as they marched through the enemy mortar impact area, but the assaulters continued without pause, realizing that to halt would be suicidal. The only hope for success was to press the attack, and this the company resolutely did."[7]

* * *

When the strength of our assault causes the enemy to panic and run from his position, it may be profitable to continue the assault beyond the objective.

"The action was extremely hot for between one and two hours; the flanking parties had carried their points with great ease, when the front pressed on their breastwork with an ardor and a patience beyond expectation. . . . The fire was so extremely hot . . . that the enemy at once deserted their covers and ran; and in about five minutes their whole camp was in the utmost confusion and disorder, all their battalions were broken in pieces and fled most precipitately; at which instant our whole army pressed after with redoubled ardor, pursued them for a mile, made considerable slaughter among them, and took many prisoners."[8]

This account of the Battle of Bennington in our Revolutionary War portrays the value of unhesitating and relentless pursuit, of rapid continuation of the assault until the enemy is destroyed or the direct limit of advance is reached. To give the foe respite, to allow him to live to kill some other day, is senseless.

* * *

"The valley was soon alive with a multitude of cheering, struggling men advancing in the face of terrific volleys, some halting to fire, some rushing forward, all with eyes intently fixed upon the Spanish blockhouse and entrenchments crowning San Juan Hill."[9]

Here we see movement *and* fire by assaulting troops. Our own fire must cause enemy fire to be ineffective. The volume and accuracy of our fire are all-important. Skill in delivery of assault fire, and rapid changing of clips and magazines, are imperative. Somewhat as an aside, let us beware of glorified accounts of assault describing "cheering men . . . rushing forward, all with eyes intently fixed upon the Spanish blockhouse." Men move forward basically because of discipline or pride, or because it's as good a direction to move in as any. Of course, their eyes should be fixed on their specific objective.

* * *

"All the way up the hill, rifle grenadiers of the first and third platoons fired grenades at the German machinegun positions. . . . The riflemen also opened up, and the Germans replied with hand grenades and machinegun fire. Unable to see specific targets, the men of Company C directed area fire at the crest. When Company C reached the top of Hill 109 . . . the enemy withdrew down the northeast slope."[10]

Often, assaulting troops will experience difficulty in locating definite targets. Inexperienced men tend to withhold fire under these circumstances—usually a fatal mistake. Each man must deliver steady fire at likely enemy positions, or even at completely unsuspicious ground in the area of advance. Provided fire is continuous, the enemy often won't know whether you see him or not, and he will either stay down or fire hurriedly and inaccurately.

* * *

"The flamethrower teams and Mallard's third platoon moved out at once. An enemy bullet pierced the pressure tank on one flamethrower, making it useless. The other two operators, however, succeeded in reaching the area controlled by North Korean grenadiers. Crawling almost to the crest of the ridge, the two operators pointed the flamethrower nozzles up and discharged the tanks so that the burning jelly fell on the reverse slope of the ridge, forcing the enemy out."[11]

Flamethrowers are invaluable weapons in the assault, particularly against a well dug-in enemy.[12] Need must be anticipated, and operators and flamethrowers must be readied for commitment. In this example, an unusual technique of indirect flamethrower fire was used—but it worked.

* * *

Another frequently useful item in the assault is the grenade.

"The lieutenant hurled a grenade at the emplacement. A Red soldier attempted to pick it up to throw it back when a squad leader killed him. Another grenade silenced the weapon . . . . During this assault, the CCF laid down a mortar barrage and opened up with a shower of hand grenades from the reverse slope . . . . The Americans countered with a grenade barrage of their own. The platoon tossed all the grenades they carried, and when the supply was exhausted others were taken from the enemy dead."[13]

"The riflemen were now doing the job that only they could do—closing with the enemy, destroying him by personal encounter. They had all been well supplied with grenades. Companies A and C were now into the edges of their first objectives and were using white phosphorus and fragmentation grenades in the trenches and pillboxes. The Chinese resisted stubbornly and gave no breathing space to the riflemen. If fire was stopped on any embrasure, either a grenade came out or a weapon appeared and opened fire."[14]

"The squads, throwing grenades into the bunker, killed eleven Chinese, checked the bunker, then moved past it. . . . The trenches joined another bunker about fifteen yards away. The two squads began throwing grenades at the second bunker. At this point, the third squad maneuvered to the rear of the bunker. The enemy tried to get out the rear exit, but seeing the men on guard, dove back inside. Lieutenant Johnson killed them with a grenade thrown into the bunker."[15]

The last example points up the advantages of envelopment, where this is possible. The assault line must frequently break down into small teams, usually squads, each cracking a stubborn point in the enemy defense.

Also to be considered is the use of improvised explosive charges in assaults against bunker-fortified areas. Satchel charges, pole charges, "beehives" and other similar devices may be used to good effect.

* * *

"Throughout past operations, the tank unit commanders complained that the Infantry units would not permit the tanks to fire as close to the attacking Infantry as the tank

World War I. Assaults followed the linear pattern of the past.

commander would have liked. . . . When the tanks were forced to lift their fires, they sat helplessly and watched friendly Infantry receive machinegun and grenade casualties from enemy positions which could have been taken under tank fire at no danger to friendly Infantry."[16]

Obviously, the lesson here is to get as much help as possible for the longest possible time. Recoilless rifles as well as tanks can fire with great accuracy only a few yards forward of assaulting troops. One man in each assaulting platoon could have a colored marking panel on his back, so the position of friendly troops would be clearly visible to supporting tanks and other weapons. Also, colored smoke grenades can be used to mark areas where tank and other direct supporting fire is desired.

* * *

"As the men investigated the enemy trench, Eakes saw a Chinese soldier lying on his back, his eyes closed, his hands grasping an automatic rifle.

" 'Is he dead?' Eakes said.

" 'Yeah, he's dead,' Conway said.

"The Chinese started to sit up, made a move to fire.

" 'He isn't dead,' Eakes said and shot him."[17]

This trick is as old as warfare itself. Be suspicious of a "dead" body, and if in doubt, hit it with another round.

* * *

Sometimes things happen which make the assault go easier.

"McClenaghan, seeing a Chinese stick his head out of the bunker, had a ROK soldier coax the enemy out. Eight came out and surrendered and were joined by four from another position. Had they desired to do so, they could have defended for a long time."[18]

In another case a company had the job of cracking bunkers of the German Siegfried Line. Tiring of this casualty-producing task, a persuasive German-speaking American soldier picked up a captured phone and spoke to the troops in the unassaulted bunkers. He succeeded in convincing some of them that it was stupid to defend a lost cause, and they surrendered.

But in most cases the enemy can't be convinced. He has to be killed.

* * *

Perhaps the most important principle is one which has not been directly demonstrated but which pervades all the examples cited. It is simply this—*the contest between the assaulter and the defender is as much—if not more—a clash of wills as a clash of arms.* No great secret, perhaps, but a point that must be driven and driven hard into the mind of the Infantry soldier.

Will and superiority of spirit are vital factors in close combat. We have seen the great disparity in casualties between victor and vanquished in the ancient battles. This occurred when the will of one combatant was broken and it is as true today as it was then. The defender gives way more often and more readily to psychological impacts than he does to the physical impact of the assault.

Will and superior determination become evident in various ways. Noise, speed, resoluteness play a part in it.

"Across the open plain, shaken by the blast of many guns, there rose the high, unearthly keen of the rebel yell.

"That yell, 'that hellish yell,' a Michigan soldier called it—appears to have been an actual power in battle, worth many regiments to the Confederacy. . . .

"A spine-chilling thing, the rebel yell. Not for nothing did old Stonewall himself, grimmest of all America's soldiers, call it 'the sweetest music I ever heard.' "[19]

"The rebels who had broken the Michigan Regiment were coming up the hill. O'Rorke jumped off his horse, tossed the reins to his orderly, called out: 'This way, boys!' and ran down the slope toward the enemy, his men at his heels. . . . The men went in with unloaded weapons. They did not stop to fix bayonets, they did not even club their empty muskets: they simply ran straight at their foes, and the only weight their charge had was the weight of their running bodies. Perhaps the mere appearance of fresh troops was enough for the moment. The Confederates wavered and drew back. . . ."[20]

World War II. Marching fire was introduced into the assault.

"Yet the gallant Virginians marched steadily forward through the storm of shot and shell that burst upon their devoted ranks, with a gallantry that has never been surpassed. As they approached the ridge their lines were torn by musketry as by a deadly hail. Yet with unfaltering courage the brave fellows broke into the double quick, and with an irresistible charge broke into the Federal lines and drove everything before them. . . ."[21]

"The first platoon was brought up and charged the hill from the right side. Members of the platoon had fixed bayonets and charged the hill with assault fire, screaming and yell-

Korea. Assaults at times became an individual affair.

ing. . . . Two succeeding hills were taken in a similar manner. . . . In each action, when the charge was made with fixed bayonets and assault fire, most of the enemy would run."[22]

Colonel Ardant Du Picq, whose *Battle Studies* is probably the finest exposition on the importance of will in war, has written, "The moral impulse which animates the attacker is everything. The moral impulse lies in the perception by the enemy of the resolution which animates you."

Some of the points brought out in these extracts from history are worthy of particular emphasis. Complete and intelligent use of supporting fires, for just as long as possible, is of the utmost importance. It is criminal for weapons to remain idle when their fires could save lives and contribute to success. Proper physical conditioning (plus, of course, courage) enables the Infantryman to close with the enemy rapidly and aggressively—an essential of successful assault. The need for continuous fire by assaulting troops, even though no specific targets are apparent, is paramount to prevent well-aimed fire by the defender. Enemy defenses should be analyzed to determine the quantities of grenades, flamethrowers and demolitions required, and the need for these items must be balanced intelligently against the need for a light load for the assaulter.

Above all stands the necessity for strong leadership at squad and platoon level—leadership evidenced not only at the moment of the assault, but leadership which has engendered confidence, loyalty and esprit throughout the days, weeks and months preceding the action. It takes a special kind of man to inspire (or if necessary drive) other men to move toward what they may consider to be certain death or disablement. Experienced Infantrymen understand and are effective when leaders control the assault from behind. But there are times when squad, platoon, and even higher leaders must move in front of their men and say, "Follow Me!"

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[1]See "We Still May Walk," October 1957 *Infantry*.

[2]Capt Russell A. Gugeler, *Combat Actions in Korea*, Washington, Combat Forces Press, 1954.

[3]Thomas R. Cowenlock with Guy Murchie Jr., *Soldiers of Darkness*, Garden City, N. Y., Doubleday, Doran & Co., 1937.

[4]*Ibid.*

[5]Training Bulletin No. 8, 16 Nov 1951, Office, Chief of Army Field Forces.

[6]Bruce Catton, *Glory Road*, Garden City, N. Y., Doubleday & Co., 1952.

[7]Training Bulletin No. 3, 21 May 1953, Office, Chief of Army Field Forces.

[8]J. F. C. Fuller, *Decisive Battles of the U.S.A.*, London, Harper & Brothers, quoted *Moore's Diary*, Vol I, p. 480, extracted from Pennsylvania Evening Post, 4 Sept 1777.

[9]*Ibid.*

[10]Historical Division, *Small Unit Actions*, Washington, D. C., War Department, 4 Apr 1956.

[11]*Op. Cit.* Gugeler.

[12]See "Flame for the Infantry," July-September 1958 issue of *Infantry*.

[13]*Op. Cit.* TB No. 8, 1951.

[14]Training Bulletin No. 4, 24 May 1952, Office, Chief of Army Field Forces.

[15]*Ibid.*

[16]*Op. Cit.* TB No. 4, 1952.

[17]*Op. Cit.* TB No. 3, 1953.

[18]*Op. Cit.* TB No. 3, 1953.

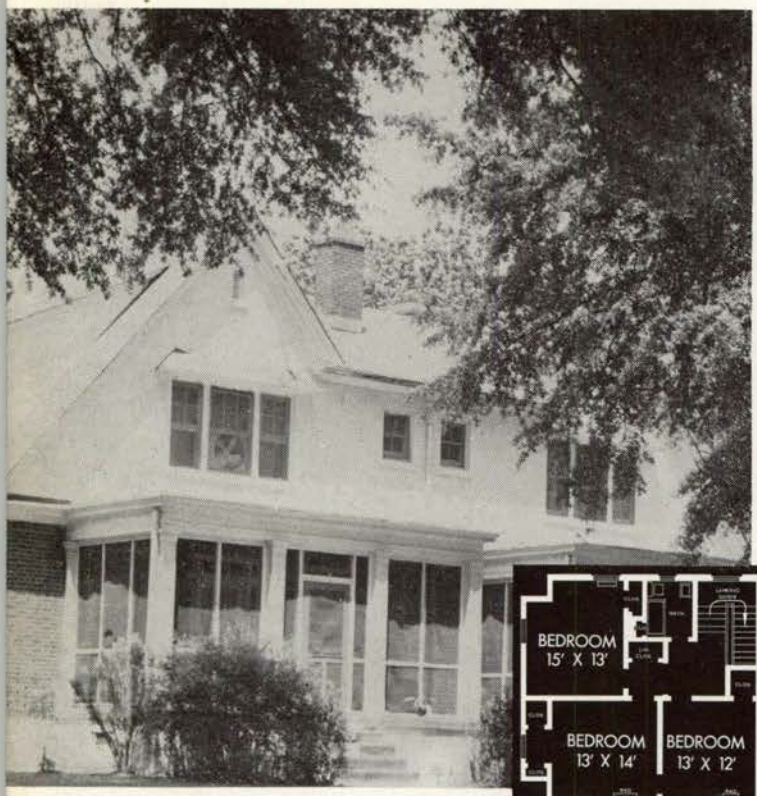
[19]*Op. Cit.* Catton.

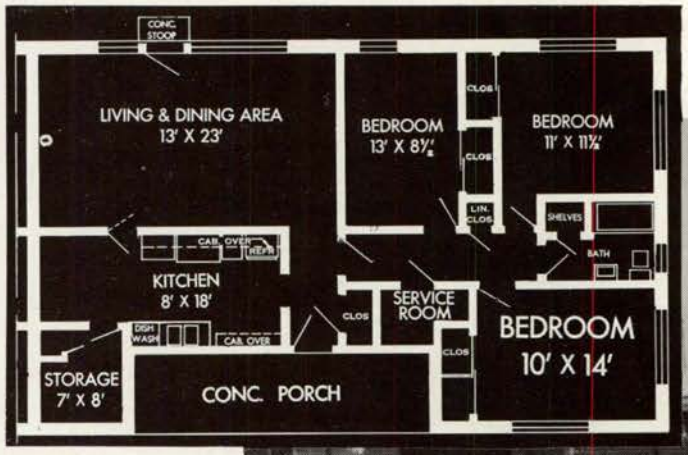
[20]*Op. Cit.* Catton.

[21]*Op. Cit.* Fuller.

[22]*Op. Cit.* TB No. 8, 1951.

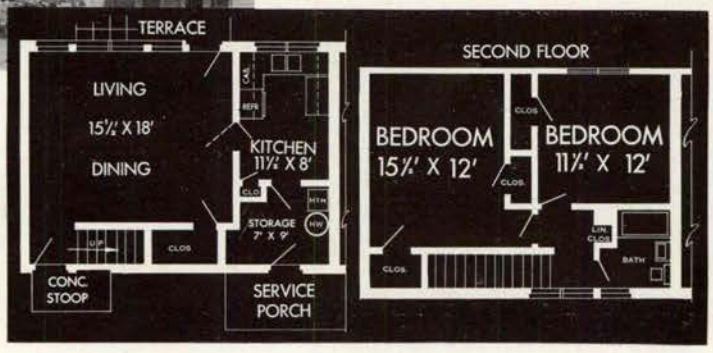
The Changing Face of
THE INFANTRY

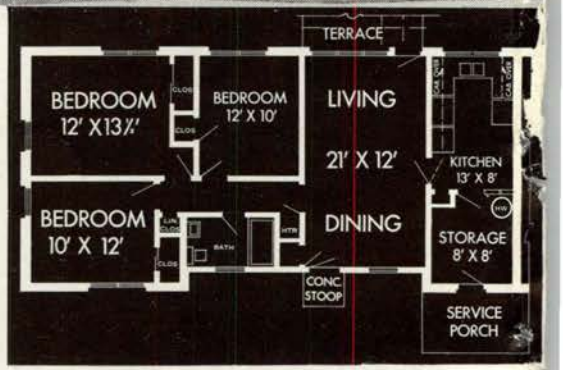




Above. Duplexes such as this are representative of some of the older quarters on the post. Of brick and frame construction, they are available to majors and lieutenant colonels.

Left. Junior officers with small families may be quartered in two-story four-unit apartments. One unit is shown here.



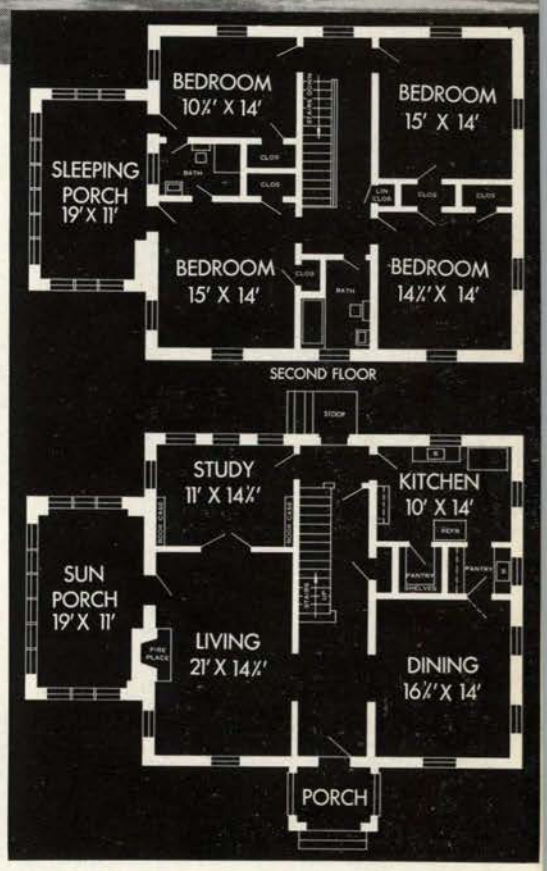


Above. Duplexes such as this make up the largest single group of quarters on the post. Authorized for company grade officers, they are found in Custer and Upatoi terraces.

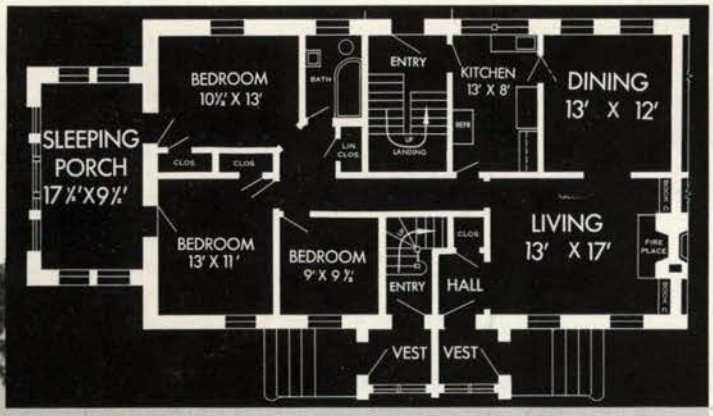
CENTER

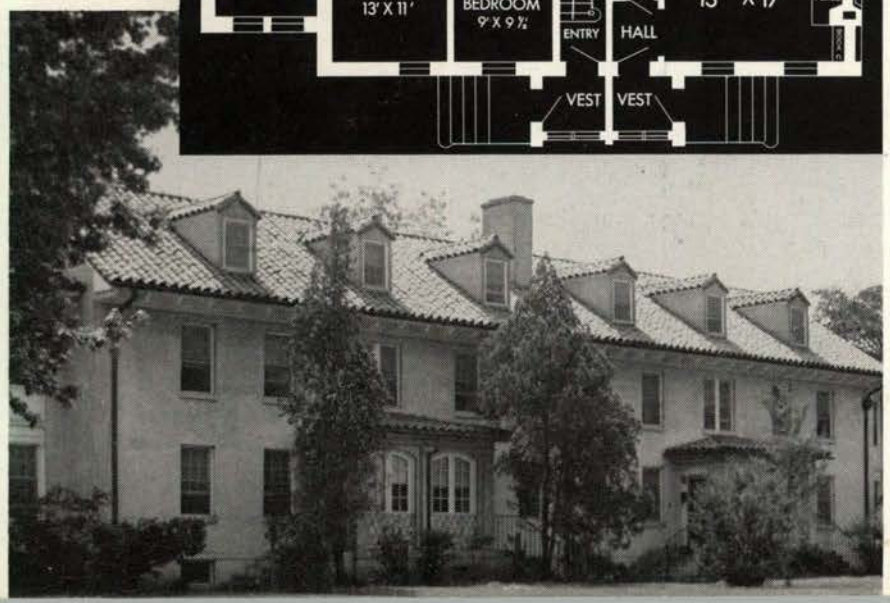
Most Infantry officers expect at least one tour at Fort Benning during their careers and information on housing is always useful. File these pages away for the day when those orders arrive. These quarters with scaled floor plans are representative of the bulk of on-post housing at the Infantry Center.

Above. In contrast to the older duplex on the left, the recently completed Capehart duplexes are fully air-conditioned and have automatic dishwashers. These quarters are intended for company grade officers and majors.



Above. Intended for general officers, colonels and lieutenant colonels, these single houses, built during the thirties, are very spacious by modern standards.





Left. Still called student apartments as a carryover from small-army days, these four-unit quarters now house lieutenant colonels, majors and captains on long-tour assignments. Each unit is on a single floor. All post quarters are furnished with a range and refrigerators.

The Soviet Officer Corps

JUST HOW GOOD ARE THE OFFICERS WHO COMMAND THE RED ARMY?

By Maj Philip S. Grant

In some thirty years, the Soviet Union has risen meteorically from the ranks of the third-rate powers to a position of almost absolute authority and domination over a great portion of the world. A large measure of credit for this change must be given to the Red Army. Without this force, backed by a well nigh inexhaustible pool of manpower, it is doubtful that the Soviet nation as it now exists could have been built. To understand this military machine and to evaluate its potentialities, it is necessary to investigate the corps of officers which directs it. Just how good is this officer corps? This is a vital question.

In my opinion, we can evaluate this professional body by examining the broad sources from which the Soviet officers have been drawn, the educational background of these officers and certain characteristics of the Russian people. Quite naturally, each of these areas must be considered in light of the impact which Communist ideology has on every facet of Soviet life.

The bulk of Red Army officers has come from three main sources. The first of these is that group which took part in the revolution and grew with the Communist cause. Initially, this group consisted of a combination of hardbitten revolutionaries with meager educational background, and professional soldiers who were formerly leaders at various levels in the Czar's Imperial Army. These latter men gave a degree of professional competence to the new army. The revolutionaries were generally tough, vicious men who achieved their positions by violence, terror and a measure of individual military ability. Some were corporals one day and regimental commanders the next. For the most part they were of peasant stock and generally displayed no academic brilliance. However, they did display great loyalty and singleness of purpose.

During the revolution and the civil war which followed, many of these men were killed. Others have been disposed of since that time. The purges of 1936 removed many who were competent militarily, but who had aroused the suspicions of the Marxist leaders. Only a few of these original Red Army officers are left, but these few form a firm core of die-hard Communists. These men hold the important command positions within the army today. It would be folly not to realize that these leaders are eminently capable in the art of war. These are the men who commanded the regiments, divisions, armies and even fronts in World War II. Those who survived the war, politically and professionally, comprise this firm core of which I speak.

The second broad category of officers is made up of battle-tested and battle-trained junior officers and former noncommissioned officers who fought with the Soviet Army in World War II. These are generally men who proved themselves to be the best combat leaders. The Red Army hierarchy saw to it that only the best were retained. These men were not hamstrung by Party affiliations at the time; their combat ability has been tested; and although they certainly must be politically well-schooled by now, they form a very firm base of battle-bred leaders on which to build an effective army. The men who make up this group form the major part of the field-grade element in the Soviet Army today. They did not undergo extensive training in the art of war prior to actual participation against the Germans. Most of what they learned was learned under fire and under the most extreme conditions. It might be said that this group consists of the natural soldiers.

The Soviet military training system has refined these veterans with education, not only in the military arts, but also in other fields which I shall discuss later. These officers contribute strength to the Soviet officer corps. However, in this segment of the corps there may be a hidden weakness, for many of these men are soldiers first and Communists second. They place high value on military talent and, although they have been trained in Communist ideology, their reaction to the removal of someone such as Marshal Zhukov must be somewhat different from that of the full-fledged Communist. These officers fought on foreign soil and are bound to be aware that all the statements made by their political leaders about the superiority of the Soviet standard of living are not necessarily true. It requires no highly educated man to recognize such things. This group, generally speaking, because of its wartime background and contact with foreign lands, might well question Communist slogans and ideas, and pronouncements about Soviet superiority.

The other major segment of the corps consists of the new blood—young men graduated from the numerous academies and officer candidate schools under the Soviet mili-

The Soviet officer who was battle-trained in World War II forms the broad base of the corps. The older of these men are products of the revolution, the younger of the war itself.

Each generation has its own background and must be regarded in a separate light.

tary education system. Each combat arm and technical service operates a number of these schools, which correspond to our officer candidate schools. For example, the Infantry arm has upwards of 20. Candidates is this part of the education system undergo a tough two to three years of training. Instruction is designed to produce physically tough, competent junior leaders for a particular branch. The candidates are fully schooled in both political and military theory. This theory is put into practice during brief periods of service with units on maneuvers, so that when these men graduate they are fully aware of the practical aspects of their profession.

Half of the officer candidates—actually the more valuable—are graduates of the Suvorov Schools. These are academic institutions established in 1943 to lay the foundation for an officer caste and to provide a means of caring for hundreds of thousands of war orphans. They are good examples of the effort being made by the USSR to develop a first-class military force.

Students enter the Suvorov schools at the age of eight or nine and are taught both academic and military subjects. They lead a strict military life for ten years, after which they are sent to one of the service schools for specialized officer candidate training. Such an education, begun in the formative years as it is, tends to produce highly proficient soldiers.

Today there are about 50 Suvorov schools training orphans, sons of high government dignitaries and sons of military personnel. Every effort is made to treat the students as an elite group. They wear special uniforms and insignia. Quite naturally, they are taught Communist ideology and are thoroughly impressed with the importance of their position in the Communist state. It is certainly a fair evaluation to state that they make a well-trained and indoctrinated group of Communist soldier-officers.

Other sources of officer candidate material for the various branch schools are men who are recommended by the Party and outstanding enlisted men who have finished their compulsory tour of active duty.

As already mentioned, the candidates in these schools receive a thorough and extensive military education. The officer instructors who staff the schools are highly competent and specially selected. Although the students are worked hard, they receive special treatment. Their quarters, rations and clothing place them above the enlisted ranks and reinforce the concept that they are moving toward a better life.

This is indeed true, for throughout the educational system and in actual practice a distinct effort is made to place officers on a plane apart from and above enlisted men and civilians. The officer has better pay, better food, better living conditions and better clothing. Even within the officer corps, a strict class consciousness exists. The captain is superior to the lieutenant and so on up the line. In short, the "caste system" is officially fostered, strictly adhered to and well established.

These constitute the principal sources from which the Soviets have drawn and are drawing their officer corps. The corps today is distinctly different from the group of elected officers of widely varying experience, education and ability who led the Red Army during and after the revolution.

The Soviets have made great strides in setting up a comprehensive system for schooling the officers of the Red Army. Each branch and service has an advanced school for its own officers, generally the same as our branch schools. However, there are two principal differences between their schools and ours. Whereas our courses extend a maximum of ten months, the courses for the Soviet officers run from two to three years. The second difference is that, on completion of the course, considerable effort is made to place graduates in positions where they may make maximum use of what they have studied.

The next step in Soviet officer education is the Frunze Military Academy. The Frunze Academy may be compared to our Command and General Staff College. It prepares officers for work on division, corps and army staffs. Successful completion of Government examinations is required both for admission and for graduation. The program of instruction is worthy of note (Figure 1). It is obvious from the amount of time devoted to educational subjects that this school assists in the development of officers who will carry into foreign countries

the Party's political banner as well as the military banner.

Finally, there is the Voroshilov Higher Military Academy. This school compares with our United States Army War College. Students are hand-picked and individually confirmed by the Central Committee of the Communist Party. The curriculum is similar to that of the Frunze Military Academy, except that it deals with higher levels. It is interesting to observe that this course of instruction runs for two years and that, in addition to military subjects, foreign language study continues. Senior field-grade officers attend this school. A one-year refresher course is conducted at this academy for general officers. The officer-student attending this school, as well as the Frunze Academy, can also expect to put into practice what he has learned, immediately after graduation.

These three courses make up the general pattern of higher schooling for the Soviet officer corps, but the training system extends much further than just this formal schooling. As in any army, not all officers measure up mentally for selection for school training. In an effort to improve the men who don't, great stress is placed on correspondence courses and reduced versions of the regular schools. Since promotion and retention in the Soviet Army depend on ability, all officers constantly endeavor to keep pace and many avail themselves of these opportunities.

It should be emphasized that the Soviets feel that even though warfare

SUBJECT	TIME
Tactical Training	30%
Political Training	20%
Military History	20%
Foreign Languages	15%
Staff Functions	10%
Miscellaneous	5%

Figure 1. Frunze Academy program of instruction.

Officer candidates put theory into practice during periods of service with units. Graduates of advanced schools are assigned where they can apply what they have learned.

in the future may see the use of nuclear weapons against civil populations and industry, the task of destroying the enemy's land force will remain the principal one, and this task will fall to the army. It may or may not require the use of tactical nuclear weapons.

The first actual military training effort that had to do with nuclear warfare took place in 1953. Since that time, much work has been done in training the Soviet officer in nuclear warfare. The first manuals dealing with nuclear warfare were issued in 1954. In this field of training, the Soviets stress the need for mobility and dispersion, while pointing out that these tactics present excellent chances for decisive action on the part of unit leaders. The offensive attitude is also stressed. In the February 1955 issue of "Military Thought," Marshall Romistrov stated, "In future wars . . . it is very important that military commanders at all levels and ranks be able to make audacious and bold decisions." Thus we see again the need felt by high Soviet military commanders for men with initiative.

Soviet atomic training places emphasis on the fact that an extremely powerful weapon is now available to field commanders, but in the Soviet view, this weapon has not lessened the requirement for a large land army. The Soviet officer is taught that nuclear weapons require refinements and improvements in techniques already practiced, but will not remove the necessity of destroying the enemy's armed forces. From the Soviet officer's point of view, the advent of the tactical nuclear weapon also demands increased skill and initiative on the part of field commanders.

Briefly, this is the general pattern of education and training of the Red Army officer corps, but the study of this group is not complete without a full consideration of the Russian character and how communism conditions Ivan's thoughts and actions. The Russian people are made up of many different ethnic groups. Despite the apparently excellent system of development of the Soviet officer corps, it is in this area that the greatest chink in the Soviet armor may be found. These groups differ in background, language (over 100 of them), traditions and customs, and racial characteristics. Nevertheless there are certain traits which are generally common to all.

Traditionally and factually, the Russian common man has always led a rigorous and difficult life. He has for centuries been under the heel of some monarch or dictator. He has always scraped for his existence. He has always been downtrodden. As a result of this, he is a generally moody and fatalistic individual. He does not expect a great deal from life and, therefore, his initiative is

Tough, well-disciplined noncommissioned officers are a good source of officer material.

weak. On the other hand, his lack of things which make life simpler and easier has accustomed him to subsisting on the bare essentials. This has made him physically tough and better prepares him for the rigorous life of a combat soldier. In addition, since he has lived the greatest part of his life close to the soil, he is better adapted to the combat requirements of patrolling, camouflage, movement over difficult terrain and improvisation. It might be proper to term the American soldier a "city boy" possessed of a minimum of field lore, and to term the Russian a "country boy" with an extensive background of field lore.

Having been led most of his life, it is natural for the Russian to accept authority with little question. Having been subjected to severe demands and few rewards, he is used to strict and inflexible discipline. At the same time, this environment has stifled his ability to express himself or to cope with situations for which he has no previous experience as a guide. His environment also tends to give him an inbred fear of, rather than a respect for, authority.

The Russian boy, when he was growing up, never owned a Model-T Ford. He never tinkered with a "hot-rod." For the most part, his mechanical know-how is limited to what he has been taught by the Army. It is only fair to state, however, that he proved himself quite capable of employing his relatively simple, but effective, equipment against the Germans.

All of this might be summed up by saying that the Russian is a well-disciplined, physically hard, fatalistic, herd-bound man. These characteristics, coupled with his follower type of disposition, make him an excellent soldier in the crowd. They do not necessarily fit him with leadership qualities so necessary in officers. The experiences of World War II point up the dearth of individual initiative in the Soviet officer corps, and there are distinct efforts being made to overcome the lack of this essential quality. The very system, however, which recognizes this deficiency depends a great deal on the lack of this quality in the individuals who serve the system. The contradiction is important to our analysis. Initiative calls for the soldier who has a new idea to advance it, even in the face of opposition or apathy. Yet the Soviet officer has been brought up in a society which scorns deviationists. It would appear that a man encouraged to be conformist throughout his formative years would not suddenly develop a great amount of initiative. This effect of the Communist system on the officer corps is profound.

As has been pointed out, each course of instruction in the military school system includes a good measure of political instruction. Each unit in the Soviet Army has its political officer. This man is greatly feared, and rightly so, for he reports on the general attitude towards political training within each organization through special political channels. He also reports on the political reliability of commanders. This method of requiring one man to inform on another has done much to insure the success of communism. It is an effective control, but it also has bred distrust and fear to such an extent that it tends to stifle initiative even further than the national character of the people already has stifled it. Truly professional soldiers must tremble to witness the removal of Zhukov, the hero of the Soviet people. The Army on one hand seeks to develop thinking leaders. On the other hand the Party tends to stifle any such desire in young men who want to improve their position and remain in favor.

Another apparent contradiction—and quite possibly what might be a significant weakness—lies in the educational system. The Army is striving to improve the educational background of its leaders, yet it is obvious that the more a man is trained to think logically and to seek new knowledge and ideas, the more his intellect

Maj Philip S. Grant graduated from the United States Military Academy in 1944. He was battalion S2 and company executive officer with the 66th Infantry in Europe during World War II. In 1946 he became Assistant Adjutant of the School Troops at Fort Benning. Afterwards he served as regimental S1 and company commander with the 7th Infantry. Later he joined the G2 Section of the 7th Army in Germany. A graduate of the Infantry School's Advanced Course and the Command and General Staff College, Major Grant is now executive officer of the 2d Battle Group, 4th Cavalry, in Korea.

demands that he find *truth*. This fostering of a better educational pattern for the officer corps may in the end produce more difficulties than benefits for the Communist system. Communism is built on lies and half-truths. It flourishes best in the uneducated and in those who have no desire to seek the truth. In the attempt to improve the officer corps the Soviets may well be planting the seeds of communism's destruction.

It is impossible, of course, to predict what the outcome of this educational process will be. To be sure, it has improved the military competence of the Army and will continue to do so. Recent developments would seem to indicate that the Soviet leaders are well aware of the tremendous importance of the Army in maintaining their own positions. The relief of Marshal Zhukov bears this out.

There are two additional points of significance which must be mentioned. The Russian people for centuries have had a deeply rooted religious conviction. Religion has been played down and oppressed by communism, but churches still exist and in the mass of the people there is an inherent belief in God. Going hand-in-hand with this belief is a tremendous love of their homeland. Though they have been oppressed and roughly treated over the years, they do not hesitate to rise to the defense of their homeland. This fact has been amply confirmed by history, as both Napoleon and Adolf Hitler could testify. Were it possible to convince them that they were being liberated from the yoke of communism, the situation might prove different. Currently, the people are told that they are preparing to defend their country against American imperialism, and this propaganda tends to make the Army a loyal and formidable force, since the officer corps is subjected to the same hate-campaign as are the people.

In general, it can be said that the Red Army officer supports the Communist system for several reasons. The constant political indoctrination tends to make him believe that he is preparing to defend his homeland and that communism is a superior form of government. He is afforded extra privileges and plays an authoritative role in the supposedly classless society. He knows nothing now —or at best only a limited amount— of the other forms of government and standards of living throughout the world. But there is some question whether he will continue to support the system when his increased education leads him to seek the truth.

It would appear that the Soviet officer corps over-all is excellent. It is well-educated militarily, well-indoctrinated politically, and it is proud and confident. Its sources of weakness derive from natural characteristics, one of which is lack of initiative. As this obstacle is overcome to secure the attendant military benefits, the ability of the Party to control the army may be reduced. Without full support of the military forces, the Party is in jeopardy. One has but to read the daily papers to see the maneuvering done to retain that control.

It is conceivable that with further development, the Soviet officer corps might rise to full power within the Moscow arena. It is a strong, loyal body of competent military men which demands our respect and continued study.

The Russian is an excellent soldier in the crowd, but may not have the originality and conviction which the best leadership demands.

TITLES FOR FURTHER READING

The Red Army Today, by Louis B. Ely (The Military Service Publishing Company, 1949)

Soviet Military Doctrine, by Raymond L. Garthoff (The Rand Corporation, 1953)

Soviet Arms and Soviet Power, by Augustin Guillaume (Infantry Journal Press, 1949)

The Red Army, by B. H. Liddell-Hart (Harcourt, Brace & Company, 1956)

Soviet Strategy in the Nuclear Age, by Raymond L. Garthoff (F. A. Praeger Company, 1958)

War and the Soviet Union, by Herbert S. Dinerstein (F. A. Praeger Company, 1959)

Communication — in the

By Capt Clarance J. Schlafer

THE LAST issue of *Infantry* discussed the changes in organization and equipment which have been made in the Infantry division after two years of testing and evaluating ROCID.[1] These changes have either required or permitted modifications to be made in the communication systems of the Infantry battle group. Field experience has demonstrated that the communication concepts developed under ROCID are basically sound. Except for revisions required to integrate new units and equipment into the existing systems, the radio and wire nets of the new battle group have been altered very little.

The more significant modifications extend the range of the rifle company command net from one to approximately five miles, employ Infantry radio frequencies rather than Artillery frequencies for mortar fire control, authorize a rifle platoon radio net and provide radios with increased capabilities for certain commanders and staff officers.

It should be pointed out, however, that the communication changes discussed here are based on draft TOEs. When the TOEs are finalized, there may be additional equipment changes. However, it is not expected that these would require any major alterations to the communication systems illustrated here.

No changes are anticipated in the battle group's communication links with division. The battle group will continue to operate in the division's six radio nets.[2] And it will still have

[1] See "ROCID Changes," April-June 1959 issue of *Infantry*, pp 8-12.

Infantry Battle Group

The changes in the organization of the Infantry division have altered and improved the communication capabilities of the battle group and its subordinate units.

12 radio-relay channels to division and 12 channels to adjacent units. As in the past, the radio-relay facilities, the radio-wire integration service, limited maintenance support and message center service will be provided by the battle group area support platoon of the forward communications company.

In addition to two primary nets—the command net and the administrative net—the battle group operates two secondary nets—the liaison net and the surveillance net. The surveillance net is new. It is operated by the radar section of the new combat support company and will be covered in some detail when that unit is discussed. The liaison net remains unchanged. Several minor alterations, however, have been made in the command and administrative nets.

The *command net* (Figure 1) now has one additional station, the fifth rifle company commander. Also, there have been several substitutions. The new deputy battle group commander replaces the executive officer, and the former mortar battery commander and liaison officer are replaced by the heavy mortar platoon leader and liaison officer. The assault gun platoon leader is supplanted by the assault weapon platoon leader.

It will be noted that only individuals directly concerned with the tactical employment of the battle group or its fighting elements are included in the command net. Traffic on this net should therefore be limited primarily to messages which affect tactical employment.

While not shown on the command net diagram, the commanders of appropriate attached or supporting units will also be included in this net.

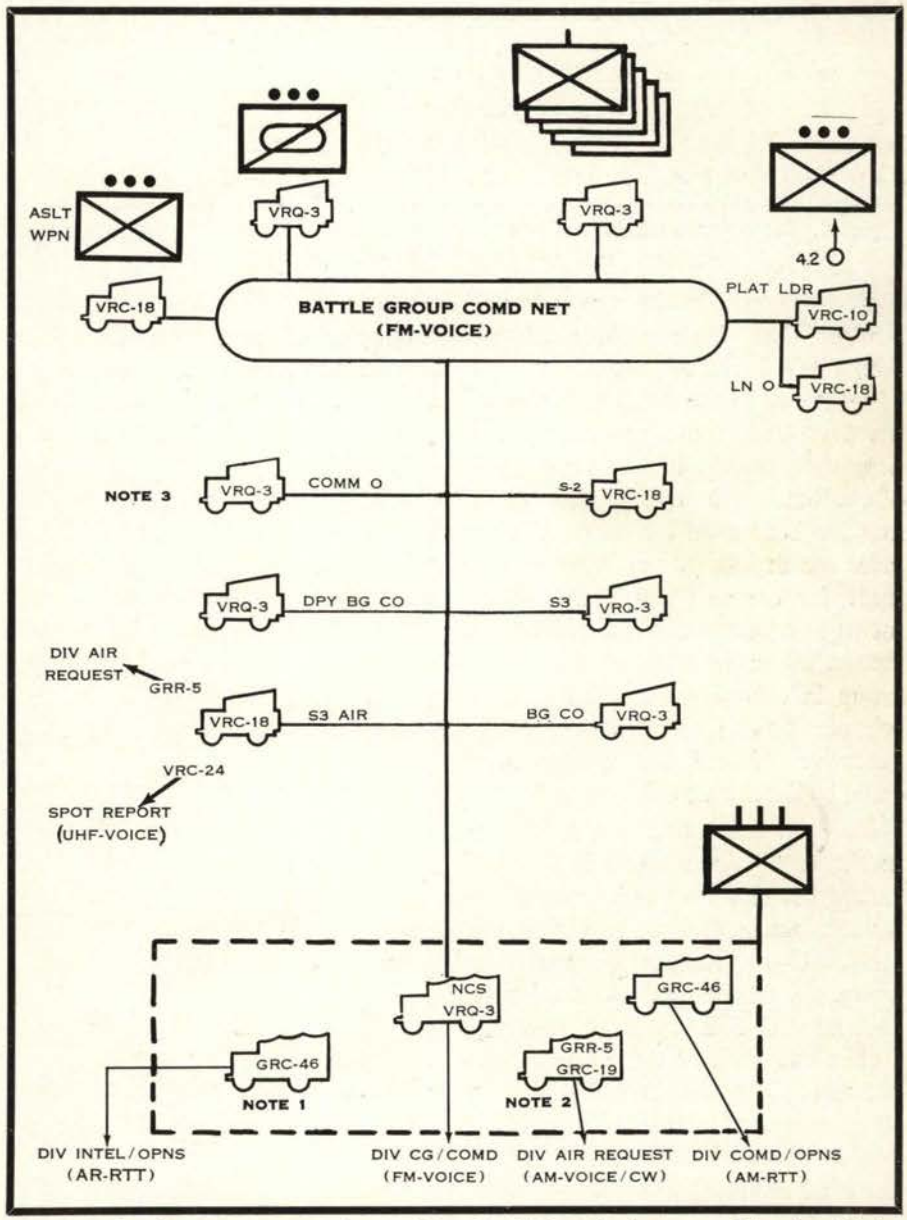


Figure 1. Battle group command net. Note 1: This radio is operated in the division admin/log net as required. Note 2: This AN/GRR-5 radio monitors the division warning/broadcast net. Note 3: This vehicle is organic to the communication platoon headquarters.

[2] The radio nets of the division are: The CG/command net, the command/operations net, the intelligence/operations net, the air-request net, the warning/broadcast net and the administrative/logistical net.

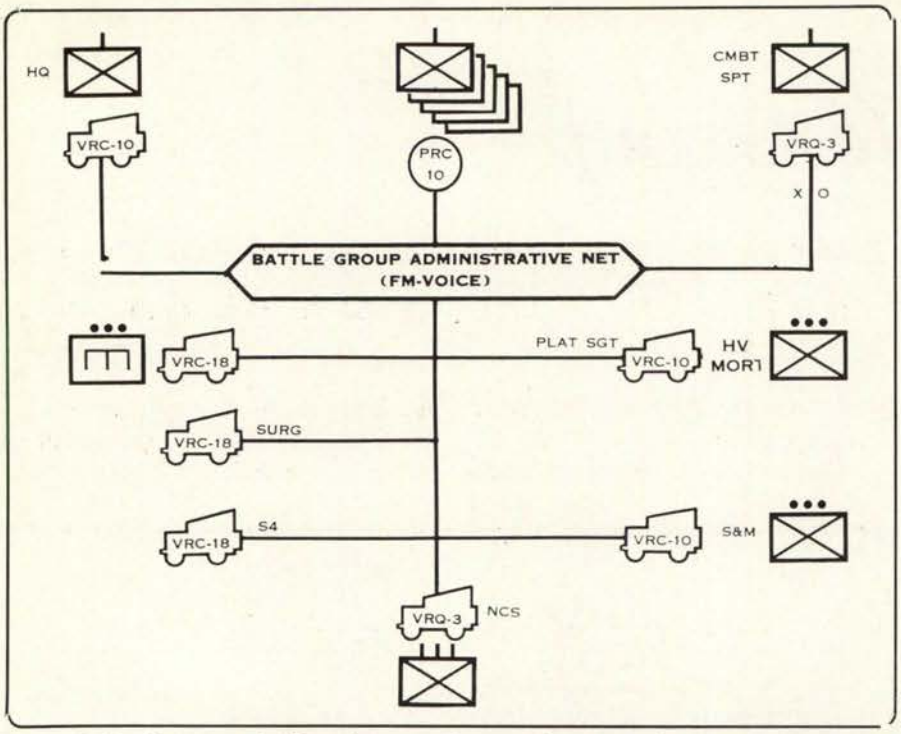


Figure 2. Battle group administrative net. The assault weapon platoon, not shown here, may enter this net as required.

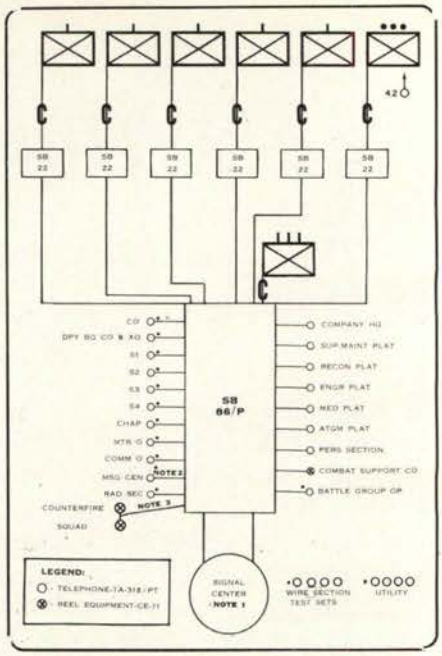


Figure 3. Battle group wire system. Note 1: This center is operated by the battle group area support platoon. Note 2: Additional wire lines for the page-printing teletypewriter will be laid to the switchboard. Note 3: This unit ties into the battle group system at the nearest switchboard. Asterisks indicate telephones organic to the communication platoon.

The deputy battle group commander has been authorized an AN/VRQ–3 radio,[3] the same type of set issued to the battle group commander. This radio will enable the deputy to assume immediate control of the battle group should the commander become a casualty. It also gives the deputy proper radio equipment for carrying out such assignments as commanding a task force or controlling a portion of the battle group in offensive, defensive or retrograde actions. The battle group executive officer is not authorized a radio by the draft TOE.

The *administrative net* is shown in Figure 2. All stations in this net except the rifle companies now have 10-mile range radios. However, the AN/PRC–10 radios[4] of the rifle companies can be used with the jungle antenna RC–292, which is now authorized to each of these units. This antenna gives the AN/PRC–10 a range comparable to that of the other sets in the net. The administrative net handles those messages which are not appropriate to the command net. Examples of traffic transmitted on this net are requests for ammunition, rations and replacements, and administrative and logistical reports.

The battle group wire system (Figure 3) is essentially the same as it was under ROCID except for the addition of the fifth rifle company and substitutions in stations as pointed out in the discussion of the radio command net. The amount of wire authorized is almost triple that previously allowed and sufficient equipment is available to incorporate all of the major elements of the battle group into the system, to provide test sets for all wire teams and to support additional wire requirements.

The administrative net control station radio and the vehicle in which it is mounted are new additions to the communication platoon. The "other half" of this AN/VRQ–3 can be used to support additional require-

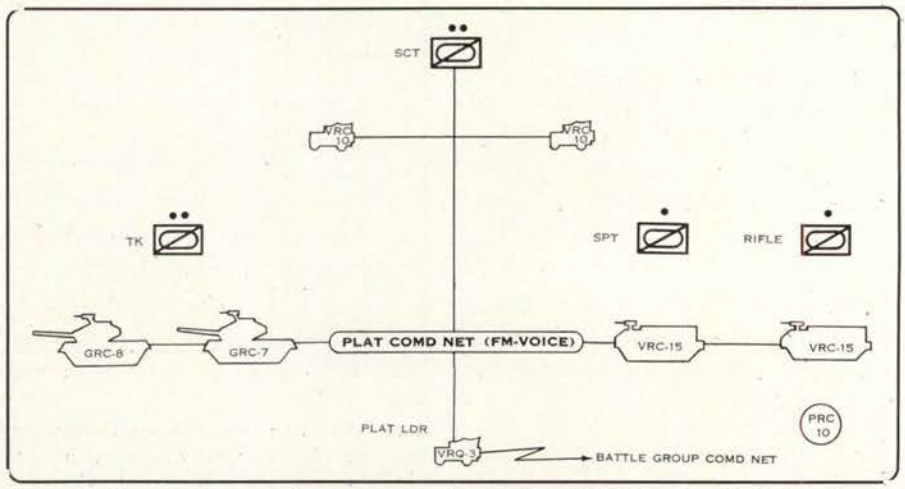


Figure 4. Reconnaissance platoon command net. The AN/PRC-10 radio is used by the rifle squad leader when dismounted.

[3] The AN/VRQ-3 is composed of two 10-mile range receiver-transmitters. It is vehicular- mounted.

[4] The AN/PRC-10 is a three- to five-mile range receiver-transmitter. It can be back-packed.

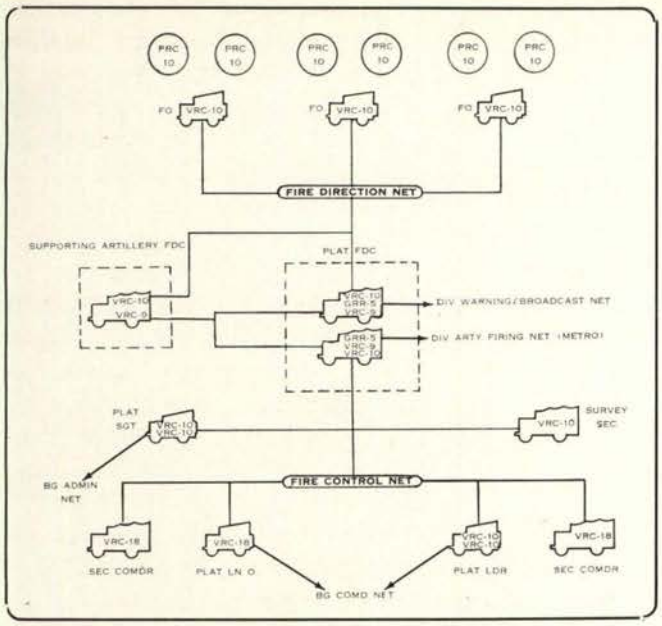


Figure 5. Heavy mortar platoon radio nets as operated in a platoon position. The two AN/PRC-10 radios shown with each FO team are used to enter the supported rifle company command net and the mortar platoon fire direction net when dismounted.

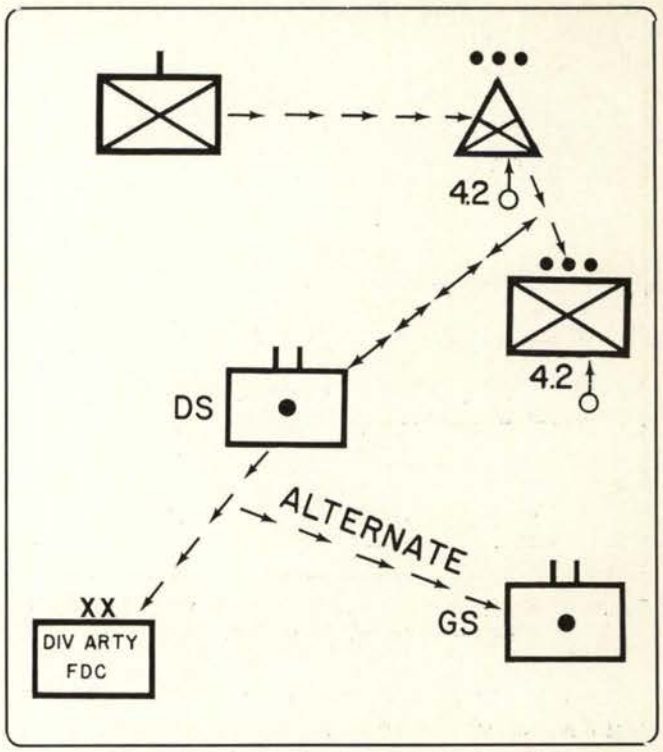


Figure 7. Non-nuclear fire request channels.

ments of the battle group. It may serve as the battle group command post station in the command net of a task force, or it may be used to enter the command net of a supporting unit.

The battle group communication platoon has been authorized additional wire team equipment so that another motorized wire team (total of four such teams) may be employed by the wire section. However, no additional personnel have been authorized.

Other equipment has been added to the communication platoon to improve still further the efficiency of the communication system. This equipment includes an additional ¾-ton truck and ¾-ton trailer in the message center section for use in conjunction with the shelter S–144/U which houses the cipher machines and the teletype equipment.

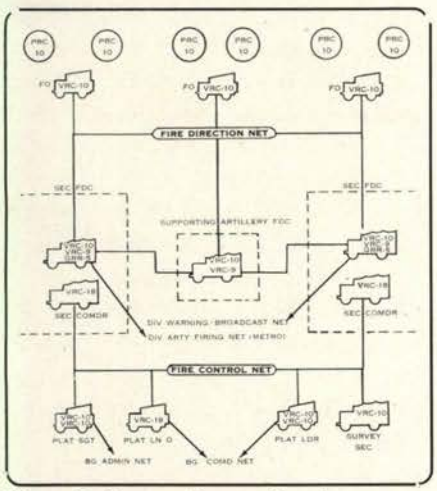


Figure 6. Two section position heavy mortar platoon radio nets.

Headquarters and Headquarters Company

The headquarters and headquarters company is not a tactical unit and therefore has no company nets as such. However, it provides the personnel to operate the battle group communication system. Also the company commander and three of the platoons in the headquarters and headquarters company—the engineer platoon, supply and maintenance platoon, and the medical platoon — have specific communication requirements and the draft TOE provides for these needs.

The company commander, because his duties are confined to the administrative and logistical support of the headquarters and the elements of his company, is equipped with an AN/VRC–10 radio[5] which he operates in the battle group administrative net. He is also tied into the battle group wire system. This satisfies his communication requirements since he does not control the operations of his subordinate platoons.

The *engineer platoon* leader normally operates his AN/VRC–18 radio[6] in the battle group administrative net. Simultaneously, he can use this set to monitor his platoon net. While he may also use one of the AN/PRC–10 radios which are provided for the platoon net, it may be preferable to give the headquarters AN/PRC–10 to the platoon sergeant.

Should the platoon be placed in support of a rifle company or a task force, the platoon leader may leave the battle group administrative net and enter the command net of the supported unit. Similarly, if one of the engineer squads supports a rifle company, it will use an AN/PRC–10 in the company command net.

The *supply and maintenance platoon* has an AN/VRC–10 radio which the platoon leader operates in the battle group administrative net.

[5] The AN/VRC-10 is a 10-mile range receiver-transmitter. It is vehicular-mounted.

[6] The AN/VRC-18 is a 10-mile range receiver-transmitter and an auxiliary receiver. It is vehicular-mounted.

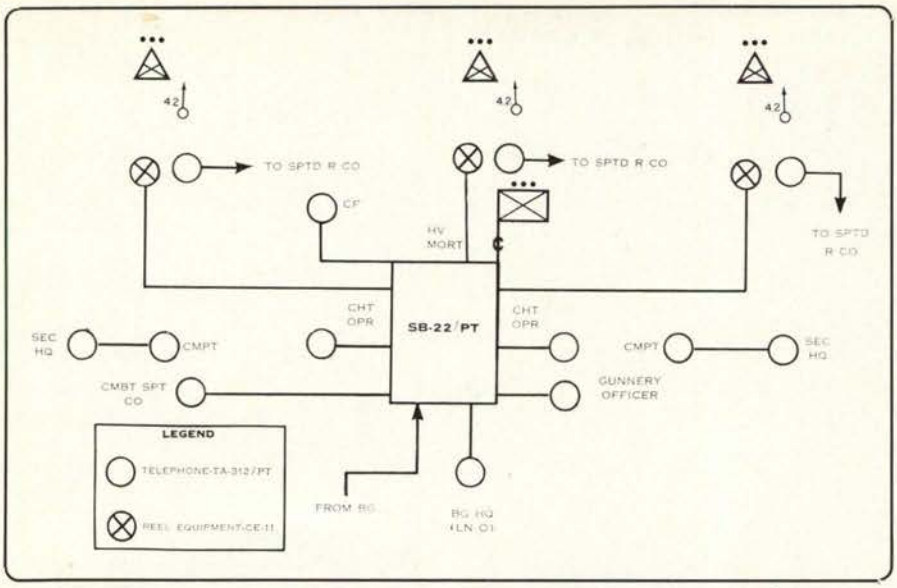


Figure 8. Heavy mortar platoon wire system for a platoon position. Additional wire is laid between the direct support artillery FDC and the heavy mortar platoon FDC.

Since the supply and maintenance platoon leader will normally be located in the trains area, his radio may be considered the trains-area radio station, though it is not specifically designated as such. Four telephone sets TA–312/PT are authorized for the platoon, along with reel equipment and wire so that a trains-area telephone system may also be employed. This newly authorized equipment will be used to meet the varying requirements of the trains.

The headquarters of the *medical platoon* is now authorized an AN/VRC–18 radio, mounted in a ¼-ton truck. Both this radio and the utility truck are for the use of the battle group surgeon. The surgeon will operate this set in the battle group administrative net. Four AN/PRC–10 radios are provided for the platoon. Two are located in the treatment section and two in the evacuation section. These radios may be employed as the surgeon sees fit. At times they will be used in a platoon net, but more frequently, they will be used to monitor other nets of the battle group so that personnel of the platoon can keep abreast of the tactical situation. Since current doctrine specifies that the platoon must be capable of operating two aid stations, these sets can assist the internal operations of the platoon.

Combat Support Company

Like the platoons of the headquarters and headquarters company, the subordinate units of the combat support company operate directly under battle group control. Consequently, there is no need for a company communication system. Both the company commander and the executive officer are equipped with AN/VRQ–3 radios mounted in ¼-ton trucks, but these radios are intended for operation in battle group nets.

While the company commander generally will operate in the battle group command net, he is not shown in this or other nets because he will enter any net as required. Under current concepts, the commander and headquarters section of this company may be called upon to serve as the nucleus of a task force headquarters, to assist in the establishment of an alternate battle group command post or to supervise rear area security.

The company executive officer normally will operate in the battle group administrative net, since his duties are mainly concerned with the administration, messing, supply and maintenance of the elements of the company. The "other half" of his set can be used to enter the nets of the subordinate units of the company to coordinate administrative and logistical matters.

The three platoons and the radar section of the combat support company have separate communication systems to meet their specific requirements. Since the reconnaissance, heavy mortar and assault weapon platoons work directly under battle group headquarters, the three platoon leaders operate in the battle group command net. The radar section is linked to battle group through the S2, who monitors the surveillance net.

There has been no change in the communication system for the *reconnaissance platoon* (Figure 4). Although no wire system as such exists within this platoon, TA–1/PT telephones have been authorized for the support squad. These phones are used for communication between the observer and the mortar position.

The communication requirements of the *heavy mortar platoon* are similar to those of the former mortar battery. Figure 5 shows the net organization when the mortars are fired from a platoon position, and Figure 6 shows the arrangement when the sections operate separately or in dispersed positions.

The heavy mortar platoon normally will be employed in general support of the battle group.

The forward observers from the mortar platoon may call for fires from the mortar platoon FDC or the FDC of the direct-support field artillery battalion (Figure 7). The mortar platoon forward observer will normally direct his requests for fire to his own FDC, and if the fire direction officer feels that the mission may be more profitably fired by the artillery, he can contact the artillery FDC on his own fire direction net. This will facilitate direct contact between the mortar platoon forward observer and the artillery battalion FDC for adjustment of fire. The artillery battalion FDC operates an AN/VRC–10 on the mortar platoon fire direction net to facilitate this capability.

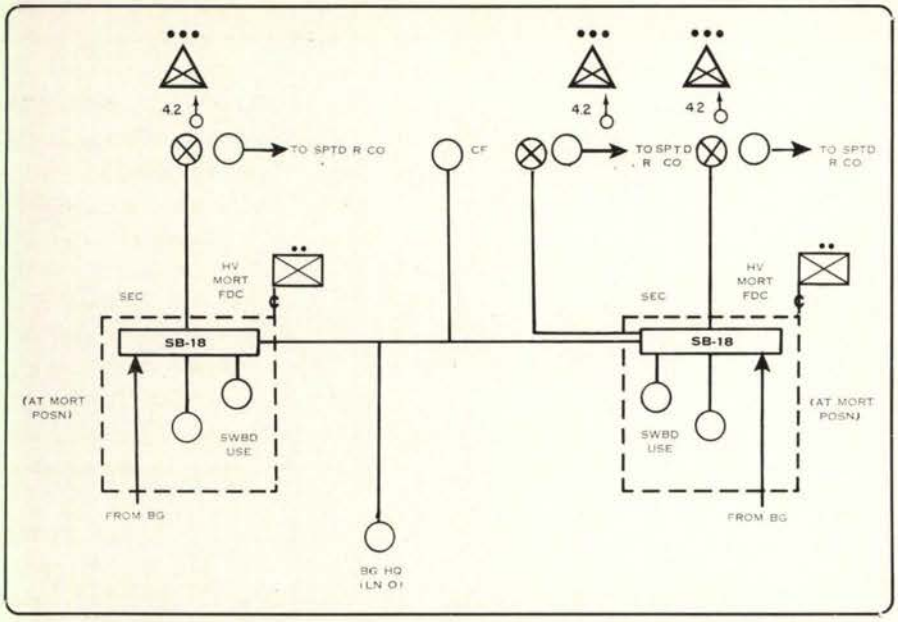


Figure 9. Heavy mortar platoon wire system for a two-section position.

A typical fire mission would be processed in this manner: The mortar forward observer calls for fire with his AN/VRC–10 radio over the platoon fire direction net. The mortar platoon FDC receives and acknowledges the mission on its AN/VRC–10 radio, while the artillery battalion FDC merely monitors the transmission. If the mission is to be fired by the artillery, the mortar platoon FDC makes the request to the artillery FDC over the mortar fire direction net. Adjustment of fire is then made directly by the FO of the heavy mortar platoon.

The mortar FDC is also equipped with two AN/VRC–9 (Artillery) radios.[7] Using these sets, the platoon FDC can monitor both fire-request channels of the artillery battalion fire direction net. Consequently, a call for fire from an artillery forward observer will be monitored by the mortar FDC and should the mortar platoon be required to fire the mission, adjustment of the fire is made directly over one of the artillery fire request channels.

This concept of fire support does not preclude the commander's attaching the heavy mortar platoon to a task force or employing it in a separate role if the situation warrants. Should the platoon be employed separately, requests for fire are handled directly by the section or platoon FDC.

The heavy mortar platoon will also be tied into the battle group and the supporting artillery battalion by wire. The artillery is responsible for establishing communication with the battle group. Wire is the primary means of controlling the platoon's firing section. Sufficient wire equipment is available to support the platoon when it operates as a unit or in two sections. (Figures 8 and 9).

The *assault weapon platoon* operates a platoon command net as shown in Figure 10. The platoon leader uses his AN/VRC–18 radio to operate both in this net and in the battle group command net. The platoon sergeant uses the auxiliary receiver of his set as required. He may, for example, enter the administrative net to transmit logistical traffic, while at the same time monitoring the platoon net with his receiver. When the squads are attached to rifle companies, they will leave the platoon net and enter the command net of the company with which they are working. The squads are each issued a TA–1/PT telephone for use in their

[7] The AN/VRC-9 is identical to the AN/VRC-10 except that it can be operated only on Artillery-band frequencies.

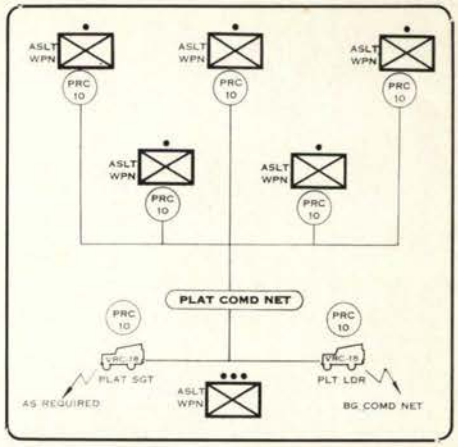


Figure 10. Assault weapon platoon command net. The two AN/PRC-10 radios in platoon headquarters are for dismounted use.

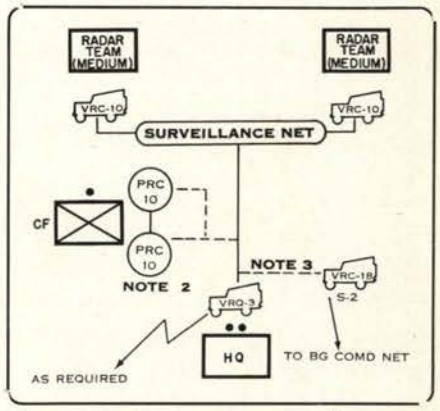


Figure 11. Battle group surveillance net. Note 1: Light radar teams may enter this net as required. Note 2: This unit enters net when transmitting information to the S2. Note 3: The S2 normally monitors this net with his auxiliary receiver.

platoon wire system, or in a company system in the event of attachment. Platoon headquarters has a TA–312/PT telephone and sufficient wire to establish a platoon wire system.

The *radar section* operates the battle group surveillance net as shown in Figure 11. As indicated, the S2 usually will monitor this net with his auxiliary receiver. In addition to operating in the surveillance net, the radar section leader may utilize his second receiver-transmitter in other nets as the situation demands. The light radar squads will use their AN/PRC–10 radios to enter the surveillance net when operating under section control. When attached to a rifle company, the light radar squad will enter the company command net. The counterfire squad may enter the surveillance net when trans-

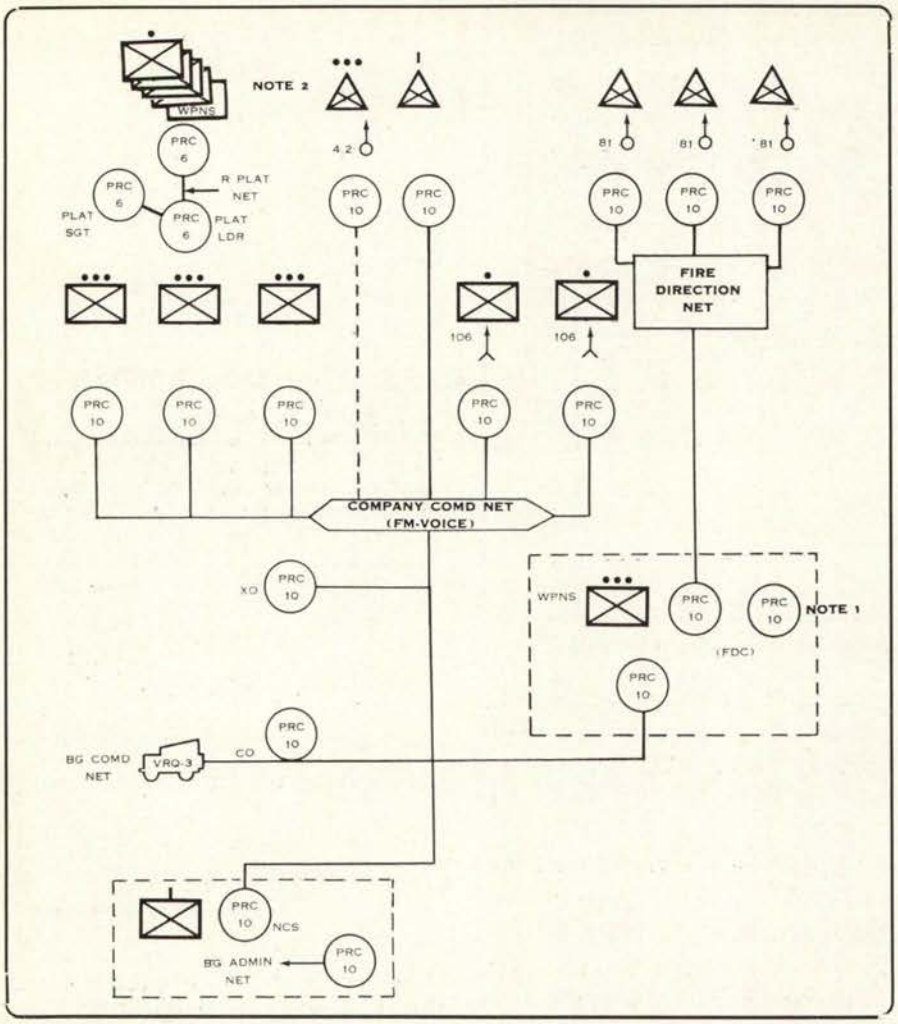


Figure 12. Rifle company radio nets. The AN/PRC-10 radio shown with the CO is for dismounted use. Note 1: This additional AN/PRC-10 radio is used during displacement. Note 2: The heavy mortar platoon FO enters this net with one of his AN/PRC-10 radios.

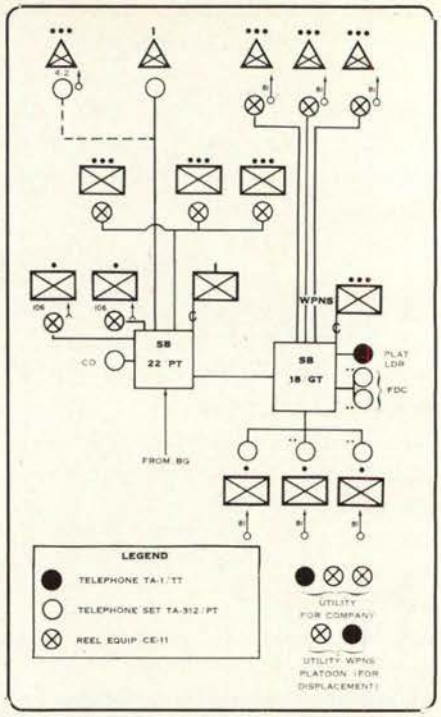


Figure 13. Rifle company wire system. Although the rifle platoons are shown on a party line, separate lines may be laid. Asterisks indicate telephones equipped with the handset-headset H-144.

mitting information to the S2. Sufficient wire equipment is authorized the section to form a wire system or to tie the light squads into rifle company wire systems.

The communication capabilities of the rifle company have been significantly increased under the new draft TOE. The company commander is now authorized an AN/VRQ–3 radio which enables him to operate in two nets. The article, "ROCID Changes," in the April-June 1959 issue of *Infantry*, states that this permits him to operate simultaneously in both the battle group administrative and command nets. However, this method of employment has been reconsidered. It is now felt that he should operate in his own company net and in the battle group command net.

The range of the rifle company command net (Figure 12) has been increased to the three- to five-mile range of the AN/PRC–10. Since the company headquarters has five of these sets, it is now possible for the executive officer to be included in the command net. Both the company commander and his executive officer may enter the battle group administrative net as required. As shown in the diagram, the heavy mortar observer may enter the command net. While not shown, other attached or supporting personnel may also enter it. For example, the artillery FO is equipped with an AN/PRC–10 for this specific purpose.

The company fire direction net remains unchanged. One additional AN/PRC–10 radio has been added to the 81mm mortar section headquarters so that continuous communication can be maintained when the mortars are displaced by echelon.

Additional wire equipment has been added to enhance the company wire system (Figure 13). The SB–22/PT switchboard is part of this new equipment. This board will serve 12 telephones without requiring party lines. More telephones are provided to cover some of the additional requirements imposed on the company by the new tactical concepts. For example, the phones could

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Capt Clarance J. Schlafer, Chairman of the Tactical Committee of the Infantry School's Communication Department, received an OCS commission at Fort Benning in 1947. In 1949 he went to the Far East, serving in Japan and Korea. He returned to the United States to become an instructor at Fort Ord and a platoon leader at the Presido of San Francisco. After duty in Germany as company commander and headquarters commandant, he attended the Infantry School's Advanced Course. He is the author of "How to Inspect Commo Equipment."

be used to provide wire communication between elements of a rifle platoon on the COPL. It should also be noted that five TA–312/PT telephones with the handset-headset H–144/U have been authorized for the mortar section. Use of the headset will free the hands of the section's personnel and will facilitate making firing computations.

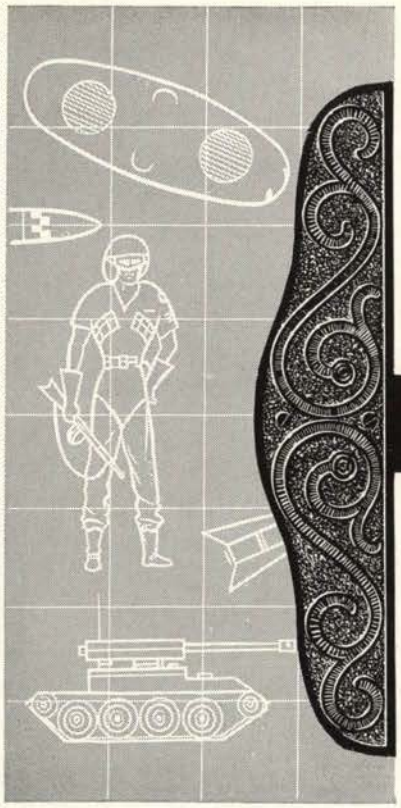
Each of the three rifle platoons is now authorized a platoon net which utilizes one-mile range AN/PRC–6 radios. This net greatly increases and simplifies the control of the platoon and contributes to a more flexible communication system within the company.

At the present time no wire equipment is issued for use within the rifle platoon. However, the platoon leader has a TA1/PT telephone for use in the company wire system.

As mentioned earlier, there may be additional equipment changes when the draft TOEs are finally approved. While the basic systems discussed here are sound and are not expected to change materially, they will be improved in the near future by the incorporation of more advanced equipment.

Field units are requested to write to the Infantry School concerning their experiences with the new organization and equipment. The Communication Department of the School is interested in hearing of any problem areas encountered and in receiving suggestions which will improve our battle group communication capabilities. Only by combining field experience with technical studies and developments will we produce the communication capabilities needed for the command and control of our combat operations.

The emergency switchboard SB–18/GT has recently been modified to remove the luminous dots. The same type switchboard minus the luminous dots will be reissued as the SB–993/GT and will replace all SB–18/GT switchboards shown in this article.—Editor.

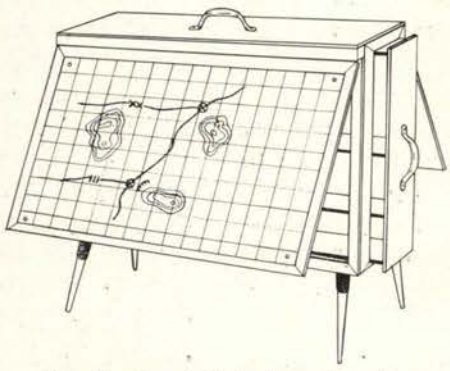


WHY DON'T WE?

Perhaps you have an idea for some item or technique that would help the Infantry. Send it to the Editor of INFANTRY. *If it is published you will receive a free one-year subscription.*

. . . produce a combination map board and field desk. When folded for carrying, this item would resemble a thin suitcase. When set up for use, it would stand on four collapsible legs and the two larger sides would swing up to form a table for acetate-covered maps. Small divided shelves inside the case portion would hold items such as grease pencils, thumbtacks, and the like. A thin drawer opening at the end would hold maps and overlay paper. Even in the carrying position the situation map would be visible for reference.

Capt John D. Bethea



Combination field desk-mapboard.

. . . call our rifle companies "Infantry" companies. Use of the word "rifle" is a carry-over from the past. It no longer describes adequately the tremendous combat power now inherent in this unit. Powerful, relatively long-range weapons such as the 81 mm mortar and the 106mm recoilless enable the company to control terrain far beyond the range of effective rifle fire, and give it a far greater potential than is indicated by the "rifle" designation. Also, there is the possibility that even nuclear weapons may be employed at company level. This is further reason for scrapping a name that connotes "limited firepower capability."

"Rifle company" in the past has distinguished this unit from the old heavy weapons company. Now rifles and heavy weapons are combined in a single fighting team. The team should be identified by branch rather than by a single hand-held weapon.

Maj Sanford H. Winston

. . . utilize the "deuce" portion of the standard scoring disk for indicating misses on the known-distance firing range. Although Trainfire I

Continued on page 68

YOUR INFANTRY CAREER

This department provides important information on policies and personnel actions which affect your Infantry career. Material for Regular Army and active duty Reserve officers is furnished by Infantry Branch of the Officers Assignment Division. Similar material for Infantry officers of the USAR is provided by the Army Reserve Branch of the Adjutant General's Office. Information for the enlisted Infantryman is obtained from other Department of the Army agencies.

From Infantry Branch

THIS IS A continuation of the queries received most frequently by Infantry Branch. The last issue of *Infantry* answered questions on military and civilian schooling and specialization. In this issue, answers are provided to questions asked by Infantry officers concerning assignments.

What are the most important considerations in making assignments?

The most important factors which are considered in selecting and assigning Infantry officers are: needs of the service, career needs, and qualifications, experience and preferences of the individual. Of these, the needs of the service are overriding in importance and must be given priority.

How long will I remain in my present assignment?

A single, all-inclusive answer to this question is not practical since reassignment criteria vary according to the grade of the officer, eligibility for overseas service, selection for service schooling and requirements for individual qualifications. The general criteria utilized by Infantry Branch to determine the length of your tour are as follows:

1. If you are overseas, the length of your tour will be as prescribed in AR 614–30.

2. If you are on a *stabilized* assignment in CONUS, the minimum length of your tour will be as prescribed in AR 614–5.

3. If you are on a *non-stabilized* assignment in CONUS and are due for a *long tour,* you will be eligible for shipment after two years on station.

4. If you are on a *stabilized* assignment and are due for a *short tour,* you will be eligible for shipment upon the completion of the minimum prescribed length of your stabilized tour.

5. If you are on a *non-stabilized* assignment and are due for a *short tour,* you will be eligible for shipment upon the completion of 14 months of service in CONUS or one year on station, whichever occurs later.

6. If you are a student on a PCS basis for service or advanced civil schooling and are due for a *short tour,* you will be eligible for shipment upon graduation from your present course of instruction. However, as a civil school graduate it is quite possible that you may be deferred from a *short tour* until you have had a utilization tour following your schooling. Each case is considered on its individual merits, and in light of requirements, at the time you become available.

7. Intra-CONUS PCS movements, other than those to or from service schools, are limited to assignments dictated by the urgent needs of the service or to approved compassionate cases.

What will my job be when I arrive overseas?

Infantry Branch assigns officers to overseas commands to fill requirements for specific MOS positions. However, it is the prerogative of the oversea commander to utilize the officer concerned in any manner he deems appropriate. It is, therefore, impossible to forecast what your actual job will be.

I will retire within two years. Will I be assigned near my selected home of retirement?

Since all assignments must be made to fill valid requirements, your desire to have a terminal tour near your selected home of retirement can be met only if a military requirement exists in the area of your choice. Infantry Branch automatically will attempt to assign you as near as possible to your requested location. When your retirement preference is not met, it is because military considerations have precluded such action.

I am on orders to fill a branch immaterial assignment. Why?

Almost one-half of the positions filled by Infantry officers are other than branch material. To equitably distribute Infantry jobs and ensure proper career development, it is necessary that all officers receive their share of duties that are not strictly Infantry in nature. Your assignment to a branch immaterial job represents a positive effort on the part of Infantry Branch to broaden your experience and qualify you for positions of responsibility at higher levels where knowledge of the functions of other branches is essential.

Is duty in Alaska, Hawaii and Puerto Rico creditable as CONUS or oversea service?

If you are a resident of CONUS, service in Alaska, Hawaii or Puerto Rico is credited as oversea duty. However, if you are a resident of Alaska, Hawaii or Puerto Rico, service within the limits of your state or territory of residence is not considered foreign service, but duty in all other areas outside CONUS will be credited as oversea duty.

I am an obligated tour (two-year) officer. What are my chances of going overseas?

Under present policy you normally will be assigned to oversea commands only if your remaining service is sufficient to allow completion of a normal tour. Therefore, you normally will receive an assignment overseas only to those areas in which the tour length is 18 months or less.

Why are Airborne officers assigned to non-Airborne positions?

There are more officers qualified for Airborne duty than there are authorized spaces involving Airborne duty. As a result, only a portion of those who are Airborne-qualified can be assigned to Airborne units at any given time. One of the missions of the active Army is to prepare for mobilization. This mission dictates the training of a maximum number of Airborne-qualified officers and the rotation of duties so that as many officers as possible will gain this experience.

Civil Schooling in Physical Sciences

Each year a selected group of Infantry officers are sent to civilian universities for postgraduate work in fields of study in which the Army has continuing requirements. The need for officer graduates in the physical sciences is increasing, especially in the fields of nuclear physics, electronics and guided missiles. Consequently, an increased number of Infantry officers will receive training in the physical sciences beginning in 1960. Those officers who possess an undergraduate degree, have completed the Advanced Course and have a good background in mathematics (through calculus) and physics are encouraged to apply under the provisions of AR 350–205. This is a voluntary program and selection is competitive.

What are the criteria for assignment to ROTC duty?

The following general criteria are applied for assignment of Infantry officers to ROTC duty:

1. Sufficient remaining service to complete the normal tour (three years—field grade; two years—company grade).
2. Graduate of a branch advanced course.
3. Four years active commissioned service and appropriate background for the duty.
4. For senior ROTC, a baccalaureate degree.
5. For junior ROTC, a high school diploma, although at least three years of college training is desirable.
6. Approval of the institution to which nominated.
7. Terminal assignments to ROTC are made only to meet priority requirements or where the individual officer is outstandingly qualified for such duty. Repeated assignments are made only where the needs of the service dictate.

I am a reserve officer. Can I be assigned to NG or USAR in my home state?

Provided the requirement exists, you may be assigned to USAR duty in any location to include your home state. However, you are not eligible for duty as a National Guard Advisor in your home state.

I am due to return from overseas shortly and will have less than three years' remaining service prior to retirement. Can I be assigned to reserve component duty as my terminal tour?

Although assignment to a terminal reserve component tour is not precluded, it normally will be made only if you possess qualifications which indicate that such an assignment is in the best interests of the service.

If I go overseas to a short-tour area and am joined by my family after I arrive, am I eligible for a long or short tour when I am again considered for foreign service?

If you are assigned to an area for which the tour of unaccompanied officers is less than 18 months and are

SCHOOL LISTS 1959-1960

The names of Infantry officers who have been selected to attend the Infantry Officer Advanced Course at Fort Benning appear on page 72.

accompanied or joined by your dependents, you are then eligible for a short tour within the purview of AR 614–30. However, if you complete the normal short tour and then are joined by your dependents, you will be considered as having served a short and a long tour consecutively. In accordance with paragraph 2c, AR 614–30, your next oversea tour may be to an area to which dependent travel is not normally authorized.

Are all Infantry officers going overseas for second short tours?

All Infantry officers must expect to serve at least one short tour in company grade, and at least one short tour in field grade in order that service needs be met.

I am working toward a two-year college equivalency so that I can apply for Regular Army. Is it possible for me to remain on station long enough to obtain these credits?

Yes. However, you should write directly to Infantry Branch, OAD, TAGO, stating your desires and including an estimate of the time required to reach your goal. If your retention on station is compatible with requirements, every effort will be made to assist you.

What constitutes a stabilized tour?

Stabilized tours are defined and specified in AR 614–5. These are assignments for which the minimum tour length is established. For company grade officers it is normally 24 months (except for assignment in the Department of the Army, which is 36 months). For field grade, the tour normally is 36 months. Positions in the Department of the Army, USCONARC agencies, faculties of certain schools, AFSWP and other areas are included in this category.

Should I write directly to Infantry Branch if I have a question concerning my career?

Infantry Branch welcomes a personal letter whenever you desire information or have a problem. Your letters and personal visits keep the Branch informed on your personal status and help us in planning assignments. Remember, your fellow Infantryman in Infantry Branch has no crystal ball. He cannot guess what is on your mind nor can he know about your personal difficulties, unless you tell him. You should try to visit Infantry Branch every two or three years. By doing so you can review your file with the aid of Branch personnel and evaluate your record in terms of your entire commissioned service.

What advantage is there in maintaining an up-to-date preference statement in my Branch file?

The Officer Preference Statement (DA Form 483) is one of the most important tools used by the assignment officer in personnel placement. If properly completed, it will indicate your desires with regard to location and type of duty. Further, it gives you an opportunity to have on record any compassionate or semi-compassionate basis for assignment. Whenever service needs permit, Infantry Branch makes every effort to comply with your requests.

Another question which is continually asked of Infantry Branch concerns the computation and importance of the Overall Efficiency Index (OEI). AR 623–105, Section VII, furnishes background on why the OEI is computed, how it is computed, and how it used. The OEI is still being computed yearly and will continue to be until a better system is established to give a more accurate and fair appraisal of an officer's relative efficiency. The 1958 OEIs are now available for review at Infantry Branch. An officer visiting the Branch can check another officer's OEI only if he has been deputized in writing by the other officer to do so.

Officer Efficiency Reports

A recent change in officer efficiency reporting regulations will now require submission of letter-type efficiency reports on all officers withdrawn from their normal rating channels to participate in a field maneuver. Under new procedures established by this change, a letter report, in accordance with paragraph 12, AR 623–105, is to be submitted on each officer who is withdrawn from his normal rating channels for more than 15 but less than 60 duty days to participate in a major maneuver (controlled by a headquarters comparable to a corps or higher). These reports are to be prepared by the individual's immediate supervisor for the period of the maneuver and forwarded by indorsement to the parent organization by the rating officer's immediate supervisor for attachment as an inclosure to his next scheduled efficiency report.

RA Augmentation

Reserve officers who applied for a Regular Army commission under AR 601–100 or Circular 601–12 and were not selected, but who have provided themselves with improved qualifications, are urged to reapply after the required lapse of one year.

The identification of every officer with a particular year group provides advantages to some applicants and disadvantages to others. The 1942 year group is already 900 overstrength and although procurement has not been cut off, the applicants in this year group are faced with intensely keen competition for selection. On the other hand, the 1947 year group is understrength by almost the same number. While no unqualified officer is selected for the Regular Army because of space availability alone, there is obviously greater procurement capability in the latter circumstance.

Many officers who were not selected under Circular 601–26 (Harmony Board) have resubmitted under the new authority and have been selected. Favorable action has been possible in such cases because of revised ceilings on all year groups junior to 1941 and additional reports available to the board for consideration.

To summarize and possibly provide guidance for those officers who have already applied or intend to apply for a Regular Army commission, these points identify themselves:

a. Pursue formal collegiate education through some authorized program and be certain that your record reflects such efforts.

b. Ensure that your personal life and individual standards of integrity are of the highest order.

c. Give full appreciation to the value of your accomplishments at service schools as a measure of your continued potential.

There is no magic formula for favorable action. The officer who has demonstrated outstanding capability and has maintained a dynamic program of development will always be welcome in the Regular Army.

Noncommissioned Officers

E9 Promotions

Initiation of the E9 promotion program has been announced by Department of the Army. In order to permit commanders an adequate degree of selectivity, the time required in grade E8 has been established at four months for this initial allocation only. Time in grade requirement will be increased for subsequent quotas. Other prerequisites for promotion to E9 include: recommendation by the immediate commanding officer and an appointable status; completion of 18 years' active Federal service, at least 10 of which are enlisted service creditable in the computation of basic pay; occupation of a position which may reasonably be expected to be upgraded to E9.

As in the case of promotion to E8, there is a below-the-zone provision for promotion of exceptionally outstanding soldiers to E9. Commanders are authorized to appoint, not exceeding 20 percent of their quotas, individuals who have completed at least 10 years active Federal service and who have 10 years of cumulative enlisted service.

Since the Army began to promote to grade E8 on 1 June 1958, a total of 3300 promotions has been authorized to that grade including the current allocation of 800 for the three-month period ending 30 June 1959.

Enlisted Management Program

The first six months' progress in the Army's Enlisted Management Program reveals that by the end of the Fiscal Year (30 June 1959), Army-wide strength in the enlisted super grades reached 2500 E8s and 800 E9s.

During the first four months of the program, approximately 8200 soldiers in selected critical MOSs received an additional proficiency pay of $30 per month. In March, additional proficiency payments to approximately 5000 soldiers were authorized, and these were followed by approximately 5000 additional payments in April. Eligibility for the March and April payments was determined by procedures established under the provisions of the Enlisted Evaluation System.

Quotas for 5900 promotions to permanent grades E7, E6 and E5 have been announced for Fiscal Year 1959. These are the first permanent enlisted promotions in over eight years.

Other improvements in enlisted career attractiveness are being carried out. They include: continued improvement in manpower quality resulting from pre-induction aptitude screening; long-range progressive development of promotion flow for career soldiers through the NCO and specialist vitalization program; individual name assignment by DA of E8 and E9 personnel; continued operation of the enlisted college training program which by 15 April had placed 149 carefully selected soldiers as full-time students in colleges and universities throughout the country (this number is expected to be increased by 21 during the summer session).

New Top Pay Grades

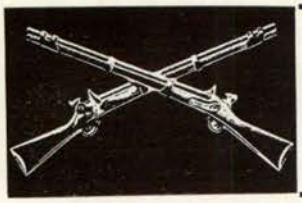
Top pay grades (E8 and E9), with new titles and insignia for noncommissioned officers and specialists, were introduced into the Army Reserve and National Guard starting in June 1959.

Key leaders, such as first sergeants, sergeants major and technically qualified noncommissioned officers in critical areas, are now authorized these pay grades on a basis similar to that current in the active Army. Selected critical specialist personnel will also be awarded the higher grades.

The titles for noncommissioned officers of these two grades are the same for both the Active and Reserve Components of the Army. An E8 will be known as a master sergeant or first sergeant, and an E9 will be known as a sergeant major.

Initial quotas for 871 Army National Guardsmen and 880 Army Reservists for promotion to E8 were authorized beginning June 1.

With the institution of the two new top grades, changes in insignia and titles among some of the lower grades of noncommissioned officers of the Reserve Components have also become necessary. The present title of master sergeant for enlisted grade E7 will be changed to platoon sergeant or sergeant first class, according to assignment. Enlisted Grade E6, now carrying the title of sergeant first class, will be known as staff sergeant. In the enlisted grade E5, sergeant, the grade insignia will no longer include an arc below the chevrons but it will bring back the old "buck sergeant" insignia traditional to the Army.



THE SOUNDING BOARD

This department gives every soldier an opportunity to "sound off" on a wide variety of subjects. It provides an outlet for thinking which need not conform to doctrine or policy. We are interested in constructive ideas—well-conceived and concisely expressed—which challenge or inform. Articles will be paid for at regular rates.

A Point to Ponder

By Capt Chew-Mon Lee

ACCELERATED scientific and industrial competition is bringing us into an era of atomic plenty. Unfortunately, our armed forces will still be outnumbered in this age. To compensate for our lack of manpower, military leaders and service schools advocate the use of tactical nuclear weapons in ground combat. This is sound thinking, and we of the company level understand and accept the logic of using nuclear weapons whenever possible both in the attack and defense. However, one thing causes us considerable concern. There seems to be a tendency to take for granted the use of nuclear weapons in support of counterattacks to destroy the enemy once he enters our battle area.

It is well that we plan to reduce a penetration by counterattacking with all available forces and fires, including nuclear fires, but too often we fail to remember that if the enemy succeeds in penetrating our position, we will still have individuals and small units actively and effectively resisting the enemy within that penetration. It is likely that in nuclear war, with increased dispersion between units, this will be more common than in the past. The point to ponder, then, is this: what will be the psychological impact on a defending Infantryman—indeed, on any soldier in our Army—when he feels that should his position be overrun, he can expect to be the victim of a friendly nuclear weapon during our counterattack?

Although shot and shell have always been the lot of the Infantry soldier, lately the battlefield environment has changed. In the days of "conventional" wars, when our troops were overrun by the enemy we were able to live and win by having friendly fires fall upon our own positions. While we have never enjoyed being shelled by our own comrades, this at times was a lesser evil than losing a position or being destroyed by the enemy. Our likelihood of weathering non-nuclear fires was reasonably good, since our defending soldier had a measure of cover from shrapnel. The enemy, on the other hand, was more exposed and therefore more vulnerable. But the possibility of surviving a nuclear detonation on top of our position plummets to about zero.

Men have been and will continue to be killed in war, so this is not a question of casualties alone. It is one of motivation. If we use nuclear weapons on our own position, the soldier may feel that if he is not killed by the enemy, his perserverance is likely to be rewarded by death from our weapons. This possibility certainly does not motivate him to linger long in the face of an enemy attack. "The word" will spread, as it inevitably does, and may permeate the ranks with a mistrust and fear of plans made by higher commanders and their staffs. Even the stout-hearted may be discouraged from holding their ground, and the weak will be encouraged to withdraw whenever close contact with the enemy is imminent. In effect, the use of nuclear weapons in support of counterattacks could inflict capital punishment on the dedicated who fight on, while sparing the meek who disengage.

Is there anything we can do to make men willing to accept friendly as well as enemy nuclear detonations on their positions? It is not likely that training will accomplish this. To risk death from enemy action in the normal course of battle is one thing, but to look forward to becoming a sacrifice to our own nuclear fires is another. Few of us go into combat resigned to death. We feel that we have a fighting chance to survive. It is only during the heat of battle that values may change and "the cause" will suddenly overcome the instinct of self-preservation—and this does not happen to every man. We cannot expect to *develop* a feeling of expendability.

One solution is to devise an elastic tactic of giving way to enemy attacks to maintain a buffer distance between belligerents so that nuclear weapons can be fired with relative impunity. But this would tend to destroy the "offensive spirit" which wins wars. Other possibilities may be found in the development of protective measures and devices of such efficacy that the defenders' odds of survival would be enhanced, or in the production of low-yield nuclear weapons of

such accuracy that they will be more partial as to whom they kill. Until these developments materialize, however, we must depend on existing equipment and knowledge, since war has a frustrating habit of coming too soon.

A solution can be found now, while nuclear wars are still being fought on paper and in the classroom. We should discourage overreliance on the use of nuclear weapons to support a counterattack every time the enemy penetrates our map-exercise battle area. Most counterattacks should rely on non-nuclear mortar and artillery fires to assist the destruction of the enemy by aggressive Infantrymen. However, if nuclear shells are used, they should in most cases be fired into the base of the penetration. Besides inflicting casualties on the attacker, this will help cut off enemy reinforcements and will give ample assistance to counterattacking reserves, particularly when non-nuclear fires are massed elsewhere within the penetration. Bursts on the base of a penetration will cause fewer friendly casualties than a nuclear blast within the bulge itself. Men can learn to accept this lesser risk. Certainly there will be situations when a nuclear weapon must be used within the penetration, but such employment should be the exception. We must not forget that the American Infantryman has engaged overwhelming numbers of enemy troops in close combat before, and with the able assistance of his brother artillerymen and tankers, has succeeded in destroying the enemy or driving him from the battle area.

Too heavy a reliance on nuclear weapons within our battle position, by sacrificing our own troops, could destroy the fighting spirit of our most precious commodity—man himself.

Current Infantry School doctrine for counterattacks envisions the use of nuclear weapons, together with the fires of other appropriate weapons, to support such attacks when troop safety permits and other conditions warrant their use. Troop safety is a factor that must always be considered in connection with the employment of nuclear weapons.—Editor.

Capt Chew-Mon Lee enlisted in 1945 and, after graduating from OCS in 1947, received a variety of assignments in Korea on three separate tours of duty there. In 1955 he attended the Associate Advanced Course at Fort Benning. Captain Lee received his present assignment with the U.S. Army Element of the Joint Support Group after completing the Associate Course of the Command and General Staff College in 1948.

Our "Gimmick"

By Capt William A. Brown

WHEN I heard it, I thought at first it was just cocktail conversation . . . but I could recall hearing it too often lately to ignore it.

"What we need is a gimmick for the Infantry. . . . The Air Force has SAC and the Atlas, and the Navy has the Nautilus and Polaris. . . . All the Infantry has to sell is the good old unspectacular doughboy. . . ."

The speaker went on, "What the Infantry needs is a gimmick—something imaginative and glamorous to catch the fancy of the public."

At this point he reached the olive in his martini and his train of thought, as well as his philosophizing, was interrupted.

My listening was also interrupted the hostess who steered me to newly arrived guests. Unfortly, I never did get back to the ation about "the gimmick."

thought about it, and, in retrospect, the idea of a gimmick has bothered me. It has bothered me because I find too many people selling the Infantry short. While I agree that space and missiles are exciting and catch the public's fancy, I also think that no war will ever be resolved without good Infantrymen to take and hold the ground.

I don't like to lean on history to prove my point, but look at any war fought in the past century—particulary in the past decade—and you can't help but recognize that Infantry is the ultimate weapon.

This isn't a press agent's cliche or dramatic prose. It is a plain, unvarnished statement of fact.

In Greece, Indo-China, Korea, Egypt, Lebanon or other recent areas of conflict, Infantry has been the unsung, unspectacular and generally unrecognized arm of decision.

I suppose there's a reason for this lack of recognition. Perhaps it's because there is something basically unpleasant and unglamorous about tired, wet Infantrymen fighting and dying to take a hill or to hold a few feet of ground. I don't know of any way you can "spectacularize" the filth, fear and anguish of the foot soldier's war.

Maybe this is the reason so few men clamor to get into the Infantry . . . or why the foot soldier is somewhat forgotten in the space and missile age. Perhaps it explains why some short-sighted people question the future of the Infantry . . . and why others feel it necessary to look for a gimmick.

Whatever the reason, I hope we have more sense than to sell the Infantry short.

Count the divisions—Infantry divisions—which oppose the Free World and consider the numerous "limited" wars of the past decade. It doesn't take much figuring to determine the importance of Infantry. And so I say, we don't need the spotlight or the headline to perpetuate our future.

We don't need a new gimmick. The weapons of future wars may shoot faster and farther, but our progress —and our victory—will still be measured by the progress and victory of the man on the ground—the Infantryman.

This is our gimmick.

Capt William A. Brown, who graduated from OCS in 1945, served in Japan and Korea before attending the Advanced Course at the Infantry School in 1954. Subsequently, he was assigned as Aide-de-Camp to the United States Commandant in Berlin. Captain Brown graduated from the Regular Course of USACGSC in 1958 and is now Operations-Training Officer in Headquarters, Second United States Army.

The Role of the NCO in Our Changing Army

By Sgt Jack F. Holden, Jr.

No one denies that we have entered a new era; many changes are being made and will continue to be made throughout the Army. How will all this affect the Army's "grassroots" leader—the noncommissioned officer? What must he do to continue his vital role?

It would be wise, first of all, for the NCO to realize that times *are* changing, and that changes have occurred not only in the methods and techniques of his particular branch, but Army-wide, in just as important but possibly less obvious ways.

Primarily, what I am getting at here is that too many NCOs seem obsessed with the past. How often have we heard the NCO remark ruefully, "Back in 1940 things were different." Of course they were—we no longer live in 1940. It will soon be 1960! Many veteran NCOs are dumbfounded because the men of their command don't act like the men of the forties. Let's face it. Times change, and so do men and methods of leading men. It should be recalled that the general educational level of the United States in 1940 was about ninth-grade. Today it stands at nearly twelfth-grade, with a considerably higher percentage of the population having attended or graduated from college.

A common complaint from NCOs of long service is that "the new men are always asking why." That is the essence of service in a democracy and, incidentally, since it is also the mark of an intelligent person who is interested in his job, it generally is a good thing for the Army. This is not to defend the "wise guy." It is to note that as the educational level of the soldier increases, different methods become necessary to lead him effectively. The NCO is now—and will increasingly be—faced with a challenge in leadership unparalleled in Army history.

The clear implication is that if the men under him are better educated, and, as a consequence, probably are able to learn their military skills that much faster, the NCO himself will have to insure that his military knowledge is constantly increasing—that *his* education is not neglected. The Army's current educational program provides unusual opportunities for those who will take the time to help themselves. The day has passed when mere barking and "pulling rank"—however necessary it sometimes is—is accepted as evidence of proficient leadership. Technical competence is now one of the primary qualifications.

A vital precept of which the NCO should be aware is that the Army actually mirrors the nation. As the nation changes, its people change and so do their habits, thoughts and ways of doing things. The NCO's problem of knowing his men is therefore going to become more complex as time goes on. The Army is beginning to receive young men who were raised in the turmoil of World War II and whose behavior has been affected by this early environment. It will not be enough merely to demand a high performance of duty from such men —it will be necessary to analyze their personalities and to discover their motivations. The average squad leader probably knows which of his men is uncooperative, and he knows who the "goldbrick" is. But does he know why the man is a goldbrick or how he can be made into a good soldier? The good squad leader must be sincerely interested in the personal problems of his men and in their individual welfare. For example, he should be interested in finding out why Soldier X doesn't get mail from home. Morale implies consideration —mature consideration, not coddling. Passing men on to the chaplain or medics is the easiest, but not always the best, solution.

Actually, we NCOs will get only the prestige we earn and deserve. In these changing times, it will not suffice merely to "pull duty" and to build a reputation as an "old timer." In addition to the classic virtues, the successful NCO must have greater imagination and knowledge, and he must master the more advanced techniques of leadership. *Let's meet the challenge!*

Sgt Jack F. Holden entered the Army in 1944. He served in Europe and the P during World War II. He is now Public Information NCO at Headquarter Army First Arctic Test Center, Fort Churchill, Manitoba.

What Are We Doing About It?

By Lt Col Joseph L. Knowlton

IT IS impossible these days to escape the impact of criticism and analysis. Almost everything we read contains critical comment on some subject—on clothes, food, crime, foreign and domestic policy, teenagers —the list is infinite. Included on the list is the U.S. Army.

There is much comment on the Army's budget, its weapons, its organization. The reading public, which, of course, includes all military personnel, is constantly presented discussion on such broad matters as missile developments, airlift capabilities and requirement for general or limited war. Most of us in the service, in addition to reading about these things, are actually a part of them and problems they present.

Most of the criticism of the Army seems to be directed at the top of the military establishment. "The Army needs increased strength, more money, faster and better weapons development, more pay, better personnel policies, higher standards of performance," say the news items, and even the soldier himself.

Our military leaders at the highest levels are working to solve these matters in terms of billions of dollars, thousands of men, acres of housing, and millions of man-years of honorable, respected military service.

But what are *we* at the lower echelons doing about it?

Most of us are not in a position to shape the major military policies of the day, but we can help to shape the countless minor ones—which have a definite relationship to the big picture.

Let's examine our own professional standards. Are we, in our individual work, contributing to a better product? Are we demanding and getting a higher caliber performance from our subordinates or do we permit inferior work to go unchecked? Are our military surroundings maintained at the high level commensurate with our profession? Do we honestly furnish guidance and stimulus to our subordinates? Do we impress them with the merits of our profession and do we do it frequently? In positions of leadership, do we actually lead?

These questions apply to squad leaders, to commanders at all levels, to members of staff sections . . . up, down, and across the board.

And let's be honest with ourselves and not fall back on such excuses as the scarcity of funds. Instead, let's supply the necessary supervision, decisions, initiative and determination.

The professional soldier, and the man we want to become a professional soldier, will accept personal hardships if he can hold his head up and be proud of his accomplishments. While these accomplishments are influenced to a large degree by high-level policies, to a greater extent they stem from our everyday jobs.

We are small, but very important, cogs in the vast Army machine. What are *we* doing about it?

A Staff for the Deputy

By Maj Robert H. Brigham

THE LATEST changes in the organization of the battle group have made this unit capable of more effective operation in nuclear, as well as non-nuclear, warfare. The addition of the fifth rifle company not only permits greater flexibility and dispersion, but also allows the commander to form a reserve of decisive strength or to detach a portion of the battle group as a task force without seriously impairing the capabilities of the remainder of the unit. The revamped organization also provides someone to command the reserve or a task force—the deputy commander. But there the trend toward flexibility stops. The deputy has been given no organic staff, and without one it is questionable whether or not he will be properly able to control the forces assigned him.

Assuming that the commander will assign an assistant S3, an officer or NCO of the supply and maintenance platoon, and certain communication personnel to aid the deputy when a task force is formed, the agencies which supply these people under the present set-up can expect to be partially hamstrung most of the time. This is true because the task-force type of operation in any future conflict will probably be the rule rather than the exception. It is doubtful, however, that the battle group, already operating with minimum staff personnel, can afford to be without the services of these men. The division organization provides a separate staff for task forces—the brigade headquarters. Shouldn't the battle group also have the capability of providing the deputy with a small staff?

That capability may already exist without our realizing it, and the creation of such a staff might be accomplished without reducing operating efficiency under normal conditions. In fact, the "second staff" would contribute to the battle group's efficiency in a general situation, while also increasing immeasurably its effectiveness when a task force is employed.

The functions of the deputy's staff in a task-force situation are numerous.

Under standard circumstances, when no task force is detached, and when the deputy is not given command over a strong reserve, there are perhaps two main functions this staff might perform. The first function arises out of the fact that, since under nuclear concepts major emphasis is placed on dispersion of units and headquarters, the clear need exists for an alternate battle group command post. As constituted now, however, the command group cannot effect such dispersion and still operate efficiently. Even if the deputy were removed from the command post location, he could not effectively control the battle group should the CP be destroyed. On the other hand, if the deputy had a small staff and were set up in an alternate command post that was properly tied into the battle group communication system, there would be no question about his ability to take over command effectively and immediately.

Secondly, the deputy's staff could also act as a planning staff for the battle group. It is expected that the battle group will operate in a highly mobile and flexible manner; that it will move great distances and be confronted with many different tactical and logistical situations. Considering the probability of many special-type operations' being assigned within a short period of time, there will be a tremendous need for a great deal of detailed prior planning. It would be extremely difficult for the battle group staff to do this planning and still keep up with the current situation. This planning in large part could be handled by the separate staff under the deputy.

These are just two useful purposes our staff could perform under standard circumstances. Though there are many others, it is already clear that the deputy's staff would not be mere "deadwood" when not employed in a task-force or strong-reserve situation.

Let's decide now how the staff should be organized. It should be small, but with enough men and equipment to get the job done. As a minimum, it should have a combination S2–S3 officer, an officer to handle logistics and administration, and a communication officer or NCO with a small operating section. Only the bare necessities in the way of equipment would be provided. It would also be advisable for the two officers to have NCO assistants so that the staff could operate around the clock. But where can we obtain these people without taking them from the unit staff?

It is quite easy to indicate the need for more people, but it is not always so simple to decide where they should come from—especially when we are attempting to keep our organization "lean and mean." However, one of the suggested solutions to the problem requires only the full utilization of personnel now available in the battle group. In almost every instance, the subordinate units of the combat support company operate independently and look to their parent unit only for administrative and logistical support. In a way, this situation makes the combat support company commander a "near relative" of the headquarters and headquarters company commander. Similarly, other members of this company headquarters are only non-tactically employed. Let's give them a job! The company commander can become our S2 and S3 and the others can fill the remaining roles. All that would then be needed to complete our staff would be the attachment of a few personnel from the communication platoon.

This is one answer to the problem of providing a staff for the deputy commander. There may be others, but the important thing we must remember is that the deputy cannot be expected to "go it alone." He must have staff help and this staff must be continuously operational.

The opinions expressed in these articles do not necessarily reflect official thinking of the Infantry School.

Continued from page 7

Infantry's Mobility Crisis

The keynote of Infantry effectiveness is versatility. Above all else, this versatility must be maintained. *Britannica* defines versatility as "having an aptitude for new tasks or occupations; many-sided: subject to change; variable; free-swinging or turning; movable in every direction." To maintain its versatility, Infantry must understand that *battlefield mobility is indivisible*. Ground mobility and air mobility cannot be treated as separate entities. Infantry must have *whatever it takes at the time,* whether it be foot movement in jungle warfare, carriers for overland exploitation, or both carriers and aircraft for early link-up type operations.

Much is said in military circles about the need to achieve a mobility differential over the Soviets. Such an advantage could go a long way toward leveling existing Soviet bulges in manpower and materiel, but we cannot sit back and wait for American industry to produce this differential. The time for the wide, deep, porous battlefield is now. The time for the long talked-of capability for semi-independent operations is now.

Mobility is a pressing problem which leaves no room for wishful thinking. The only dependable solution involves the use of materiel already in existence or available in the foreseeable future. Otherwise, we are banking on hopes and dreams. After all, Soviet industry is quite up-to-date in producing machines of war. We should already have learned that to bet on a clear-cut technical superiority is to put a great many eggs in a pretty loosely woven basket.

To be specific, it is suggested that:

We maintain our versatility by not committing the Infantry to a program of 100 percent mechanization.

We become as airminded as possible as quickly as possible. Training Circular 20–1, "Airmobile Operations," is the first step in this direction, but we need many more steps backed by aggressive command support.

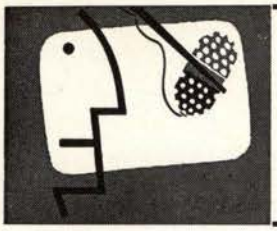
With the types of aircraft presently in the Army inventory, we can draw ground mobility and air mobility into better balance—and we can do it right now. This can be done by increasing the number of aircraft available for the deployment of Infantry units over the wide areas of the nuclear battlefield. These aircraft would be committed to the support of Infantry fighting elements in the same way as armored tracked vehicles are committed. All Infantry units would be trained to use both, either separately or in combination.

We make a genuine effort to lighten all of our equipment so that it can be moved by Army aircraft. In this connection we must recognize that any increase in the size, weight, or number of ground vehicles in Infantry units will incur a corresponding loss in tactical air mobility and in strategic air mobility as well.

We bend every effort to develop new concepts which will exploit our tremendous advances in firepower and which will maximize our battlefield mobility capabilities. This will entail a free exchange of thought and a willingness to abandon the old and to try the new.

It is important that we begin this program now and at the same time continue to seek breakthroughs in the development of new vehicles. Throughout history, it has been demonstrated again and again that a revolutionary concept of operations can overcome a superiority in numbers. When we develop a concept which combines the best we have in firepower with the best we have in mobility, the Queen of Battle will rule the wide, deep, porous battlefields of the future.

The opinions expressed in this article are those of the author and do not necessarily reflect official thinking of the Infantry School.



QUARTERLY QUIZ

Answer the following questions. Determine whether you are a Bolo, Recruit, Marksman, Sharpshooter or Expert. Each of the questions is worth 10 points.

1. The approved method for purifying a canteen of drinking water in the field is to add one:

a. salt tablet and boil for 30 minutes.

b. halazone tablet and wait 30 minutes.

c. water purification tablet (iodine) and wait 15 minutes.

d. calcium hypochlorite ampule and wait 30 minutes.

2. Normal targets for ground combat units manning the machinegun, caliber .50, HB, M2, mounted for AA fire, are:

a. all hostile aircraft.

b. hostile high-performance aircraft.

c. hostile troop-carrier and liaison aircraft.

d. no hostile aircraft unless attacked or endangered by the aircraft.

3. A complete copy of the Signal Operation Instructions (SOI) is not distributed below:

a. platoon level.

b. company level.

c. battle group level.

d. brigade level.

4. The determination of the degree of risk to friendly troops from a nuclear detonation is the responsibility of the:

a. nuclear weapons employment officer.

b. G2.

c. G3.

d. company commander.

5. What tracked vehicles is the Infantry division battle group authorized and where are they located?

6. The responsibility of the transport aviation unit commander in the conduct of a tactical operation in which he will provide support is to:

a. act as the personal pilot of the commander he supports.

b. act as a technical advisor to the tactical commander.

c. command his unit and ignore the tactical commander.

d. consult the division or corps aviation officer for instruction.

7. In the defense, a forward rifle platoon obtains all-around defense by:

a. withholding a reserve.

b. preparing rifle squad supplementary positions.

c. employing three rifle squads abreast in an irregular line.

d. organizing a perimeter defense.

8. When aiming the 3.5-inch rocket launcher, M20A1B1, at the target moving directly towards you, your point of aim in relation to the target must be at:

a. the center of mass of the target.

b. the bottom center of the target.

c. the top center of the target.

d. the center and right edge of the target.

9. The key to effective management of mass casualties in nuclear warfare is:

a. evacuation of all casualties.

b. efficient sorting of all casualties.

c. conservation of essential medical supplies.

d. knowledge of the effects of nuclear weapons.

10. What are the two components of the commander's plan of attack?

Answers on page 73

Continued from page 26

COMPETITIVE MARKSMANSHIP
It Pays Off!

If for no other reason than that it provided trained, competent coaches, the Competitive Marksmanship Program would be paying its way with dividends.

It is true that in the past there has been a noticeable failure to make proper use of the instructional resources which the program provides. Improvement in this situation should be brought about simply by a recognition of the merit and utility of competitive marksmanship.

THE Army Advanced Marksmanship Unit, located at Fort Benning, is, of course, the focus of the Competitive Marksmanship Program. Organized in 1956, shortly after the outset of the program itself, the Unit was formed to provide a centralized cadre for the rifle and pistol teams representing the Army in national competitions. It has been highly successful in performing this mission. It won the National Team Champpionships in 1957 and 1958, and expects to win these honors once more in 1959.

Being somewhat representative of the entire program, the Unit performs instructional missions as well. Since the fall of 1956, it has conducted a number of advanced coaching courses, with increasing effect upon Army-wide marksmanship since that time. In addition, it has conducted courses at training divisions for the improvement of the coaching techniques of cadre personnel. It has also conducted a number of marksmanship clinics for TOE units, notably for the 101st Airborne Division after its reactivation in 1957.

Other aspects of this mission of professional guidance and instruction include the clinics which have been organized from time to time to assist various colleges and universities in the formation of rifle teams and in instruction in rifle marksmanship techniques. The Unit, moreover, assists in the continuing Army program to provide instruction and sometimes facilities for the civilian shooter. A National Board for the Promotion of Rifle Practice was established by Congress prior to World War I as a part of the National Defense Act. This Act provided the basis for annual national matches in which the best shooting talent of the country would be able to compete on a somewhat equal basis for national laurels. With the exception of a period during World War I, and the years 1942 through 1951, this program has remained active. Congress has given some financial support to it, but the major burden must be borne by the services themselves. No other group or association is able to undertake a task of this magnitude, and perhaps no other is as concerned with encouraging high civilian standards of marksmanship.

As an indicator of the success of this enterprise, the National Rifle Association of America states that, while the number of classified shooters, or those entering tournaments, in 1940 was 19,681, by 1959 this figure had increased almost fivefold to 94,548. The number of matches conducted annually rose from 298 in 1940 to 1585 in 1958. It is apparent that national interest in rifle and pistol marksmanship is definitely on the upswing, and that this trend will considerably increase our general defense preparedness.

The Advanced Marksmanship Unit at Benning has other functions, as well. In conjunction with the Springfield Armory and the Frankford Arsenal, it has done much to improve the performance of the standard service rifle. Criteria are set up for gauging and testing such weapons, and the degree of accuracy which results from these studies is made available to every soldier who properly cares for his rifle. Inaccuracy in the soldier's rifle has been determined frequently to be due to excessive disassembly and cleaning. Many of the rifles used today, with standard ammunition, will not group in the Trainfire silhouette at 300 meters. This condition must be remedied in order to give the soldier confidence in his weapon's performance.

The Unit has worked with commercial manufacturers toward the design and development of new types of weapons, some features of which have been or will be incorporated in future arms. More accurate types of ammunition have been tested and developed with USAAMU's assistance, one of which is the 7.62mm boattail round, which soon will be standard-issue for all weapons chambered for the NATO round.

Despite the great and varied utility of the Competitive Marksmanship Program, a frequent complaint is that the Program is too expensive. During Fiscal Year 1959, the Marksmanship Unit was allotted $189,728 for TDY, travel purposes. But this money supports periods of instruction at other units as well as match participation. The Unit's TA equipment does involve another large figure. This cost, however, has been absorbed over a three-year period. In most cases, the tools and equipment it has purchased will be in service for years to come. Twenty percent of the figure is, in any case, not obtainable, due to fiscal curtailments.

These costs are inconsequential if—as I firmly believe—they buy a high state of proficiency with the rifle for the ordinary rifleman. Confidence in his ability to defend himself and to hit what he sees is an important factor in the soldier's accomplishment of his mission. Marksmanship training will give this confidence, and the proficiency to match it. This proficiency—directly or indirectly, by developing its own professional skill, as well as by testing, teaching and fostering marksmanship—is what the Army Advanced Marksmanship Unit, and the Marksmanship Program as a whole, will achieve.

The opinions expressed in this article are those of the author and do not necessarily reflect official thinking of the Infantry School.

Continued from page 27

The Price of the Prizes!

reasonable bounds. But the cost of the Army's competitive shooting program with respect to time and personnel is incredibly large. The shooters and the administrative and detail personnel which support them—clerks, typists, truck drivers and ammunition men—account for thousands upon thousands of man-hours. For example, the national matches at Camp Perry require approximately 2000 support troops. The number of full-time personnel assigned to the USAAMU at Fort Benning would nearly fill one combat company. In view of the small effect of the program, such manpower consumption must be eliminated.

When one begins to calculate the cost of this program in dollars and cents, the figures really become astronomical. The budget for competitive shooting for Fiscal Year 1959 at Benning alone has been set at $2,200,000. Multiply this figure by five and you have a good approximation of the total expenditure within the United States upon Army teams alone. Yet there are also Marine Corps, Navy, Coast Guard, Air Force and reserve units in the program.

Specifically the USAAMU teams at Fort Benning have a budget which calls for nearly $190,000 for TDY funds during FY 1959. The cost of their Table of Allowance equipment alone is about $680,000. And what is worse, this "sport" is put on the same first-priority basis for funding and manning in the Army Program System as the training of combat troops.

Taking the national matches at Camp Perry as an indicator, if we figure on an average of $250 per month per man, the wages of the personnel supporting the Perry matches would be in the vicinity of $500,000. Add to this the TDY costs, the cost of shipping the equipment used, the cost of incidental transportation, the cost of ammunition and countless other indirect expenses of the sort, and these matches turn out to be the most expensive "sport" the Army maintains—and yet they are absurdly exclusive as well.

If the Competitive Marksmanship Program fulfilled its purpose—if the program offered greater spectator interest—if it produced better combat riflemen—if it were concerned with perfecting methods of training combat riflemen—then it would have some justification.

As matters stand, however, there are no excuses. It has been evident for a long time that the Competitive Marksmanship Program requires serious reappraisal. Now especially, when we are faced with the necessity of maintaining fighting trim on limited budgets, with limited manpower, this reappraisal is urgently needed.

The opinions expressed in this article are those of the author and do not necessarily reflect official thinking of the Infantry School.

LETTERS *(continued from page 3)*

mander, a deputy battle group commander and an executive officer who will divide the five companies among them. Naturally, each will require a staff and the staffs will require headquarters equipment and vehicles. In time, the Infantry division will get back up to 18,000 strength and the battle area will be clogged with vehicles. . . .

Let us not forget one thing . . . as far as organization is concerned—eliminate the hierarchical arrangements as much as possible and let the personality of vital leaders predominate! Unnecessary intervening commanders and staffs suck the lifeblood out of combat units by pursuing their miserable little functions which are delegated to them just to get them out of the hair of higher commanders. . . .

GLENN A. FARRIS
Col, Infantry
PMST
University of Florida

Be assured that the Infantry School opposes any unnecessary complication of lines of command. The deputy battle group commander at times requires a staff of his own but it may be constructed from personnel who are already authorized and who normally perform other duties within the battle group (see "A Staff for the Deputy," page 63).—Editor.

Translation

Sir:

I greatly appreciated the article, "New Basic Weapon for the Infantry," by Maj R. H. Oestreich (January 1958 issue of *Infantry*).

After reading the article, I made up my mind to translate it for the Dutch Army, in order to make it possible for more of us to get some knowledge of your methods of increased firepower for forward units. . . .

G. A. GEERTS
Lt, Infantry
Netherlands Army
Tapijnkazerne, Maastricht
The Netherlands

Lieutenant Geerts' translation project is a beneficial step towards ensuring the fullest practicable exchange of military information between the United States and its allies. Infantry *encourages other allied officers to develop similar projects of their own. Except in the case of previously copyrighted material, we are more than happy to grant reprinting rights.*—Editor.

Kudos

Sir:

I have subscribed to *Infantry* for some years now for a variety of reasons. In my command guidance to my battalion (of another branch) I have suggested that all officers and dayrooms subscribe, after belonging to the Army Association and their branch association. In the first place I feel that *Infantry* fills a void left when the expansion of *Army* to include so many branches forced the . . . coverage above the small-unit tactical level. For that reason I am interested in the individual and small-unit technique articles. New developments in weapons interest me. Controversial articles on small-unit techniques, and even on such levels as the new supply system are of interest. I quoted extensively from "Garrison Supply" (by Capts Chandler Goodnow and Benjamin G. Spivey, in the July-September 1958 issue of *Infantry*) in a recent attempt to revise some aspects of supply here. I find most articles of great personal interest, although I am of another branch. The line of demarcation between us grows slimmer on the nuclear battlefield!

WILLIAM A. KNOWLTON
Lt Col, Armor
1st Bn, 3d Armd Cav Regt
Fort Meade, Md.

We appreciate Colonel Knowlton's remarks and are glad to hear once again that Infantry *is helpful to other members of other branches. We have long intended* Infantry *as a magazine not only for Infantrymen, but for all those who work with Infantry.*—Editor.

Sir:

Infantry is the essential part of my military library. . . .

JOSE M. SOLIA
Rio Piedras
Puerto Rico

Sir:

Infantry . . . has been the answer to an Infantryman's prayer. It is beginning to fill the void left by the demise of the old *Infantry Journal.* I look forward to the day when it is a monthly publication . . . . I have turned into an itinerant peddler of magazines . . . and I expect the total for the battle group in new subscriptions to approximate 100. There are quite a few subscriptions already. . . .

Continued on page 72

Continued from page 55

Why Don't We . . .

will eventually replace the KD ranges, it will be several years before all installations complete the changeover, and even then 50-point KD ranges will still be authorized at each major installation. Many dollars and hours are spent on repairing and replacing the "Maggie's Drawers" now employed. Also, the disk is more effective than the red flag in showing the location of a bullet hole outside the scoring area. Using the disk to mark the unscored hole will aid shooters in bringing the bullet-strike into the bull's-eye.

MSgt O. G. Hibbert

. . . manufacture a universal field eating utensil. This item would replace the present mess-kit knife, fork and spoon. It would eliminate the necessity of issuing can openers with field rations since it would combine the features of the present can opener and a puncture-type can opener. Our universal utensil would be slightly more concave than the ordinary spoon and would be made both with tines and with a cutting edge. The cutting edge would simply be a serration similar to that on a steak knife. The utensil would be issued in both a right- and left-handed version.

Capt Alfred A. Alvarez

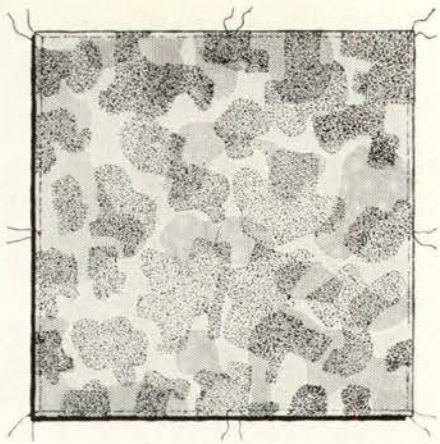
. . . develop an individual camouflage net of weather resistant paper. This net would be about 50 inches square and large enough to cover a one-man foxhole. Simple tie-strings would enable several nets to be joined together for larger positions. The net would be primarily brown on one side and primarily green on the other, and would be small enough when rolled to fit easily into a field jacket pocket. If issued as an expendable item with each case of field rations, the net would be readily available to the soldier and would impose no additional burden on the logistical setup.

Capt John D. Bethea

. . . develop an Electronic Location Finder ("ELF"). When fractional-yield nuclear weapons in the hands of Infantrymen become commonplace on the battlefield (Davy Crockett, the atomic bazooka, points the way), the problem of pinpointing friendly units and effecting pre-nuclear firing coordination will be a serious one. For example, if a company commander wishes to fire an atomic bazooka he, of course, must warn adjacent units. If it is nighttime, the problem of night blindness will require more distant units to be notified. Conventional means of notification are slow. Some units may not get the word and units may not always be able to report accurate, pinpoint locations.

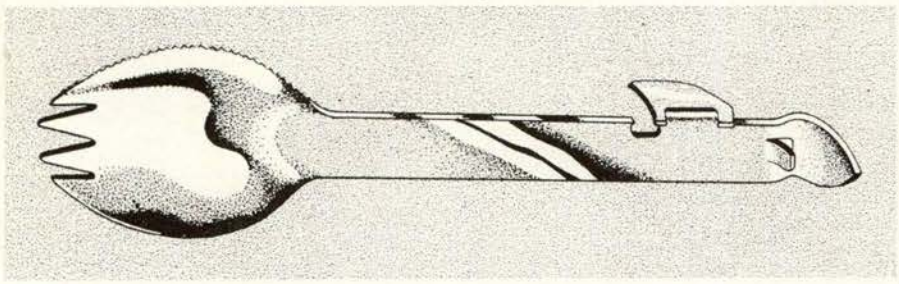
We need an electronic device that might work something like this: The battle group would have an ELF with an electronic board which could pinpoint the exact location of every company-size unit in the area. The commander of the company desiring to fire a fractional-yield nuclear weapon would transmit a coded radio request to the ELF at battle group, giving the azimuth and distance to the enemy target. The ELF would electronically measure the distance and direction of the sending company's radio beam, thus pinpointing the exact location of the firing unit. Simultaneously, it would transmit a coded flash message requiring all company-size units in the area to transmit, thus enabling the ELF to pinpoint their location. The ELF operator would then plot all locations and determine if the planned shot would affect any of the units. If all units were clear, it would flash a coded "OK-to-fire" to the requesting unit. The ELF would do all of this automatically, electronically, in no more than five minutes and with a minimum chance of human error. Meanwhile, the requesting unit would have the atomic bazooka ready for immediate firing. The speed with which such requests could be processed would prevent the enemy from deciphering and acting upon the strike messages.

Capt William A. Brown



Individual camouflage net.

Universal eating utensil.



If mutual extermination were the object of war, hostile nations could have committed suicide very cheaply long ago. If unlimited force were useable in war, no army, navy nor air force in the world would be necessary today. . . .

General Bruce C. Clarke

By Lt Col Gamma Ray

SOME HAVE IT SOME GET IT!

The ability to lead comes naturally to some men, others acquire it. A number of our great commanders were not born with, but had to learn the techniques of leadership.

"He's a born leader!"

Often such a distinction is applied admiringly, if incorrectly, to officers or noncommissioned officers who command their units with skill, drive, enthusiasm and ease. These "natural-born" commanders conduct themselves as if the ability to command a unit successfully were a fundamental and inherited part of their makeup.

But is there such a thing as a "natural" leader? If so, are all other less fortunately endowed officers and NCOs doomed to failure or staff assignment (sometimes regarded as synonymous)? Can "natural" leadership be acquired?

One of our outstanding company commanders, in a regiment which probably was the outstanding regiment in Korea, was an officer who was admired, respected and loved by his men. He demanded and received the best from each of them as individuals and as a team. When his company was on the line, he handled it with a tactical skill which would have warmed the hearts of Benning instructors. And when his company was in reserve, it was a showplace which other companies were directed to emulate. The neatness of his unit in garrison was deep—it wasn't the result of superficialities like whitewashed rocks and swept streets. His arms room reflected orderliness, cleanliness and superior maintenance; his supply room was as meticulously arranged as a top-notch hardware store; his mess was a combination club and restaurant; his records and administration were flawless. And the men imitated the example set by this captain whose military bearing and personal demeanor were exemplary. His first sergeant and platoon leaders spoke of him in terms of reverence. He was impeccable in conduct on and off duty. And to make his accomplishments a little more noteworthy and his tasks a little more difficult, this paragon of officer conduct was a Negro captain commanding an integrated company.

There probably are some men with a natural flair for leadership. One was an artillery battery commander who was a "natural" if there is such a thing. He was big, brawny, a football player while at West Point. He wore almost continually a grin which spread from ear to ear. He was a big man physically and, more important, mentally. He loved people and was intensely interested in everything that happened to his men. But he had a fiercely competitive spirit which made him both an outstanding football player and a superior unit commander. When he suggested something to his men they responded with enthusiasm; when he ordered them to a task, no matter how distasteful, they fell to without grumbling. And with high, good spirits, he would try to make his unit the best at whatever was going: battery tests, messes, inspections, motor maintenance, or jumping out of airplanes. He was the kind of officer whose men would follow wherever he wanted to take them. He exuded confidence. He was "gung-ho," well trained, and well liked by everyone. But his competitive spirit could not stand the stagnation of the post-Korea Army, and he succumbed to the attractions of the outside world where, it is said, brave, intelligent men can progress rapidly, without waiting for "seniority."

Others, often thought of as "naturals," have single-handedly written chapters of combat history. Patton, for example, was simultaneously loved and despised, but he got his job done. Napoleon was a despotical military genius whose ambitions proved his downfall. Alexander was another genius who, at the age of 21, wept when there were no more fields for him to conquer. Eisenhower was a diplomat in uniform who molded millions of men from tens of countries, each with its own

chauvinistic prides, and gave the world an unprecedented victory. Ridgway was a courageous and offensive-minded commander who turned a pessimistic, unenthusiastic Army into a charging, victorious one. Mackenzie was an Indian fighter who, though a martinet and disciplinarian of almost sadistic intensity, went after his goal with a singleness of purpose without which victory over the elusive Indian was impossible. Grant was a washed-up has-been who, like Ridgway, took a discouraged Army and led it and himself to total victory.

Without equivocation it can be said that these men were great leaders. But were they "naturals?" What did they have in common?

Some of them used personal gimmicks. Patton had his pearl-handled revolvers, highly polished riding boots, and stars on every conceivable part of his uniform. Ridgway had his hand grenade, suspenders and jump boots. Eisenhower had his jacket. Mackenzie had his meticulous uniforms even in the saddle on a long forced march. MacArthur had his gold-encrusted cap and outsized corncob pipe, Stillwell had his campaign hat, and Gavin, even as a major general, had an M-1 rifle for a side-arm. Even a well publicized lieutenant, with a flair for the theatrical, wore a Luxenberg cap in Korea.

Personal gimmicks these men had in common. But gadgets did not make them leaders. What intangibles did they have in common?

They all displayed integrity, resoluteness, confidence (whether they felt it or not), intrepidity, competitiveness, icy nerves, a willingness to gamble (MacArthur's attack at Inchon was a stroke of pure bravado and gambling that broke the back of the North Koreans). But, are these necessarily born and inbred instincts? Can't they be acquired?

There is a general officer in the Army today who exemplifies one type of officer. He would never be mistaken for a "natural." He has analyzed himself and correctly recognized himself for what he is—a hard-to-know, demanding, cold, ambitious, intellectual type who is a brilliant staff officer but who is an unenthusiastic and reluctant commander. He does not care particularly whether the units he commands have an esprit and a bonded unity—provided they get the job done. He is, in short, a "cold jug." He dislikes command duty and suffers through it only because he knows it should be on his record to give it balance. He accepts the limitations of his personality and doesn't attempt to change them—even though he might.

Another extremely successful general officer, and this man would seem to be almost, but not quite, a "natural," figuratively "grinds out leadership." As a young officer, he was handsome, almost offensively military, erect, conceited, unbending, humorless, painfully correct. He was cold and unapproachable. He was completely unsympathetic toward his men. He simply did not understand them. But as he grew older he recognized his shortcomings as a leader and resolved to correct them. He learned the techniques of leadership and followed them slavishly. He retained enough of his coldness to make decisions objectively and unemotionally, something which perhaps the leader with too much of the milk of human kindness might not be able to do. But by learning and applying the techniques of leadership, he has become the outstanding young general in today's Army. He built on what he was born with and succeeded in changing his personality—retaining and improving the good and discarding the imperfect.

So far we've taken a look at some so-called "natural" leaders, at a man who had no flair for leadership and who did not want to do anything about it, and at a man who recognized his leadership deficiencies and who corrected them. This latter example would certainly seem to prove that leadership can be acquired.

There is still another type of leader. This would seem to be the ideal. He is a man who arrived at adulthood with the personality traits which make him seem a "natural" but with the desire and the ability to learn the trade of being an officer. By combining the right personality with his training, he becomes the outstanding leader—a man sought after, promoted and recognized.

There are probably many such men in the Army today. One was a lieutenant early in World War II, but eventually he commanded a battalion of tanks in the North African campaign and was later a combat commander in Patton's march across Europe.

His reputation on the battlefield was such that the Germans recognized his tactics and cringed before him. He was able to inject into his unit his own ruthless drive, energy, enthusiasm, bravado, courage and endurance. He planned his attacks with care and daring. And when he attacked he did so with all the force he could muster. He saved ammunition and gas for his attacks. When he moved out he was ready. He attacked with all guns blazing and aimed at the proper objectives. He was not wasteful of his resources but put them to bear on the points where they could do the most good. His men knew they were ready and were supremely confident of themselves, their commander and their unit.

That same tank commander is now a general officer on the Army staff in the Pentagon, a place considered by some as a labyrinth of frustrations, a mausoleum of lost causes, a graveyard of shattered ideals and driving enthusiasms. But this former commander applies to the multifaceted

M-1 rifle for a side-arm, but gimmicks such as these did not make them great leaders.

problems of the Pentagon the same daring and unique approaches that he used in combat. By applying these principles to the Pentagon challenge and by utilizing his leadership and competitive urge, he is able to stand out among the staff officers there as a man to be admired and imitated. He is respected by his superiors for his frank and analytical approach to problems, even though he is often in disagreement with the initial opinions of his bosses. But he has the courage to speak out with confidence and knowledge based on meticulous and sometimes dogged research.

He is loved by his subordinates who know that the guidance they receive from him is not for the sole purpose of performing a paper exercise to join countless files of similar studies, memoranda and fact sheets which are produced daily in the Pentagon with the rapidity of high-speed newspaper presses. His subordinates recognize his guidance for what it is—a fresh, well thought-out approach which has substance and And he doesn't give them their studies. He lets answers ac-

called "natural" leaders and the rest of us. The "naturals" have acquired their traits either through having inherited them, or by having developed them in their growing-up process. But the point here is that by the time they become officers or NCOs they have acquired the personality traits which call attention to what they are —naturals of one degree or another. The captain mentioned in the first part of this article and the ex-West Point tackle represent this category of individual.

The other broad category is that type who neither through natural instincts nor environment has acquired the traits which make him stand out as a leader. He may know what he is supposed to do with his unit but he gets nothing but disgruntled, half-hearted cooperation when he tries to get the job done. He has arrived at adulthood with no sense of men or leadership. If, however, he wants to do something about it and if he has the innate instincts to be developed, he can be taught leadership. While he might be accused of "grinding it out" he is nonetheless a leader in the truest sense of the word. His men respect him, he has no difficulties in getting the job done, and he can live with himself.

ti there is that leader who is ing of all—the "nat- his God- his

end up as nine-letter men. On the other hand, there are those athletes who are not naturally endowed with graceful coordination but doggedly pursue one sport until they master it. They may be able to knock down the opposing interference on the football field nine times out of ten, but they'll never be able to break 60 on the back nine. And then there are non-athletes so badly coordinated that they have some difficulty even in walking.

With leaders it is the same—some are naturals who can and do master all phases of the art and who rise to great heights. Others are average men who doggedly pursue the art. They, too, can rise high but they may have to settle for less publicity than the former group. There are also the average men who do not want to work at leadership. These are the men who are happiest as staff officers and shoot in the middle 90s. They may be brilliant in that capacity but there they expire. Finally, there are those who are barely able to walk. If they get past the commissioning process it's best to make them junior staff officers for the rest of their careers.

A prime example of the dogged student of leadership is the battalion commander who took over a fairly happy, well-trained unit and in three ths had turned it into a griping better-trained outfit. ough, he had rior

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Is there or isn't there such a thing as a born leader?

Psychologists seem agreed on one point. Given a man with average intelligence and traits of character which permit him to recognize right from wrong, they feel he can be trained to be a good leader by developing in him the proper amounts of initiative, confidence and magnetism. On the other hand, if a man doesn't want to be a leader and is not willing to recognize and correct deficiencies in personality, no amount of training is going to make him a

break down

called "natural" leaders and the rest of us. The "naturals" have acquired their traits either through having inherited them, or by having developed them in their growing-up process. But the point here is that by the time they become officers or NCOs they have acquired the personality traits which call attention to what they are —naturals of one degree or another. The captain mentioned in the first part of this article and the ex-West Point tackle represent this category of individual.

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Finally, there is that leader who is the most satisfying of all—the "natural" who doesn't rest on his God-given laurels, but who builds on his character and moves ahead. He polishes himself until, like the tank commander, he becomes a daring, dashing, superior commander on the battlefield, or a wise, patient, enthusiastic, morally irreproachable staff officer, in that most difficult of all leadership situations, the Pentagon.

Leaders are analogous to athletes. There are some athletes with natural coordination. They can play low-70 golf the second time out, they can jump six feet on the track after just having won the basketball game for the Alma Mater. They usually end up as nine-letter men. On the other hand, there are those athletes who are not naturally endowed with graceful coordination but doggedly pursue one sport until they master it. They may be able to knock down the opposing interference on the football field nine times out of ten, but they'll never be able to break 60 on the back nine. And then there are non-athletes so badly coordinated that they have some difficulty even in walking.

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A prime example of the dogged student of leadership is the battalion commander who took over a fairly happy, well-trained unit and in three months had turned it into a griping but somewhat better-trained outfit. Four months later, though, he had a happy, spit-and-polish, superior battalion. How did it happen? The commander recognized his mistakes in leadership; he changed them but not his skyhigh standards. As a result he got what he wanted, and so did his men.

The moral of the story? Leaders may be born that way but they can also be developed. Some have it, some get it.

Continued from page 67

LETTERS

You may be interested to know that 52 of these subscriptions came from one company. The only advertising consisted in showing the latest issue to the man. As we are just now in the small-unit phase of training, the magazine sold itself. . . .

JAMES E. LANDRUM, JR.
Col, Infantry
1st BG, 8th Cav
Korea

We of the 12th Marine Corps Reserve and Recruitment District have read and studied with great interest Brig Gen S.L.A. Marshall's book—excerpts of "Sinai Victory" in the April-June 1959 issue of *Infantry*. . . . We note a fine parallel of its lessons and points to our own objectives . . . in the training of Marine Corps Reservists. . . .

M. J. STYLES
Capt, USMCR
Procurement Aids Branch
12th Reserve District
San Francisco, Cal.

Infantry *receives many letters which testify to its value as reference material. An ideal way to keep your copies for future use is in the special* Infantry *binder pictured on our inside back cover.*—Editor.

Unit History

Sir:

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DONALD O. CRUTCHLEY
Capt, Infantry
Combined Arms Branch
The Quartermaster School

The type of presentation you propose is already under consideration by Infantry. *We appreciate your suggestions.*—Editor.

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Fleming, Jack R.
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Stone, Lawrence J.
Swann, H. L. Jr.
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Brogan, Thomas W.
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Seto, Sam C. Jr.
Shea, Eugene A.
Sherron, Gene T.
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Smith, Julian H.
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Stevenson, William J.
Stout, Herald F. Jr.
Sweeney, Kenneth J.
Thorpe, Marion E.
Troutman, Gregory L.
Tunmire, Dana
Vaught, Ralph R.
Ware, Fletcher K. Jr.
Weekly, Ralph E.
Weeks, Robert E.
Welsh, Robert W.

M-1 rifle for a side-arm, but gimmicks such as these did not make them great leaders.

problems of the Pentagon the same daring and unique approaches that he used in combat. By applying these principles to the Pentagon challenge and by utilizing his leadership and competitive urge, he is able to stand out among the staff officers there as a man to be admired and imitated. He is respected by his superiors for his frank and analytical approach to problems, even though he is often in disagreement with the initial opinions of his bosses. But he has the courage to speak out with confidence and knowledge based on meticulous and sometimes dogged research.

He is loved by his subordinates who know that the guidance they receive from him is not for the sole purpose of performing a paper exercise to join countless files of similar studies, memoranda and fact sheets which are produced daily in the Pentagon with the rapidity of high-speed newspaper presses. His subordinates recognize his guidance for what it is—a fresh, well thought-out approach which has substance and meaning. And he doesn't give them conclusions to their studies. He lets them develop their own answers according to the facts.

Is there or isn't there such a thing as a born leader?

Psychologists seem agreed on one point. Given a man with average intelligence and traits of character which permit him to recognize right from wrong, they feel he can be trained to be a good leader by developing in him the proper amounts of initiative, confidence and magnetism. On the other hand, if a man doesn't want to be a leader and is not willing to recognize and correct deficiencies in personality, no amount of training is going to make him a good leader.

Officers and NCOs break down into two general categories—the so-called "natural" leaders and the rest of us. The "naturals" have acquired their traits either through having inherited them, or by having developed them in their growing-up process. But the point here is that by the time they become officers or NCOs they have acquired the personality traits which call attention to what they are —naturals of one degree or another. The captain mentioned in the first part of this article and the ex-West Point tackle represent this category of individual.

The other broad category is that type who neither through natural instincts nor environment has acquired the traits which make him stand out as a leader. He may know what he is supposed to do with his unit but he gets nothing but disgruntled, half-hearted cooperation when he tries to get the job done. He has arrived at adulthood with no sense of men or leadership. If, however, he wants to do something about it and if he has the innate instincts to be developed, he can be taught leadership. While he might be accused of "grinding it out" he is nonetheless a leader in the truest sense of the word. His men respect him, he has no difficulties in getting the job done, and he can live with himself.

Finally, there is that leader who is the most satisfying of all—the "natural" who doesn't rest on his God-given laurels, but who builds on his character and moves ahead. He polishes himself until, like the tank commander, he becomes a daring, dashing, superior commander on the battlefield, or a wise, patient, enthusiatic, morally irreproachable staff officer, in that most difficult of all leadership situations, the Pentagon.

Leaders are analogous to athletes. There are some athletes with natural coordination. They can play low-70 golf the second time out, they can jump six feet on the track after just having won the basketball game for the Alma Mater. They usually end up as nine-letter men. On the other hand, there are those athletes who are not naturally endowed with graceful coordination but doggedly pursue one sport until they master it. They may be able to knock down the opposing interference on the football field nine times out of ten, but they'll never be able to break 60 on the back nine. And then there are non-athletes so badly coordinated that they have some difficulty even in walking.

With leaders it is the same—some are naturals who can and do master all phases of the art and who rise to great heights. Others are average men who doggedly pursue the art. They, too, can rise high but they may have to settle for less publicity than the former group. There are also the average men who do not want to work at leadership. These are the men who are happiest as staff officers and shoot in the middle 90s. They may be brilliant in that capacity but there they expire. Finally, there are those who are barely able to walk. If they get past the commissioning process it's best to make them junior staff officers for the rest of their careers.

A prime example of the dogged student of leadership is the battalion commander who took over a fairly happy, well-trained unit and in three months had turned it into a griping but somewhat better-trained outfit. Four months later, though, he had a happy, spit-and-polish, superior battalion. How did it happen? The commander recognized his mistakes in leadership; he changed them but not his skyhigh standards. As a result he got what he wanted, and so did his men.

The moral of the story? Leaders may be born that way but they can also be developed. Some have it, some get it.

Continued from page 67

LETTERS

You may be interested to know that 52 of these subscriptions came from one company. The only advertising consisted in showing the latest issue to the man. As we are just now in the small-unit phase of training, the magazine sold itself. . . .

JAMES E. LANDRUM, JR.
Col, Infantry
1st BG, 8th Cav
Korea

We of the 12th Marine Corps Reserve and Recruitment District have read and studied with great interest Brig Gen S.L.A. Marshall's book—excerpts of "Sinai Victory" in the April-June 1959 issue of *Infantry*. . . . We note a fine parallel of its lessons and points to our own objectives . . . in the training of Marine Corps Reservists. . . .

M. J. STYLES
Capt, USMCR
Procurement Aids Branch
12th Reserve District
San Francisco, Cal.

Infantry *receives many letters which testify to its value as reference material. An ideal way to keep your copies for future use is in the special* Infantry *binder pictured on our inside back cover.*—Editor.

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Stein, Albert E.
Stevenson, William J.
Stout, Herald F. Jr.
Sweeney, Kenneth J.
Thorpe, Marion E.
Troutman, Gregory L.
Tunmire, Dana
Vaught, Ralph R.
Ware, Fletcher K. Jr.
Weekly, Ralph E.
Weeks, Robert E.
Welsh, Robert W.
Wenzel, Carl L.
Wise, John E.
Woodyard, John H.
Ziegler, Richard G.

and the relative probability of adoption of enemy capabilities.

Graphic Representation, 6304–A2. An integrated conference and practical exercise involving the technique of graphic representation in the preparation of situation maps, operations maps, planning maps and operation overlays.

**Unit Funds,* 6474–12–USAR(RDT), two hours. An integrated conference and practical exercise covering sources of income, and duties of the custodian and the unit fund council. 20¢.

Parachute Operations, 6621–A10. A map exercise covering the planning for and conduct of a parachute operation by an airborne battle group and company.

Assault Transport Operations, 6630–A10. A map exercise covering the planning and execution of an air-landed operation by a ROTAD battle group in active nuclear warfare.

**Battle Group in Night Attack,* 6666–A8–USAR (ADT), eight hours. A terrain exercise covering a company and battle group in the night attack under active nuclear conditions. $1.00.

Battle Group in Desert Operations, 6770–A4. A map exercise covering a mechanized battle group in the attack in desert terrain under active nuclear conditions.

Battle Group in Mountain Operations, 6774–A6. A map exercise covering the planning and conduct of company and battle group mountain operations under active nuclear conditions.

**Company Security Missions, Offensive,* 6832–I4–USAR(ADT), four hours. A conference and map exercise covering the employment of the rifle company as advance, flank and rear guard of a larger force in the offensive. Also described is technique for performing these missions with varying degrees of mobility (including partial and complete helicopter and Infantry-carrier mobility). 75¢.

**Reverse Slope Defense,* 6931–I4–USAR(ADT), four hours. A terrain exercise covering the fundamentals of defensive combat as applied to the elements of a rifle company organized on a reverse slope. Based upon a ground reconnaissance, students are required to plan the organization of ground of the rifle platoons, select positions, and assign missions to the weapons of the weapons platoon and tanks of an attached tank platoon. Students are also required to plan the employment of a defensive position in a counterattack role. 35¢.

**Reserve Rifle Company in Defense,* 6950–I4–USAR (ADT), four hours. A terrain exercise in which the students, acting as weapons platoon leaders and rifle company commanders, apply the fundamentals of defense in the organization of the ground of a reserve rifle company in the position defense and as part of a larger unit conducting the mobile defense. 40¢.

Organization of Artillery, 7205–A2–USAR(ADT), two hours. An integrated conference and display covering the general missions of artillery, the over-all organization of division artillery, and the organization of the mortar battery of the battle group.

Items from the April 1959 Monthly List:

**Map Reading: Fundamentals and Theory,* 2180–USAR (RDT), two hours. A conference covering marginal information, topographic and military symbols, the meaning and application of the UTM grid system, and the use of the graphic scale in measuring distance. 10¢

Battle Group in Position Defense, 6250–A18–USAR (ADT), eighteen hours. A map exercise and problem covering the battle group in defense under both active and non-active nuclear conditions. The problem includes organization of the battle group battle area defense, employment of subordinate elements, troop leading and

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***Infantry*, Book Department, U. S. Army Infantry School, Fort Benning, Georgia.**

staff section procedures, supply requirements and location of logistical installations.

**Personnel Procedures,* 6445–I3–USAR (RDT), three hours. An integrated conference and practical exercise covering classification, assignment, reassignment, promotion and reduction of enlisted personnel. 45¢.

**Supply and Property,* 6505–A6–USAR (RDT), six hours. A practical exercise covering garrison supply and property accounting procedures. The problem encompasses the principles and types of supplies, determination of supply requirements, and supply economy. 40¢.

**Inspections,* 6515–I1–USAR (RDT), one hour. A conference and problem covering functions of inspections. The problem encompasses the inspection process, programs, types and techniques, 15¢.

**Movement Planning,* 6520–I1–USAR (RDT), one hour. A conference covering the principles of planning which are applicable to all unit movements by all forms of transportation. The problem deals with the planning sequence of troop movement, and loading characteristics of rail, water, truck and air transport equipment. 25¢.

Brigade in Offensive Operations, 6760–A6. A map exercise and problem covering a brigade task force in mobile offensive operations under active nuclear conditions.

**Fire Support Planning,* 7208–A1–USAR (ADT), one hour. A conference and problem on the techniques, terminology and procedures used by the Artillery in developing the fire support plan. 45¢.

Items for the May 1959 Monthly List:

Civil Affairs/Military Government, 2236–USAR (RDT), one and three-quarters hours. An integrated conference and practical exercise covering the mission, function and activities of Civil Affairs units. Also included are staff and unit organization, policies and procedures for the conduct of CA activities, and relationship with civilians as prescribed by the Geneva Conventions of 1949.

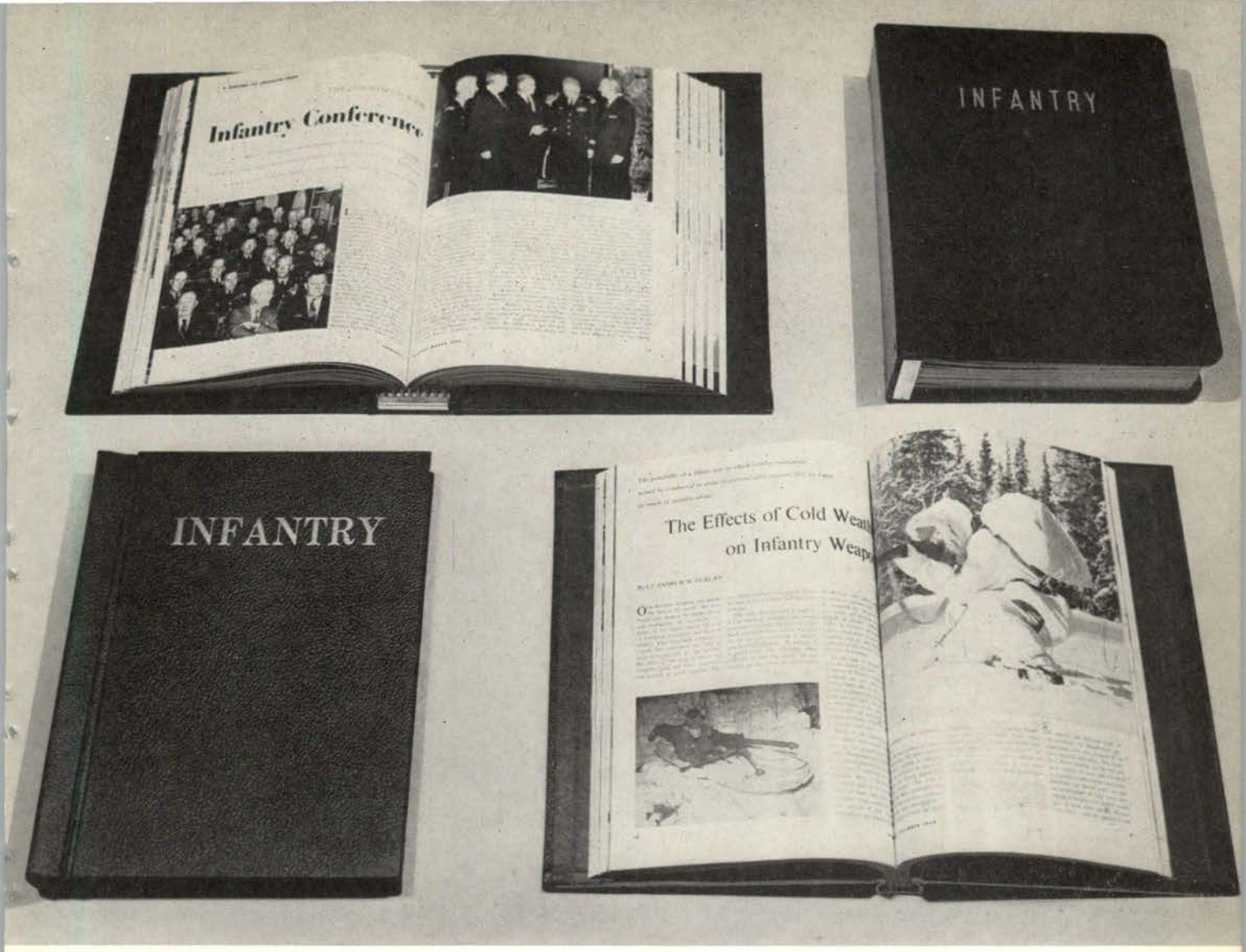
Administration of Military Justice, 2237–USAR (RDT), three hours. A conference covering actions by persons having knowledge of an offense, apprehension and restraint of the accused or the suspected, and searches and seizures. Also included is a preliminary inquiry of the commanding officer, including evidentiary matters and selected punitive articles. A practical exercise deals with the administration of military justice.

Administration of Military Justice, 2238–USAR (RDT), three hours. A conference covering actions of the company commander of the accused, including nonpunitive measures, nonjudicial punishments under Article 15, UCMJ, the preference and drafting of charges and preparation of allied papers, and forwarding of charges to the battle group commander for action. A practical exercise deals with the administration of military justice.

Joint Air-Ground Operations, 6331–A2–USAR (RDT), two hours. An integrated conference and practical exercise covering Army requirements for air support, air-ground system, target selection and marking, the ground liaison officer, the air reconnaissance liaison officer and air operations planning.

Airborne Logistics, 6542–I2–USAR (RDT), one and three-quarters hours. An integrated conference and practical exercise on the logistical organization of the Airborne division and its subordinate units, stressing company level operations. Emphasis is placed on special characteristics of logistical support of the Airborne division, including the means of retrieving parachute-dropped supplies.

Mess Administration, 6517–I1–USAR (RDT), one hour. A conference covering unit mess administration, ration requests, field ration issue slips, meal cards, master menus, cash collection sheets and miscellaneous files and records.



Binders for Your Copies of Infantry

Two handsome binders are now available for *Infantry* magazine. Both covers are sturdily constructed of dark-blue, grained leatherette and are richly stamped with gold lettering.

Post-Type Binder (shown at top of illustration) — This compact binder holds eight issues — a full two-year's subscription. The magazine is easily inserted and lies flat for convenient reading. Price $2.50, plus $.35 for mailing.

Grip-Type Binder (shown at bottom of illustration) — The grip-type binder holds four issues — a one-year's subscription. This beautiful cover gives the appearance of a permanently bound book. While it does not lie as flat as the post-type binder, the magazine can be removed for easy reading simply by pressing down on the opened front cover. Price $1.50, plus $.35 for mailing.

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We will stamp your name in gold on the front cover for an additional $.25. Foreign subscribers (not APO) add an additional $.50 for postage.

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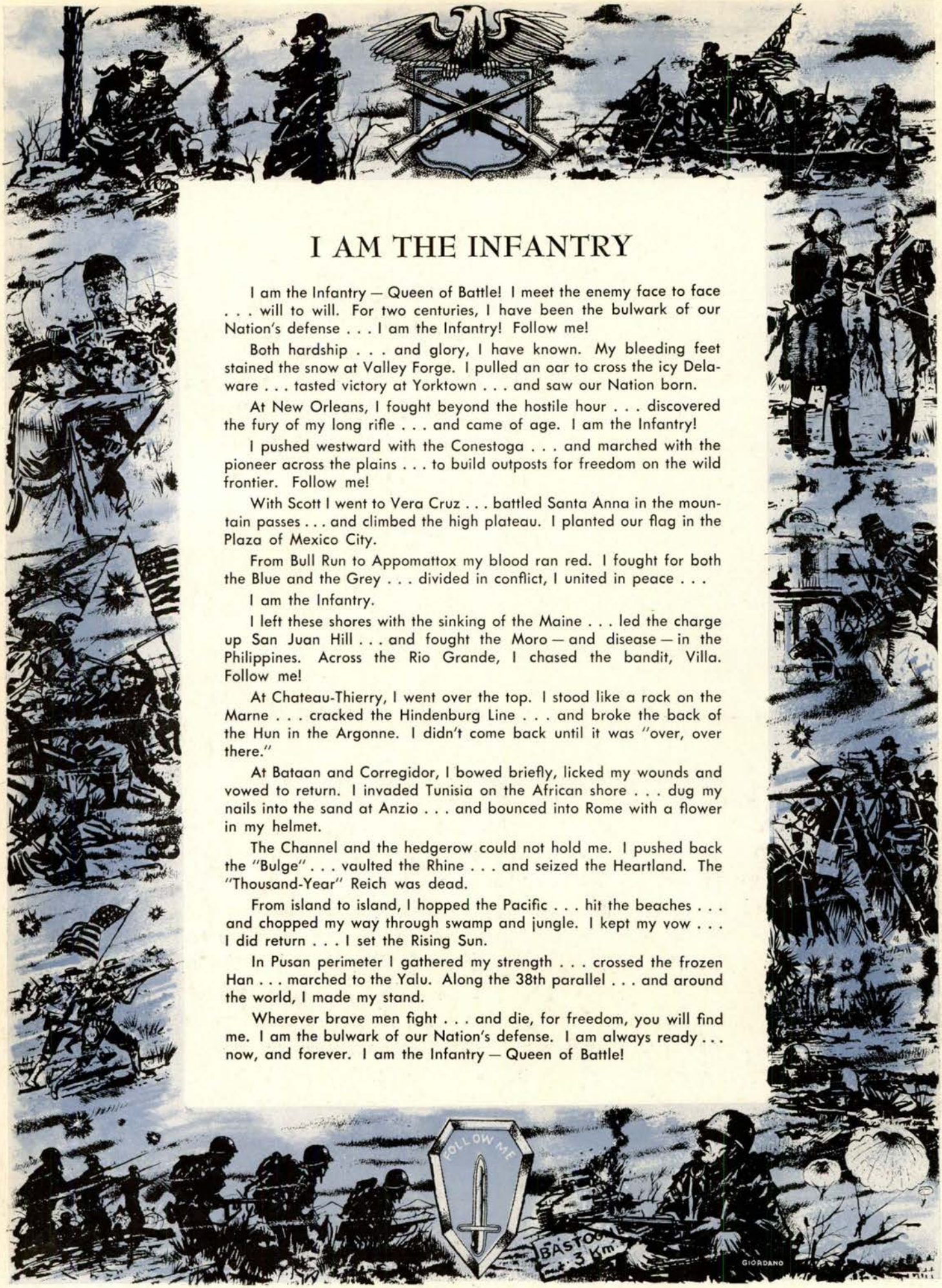


I AM THE INFANTRY

I am the Infantry — Queen of Battle! I meet the enemy face to face . . . will to will. For two centuries, I have been the bulwark of our Nation's defense . . . I am the Infantry! Follow me!

Both hardship . . . and glory, I have known. My bleeding feet stained the snow at Valley Forge. I pulled an oar to cross the icy Delaware . . . tasted victory at Yorktown . . . and saw our Nation born.

At New Orleans, I fought beyond the hostile hour . . . discovered the fury of my long rifle . . . and came of age. I am the Infantry!

I pushed westward with the Conestoga . . . and marched with the pioneer across the plains . . . to build outposts for freedom on the wild frontier. Follow me!

With Scott I went to Vera Cruz . . . battled Santa Anna in the mountain passes . . . and climbed the high plateau. I planted our flag in the Plaza of Mexico City.

From Bull Run to Appomattox my blood ran red. I fought for both the Blue and the Grey . . . divided in conflict, I united in peace . . .

I am the Infantry.

I left these shores with the sinking of the Maine . . . led the charge up San Juan Hill . . . and fought the Moro — and disease — in the Philippines. Across the Rio Grande, I chased the bandit, Villa. Follow me!

At Chateau-Thierry, I went over the top. I stood like a rock on the Marne . . . cracked the Hindenburg Line . . . and broke the back of the Hun in the Argonne. I didn't come back until it was "over, over there."

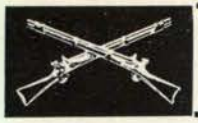
At Bataan and Corregidor, I bowed briefly, licked my wounds and vowed to return. I invaded Tunisia on the African shore . . . dug my nails into the sand at Anzio . . . and bounced into Rome with a flower in my helmet.

The Channel and the hedgerow could not hold me. I pushed back the "Bulge" . . . vaulted the Rhine . . . and seized the Heartland. The "Thousand-Year" Reich was dead.

From island to island, I hopped the Pacific . . . hit the beaches . . . and chopped my way through swamp and jungle. I kept my vow . . . I did return . . . I set the Rising Sun.

In Pusan perimeter I gathered my strength . . . crossed the frozen Han . . . marched to the Yalu. Along the 38th parallel . . . and around the world, I made my stand.

Wherever brave men fight . . . and die, for freedom, you will find me. I am the bulwark of our Nation's defense. I am always ready . . . now, and forever. I am the Infantry — Queen of Battle!



ANSWERS TO QUARTERLY QUIZ *(See page 65)*

1. **c.** Water in issue canteens can be easily disinfected with issued water purification tablets (iodine). One tablet is needed for every quart or canteen full of clear water, though two tablets should be used if the water is muddy or off-color. Replace canteen cap loosely to allow a little leakage. Wait five minutes. Shake thoroughly so a little water leaks out and disinfects the screw threads. Then tighten the canteen cap. Wait 10 minutes before drinking, or adding beverage powders. If water is very cold, wait 20 minutes. Halazone tablets are no longer issued.[1] (Chap 3, Par 57, FM 21–10, May 1957, and directions on label of water purification tablet (iodine) bottle)

2. **c.** Hostile troop-carrier and liaison-type aircraft are normal targets for ground combat units manning the machinegun, caliber .50, HB, M2, mounted for AA fire. Ground combat personnel will not normally engage other types of aircraft unless taken under direct attack. (Chap 10, Sec I, par 146, FM 23–65, December 1955)

3. **c.** Since SOIs contain information that is of particular value to the enemy because it is a means through which additional information can be gathered, complete copies should not be carried to forward areas where they are exposed to capture. Normally, extracts of the SOI are produced for the forward units. (Chap 7, Sec II, par 53a, FM 11–16, August 1958)

4. **d.** When nuclear weapons are employed in proximity to friendly troops, a determination must be made as to the degree of protection (foxholes, tanks, exposed, etc.) which the troops will have at the instant of detonation. A second decision required involves the degree of risk (amounts of thermal radiation, nuclear radiation or blast overpressure which should not be exceeded for troop safety). This determination is a command responsibility. Although it may become a matter of SOP, the CO is still responsible. (Par 59, DA Pamphlet 39–1)

5. The Infantry division battle group is authorized two light tanks and two personnel carriers. The two tanks are organic to the tank section of the reconnaissance platoon, one carrier is organic to the rifle squad and one is organic to the support squad. The reconnaissance platoon is organic to the combat support company, Infantry division battle group. The personnel carriers are used to mobilize the rifle and support squads, and also to transport the radio set AN/VRC–15 organic to each squad. The two tanks are used to provide limited antitank protection, and direct fire support for the reconnaissance platoon. (Pars 7, 8 and 9, Sec III, "Equipment," Table of Organization and Equipment Nr 7–19D (Draft), Headquarters, Department of the Army, Combat Support Company, Infantry Division Battle Group)

2. **b.** When a transport aviation unit is notified that it will support a tactical operation, the commander or designated member of his staff establishes and maintains liaison with the tactical unit it will support. The transport aviation unit commander or his representative acts as a technical advisor to the tactical commander in all matters pertaining to aviation unit organization and employment. (Chap 2, Sec II, par 18, FM 57–35, June 1958)

7. **b.** Supplementary squad positions are selected to provide all-around defense of the platoon area. If the platoon area is penetrated or threatened from the flanks or rear, the platoon leader may adjust his defense by moving men and weapons from the least engaged area into prepared supplementary positions to meet this threat. Normally, the forward rifle platoon does not withhold a reserve. The rifle squads prepare and occupy primary positions, usually on the forward slope of the terrain features being organized, except in reverse slope defense. (Par 138c(4), FM 7–10, January 1959)

8. **b.** The gunner estimates the range and sets the indicator arm at the correct position on the range scale plate, disregarding the speed of the tank. He positions the target on the reticle so that the vertical centerline passes through the center of mass of the target. If the target is moving toward him, he places the selected horizontal range line on the bottom of the target. This compensates for the slow muzzle velocity of the rocket and takes into account the gradual range change. (Par 38(2), FM 23–32, April 1956)

9. **b.** The immediate grouping of wounded according to type and seriousness of injury and likelihood of survival assures allocation of limited medical and evacuation means for the greatest benefit to the largest number of individuals. Sorting also identifies casualties who can temporarily continue their primary duty, care for themselves and others, and participate in rescue operations. (Par 6, TB Med 246, DA, October 1955, and Problem 2309, "Medical Aspects of Nuclear Explosions," Medical Committee, Special Subjects Department, USAIS, January 1959)

10. The commander's plan of attack consists of a scheme of maneuver and a plan of fire. The scheme of maneuver indicates how the maneuver elements (Infantry units, and tanks and other attachments) are to be employed to accomplish the mission. The plan of fire supports the scheme of maneuver and is the commander's decision on the use of all available fires. These two plans are made concurrently since they are interrelated. (Chap 2, Sec II and IV, Advance Sheet, Rifle Company, Infantry Division Battle Group, May 1959)

[1]Question 1 is the corrected version of the question found in the April-June issue of *Infantry*.

WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Specific or General Interest to Infantrymen

Cable-Laying System

The Army has developed a system for laying a newly developed multi-channel telephone cable by helicopter at speeds up to 100 miles per hour, five to ten times faster than previous methods. The lightweight telephone cable can carry 96 separate two-way conversations simultaneously.

The system utilizes a compact package which hooks under a standard Army helicopter and carries 10 miles of cable packed in zig-zag fashion to prevent snagging at high pay-out speeds.

Use of this technique will allow the new cable to be laid over bodies of water and impassable terrain. The same technique could be put to civilian use in flood or other disaster areas.

M60 Machinegun

A contract for the first commercial production of the new 7.62mm general purpose M60 machinegun has been awarded. The $2,700,000 contract for 5835 machineguns, with spare parts and manufacturing data, will establish a mobilization base for future production of this newly developed weapon, as well as supplying a portion of the current requirements for this gun.

The M60 will eventually replace the three existing caliber .30 machineguns. It fires the standard 7.62mm NATO cartridge, and can be fired from the shoulder, the hip, a bipod, and a newly developed aluminum tripod.

M14 Rifle Modified

Recent modifications made to the basic M14 rifle permit its use as an automatic rifle combining most of the features of the M15, originally conceived as the automatic weapon, in one design. Modifications include a hinged butt-plate, ventilated upper handguard and provisions for a bipod.

Modified M14 Rifle.

Sugar-Cube Radios

Radios as small as sugar cubes have been successfully developed by using micro-module circuits which are expected to play an increasingly important role in the field of defense electronics.

The micro-module program, underway since April, 1959, marks the beginning of the "cubist" era in electronics. In this new scientific and engineering revolution, the vast range of jobs done by transistors and other electronic parts is being compressed into tiny micro-modules—circuit building-blocks measuring only a third of an inch on each side. This small size can save critical space and weight in future satellite systems and rockets.

The military logistics complex for supporting highly mobile, widely dispersed forces of the modern Army is expected to be simplified by micro-modules. Easy replacement of defective parts in electronic equipment will require fewer skilled repairmen. Material tonnage, transport and storage will be greatly reduced.

Since the program was launched, tests show that the tiny cubes promise to be dependable and long-lived, and to use little power, deliver high performance and greatly simplify repairs. Their simplicity and unitary design make them extremely rugged.

Motor Vehicle Inspections

An idea which may revolutionize methods of inspecting motor vehicles and result in large savings in money and manpower by taking the guess work out of diagnosing engine and electrical troubles is being studied by the Army.

The new method of trouble-shooting engines and electrical systems of both combat and administrative vehicles calls for use of electronic equipment to pinpoint sources of malfunctions and potential breakdowns.

The automatic checkout technique would employ electronic inspection for quick analysis of all parts of a vehicle, including its ignition system, engine, drive and other components. In addition to locating actual disorders and potential trouble spots, regularly scheduled, but sometimes unnecessary, maintenance and servicing would be eliminated if the new system proves workable.

SS11 Antitank Missile.

SS11

France's new antitank missile, the SS11, is shown mounted on Republic Aviation's Alouette II jet helicopter at the missile's unveiling at the World Congress of Flight at Las Vegas, Nevada. The missile, developed by the French with the assistance of the United States Army, is a remote-controlled, guided missile powered by a solid propellant.

The new missile, described as being able to knock out any known type of tank, can be launched from planes or helicopters, as well as from the ground.

M60 Tank

Plans to order 180 of the Army's new diesel-powered 52-ton main battle tanks, the M60, have been announced by the Department of the Army.

The M60 will replace both the present medium 50-ton M48 and the heavy 60-ton M103 tanks, since its new British-made 105mm gun is capable of defeating all known armored vehicles.

In addition to the heavier armament, and the diesel engine which will greatly increase the tank's operational range, the M60 has a simplified fire-control system. Its track and suspension system will be similar to the present medium tank. A crew of four will operate the new tank.

The 750-horsepower Continental diesel engine gives the M60 a speed of 32 miles per hour on hard surfaces and a fuel range of 250 miles. The M60 has three principal advantages over other models: Its 105mm gun outclasses the 90mm gun on current medium tanks; its diesel engine provides 30 to 40 percent more range and presents less fire hazard since the fuel is less volatile; and the increased armament gives additional protection to the four-man crew.

Shillelagh

The Shillelagh, a new lightweight surface-to-surface guided missile system for close-in support of troops, is about ready for full-scale development, the Department of the Army has announced.

The Shillelagh greatly increases firepower against armor, as well as troops and field fortifications. It is expected to be operational in the mid-1960s. Vehicle mounting is one application of this system.

XM410

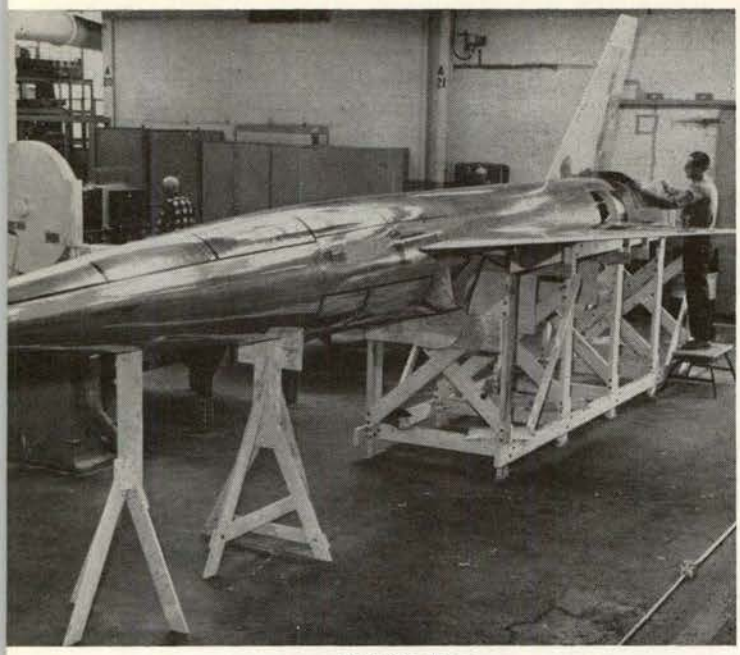
The XM410, the first of a new family of Army trucks, will soon be tested at Aberdeen Proving Ground.

The new "intermediate-duty" truck will have approximately 30 percent greater payload-to-vehicle-weight ratio and 50 percent better fuel mileage than the present 2½-ton truck with the XM410 is designed eventually to replace.

Using an aluminum integral body frame, the truck is so constructed that it will float when empty or loaded. An eight cylinder 165-horsepower engine, which eventually will be able to use gasoline, kerosene or diesel fuel, is being utilized. All major components of the 8x8 XM410 will be interchangeable with the proposed 4x4 1-ton and 1½-ton member of the intermediate family. (The term "8x8" indicates that there are eight wheels with power transmitted through all eight wheels.) Greater mobility will be achieved through independent suspension on all wheels.

The weight of the XM410 has been reduced by approximately 5000 pounds from the current weight of the 2½-ton truck. This is in line with the effort to reduce weight to secure better air-transportability and greater fuel mileage.

XM410 Intermediate-Duty Truck.



SD4 Swallow.

"Swallow"

This is the first glimpse of a full-scale mockup of the SD4 Swallow, a jet-propelled all-weather reconnaissance drone. The pilotless Swallow will use infrared detection, radar, photography and other sensory devices to "spy" on enemy battlefield operations.

Multi-Channel Radio

Development of a new mobile multi-channel radio set for use by the U. S. Army in forward area combat communication has been announced by the Department of the Army.

The new tactical radio equipment, designated AN/GRC–53, is one-third smaller than and one-half the weight of field equipment currently performing a similar function.

During a recent demonstration, two Army Signal Corps soldiers set up the entire equipment and had it operating in 24 minutes.

The equipment is housed in a standard Army shelter mounted on a ¾-ton truck, and is designed to give the field forces swift, reliable communication. The set carries its own power supply, antenna equipment and cabling.

The AN/GRC–53 provides 400 radio frequency channels in the band of 50 to 150 megacycles. It can provide simultaneous transmission facilities for 12 traffic channels over distances of up to 20 miles. Twenty-four persons can use the system simultaneously without interference.

The Army's newest radio is rugged and will withstand vehicular movements over rough terrain, as well as parachute drops and helicopter lifts.

Parachute Assembly

A parachute-harness assembly, incorporating a canopy release designed to prevent paratroopers from being dragged by surface winds after landing, has been standardized for use on Army troop-type parachutes.

The canopy release is a safety device to be used only after landing when there is the danger of being dragged. It enables the paratrooper to free the canopy from the parachute-harness in about six seconds.

Procurement of the new harness assembly and canopy release is expected to start shortly.

Conversion to Metrics

The United States Army Infantry School will use the metric system of measurement starting 1 July 1959 in instruction and instructional materials and literature. The USAIS feels that a more liberal use of the metric system will eliminate many problems created by a dual system of measurement. Many operational concepts and doctrines (forward observer procedures, frontages and depths of units, range estimation, etc.) are affected by the range of organic and supporting weapons. It has been necessary to shift constantly between metric and English systems in order to integrate the capabilities and operational employment of these weapons with tactical situations.

Conversion to one system, the metric system, will facilitate standardization within NATO to include weapons, tactics and doctrines. In addition, the conversion should enhance allied training. Also, since the standard map system is expressed in meters, it will eliminate the use of dissimilar terms in linking maps to terrain and vice versa.

The conversion will include field and technical manuals, as well as problems and exercises.

"Chinook"

The Department of the Army has announced that it will negotiate for the development of a new two- to three-ton capacity transport helicopter, the YHC1B, nicknamed the "Chinook."

The "Chinook" will be a tandem-rotor, turbine-powered craft with rear-loading ramp. It eventually will replace the Army's current inventory of obsolete piston-engine transport helicopters. It is expected to carry a maximum of 40 troops.

Army Uniforms

Several uniform and accessory changes have recently been approved and will appear in appropriate regulations.

- A lightweight model of the Army Green fur-felt service cap has been authorized for optional wear by officers. Six manufacturers have been certified by the Quartermaster Quality Control Office to make the caps.
- A service-cap frame with interchangeable Army Blue, Army Green and Army White covers has been authorized for optional wear by officers.

• A short-sleeve tropical worsted shirt has been authorized for optional purchase. It may be worn with long trousers of the same material in accordance with regulations applying to the wear of the short-sleeve cotton shirt.

• The Office of the Quartermaster General has published a modification of the taupe raincoat, shade 179, which will eliminate leaks at the shoulder seams. Directions contained in MWO/QM 32 will be used at post, camp and station level to modify raincoats in stock and in the hands of troops when it has been determined necessary. The modification will be free to the purchaser.

New Training Literature & Films

MANUALS

The following manuals and training literature have recently been printed by Department of the Army and are available to instructors through normay supply channels:

DA Pam 23–2, Hits Count (revision).

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Group (new).

The following manuals and training literature have been forwarded to Department of the Army for publication:

ASubjScd 7–3, Weapons and Squad Tactical Training (revision).

ASubjScd 7–11, Advanced Rifle Marksmanship (new).

ASubjScd 7–20, Rifle Squad Tactical Exercise (revision).

ASubjScd 7–113.1, Infantry Operations and Intelligence Specialist (new).

ASubjScd 21–30, 3.5-inch Rocket Launcher, M20A1 and M20A1B1 (revision).

ATP 7–12, Headquarters and Headquarters Company, Infantry Division Battle Group (new).

ATP 7–62, Headquarters and Headquarters Detachment, Infantry Division Trains and Infantry Division Band (new).

ATP 20–52, Headquarters and Headquarters Detachment, Replacement Group; Headquarters and Headquarters Detachment, Replacement Battalion and Replacement Company (new).

ATP 29–52, Headquarters and Headquarters Detachment, Airborne Division Support Group (new).

ATT 7–11, Airborne Division Battle Group (new).

ATT 7–62, Headquarters and Headquarters Detachment, Band and Security Section, Infantry Division Trains and Infantry Division Band (new).

ATT 7–168, Pathfinder Team (new).

ATT 57–1, Air Movements (new).

FM 21–75, C1, Combat Training of the Individual Soldier and Patrolling (change).

FM 23–65, C2, Browning Machinegun, Caliber .50, HB, M2 (change).

TC 20–( ), Airmobile Operations (new).

The following field manuals and other training texts are being written or rewritten. Publication may be expected later this year, or early during 1960:

AR 600–73, Standards for Expert Infantryman Badge (revision).

ASubjScd 7–21, Weapons Squad Tactical Exercise (revision).

ASubjScd 7–( ), Assault Gun Platoon Tactical Exercise (new).

ASubjScd 7–( ), Reconnaissance Platoon Tactical Exercise (new).

ASubjScd 21–24, Night Firing and Night Vision (revision).

ATP 7–17, C1, Rifle Company, Infantry and Airborne Division Battle Group, Light Weapons Infantryman and Heavy Weapons Infantryman (change).

ATP 57–6, Headquarters and Headquarters Company, Airborne Division Command and Control Battalion and Administration Company (new).

ATT 7–2–1, Security Platoon, Headquarters and Headquarters Company, Infantry Division (TOE 7–2T) (revision).

ATT 7–17, Rifle Company, Infantry and Airborne Division Battle Groups (revision).

ATT 57–6, Security Platoon and Band, Headquarters and Headquarters Company, Airborne Division Command and Control Battalion (new).

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Groups (revision).

FM 7–24, Communication in Infantry and Airborne Divisions (revision).

FM 7–40 w/C1, C2, C3, Infantry and Airborne Division Battle Groups (revision).

FM 20–( ), Military Dog Training and Employment (new).

FM 21–5, Military Training (revision).

FM 21–76, C1, Survival (change).

The following manuals and training literature have been submitted to United States Continental Army Command for review and approval:

ASubjScd 7–2, Rifle Squad Tactical Training (revision).

ASubjScd 7–10, Browning Automatic Rifle, Caliber .30, M1918A2 (revision).

ATT 7–52, Security Platoon, Headquarters and Headquarters Company, Infantry Brigade, Separate (new).

FM 22–5, C1, Drill and Ceremonies (change).

FM 23–5, C1, U.S. Rifle Caliber .30, M1 (change).

TRAINING FILMS

The following training films have been approved for release to requesting units:

GF 11–42, Introduction to Telegraph Terminals AN/TCC–20 and AN/TCC–4, 16 minutes.

MF 16–9046, The Power of Resurrection, 62 minutes.

MF 30–8993, Free Europe—Part III—Steps Toward Unity, 33 minutes.

TF 3–2732, Employment of Smoke in Combat Operations, 19 minutes.

TF 3–2733, The Chemical Smoke Generator Company, 18 minutes.

TF 5–2682, Principles of Anchoring Floating Bridges, 33 minutes.

TF 5–2683, The M4T6 Floating Bridge, 33 minutes.

TF 5–2734, Panel Bridge Bailey Type M2—Part IV—Multi-Span Bridges and Panel Crib Piers, 38 minutes.

TF 6–2404, The Corporal Missile—Defueling Proceddure, 25 minutes.

TF 8–2675, Management of Mass Casualties—Part VI—Sorting, 13 minutes.

TF 8–2712, Management of Mass Casualties—Part X—Management of Pscyhological Casualties, 24 minutes.

TF 9–2684, Packing and Adjustment, M135 Truck Wheel Bearings, 7 minutes.

TF 9–2723, Surveillance of Ammunition, 19 minutes.

TF 11–2719, Pole Line Construction—Part VII—Stringing the Wire, 35 minutes.

TF 11–2747, Operation of Field Telephones, 29 minutes.

TF 16–2740, Reputation, 9 minutes.

TF 16–2741, Self-Discipline, 6 minutes.

TF 19–2273, The Search, 7 minutes.

TF 44–2605, Nike Hercules SAM Battery Orientation and Synchronization—Part 1—Leveling, 20 minutes.

TF 44–2629, Nike Ajax System, Missile Tracking Radar, Range Zero Set and Coding Interval Adjustment, 6 minutes.

TF 46–2665, H34 (Choctaw) Flight Maneuvers—Part I—Basic, 22 minutes.

TF 46–2666, H34 (Choctaw) Flight Maneuvers—Part III—Intermediate, 31 minutes.

TF 46–2667, H34 (Choctaw) Flight Maneuvers—Part III—Advanced, 24 minutes.

Monthly List of Instructional Material

Starting with this issue, *Infantry* will list all training literature which has appeared in the United States Army Infantry School's *Monthly List of Instructional Material* during the three preceding months.

The Monthly List, an official publication of the Infantry School, is produced to facilitate the coordination of Infantry doctrine among Army service schools and to offer Infantry School instructional materials to Army agencies which conduct, support or monitor school-type instruction. As the name implies, it is published monthly and includes all significant materials prepared and printed at the School during the preceding calendar month. It is distributed under the provisions of USCONARC Memorandum Number 48, dated 14 October 1958, and each authorized addressee is furnished one gratuitous copy of any item listed which he specifically requests for official use.

We are publishing the items in *The Monthly List* as a service to Infantry readers so they will know what materials are being produced by the Infantry School.

All items which are preceded by an asterisk may be purchased from the Book Department, USAIS, Fort Benning, Ga., at the prices indicated, by anyone who is a member of the U.S. Armed Forces and who so states when ordering. The official military unit or agency address should be included with all such orders since franked mail cannot be sent to a private residence. If a personal address is given, the cost of postage must be inclosed with the order.

The items not marked with an asterisk are produced in limited quantities for resident instruction at the Infantry School and are not available for purchase. However, a unit or agency having a strong *official* need for any of these items may request a gratuitous copy from the Doctrine Publications Office, USAIS, Fort Benning, Ga. Such requests must state the purpose for which the material is needed and must include the official title and unit or agency address of the requester. Properly justified requests will be filled so long as the supply lasts.

Items from the March 1959 Monthly List:

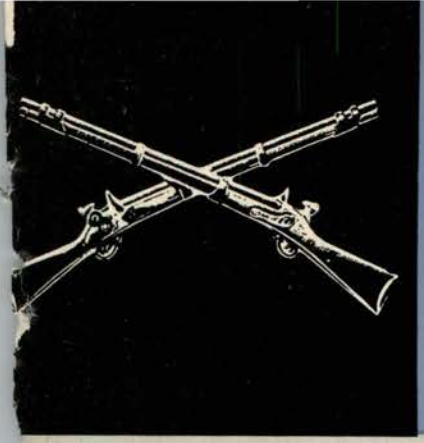
Map and Aerial Photo Reading Fundamentals and Techniques, 2181–USAR (RDT), two hours. A conference covering the fundamentals and techniques of the use and application of the grid magnetic (G–M) angle in the conversion of magnetic to grid azimuth and vice versa. It shows application of the G–M angle, azimuth and scale in polar coordinate, intersection and modified resection problems. The conference covers also the protractor and base direction.

Aerial Photo Reading, 2183–USAR(RDT), four hours. A conference and practical exercise covering the types and uses of aerial photographs. The conference discusses the comparison of an aerial photo to a topographic map, and basic photo interpretation.

**Characteristics and Effects of Nuclear Explosions,* 2400–USAR(ADT), two hours. A conference explaining the appearance and types of nuclear bursts and the physical effects of a nuclear explosion, including a discussion of heat, blast and nuclear radiation and their effects on personnel and equipment. 30¢.

Preventive Maintenance of Commo Equipment. A pamphlet emphasizing the importance of preventive maintenance on communication equipment.

Enemy Indications and Capabilities, 6215–A3. An integrated conference and practical exercise covering the organization and tactical doctrine of the Aggressor rifle division, the determination of enemy indications



INFANTRY

The Professional Journal for Infantrymen

OCT-NOV 1959

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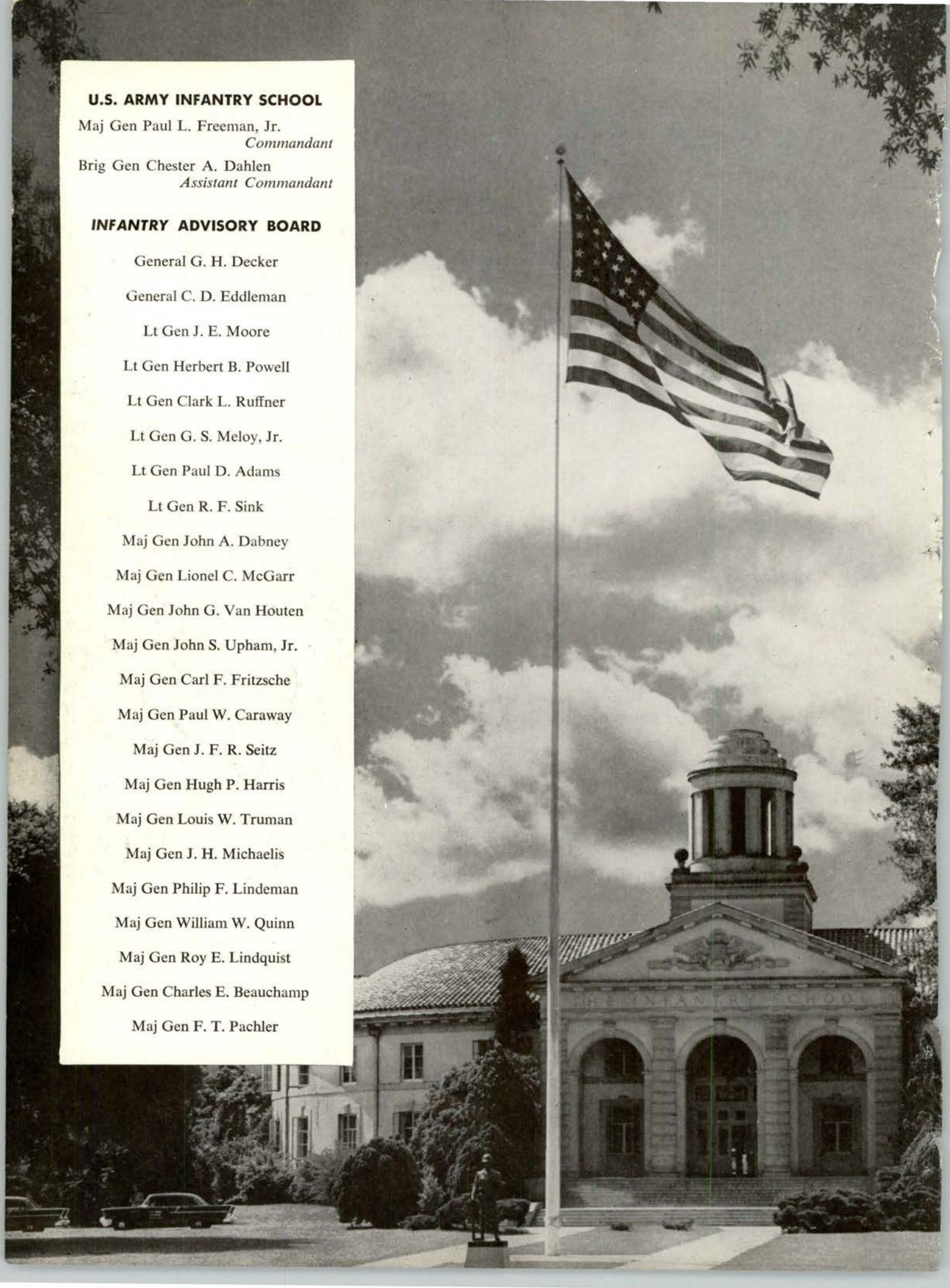


Dear Infantrymen:

Our belief in the need for critical evaluation of our future requirements has led to our asking the distinguished Infantrymen whose names appear on the opposite page to act as an advisory board for *Infantry*. They will from time to time recommend to us, and therefore to you, matters that are appropriate for all Infantrymen to study and consider—matters of potential importance to the Infantry and, of course, to the Army and to our national military posture. Their advice on a variety of vital issues will contribute to the kind of progressive climate upon which the effectiveness of the combined arms team depends. We know that we cannot do the job alone. We know the urgent need for all services to work together. We believe that only by such creative unison is victory achieved.

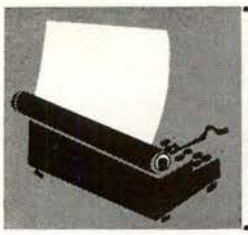
It is our belief at Fort Benning that honest discussion about critical and important problems is the most desirable way to attempt to determine our requirements for the future. Accordingly, our magazine strives to present without bias all aspects of problems, some of which are controversial but all of which are fundamental to Infantrymen world-wide and to the betterment of our Army as a whole.

It is an honor that these busy officers have consented to share a portion of their limited time with us. They have risen to posts of great responsibility because they refuse to be awed by the complexity of the future. I know that they would enjoin each reader to adopt a similar attitude, for only by the moral courage to face the truth can we hope to progress.

FROM THE COMMANDANT

Paul L. Freeman Jr.

PAUL L. FREEMAN, JR.
Major General, USA
Commandant



THE EDITOR SAYS

With this issue, *Infantry* begins bimonthly publication. Coinciding with the thirty-seventh anniversary of the Infantry School's professional journal, this change marks another extension of service to Infantrymen world-wide.

Among the most recent improvements was the adoption of a larger format a year and a half ago, the introduction of a number of new features and the modification of layout to increase attractiveness and readability. More important, however, we have sought to bring you the most accurate and up-to-date information on topics that are necessary to your professional development, and current Infantry thinking on vital issues. We hope that the new *Infantry* logotype, which appears for the first time on this initial bimonthly issue, expresses to all Infantrymen the aggressive, forward-looking spirit of the ground combat soldier—the spirit which we hope to reflect within these pages.

Many of our readers have indicated their preference for a bimonthly publication, regardless of price. It is noteworthy in this regard that, for our permanent subscribers, cost per issue will decrease from $.56 to $.50. This has been made possible by *Infantry's* rising circulation.

Our purpose is to help the professional Infantryman, and those who work with the Infantry. To do this we need *your* help. Firm support—in the form of subscriptions, articles and your letters of suggestion or opinion —is the only means by which we shall be able not only to maintain, but to expand, our services to you.

This issue also marks the establishment of the *Infantry* Advisory Board. The distinguished officers who are members of the Board will provide significant guidance to *Infantry* and the School. By accepting membership they have indicated a deep concern with the continuing development of a sound and progressive Infantry approach to the vital problems which face us today. We want to express to them our gratitude.

Every Infantryman should be equally concerned. If you have an idea that you think will help the Infantry and the Army, write to the Commandant or to the department you believe is concerned. All suggestions from the field receive thoughtful consideration.

And, if you have questions of fact or special problems, send them to *Infantry*. Chances are that someone here at the School has the answer or a solution. Our "Letters to the Editor" column is always open to such queries, and the replies we print may benefit other Infantrymen as well.

LETTERS TO THE EDITOR

Standardization

Sir:

Although standardization is now a matter dealt with at small unit level, I am, however, astonished that nothing, or nearly nothing, has been said on this question in your publication.

In my opinion, the Infantryman should know what is going on in NATO in order to allow all nations to fight more efficiently and to allow unity of procedures in the various integrated staffs.

Standardization applies to equipment as well as to procedures. For instance, your M14 rifle and your M60 machinegun are built up around a standardized ammunition. When the soldier speaks of the "NATO 7.62mm round," does he know that this same round is used in other countries, and by which countries? This is not only to tell him what other NATO nations are doing, but also to tell him that in an emergency, when he is overseas, he will be able to help the neighbor unit, or be helped by it.

Standardization takes a long time and a lot of paperwork, but it is worthwhile.

J. C. R. ARNAULT
Major
Military Agency for Standardization
NATO

Every effort is made to inform our troops about the nature and purposes of NATO through our Troop Information program. Though Infantry *itself has not carried an article specifically of standardization, it has given full attention to the transition to 7.62mm. We would welcome articles from NATO Infantrymen on standardization and other matters of common interest within the Organization.*—Editor.

Permanent Subscription

Sir:

I wish to change my subscription to "permanent" . . .

. . . I found *Infantry* very useful as an ROTC cadet. I am sure that it will be even more valuable now that I am going on active duty.

WAYNE C. WATKINS
Lt, Infantry
101st Airborne Division
Fort Campbell, Kentucky

As we have many times before, we want to recommend the permanent plan to all our readers. Cancellable at any time, this plan saves you money as it assures you of uninterrupted delivery of your Infantry. *Frankly, we like it, too, because it gives a certain stability to our subscription lists.*—Editor.

Bimonthly

Sir:

I . . . am pleased to hear Infantry will come bimonthly.

It has been a great help to me in preparing classes in our company and in keeping up to date on many changes. Thanks for a wonderful magazine.

GEORGE MAREK
Sfc, National Guard
Merrillan, Wisconsin

This issue of Infantry marks the beginning of our bimonthly service.—Editor.

Weight vs Bulk

Sir:

Weight is called the "nemesis of mobility" ["Weight-Nemesis of Mobility," by Capt Harold J. Meyer, in the July - September issue of Infantry]. But bulk, too, is a barrier to mobility, and specifically to strategic air transportability. Army Aviation is spawning a whole new family of vehicles which are as strategically immobile as armor and heavy support equipment. Continued on page 12

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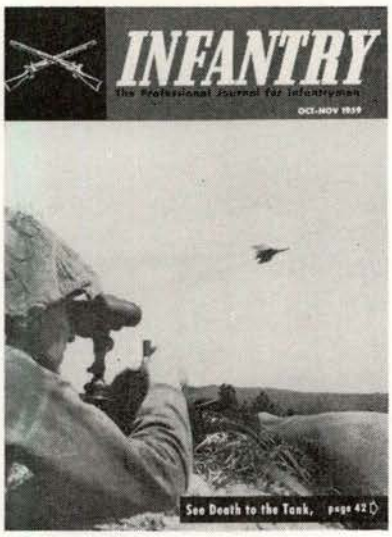
THE COVER

The missile gunner on this month's cover tracks his SS11 to its target. When fully trained he will take his place alongside other gunners in the battle group's assault weapon platoon and in the Army's expanding missile program.



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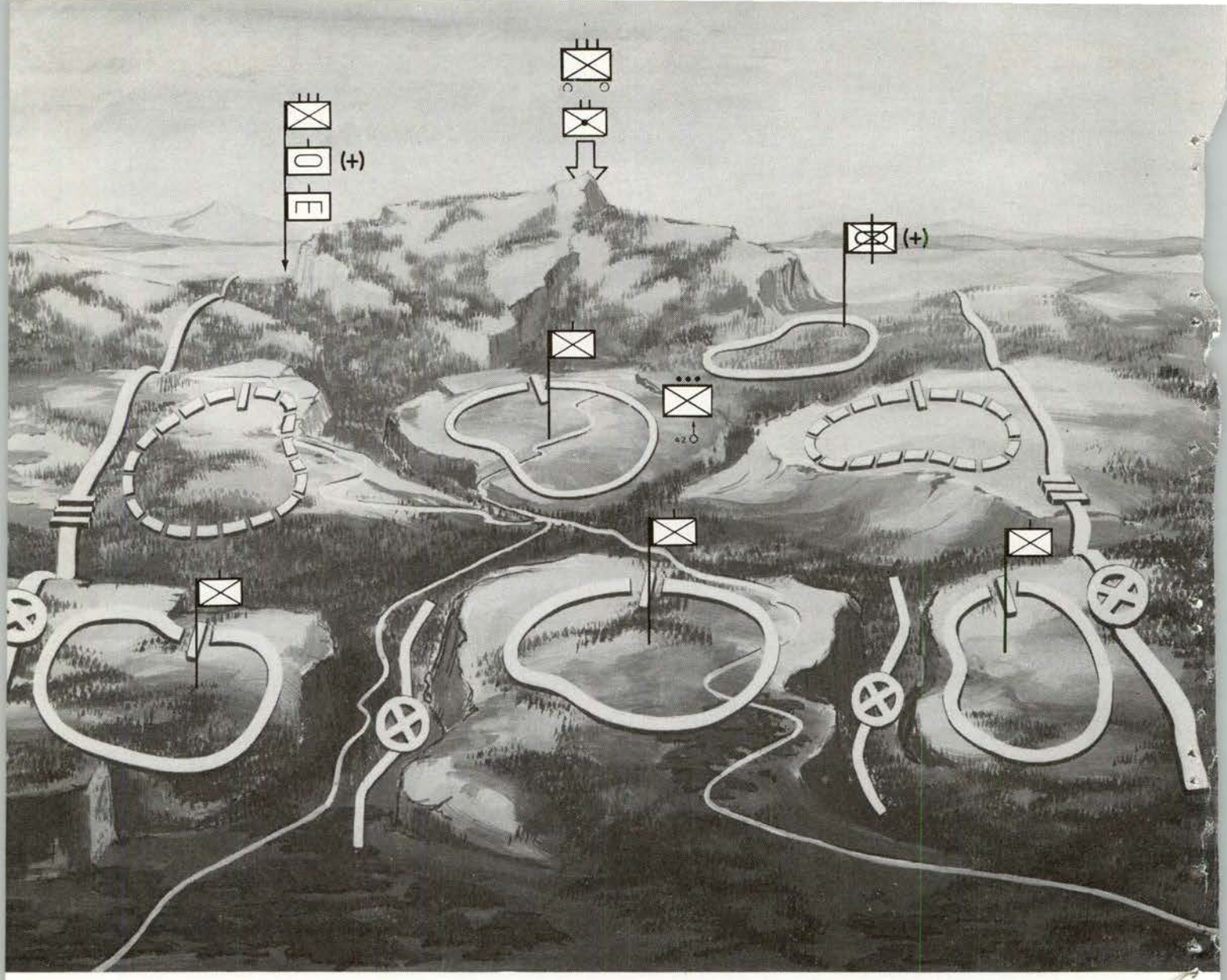

The Infantry Battle Group – in the Defense

by Lt Col Edwin C. Gibson and Maj E. B. Moore, Jr.

BECAUSE of the concrete manner in which units can be placed upon specific terrain in defensive situations, the subject of defense is one of the most popular items for discussion among students of tactics. Almost every thinking soldier seems to have a theory on this subject, especially in these times when no one can accurately predict the effects of a nuclear weapon on a specific position. The question of how much dispersion is necessary is not accurately answerable and, consequently, defensive theories have arranged themselves into three general schools of thought. The first holds that defense must be established using strong points of battle group size, retaining full mutual support between subordinate elements of the battle group. While this or-

A defense which preserves small unit integrity and is based on the ranges of organic and supporting weapons appears to be the most plausible solution for the nuclear battlefield.

ganization appears best suited for defense of specific terrain, it also is most vulnerable to enemy nuclear weapons.

The second school maintains that the battle group must be widely separated, with squads, platoons and companies all disposed in great width and depth. This method of disposition certainly affords passive protection against enemy nuclear weapons, but it is doubtful that units so dispersed can actually defend. In fact, they may be defeated by an enemy who has not been required to mass. Somewhere between these two variants lies the third school of thought, which is essentially a compromise position, but nevertheless one which is plausible and adaptable to varying conditions. This article will discuss only one of the defensive arrangements possible under this theory, which essentially is based on small unit integrity and keyed to the ranges of supporting and organic weapons. By applying this basic theory a number of defensive postures can be evolved which will fit different situations and terrain.

The mission of Infantry in defense remains unchanged. Neither are the fundamentals of defense changed. In the defense we strive for dispersion, flexibility, retention of the initiative and maximum use of offensive action. No longer is Infantry tied to the retention of ground in a static position. Instead, Infantry skillfully uses terrain to help destroy the attacking enemy. The commander must dispose his force in such a manner as to mass the enemy into a lucrative target for the effective employment of massive firepower. At the same time, however, the commander must not dispose his forces in a manner that will provide the enemy an equal opportunity. To ensure flexibility he must disperse both laterally and in depth and have mobility which is at least equal to that of the enemy. To cover the wide areas, there must be overlapping capabilities of surveillance and fire, and the ability to control the actions of subordinates. The commander must be provided, and must provide his subordinate units, with the means to sustain semi-independent operations at least for limited periods.

In organizing for the defense, the battle group commander makes maximum use of the capabilities of units available to him. Since some of these units are new to the battle group, a brief review of their capabilities and employment is in order.

The primary antitank support organic to the battle group comes from the *assault weapon platoon*. The weapons of this platoon, currently SS10 guided missiles, are employed in forward company areas. This allows the range of the missiles to be exploited to the maximum and permits engagement of enemy armor forward of the FEBA. The missiles are usually sited to cover the most likely avenues of armor approach. Mutual support between the squads of the platoon is desirable. However, when the number of tank approaches and the distance to be covered by the platoon does not permit mutual support, the squads may be employed singly.

When tanks are attached to the battle group in defense, the major portion of the tank company should be retained in reserve whenever possible. This action capitalizes on the tank's offensive capabilities and, at the same time, gives the battle group antitank defense in depth. However, tank platoons may be attached to forward rifle companies to thicken the antitank defenses or to cover armor approaches not covered by elements of the assault weapon platoon.

The *reconnaissance platoon* is initially employed under battle group control to maintain contact with security units forward of the battle group sector. Upon withdrawal of

---

Lt Col Edwin C. Gibson completed OCS in 1943 and received a Regular Army commission in 1947. He served in Europe during World War II with the 157th Infantry. After the war, he joined the staff of the Mountain and Winter Warfare School. He graduated from the Advanced Course at USAIS in 1949, and then became an instructor at the Army Arctic Indoctrination School. He completed the Regular Course at USACGSC in 1952. Colonel Gibson served in Korea prior to his present assignment with the Infantry School's Command and Staff Department.

Maj E. B. Moore was graduated from OCS in 1943. In 1950, he received a Regular Army commission. During World War II, he served with the 260th Infantry in Europe. After the war, he was assistant adjutant of the Manhattan District and, later, of the Armed Forces Special Weapons Project. In the Korean War, he was assigned to the 179th Infantry, 45th Division. Major Moore has attended the Associate Advanced and Advanced Courses at the Infantry School, and the Command and General Staff College. He is now studying for the M.A. at Syracuse University.

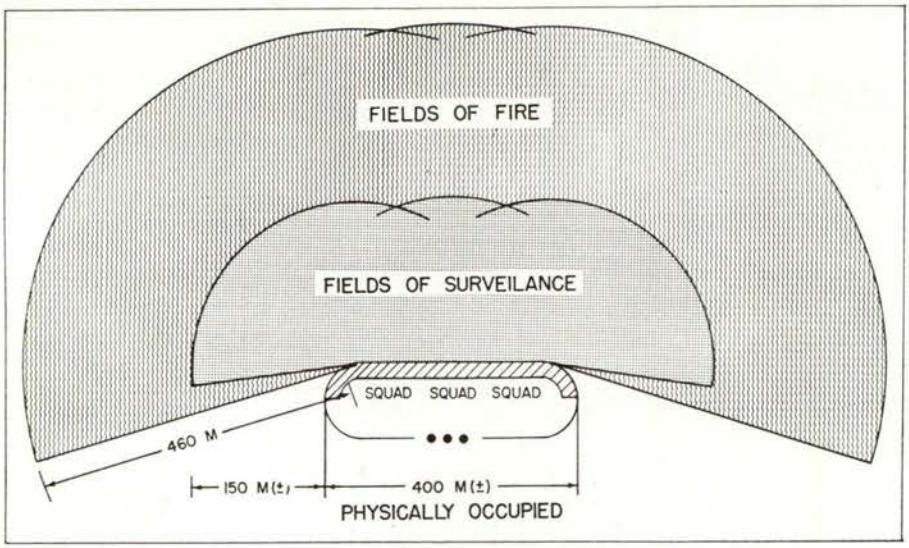

Figure 1. Schematic of the rifle platoon defensive area.

these security elements, the platoon may be utilized in one of several ways: in maintaining contact with flank units, to establish observation posts, as an economy of force element, or to perform security missions in the rear portion of the battle group sector.

The *radar section* can be used in a combination of attached and general support roles, with battle group S2 exercising primary staff supervision over its employment. Normally, the AN/PPS–4 radars will be attached to the forward rifle companies because of their limited range. The medium range AN/TPS–22, operating under battle group control, will be positioned where they can best extend the coverage of the shorter range devices and still provide surveillance in depth in the battle group sector. While the radars can increase the surveillance capability of a unit during periods of darkness or reduced visibility, it must be recognized that their ability to detect and locate enemy activity is dependent upon their siting. Absence of suitable vantage points may seriously impair the usefulness of these devices. Trees, brush, hills and other solid objects will clutter or block the radar signal to such an extent that little useful information can be obtained.

When an engineer company is placed in support of the battle group, the organic *engineer platoon,* in the interest of efficiency, may be directed to accept missions from the supporting engineer unit commander. Engineer units are normally retained under battle group control; however, when the battle group operates over an extended frontage, portions of these units may be attached to company-size task forces.

The *heavy mortar platoon* will normally be employed in general support of the battle group, with its fires and fire direction operations closely tied to those of the direct support artillery battalion. However, the battle group commander may attach the platoon to a task force or otherwise utilize its elements separately if the situation warrants. But irrespective of how the unit is employed, the mortars remain immediately responsive to the needs and desires of the battle group commander. The fire support coordinator, commander of the DS artillery battalion, will plan the fires of the mortar platoon and integrate them into the fire plan.

When the mortar fires are tied in with those of the DS battalion, the mortar and artillery forward observers will call for fire through their respective fire direction centers. When appropriate, the mortar platoon FDC may refer requests from its observers to the direct support battalion FDC and, conversely, the DS battalion FDC may refer requests to the mortar platoon. This procedure enables the forward observers of either the DS battalion or the heavy mortar platoon to adjust both the mortar and artillery fires.

Defensive fires, both nuclear and non-nuclear, are planned to bring the enemy under increasingly heavy attack as he approaches the battle area. Fires are also planned within the battle area to limit penetrations, to support counterattacks, and to complete the destruction of the enemy. Nuclear and non-nuclear fires complement and supplement each other and must be closely integrated to achieve maximum effectiveness.

The primary concern of the commander in planning the defense centers around the placement of his rifle companies. This is the point where the theories of nuclear defense diverge. Although the battle group commander will not normally think in terms of squads and platoons, a defensive posture is determined by the dispositions made at that level. For this reason this analysis must begin with the Infantry squad.

The squad must be retained as an integral unit in the defense. This employment is dictated by the absence of internal communication, the fact that observers for supporting weapons are not normally present and the squad's incapability of receiving and controlling major attachments. By disposing the men of the squad in mutually supporting two-man foxholes roughly 20 meters apart, a frontage of 100 meters can be occupied. When supporting weapons are employed in the squad's sector, a slightly greater frontage can be accepted.

A squad occupying a well-prepared position is considered capable of causing the enemy to mass at least a platoon for a concerted attack without nuclear firepower. This massed platoon may well be a suitable target

for improved non-nuclear weapons and for subkiloton-yield nuclear weapons as well.

The rifle platoon frontage (Figure 1) is approximately 550 meters —the combined frontages of the squads on line plus the distance on one flank which can be covered by fire with organic weapons. Coverage of this frontage is made possible by the internal communication net, infrared surveillance equipment and the increased firepower obtained from the new family of 7.62mm weapons. Under conditions of poor visibility, patrols and sensory devices are used to cover the gaps. The platoon radio net is particularly valuable should the platoon position be penetrated or threatened from the flanks or rear. The platoon leader, using his radio, can more quickly move men and weapons from the least engaged area into supplementary positions to meet this threat.

With two platoons deployed on line as described and one platoon in reserve the rifle company can control an area (Figure 2) approximately 2000 meters wide and 1300 to 1400 meters deep. The area of influence of this company is almost four square miles, which is over three and a half times that of the World War II rifle company and only slightly less than that of the World War II Infantry battalion.

Adequate means of firepower, surveillance and communication are available to cover this large area. In addition to the fires of weapons organic to the platoon, coverage of the intervals between companies is provided by company weapons—the 81mm mortars and 106mm rifles—by battle group assault weapons and heavy mortars, and by supporting artillery fires. Surveillance devices such as the AN/PPS–4, one of which will normally be attached to the company, assist in the surveillance of unoccupied areas. Depth and flexibility is provided by retention of a sizeable reserve.

Considering that the rifle company can be so disposed, a battle group with an attached tank company can logically be expected to defend a frontage of about 8000 meters. Figure 3 shows the concept of such a defense. Defense on so large a frontage is made possible by radios of greater

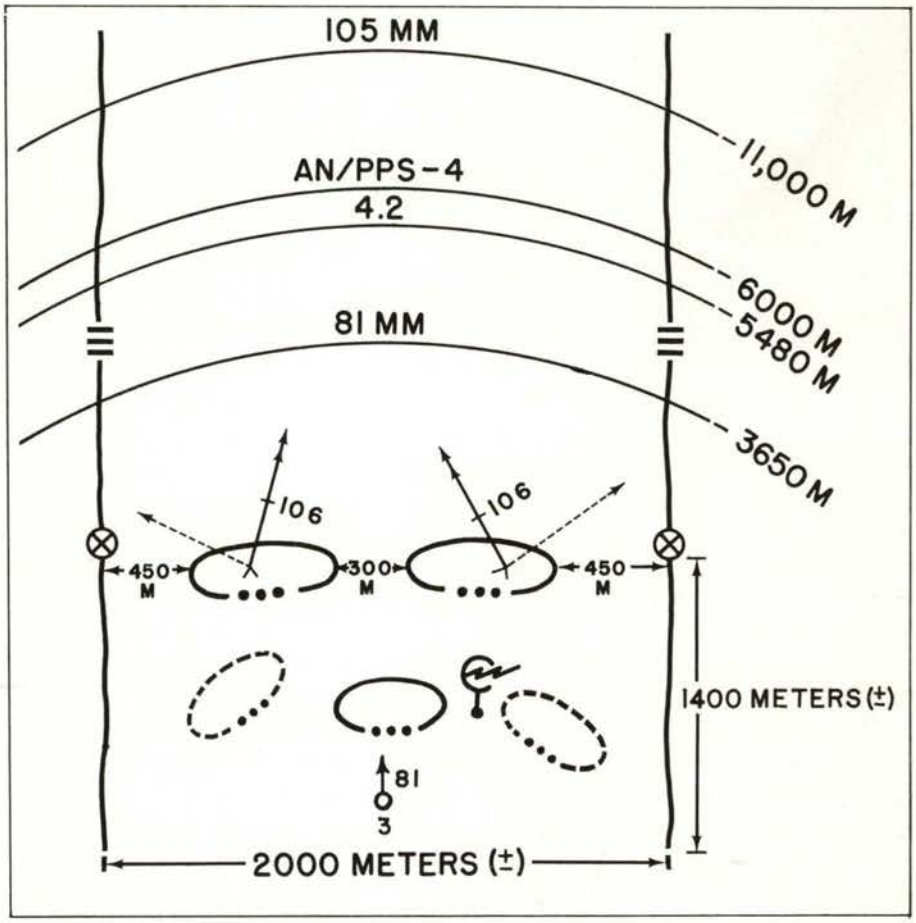

Figure 2. Rifle company area of responsibility.

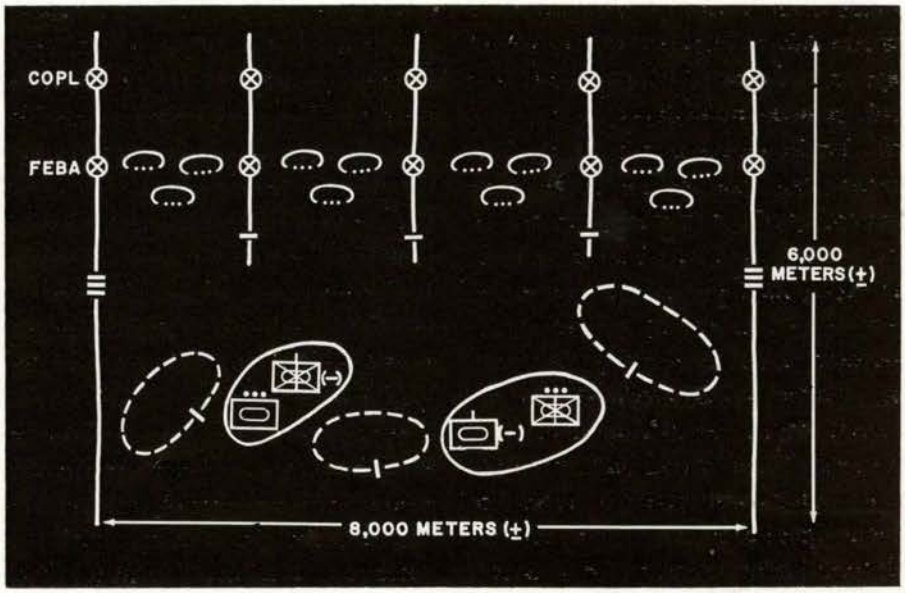

Figure 3. Battle group defending a normal frontage.

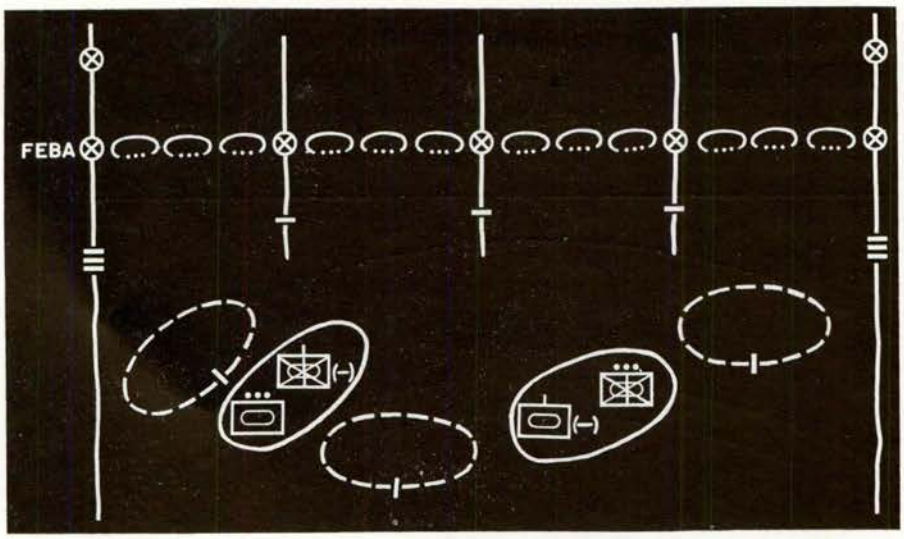

Figure 4. Defense of an extended frontage may require froward companies to place three platoons on line.

range and reliability located at company level, plus adequate means of surveillance and firepower.

The forward rifle companies are positioned astride likely avenues of approach and are strong enough to force the enemy to mass into suitable nuclear targets if he attempts to break through.

The fifth rifle company, and the tank company when attached, are retained in assembly areas as the battle group reserve. Sufficient positions are prepared to permit these elements to take on a blocking role if required. By cross-attaching platoons between a mechanized Infantry company and a tank company, the commander can tailor two forces of approximately equal capability for offensive and defensive action.

As the enemy closes with the forward companies, security elements withdraw into the company's defensive position. At the same time, elements of the company engaged in rear area security and surveillance move forward to occupy their positions. Thus the company will form a cohesive block on the approach it is covering. If the enemy pulls back, the security elements will return to their original missions. This also provides passive security from enemy nuclear weapons, since the company is dispersed over a large area when not in close contact. If the enemy uses nuclears against the prepared company position when in close contact, he will endanger his own forces also.

Under certain conditions the battle group may be required to defend on a much wider front (Figure 4). As illustrated here the companies do not hold a reserve, but every effort is made to retain a highly mobile battle group reserve.

It should be emphasized that each echelon of command establishes security according to its capabilities and looks to higher echelons for further security when necessary. For example, if the battle group is assigned a frontage in excess of 8000 yards it may not have sufficient force to man a combat outpost line. In such an event, it is anticipated that forward security for the battle group will be provided by the division. However, at no time will local security be disregarded. The distances forward of the FEBA at which this security is established will vary with the terrain, range of supporting weapons, and the size, capability and mobility of the force manning the security line.

The battle group commander prepares counterattack plans for each part of the battle area which he estimates may be penetrated. He prepares these plans in advance and gives highest priority to those possible penetrations which pose the greatest threat to the accomplishment of his mission. These plans are rehearsed to the extent time permits. In the counterattack, the battle group reserve is normally the maneuvering force, but the counterattack plan provides for employment of all unengaged organic and attached elements. The maneuvering force is supported by all weapons of the battle group, including, where practicable, weapons of the forward companies. A single coordinated blow is delivered by as large and as strong a force as the situation permits.

In defense, as in offense, the battle group commander provides for alternate command installations. He makes full use of the deputy battle group commander and the executive officer in establishing alternate control facilities. In addition, the deputy battle group commander may be used to command the combat outpost, reserve elements, a portion of the forces on the FEBA or rear area security forces in those situations which warrant organizing task forces for these missions.

This brief analysis of the concept of nuclear defense should be sufficient to show that the "middle road" offers much more potential than the extreme theories. The reorganization of the battle group and the provision of improved means have enhanced the battle group's capability to perform defensive missions. The battle group commander must skillfully utilize these added capabilities to defeat the attacking enemy, at the same time avoiding destruction of his own unit. A well organized defense, adroitly conducted, retains an advantage over the attacker despite the potentialities of enemy nuclear weapons. The commander must be prepared to exploit this advantage.

This is the second in a series of two articles by Colonel Gibson and Major Moore on the employment of the reorganized battle group and its subordinate units.—Editor

عشى كريماً *To Live With Honor*

تعلمر شريفا *To Learn With Honor*

حارب نزيحماً *To Fight With Honor*

The Philosophy of a Warrior

by Brigadier Rajendra Singh

The Indian Army's Director of Infantry shows how a man becomes the complete soldier.

IN THIS "era of military change and growing complexity," as Gen Maxwell Taylor put it, the necessity of military study has grown much greater than 5000 years ago when the Indian lawgiver laid down that study was the first and foremost duty of a warrior.

In the third century B.C., when Chander Gupta Maurya resolved to expel the Greek phalanxes from the soil of India, his clever minister, Chanakya, prescribed the study of scriptures, logic, economics, politics, history and military science for his

military leaders. To this list many subjects were added as human knowledge progressed. Study of war became a vast and difficult subject. As battle dealt more with physical force, warriors did not find sufficient time to improve their mental horizons and a time came when the studious soldier, the pen-pusher, was looked down upon in the professional hierarchy. This prejudice still persists.

In modern warfare, no nation, no army, no organization and no warrior can prosper, nay survive, unless leaders are not only superior in physical qualities but have developed great mental and spiritual capabilities by planned study.

Dynamic thought requires a deep reservoir of knowledge-power—not a smattering of military know-how—which concerns every facet of the national and international scene. The main task is to gain and maintain the intiative of ideas by the impact of new thoughts based on sound learning.

Learning is creative activity, motivated by the desire to know, to know more accurately and to know more clearly so that we can solve our problems in a more accomplished manner. The thirst to learn is half the battle and once that thirst grows the victory is in sight.

Creative activity can be divided into six aspects:

One	:	Information.
Two	:	Imagination.
Three	:	Appreciation[1].
Four	:	Resolution.
Five	:	Execution.
Six	:	Perfection.

Each aspect of this activity must be properly developed. Study is the chariot of knowledge and its two wheels are reading and writing. When this knowledge is harnessed to the steed of experience, the warrior is fitted to compete in the race for progress. "As the land will improve when it is sowed with various seeds, so shall the mind when it is exercised with various studies." This reminds me of the king who, asking Euclid whether he could not explain his art in a clearer manner, got the answer: "There is no royal road to geometry."

[1] Equivalent in American usage to "analysis."

INFORMATION

Information is facts, and facts must be correct. Anything a man knows —whether or not it is factual—is definable as knowledge, but only that portion which is factual is definable as truth. Truth is the greatest quality of a thinker, and spiritual training is prescribed in every army because a warrior in pursuit of truth must have courage. "Fearlessness," according to Mahatma Gandhi, "is the first requisite of spirituality. Cowards can never be moral."

A warrior endowed with a spark of spirituality selects the true pearls—facts. Without facts, knowledge cannot progress. As Ivan Pavlov says, "Perfect as is the wing of a bird it never could raise the bird up without resting on air. Facts are the air of a scientist: without them he cannot fly."

The only way to gather pearls is to go and get them from the ocean of knowledge. Rudyard Kipling describes how he collected his "pearls":

I keep six honest serving men
(They taught me all I knew).
Their names are What, and Why, and When,
And How, and Where and Who.

When we apply an inquisitive mind to what we see, hear, feel and think, we fling open the gates of the treasury and pick our pearls.

The three sources from which facts can be gathered are reading, travelling and discussion. What we read, where we travel and with whom we converse should be objectively determined to gain insight and wisdom.

Reading is the main source. We do read for entertainment but reading for facts has to be serious and is best done in peaceful retirement. Sir John William Lubbeck, the noted British astronomer, says, "Books are to mankind what memory is to the individual. They contain the history of our race, the discoveries we have made, the accumulated knowledge and experience of ages, they picture for us the marvels and beauties of Nature, help us in our difficulties, comfort us in our sorrows and in our suffering, change hours of ennui into moments of delight, store our minds with ideas, fill them with good and happy thoughts and lift us out and above ourselves."

For reading, firstly, we must have good books. Bacon, in his *Essay of Studies*, says that "Some books are to be tasted, others to be swallowed, and some few to be chewed and digested." Selecting from the large number of books that are being published these days is an art by itself.

Secondly, we must have a system of annotations. Munshi Prem Chand, the celebrated Indian author, once said, "The sword of the scholar is the sharp point of a soft pencil." Mark the para's, underline the sentences and side-line the passages, and by the time the book is finished you have taken the juice out of it.

Thirdly, we must have retirement. When we read and contemplate, when we admire the beauty of a passage, the seeds of thought are laid in the receptive brain. Reflection waters the healthy seedlings and, stored in the memory, they are the granary of knowledge.

Travelling is another way to know people and places intimately. It increases our knowledge about others, their environment, their ways of living, their beliefs and fears, their language, their manners, behaviour and culture. By contact with different people we come to know ourselves better, learn to appreciate the point of view of others and become useful members of expanding society. Selfishness is wiped away and with a wider horizon we can better admire the beauties we discover.

Socrates tells us that for discussion we must have a learned person, a secluded place, learned company and serene atmosphere. In discussion, we must be logical. Many avenues are now open to military leaders for discussion and for expressing their views. The day of the yes-man is gone. Today we want courageous men who can put across their views without fear

or favour. Yet when taking part in debate or making remarks at the end of a lecture we need not be offensive; we must make our contribution in the fewest, simplest possible words appropriate to the occasion. We must develop the habits of quick thinking and creative imagination.

IMAGINATION

Imagination is the eye of the soul. It is a deep spring of human activity and the principal source of improvement. It is the power which brings ideas into meaningful and useful relationship by visualizing new combinations. It is the ability to create in advance a new plan or line of action which when tried proves practical.

Imagination distinguishes man from the animal and so does the degree of its development and usage differentiate the ordinary man from the leader. For proper development of our imagination we must maintain a wide outlook, like the window which opens onto a whole panorama. When we maintain a flexible outlook, we receive new ideas, are infused with a desire to express our views and assert our personalities so that we can improve any situation.

With imagination we can make proper use of the information that we have collected and collated to make a correct analysis.

APPRECIATION

Analysis is the logical way to deal with any problem. Military life is a constant repetition of problems which have to be dealt with quickly and correctly. We must place great emphasis on this thought process because every warrior has to face and solve his problems.

What is the problem? To solve any problem there must be logical thinking and for this there must be an aim, a purpose, a directing cause. For the thoughts to advance on correct lines, for our energies to be directed in the right channels and for our imagination to be absolutely concentrated, we must select our aim correctly.

For proper assessment of the situation we must consider all the factors honestly. Factors which are in favour and those against the attainment of the aim must be balanced to lead to a correct decision. It often happens that we start a proposition with a preconceived idea which prejudices the whole course of action and often leads to a wrong decision. For truth to prevail there must be no prejudice.

These thought processes are inclined to take some time but by practice can be cut to reasonable limits; they should never lead to procrastination but should strengthen resolution.

RESOLUTION

Resolution is the determination to act. There must be action and accomplishment to cut across indecision, to galvanize indifference with enthusiastic performance, to translate doubt of possibilities into realms of growing activity. To effect these transitions is the leader's peculiar prerogative and duty. 'He did the job,' is the tribute to leadership.

Resolution demands character, will power and judgment. Resolution combined with judicious analysis leads to correct decision. The harder the problem, the greater the requirement of character; and for correct and quick decision there must be judgment. Decisions must be reached only after cool calculation. Where there is doubt a risk may have to be taken. Action must not be postponed, for war is a gamble and we must be prepared to seize every opportunity. Experience teaches us when to parry and when to thrust.

Having resolved to act we can attain our aim by proper execution.

EXECUTION

Execution is action. It is the method and style by which decision is put into operation. The decision itself is vital, for in war, which is nothing but a series of actions, it would be a crime to be inactive. If we are driven by an urge to improve ourselves, we will not be lazy, we will determine ways and means to move forward. As a decision is made by us, so it is our duty to see it through.

Thus, execution requires persistence which in turn lives on faith. This faith, or self-confidence, is a product of active thinking and active living. We must adopt a positive attitude, and develop a rightful pride in ourselves, with a reasonable ambition and an intense desire for teamwork. Our lives are intertwined with others as is our happiness. So we must understand the problems of our mates and do our best to resolve them.

Execution requires cooperation and this will be forthcoming from a happy team. We must understand our superiors and subordinates in order to get the maximum output with minimum friction. This can best be done by having confidence in all and yet assigning each individual to a task within his capabilities.

Execution requires completion. Once the task is assigned, the leader must exert his personality by proper

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Brigadier Rajendra Singh of the Indian Army was commissioned in 1934, and was assigned to the Queen's Royal Regiment at Allahabad. In 1938 he joined the 1st Battalion, 4th Punjab Regiment, and saw service on the Northwest Frontier of India for two years. Later he held a variety of staff jobs, and in 1945 went to Burma as second-in-command of the 4th Battalion of the 14th Punjab. When the war ended, he was Grade I staff Officer at Army Headquarters. In 1948 he led the 1st Grenadiers (now 2d Guards) in the capture of Gurez. A year later, he returned to Jammu and Kashmir, where he commanded an Infantry brigade. Brigadier Singh, who is well-known in the Commonwealth as a military analyst and novelist, is at present Director of Infantry.

supervision. For this he must develop the habit of being at the right place at the right time. How? To be sure of being where he is needed, he must get to the most difficult place at the most difficult time. And he must remain there till the job is finished to his satisfaction. But this personal satisfaction must aspire to perfection.

PERFECTION

Perfection is the desire to reach the truth. Execution must be constantly improved by effort and patience. Effort has a spiral action; the more information we gather, the greater becomes our knowledge; the more problems we face, the stronger becomes the habit of correct analysis; the greater our experience, the stronger our resolution; and the greater our practice, the better our execution. Each short but sure step leads to the citadel of perfection.

Perfection can never be absolute for it is an ideal without limit, the ideal of beauty and truth, the ideal of a warrior to live with honour, to learn with honour and to fight with honour.

War for a righteous cause is a noble act. In the great epic Mahabharata, Lord Krishna says, "I elect glory even at the cost of Life." For the noble purpose of war we must develop a correct philosophy of life, distinguish right from wrong, and develop the character to pursue our ideal to the ultimate.

A warrior with proper study will become professionally competent, will gain a thorough knowledge of influences, will know the various courses open, and will have a wealth of self-confidence and enthusiasm. He will be the leader.

A leader must amass a store of knowledge. Human knowledge is nothing but an accumulation of small facts—the little bits of knowledge and experience, carefully treasured up, growing at length to a mighty pyramid.

Now comes the vital question: how to make use of this accumulated knowledge. The answer will come when it is needed. As Mahatma Gandhi has said, "When the heart is prepared for action, opportunity is seldom wanting." But the most important conclusion is that one must never give up the pursuit of learning, wisdom and truth. The day of battle is always at hand.

Marshal Foch, in his *Principles of War,* admits: "The truth is, no study is possible on the battlefield. One does there simply what one can in order to apply what one knows. Therefore, in order to do even a little, one has already to know a great deal and to know it well."

Study after a time often becomes boring. This is the hurdle which comes in the way of every creative worker—soldier, scientist, artist and leader. Those who falter, stop and remain mediocre; those who persist, surmount the obstacles to progress and join the galaxy of man.

Lord Buddha says, "Through zeal knowledge is found, through lack of zeal knowledge is lost; let a man who knows this double path of gain and loss so conduct himself that knowledge may grow."

LETTERS *(Continued from page 2)*

The Lebanon crisis illustrated this problem beautifully. Initially neither the Marines nor the Army had helicopter support. An aircraft carrier was hastily loaded and dispatched to the scene. But by the time it arrived the crisis had passed.

Major General Hamilton H. Howze, critiqueing Operation Banyan Tree in the July issue of *Army Information Digest,* said, "A detachment of transport helicopters . . . would have been particularly valuable to the battle group. The rough terrain had been made more difficult by the remarkably elaborate artificial obstacles emplaced by the Aggressors. In these circumstances, had the 501st had available sufficient helicopters to move wide around the enemy's flank and emplace in his rear, the situation could probably have been brought to a conclusion by noon of the first day. Actually our division tried to persuade the Navy to carry 10 of our H34s to Rio Hato on a small carrier, but this effort was unsuccessful."

Rather than depend on naval support and the proximity of the sea, why not turn the problem back to our civilian contractors? It ought not be too difficult an engineering feat to sectionalize our light and medium transport helicopters. They could then be broken down into component parts small enough to fit the cargo compartment of a C130. These units could be parachuted singly, or in composite groups, and reassembled in the drop zone.

For example, the H34 might be broken down into a rotor and cockpit group, a fuselage and motor group, and a tail boom and torque rotor group. Reassembly might require some support equipment, but probably no more than a lightweight hydraulic crane, or possibly some form of collapsible scaffolding.

Whatever solution proves feasible ought to be injected into our aircraft design soon, before we get too sizeable an investment in strategically immobile tactical aircraft. Our air-transportable STRAC units ought not be separated by time and distance from the advantages of tactical air mobility.

FRED W. HALLBERG
Lt, Infantry
Fort Leonard Wood, Missouri

Lieutenant Hallberg's comments have been referred to the Infantry School's Combat Developments Office. Opinions from the field on this or any other subject are welcomed.—Editor.

Reprints

Sir:

Congratulations on your very fine July-September magazine.

We not only enjoyed it, but would like to reprint two of the many good articles: "Assault!" by Maj T. H. Jones, and "The Soviet Officer Corps," by Maj P. S. Grant.

Best wishes; keep up the good work.

T. N. GREENE
Lt Col, USMC
Editor and Publisher
Marine Corps Gazette

Sir:

If you have reprints of "A Staff for the Deputy," by Maj Robert H. Brigham [July - September 1959 issue of Infantry], I would appreciate your sending me two . . .

ROBERT L. HUGHES
Colonel, Infantry
Middleton, Wisconsin

Unfortunately, Infantry *cannot provide reprints of its articles. However, providing the author assents,* Infantry *is happy to grant general reprint rights.* —Editor.

Continued on page 74

Put Yourself in This Picture. Can You Solve the . . .

PROBLEMS of COMMAND

The new Trainlead films portray realistic leadership situations which you can use as helpful supplements to leadership instruction.

by Capt E. G. Magnuson

EVERY successful commander has formulated definite theories on the subject of leadership. But what about the young officer who lacks this experience? How can he best learn the fundamentals and develop the essential techniques? How can we impart to him the knowledge born of the experience of others?

In recent years, great changes have been made in Infantry organizational and tactical concepts. These changes have resulted in many new developments in the military educational field. However, the basic doctrine and principles of leadership have not changed to any great extent—except that increased emphasis has been placed on leadership at all levels. In keeping with this new emphasis, the Special Subjects Department of the Infantry School is presently engaged in the development of new techniques for presenting realistic leadership problems to commissioned and noncommissioned officer students. These problems consist of

REALISM is injected into leadership instruction by these films. Competent actors play convincing roles against convincing backgrounds.

typical situations which the student can expect to encounter in the field, and are designed to provoke thoughtful classroom discussion.

There are, of course, several possible methods of instruction. There is the academic approach in which the instructor discusses the fundamentals of leadership and presents his practical material orally or through the use of written texts and exercises. And there is the concrete approach which capitalizes on two of the individual's senses simultaneously —sight as well as hearing. Obviously, this last method requires either a skit or a sound motion picture. The most practical and economical method of presenting live situations is through the use of short films in which the *student assumes the key role* of solving leadership problems.

The Leadership Committee of the Special Subjects Department has recently completed supervising production of a series of leadership films under what is known as the Phase II Trainlead Film Program. The words "Phase II Trainlead" merely comprise a distinctive phrase describing the production portion of the total program. Phase I Trainlead was the pilot phase, or the research and experimental forerunner of the present program.

The program as a whole is designed to provide the instructor with a series of realistic leadership situations on film which are intended to supplement the present method of presentation, i.e., written practical exercises, and situations presented orally or by means of a tape recorder. These films are all black-and-white sound productions, and running time varies from three to eight minutes each.

Let's take a look at one of the pre-commissioned film situations and see how it is used to supplement a discussion of senior-subordinate relations. The title of the film is "Senior-Subordinate Relations" (release number TF 7-2639), and its running time is four minutes. In the film, a young second lieutenant, assigned to command a platoon-sized unit, is presented with a leadership challenge. Because of his inexperience, he has relied heavily on his sergeant in the past, and has permitted him to maintain temporary control of the unit. Now, however, as the lieutenant acquires experience and gains confidence in himself, he begins to assume his proper control, much to the displeasure of the sergeant, who seems to resent the lieutenant's assumption of command. The company commander learns of the existing friction and asks the lieutenant what he intends to do about it. Here the film-situation ends and the student audience is asked to solve the leadership problem.

Students are given five minutes in which to discuss among themselves solutions to the problem. They are asked to analyze the problem in light of the concepts and principles outlined prior to the showing of the film.

Among the questions asked after the discussion is, "As Lieutenant Ryan, what would you do to correct this situation?" Response is always hearty and indicates a vital interest in the leadership problem, mature consideration and eagerness to participate. Solutions themselves reflect an unusually clear analysis of the problem—to a degree uncommon among other types of teaching vehicles.

The film situations are negative in nature. That is, the problems challenge the student's imagination and ingenuity to provide a logical solution to a definite area of conflict created

Capt Ellert G. Magnuson received a battlefield commission during World War II. He left the service in 1945, but returned in 1950 to become a company commander with the 20th Infantry. A year later he was a platoon leader in Korea, serving in the 19th Infantry. He was wounded, and after his recovery was assigned as battalion S1 and executive officer with the 20th Infantry. He went to Alaska in 1953 to become a company commander in the 4th Infantry, returning to CONUS to enter the USAIS Associate Advanced Course. Captain Magnuson is now a member of the Leadership Committee of the School's Special Subjects Department.

by either poor leadership practices or negative individual behavior.

The present program consists of 25 films. The first 14 are designed for use at the pre-commissioned level—OCS, ROTC and the United States Military Academy. Review and analysis of these films indicates that they may also be appropriately used at the *basic* post-commissioned level. Production of these films has been completed and they are available in film libraries throughout the Army. The remaining 11 films are primarily designed for the post-commissioned level, i.e., Basic, Company Officer and Advanced courses. Only seven of these have been approved for production and are also available in film libraries.

Generally, there are three films under each of the subject titles. This allows the instructor some flexibility in their use and in the selection of situations which he may feel best suited to his particular branch of service or class level.

The situation areas (film titles) are generally those currently being taught. These are: Assumption of Command; Senior-Subordinate Relations; Physical Leadership; Chain of Command; Counseling; Instructional Techniques for Small-Unit Leaders; Handling of Subordinate Leaders in Combat; Selection of Subordinate Leaders; Utilization of Personnel; and Staff and Subordinate Commander Relationship. Those situations pending production-approval are three films on Counseling and one on Selection of Subordinate Leaders. These are being held in abeyance pending field evaluation of the first 21 completed films.

These films *do not,* in themselves, teach anything, but are merely vehicles to aid the instructor in presenting a realistic, clear-cut and understandable problem, and thereby to stimulate discussion and point up the necessity for proper application of leadership principles and techniques.

No solution, as such, accompanies the films and instructors are thus permitted considerable latitude in their use. However, suggested introductory remarks, points for discussion and questions based on the film are included in the instructor's film reference as an aid or guide.

PRE-COMMISSIONED SERIES

TF 7-2636	Assumption of Command	1	5½ min
TF 7-2637	"	2	5½ min
TF 7-2638	"	3	5½ min
TF 7-2639	Senior Subordinate Relations	1	3½ min
TF 7-2640	"	2	4 min
TF 7-2641	"	3	5 min
TF 7-2642	Physical Leadership	1	4 min
TF 7-2643	"	2	7½ min
TF 7-2644	"	3	7½ min
TF 7-2645	Instructional Techniques for Small Unit Leaders	1	5 min
TF 7-2647	Chain of Command	1	3½ min
TF 7-2648	"	2	5 min
TF 7-2649	"	3	5 min
TF 7-2700	Staff and Subordinate Commander Relationship	1	5 min
TF 7-2701	"	2	4 min
TF 7-2702	"	3	7 min
TF 7-2706	Handling of Subordinate Leaders in Combat	1	6 min
		1	6 min
TF 7-2707	"	2	6 min
TF 7-2708	"	3	6 min
TF 7-2709	Utilization of Personnel	1	4 min

TRAINLEAD film titles now available. Fifteen additional films dealing with decision-making in combat have been approved for production.

Prior to the final approval of the film treatments, coordination was effected with all service schools as well as with the Leadership Human Research Unit at Fort Ord, California. All coordinating agencies expressed their interest in and enthusiasm for the program.

Prior to the Trainlead program, the Leadership Committee of the Infantry School had detected a definite need for an improved method of presenting typical leadership situations so that each student thoroughly understood what the real problem was. Too often, situations were not presented in definite, unmistakable terms, and the resulting confusion impeded student learning. Use of Trainlead films at the Infantry School, although limited at this time, indicates that these situations definitely do stimulate student interest, provoke discussion, and facilitate clear expression of leadership challenges. The films are a vast improvement over the old methods of setting up leadership problems for student discussion.

With the ever-increasing emphasis placed on leadership at all levels, it is quite apparent that those involved in teaching this important subject must be afforded the best possible vehicle to ensure that students take away from their classes a sound working knowledge of the ways in which leadership principles may be applied to leadership problems. In this way they learn creatively and personally, and leadership is transformed from a formal subject to a concrete matter of individual responsibility.

The Phase II Trainlead Film Program is merely the beginning of what may well be a new, all-service method of presenting leadership instruction.

THE FAMILIAR PLATOON MEDIC OF FORMER WARS HAS DISAPPEARED FROM THE FIGHTING SCENE. THE NEW CONCEPT OF MEDICAL SERVICE RELIES HEAVILY ON THE INFANTRYMAN HIMSELF.

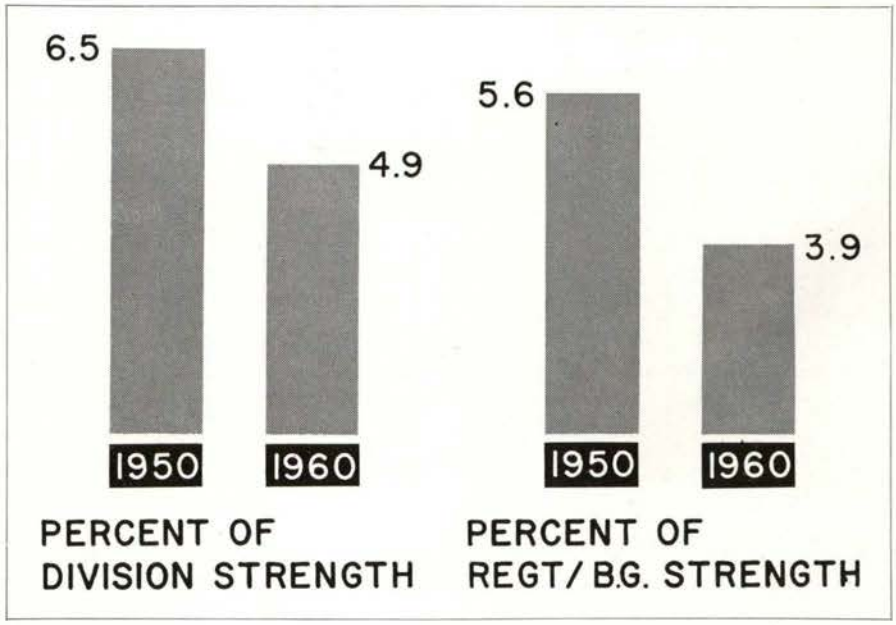
Modernized Medical Support

by Lt Col George T. Britton, MC

THE ART and science of warfare has changed so rapidly during the past few years that many adjustments have been necessitated in the supporting medical service. Routines and techniques developed during the Civil War and refined through two world wars and Korea may no longer apply to current concepts of mobility and dispersion, or to manpower austerity. In the former ROCID battle group the organization of the medical platoon still adhered largely to principles established through past experience and, as a result, it has been evident for some time that this unit could provide only marginal support under conditions of modern warfare. Reorganization of the Infantry battle group under TOE 7–11D provided a logical opportunity to reevaluate the organic medical support and, working within a stringent personnel ceiling, to reorganize the

medical platoon along more realistic lines.

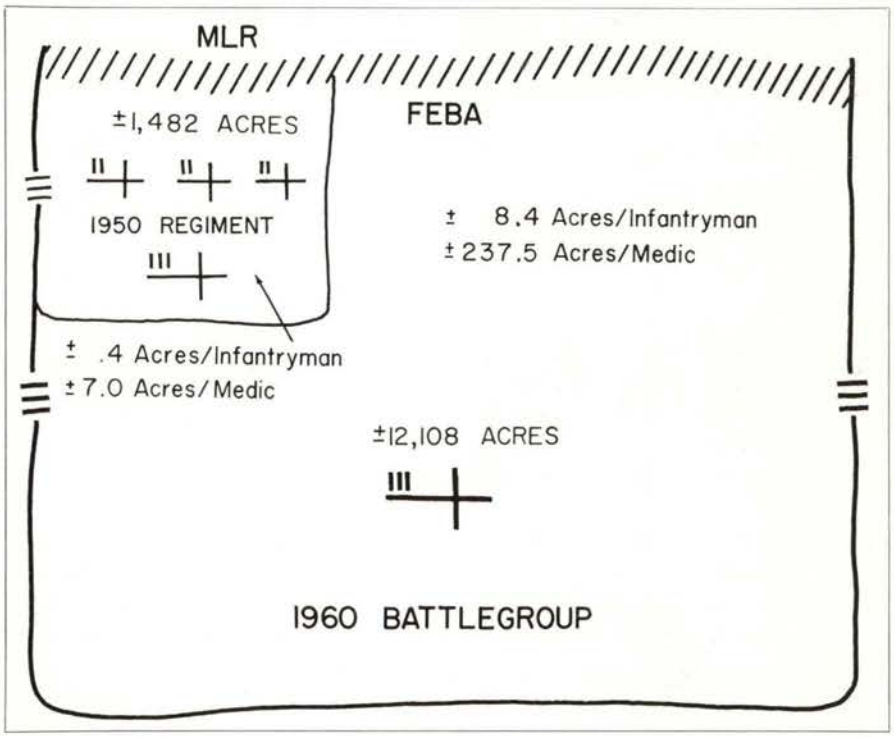
The major problem faced by the organizational planners was posed by the limitation on personnel in the battle group. Naturally, since the purpose of the "lean and mean" Infantry division is to fight, it is difficult to justify additional medical soldiers who do not fight. Fundamentally, such limitation on non-fighters in the forward areas is sound, since approximately the same support is required to sustain a man in the forward area whether he is an Infantryman, a medic, or an indigenous laborer. And any increase in one category of personnel must be matched by a decrease in another. More medical soldiers would increase the efficiency of medical support, but there may be a point of diminishing return. The question of whether or not the spaces allocated are sufficient can only be answered by the test of warfare or by vigorous field tests conducted in realistic settings. Nevertheless the worrisome fact remains that the war of tomorrow, at least initially, will have to be fought with formations and allocations arrived at today. The bar graph (above, right) shows vividly the reductions in the strength of medical personnel at division and battle group levels to date. This reduction is further complicated by increased dispersion called for in the battle area, both in the offense and the defense. However, medical problems cannot be treated "across the board" with other technical service problems. For example, other technical services are concerned mainly with furnishing cargo or services forward from the rear. The critical area for instantaneous decisions in these branches is in the rear—in the trains area or further back. But the Army Medical Service is concerned with the movement of extremely perishable "cargo" in the opposite direction, from forward areas back toward the rear. The critical area for instantaneous medical decisions is forward. This is recognized in the fact that the division surgeon operates from division main CP and



COMPARISON of medical personnel strengths at division and battle group levels now and before.

the battle group surgeon from battle group headquarters.

The impact of dispersion on medimedical service can be seen by a simple comparison of areas. While the acre is not a common military measurement, the chart (below) shows that the forward battle area has increased by about eight times, the area per Infantryman has increased roughly 21 times and the area per medic, 34 times. Of course not all of this area will be populated all of the time, but the medical platoon is responsible for casualties resulting from patrol action, counterattacks or other activity anywhere in the area. The areas illustrated are to scale, the installation symbols representing a treatment station with one medical officer. Actually, count-



AREA normally assigned to a battle group compared with a regiment's defensive zone in Korea. Symbols represent surgeons present in aid stations.

ing the staff surgeon of the old and new formations, the decrease in medical officers has been from five to two.

Consider the foregoing in light of the obvious fact that the mass destruction weapons possessed by our potential enemies can produce far more casualties than in the past. Moreover, the lack of group identification brought about by dispersion of units, and other emotional strains, conceivably will result in a greater rate of combat exhaustion and other emotional breakdowns. And finally, doctrines of mobility and dispersion will preclude most environmental sanitation measures that have held down the incidence of disease in past wars. We must expect more casualties from pestilences of war. Typhoid fever, influenza, malaria and hemorrhagic fever have all reached epidemic proportions during wars fought in this century. It is only logical to assume that any future war also will have its epidemics, even if our enemy decides *not* to employ bacteriological warfare.

An assessment of these facts permits only one conclusion. Medical service at the fighting level is radically austere and may have to "play the percentages." The medical chain of evacuation can reach only as far forward as available men and equipment permit. Should he become a casualty, the combat soldier must rely on himself or his fellow Infantryman. "Buddy-aid" and "self-aid" must replace the platoon medic. In the new organization of the battle group's medical platoon, this familiar figure of the past wars has disappeared—out of necessity rather than preference.

It was clear that the new organization should have more aid-station personnel. As the chart (next page) shows, only five enlisted men were available in the old organization to man the aid station on a 24-hour basis. If it were necessary to operate two stations—a distinct possibility—an already bad situation would have been worsened. This limited assistance for the doctors created a bottleneck at the very level where decisive treatment should be available. The only way to add personnel to this group was to readjust the tasks within the platoon. Referring again to the chart, the ROCID battle group had enough aidmen to furnish one to each combat platoon and enough litter teams and ambulances to supply one to each rifle company. Since the new battle group would have five rifle companies instead of four, it was impossible to continue this level of support even if no personnel were added to the aid station group. As a consequence, it was decided that the number of aidmen would be reduced to seven—one per company—and a new concept of aid and evacuation developed. The redistribution of manpower within the platoon is shown in the chart.

The new concept of medical support places the majority of the medical platoon on wheels—understandable in view of the concepts of increased mobility and dispersion. The 11 enlisted men and the two ¾-ton trucks now authorized the treatment section give the platoon the capability of operating two independent aid stations, one controlled by the platoon leader (a Medical Corps captain) and the other[1] managed by his assistant (a Medical Service Corps lieutenant). And the substitution of litter jeeps for litter teams means that now only two able soldiers are needed to evacuate five disabled ones instead of the old ratio of four able to one disabled.

Other basic improvements will enhance the platoon's effectiveness. For example, two of the men in the treatment section are highly trained medical assistants (MOS skill level .30). These specialists, not previously authorized the platoon, are capable of carrying out certain manual and mechanical surgical procedures formerly performed only by surgeons. Although their training does not qualify them to make technical decisions, they are still capable of performing delicate treatments under the surgeon's general supervision.

The platoon has also been given added communication capability. The battle group surgeon's AN/VRC–18 and the four AN/PRC–10s will allow closer operational control of the platoon and make for more rapid pickup and evacuation of casualties.

As desirable as they may be, these improvements alone do not make an efficient medical support system. This new organization would be useless without a workable concept of casualty treatment and evacuation. And this concept, regardless of whether there is a platoon medic or not, must start at the fighting level. The Infantryman himself must provide the first link in the chain of treatment and evacuation. The frontline ambulance team will rarely be close enough to render immediate aid. Therefore, it is conceivable that able men will have to be used to move the seriously wounded to a place where they can be picked up by the litter jeep. This is especially true when the platoon is operating over terrain not easily negotiated by vehicle. The responsibility for initial treatment and evacuation lies with the small unit leader—not the evacuation team. Certainly this situation will add further emphasis to the training of the combat soldier in "self-aid" and "buddy-aid."

It is worthy of note that Department of the Army has increased the amount of first-aid training given the

[1] Normally, the battle group surgeon will spend most of his time at this second station to direct professional care of patients.

Lt Col George T. Britton, Medical Corps, was commissioned in 1941 after graduation from the University of Michigan medical school. He served in the Korean War as commanding officer of the 629th Medical Clearing Company and division surgeon of the 7th Infantry Division. Later, he became medical staff officer in the Office of the Chief of Army Field Forces and, after attending USACGSC, commanding officer of the 2d Evacuation Hospital in Germany. Colonel Britton then was assigned as Deputy Surgeon in Headquarters Communication Zone, USAEUR. At present he is Medical Committee chairman in the Infantry School's Special Subjects Department.

soldier to 20 hours. This training undoubtedly was extended mainly because of concern over the effects of mass-casualty weapons. Nevertheless, the value of this extended training, in view of the availability of medical support, is obvious. With this additional training and proper integration of first-aid into small unit exercises, the result *can* be an upgrading of individual skills so that every soldier is as capable as the former platoon aidman.

The company aidman is of prime importance to the proper functioning of the new system. He usually will operate an informal company aid post near the company command post. He will control the evacuation teams present in his company area and, by making use of organic company communication, coordinate the evacuation of litter cases from the forward platoons. Additionally, he will provide emergency treatment for casualties occurring in his vicinity and he will also examine and treat the walking wounded and any other casualties evacuated to his post on company transport. In some situations he will be called upon to conduct company sick call formation (to the limit of his skill) and he will keep the company commander informed of the medical and sanitary conditions of the company. Efficient medical support of the company largely depends on how well this man does his job.

The company aidman will receive assistance from the medical specialists who make up the evacuation teams. Although these teams will be under centralized control in most situations, they can be allocated to each company. The mission of the evacuation teams is to provide initial emergency treatment for the seriously wounded and to move them as rapidly as possible to the nearest aid station. These teams will habitually operate as far forward as possible without coming under direct enemy observation and fire. In practice, the teams at times may operate in the vicinity of the rifle platoon CP. Since it is important that the teams be completely familiar with the terrain and the tactical situation, it may be more efficient for one or two teams to operate exclusively within a company area, collecting casualties and evacuating them only to the company aid post. From there other evacuation teams could remove the wounded to the aid station. Of course, other techniques of operation will be derived from experience gained in the future.

INFANTRY BATTLE GROUP MEDICAL PLATOON

	OLD TOE 7–12R	NEW TOE 7–12D
Officers		
Battle Group Surgeon (BG Staff)	1	1
Platoon Leader (MC)	1	1
Assistant Platoon Leader (MSC)	0	1
Enlisted men		
Headquarters	3	3
Treatment Section		
Company Aidmen	22	7
Aid Station Attendants	5	11
Section Leader	1	1
Litter Bearers (4 teams)	16	0
Ambulance-Driver Aidmen	4	14
Ambulance Aidmen	0	14
Total	53	53
Vehicles		
¼-ton Truck, Utility	0	1
¼-ton Ambulance	4	14
¾-ton Truck, Cargo	1	2
Total	5	17

MEN and EQUIPMENT assigned to the ROCID medical platoon (old) and to the present platoon.

Doctrinal changes toward mobility and dispersion cannot ignore basic medical and surgical principles of wound recovery. Rapid evacuation alone is not the answer. Patients must be stabilized prior to movement to prevent death en route. It often requires one or two hours in a medical installation before fluctuations in blood pressure and in pulse and breathing rates are controlled sufficiently for a patient to be moved safely. However the aid station operates no mess, so the evacuation policy of the batle group is measured in hours and not in days.

Each aid station will keep a roster of all casualties treated, noting thereon the disposition of the patient. This roster is for use by the battle group surgeon in preparing his medical estimate and by the S1 in preparing his personnel reports. Since the platoon has only one clerk to serve both aid stations, elaborate routine reports should not be required by unit SOPs.

Evacuation beyond the battle group aid station is generally unchanged. Ambulances of the division medical battalion will remove patients from the aid station to the clearing station, or evacuation of critical cases by helicopter ambulances of the field army may be requested by the surgeon through medical channels. With presently available equipment, helicopter evacuation is limited by darkness, adverse weather and enemy air action. Also, allocation is still based on medical need and is usually provided only to save life, limb or sight. There may be occasions when nonmedical aircraft can be used for evacuation, but there are serious drawbacks to this. Normally no medical attendants can be provided on these flights and, since there is no provision

for exchange of medical property, the medical platoon might be quickly drained of its blankets, litters and splints.

The operation of the battle group treatment section will vary according to the tactical situation and the number of casualties. As stated before, the section can maintain two aid stations should the need arise, thus permitting the surgeon a certain amount of flexibility in supporting the battle group's operations. In a rapidly changing situation such as an attack or a retrograde movement, these stations may be separated in depth so that they can be displaced leap-frog fashion. This method allows for continuous treatment during the operation. In more stable situations, such as in defense or when the battle group elements are separated by outstanding terrain features or great distances, the two stations may be deployed laterally.

In previous wars the ideal location for the aid station was well forward on the lines of drift so that casualties could receive professional care more quickly. This was acceptable when combat resembled football, with a fairly rigid forward line. Under those circumstances the aid station could operate in the "backfield," with little concern about interruption of its task of treatment and evacuation. But it appears that future warfare is more likely to resemble basketball—a process of move and countermove played over extremely large "courts." Enemy elements can be expected to move between and behind our units. Battle casualties can be expected to occur in and around company areas from action with these elements and from the effects of artillery, rocket and air activity. This, of course, means that casualties can now be expected to occur anywhere in the battle area—not just on the forward edge of the area. The only practical location for the aid station under these conditions is in a centralized position within a defensive position so that there will be a smaller possibility of frequent interruption of service. This may be at about the depth of the battle group CP. In effect, then, depending on the situation, the aid stations may be as far as five kilometers from the frontline units.

Future warfare holds many unknowns for the medical service. There is little likelihood of accurately predicting casualty loads or of determining in advance where these loads will occur. Control of the air at the onset of hostilities may not exist. Even if the enemy has ratified the Geneva Conventions and has disciplined forces, the Red Cross emblem cannot protect a man from mass-destruction weapons. The zone of the interior may or may not be capable of receiving casualties from the battle zone. And care for many wounded POWs may result in decreased care for U.S. patients. All of these variables, to varying degrees, will affect the medical service at the fighting level. While it cannot be said that the organization and concept of operation of the medical platoon as described here will be sufficient to meet any and all of these possible conditions, the platoon is set up in such a way that it serves as a good basis for adaptation to meet changing needs. However, it should be kept in mind that in the case of peak casualty loads resulting from enemy use of mass-destruction weapons or other causes, platoon must be augmented by other troops. In order to plan realistically for all aspects of nuclear warfare, commanders must give serious consideration to this possibility.

THESE QUESTIONS ARE VITAL.

Send your answers to the Special Subjects Department, United States Army Infantry School.

Since the deletion of map reading from Basic Combat Training, what additional training is necessary for medical platoon troops to maintain day and night orientation in the dispersed battle group area?

Is the Infantryman's first aid packet adequate for future warfare?

Is the current aidman's kit adequate for future warfare?

Within the rifle platoon area is there a need for folding medical litters to expedite the evacuation of wounded in combat?

What modifications of the frontline ambulance are necessary for support of Infantry operations?

When hot food is served to the dispersed battle group elements, will individual mess kits be used? If so, how will mess gear be cleaned?

What will be the space-time impact on medical treatment and evacuation caused by the greater dispersion of combat elements?

How will the battle group headquarters company provide food for medical personnel and patients, particularly when two aid stations are established laterally?

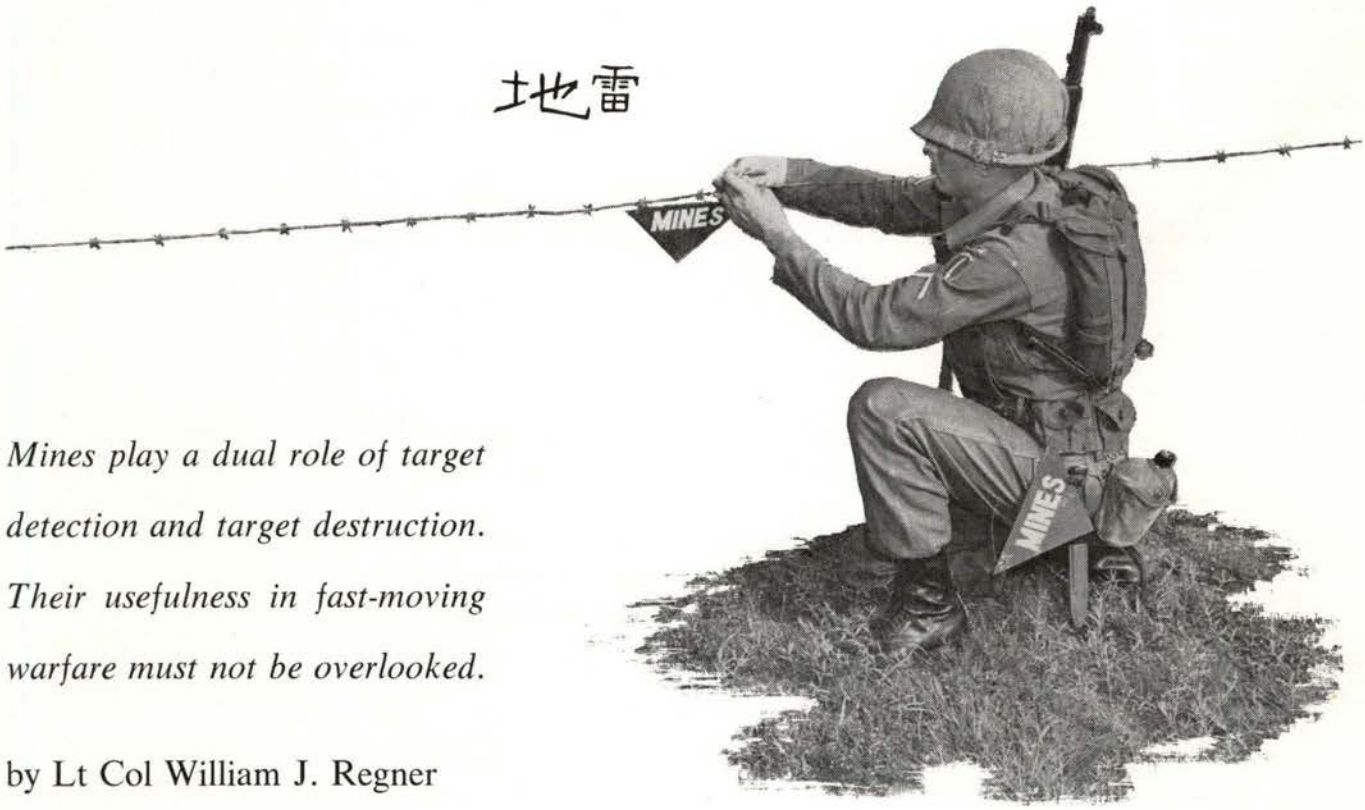
What are the morale implications—particularly at the platoon level—of reduced Infantry medical support?

What procedures will be used for the safeguarding of wounded prisoners of war who require medical care and evacuation?

ОСТОРОЖНО МИНЫ !

Achtung Minen!

地雷



Mines play a dual role of target detection and target destruction. Their usefulness in fast-moving warfare must not be overlooked.

by Lt Col William J. Regner

IN ANY language, the meaning is the same. Mines are in the area.

Infantrymen develop a personal interest in the soil at their feet, and tankers sit light in their seats. Columns fail to move, time-tables are thrown off, attacks are halted or lose their momentum.

Military histories are filled with accounts of encounters with mines. The German armies of World War II learned the value of mines quickly, and employed them with great success against the Allied forces on all fronts. The teacher of the German was the Russian, and the schoolroom was the plains of Russia, where the use of mines occurred on an unprecedented scale. Minefields containing 10,000 to 100,000 or more mines were common and this massive use of mines greatly influenced the tactical operations on both sides.

This history is of more than academic concern to the Army, for the fact is that the usefulness of mines has definitely increased in the intervening years. This broadening utility has resulted from the substantial changes in our organizational and operational concepts brought about by the nuclear age.

Nuclear weapons force us to operate with maximum dispersion consistent with control and our mission. Deep objectives and penetrations will characterize offensive operations—our own and the enemy's. The greater and more porous frontages, and the tactical uses to which they will be put, create a convincing requirement for surveillance and firepower to cover the ground that can no longer be physically occupied by the man. The wide-ranging enemy must be detected, and once detected, destroyed.

Ordinarily surveillance and firepower means are still inadequate to provide the kind of coverage required. Surveillance devices are not yet sensitive enough to notify us of all enemy penetrations in time for us to react; our firepower is not yet mobile enough to allow us to apply it every time with the kind of warning surveillance now gives us.

There is little doubt that if another war comes, whether nuclear or nonnuclear, every effort will be exerted by both sides to make it a war of mobility. The fact that the majority of Soviet divisions are mechanized, motorized or armored drives home the point that both sides will be capable of the kind of penetrations mentioned above. Such penetrations, while they immeasurably increase the defensive problems of detecting targets and applying firepower to them, also create an offensive problem of protecting the vastly extended flank or the open rear.

Our doctrine in the defense is to influence the enemy's effort so that he will be forced to fight on ground

of our choosing, and to channelize his movement into preselected killing zones. Are we being realistic in presuming that our fire and movement alone will be able to accomplish these ends?

In the deep blows at distant objectives which will especially characterize offensive warfare, the vulnerability to counterblows which results from such tactics must be reduced. The objectives we take will be harder to hold, for consolidation, resupply and support will be complicated by distance or dispersion.

The strange thing about mines is that they combine the two functions of target detection and target destruction. Properly employed, they are able to detect the most improbable breakthrough or counterattack, and once they have detected it, they have no difficulty in applying their firepower. For this reason, mines are peculiarly suited to the kind of warfare I have described. They represent an important means of increasing our chances for victory on the modern battlefield, and of ensuring that our doctrine does not outdistance our capabilities.

This, after all, is the constant danger of paper wars. It is all very well to theorize about swift strikes and bold maneuver, but we must not forget that as these tactics open new possibilities of success, they create as many possibilities of weakness—possibilities which we must counter in our own operations and exploit in the enemy's.

The American Army has never employed mines very widely, and has displayed very little enthusiasm for mine warfare. This is difficult to understand in view of the many unpleasant and seriously disruptive encounters we had with enemy mines in North Africa, Italy, Germany and Korea. We have consistently failed to train our troops in the proper employment of mines. We have allowed them to be careless, and have not impressed upon them the importance of marking, recording and reporting minefields. This is indicated by our casualties from friendly mines at Bastogne, for instance. If we stress the requirement for proper mine employment, emphasizing it in training and planning, then we can certainly overcome the obstacles which have tripped us up in the past.

In October of last year, the Infantry School published its current position on mine warfare. It not only envisions a wider use of mines in the future but it also identifies the Infantry as the prime user of this weapon. Previously, mines were considered primarily an Engineer responsibility, but the nature of the modern battlefield—its requirements for dispersion, self-sufficiency and speed—has indicated that mines belong in Infantry hands.

The School position states specifically, "Minefields will serve as defensive obstacles around and between islands of resistance in the forward area and critical installations in the rear." Here, then, is a decisive means of coping with frontages that cannot be physically occupied or even covered by fire. Mines deny the enemy unrestricted choice of ground. Especially in view of new developments in mine design, they are capable of making large areas untenable except at tremendous sacrifice. Any enemy, however determined and ruthless, will give this factor serious consideration.

The School goes on to say, "Minefields will be laid behind the line of contact to channelize enemy penetrations between forward units into killing zones." Thus mines will be employed as an adjunct to fire and movement in order to force the enemy to concentrate in areas of our choosing. To prevent this seizure of initiative, the enemy may precede his attack by saturation firing. Though personnel are vulnerable to these fires, minefields by actual test are relatively immune. A well-conceived barrier plan, including extensive mining, could determine our success in imposing our will upon the enemy in this type of operation.

The Infantry School has also determined that "during offensive operations extensive use will be made of barrier minefields to block and deflect enemy attack formations from major units and from critical installations behind the combat zone." Mines, then, will cover our flanks and rear, supplementing our surveillance and firepower. They will also aid us to hold the objectives we have won. Mines, in fact, introduce into the very fluid operations we contemplate a valuable element of security which we cannot afford to ignore.

New developments in mine design deserve some attention, for they will aid us in accomplishing the ends I have outlined. Though precise details of these developments are, of course, not available for general dissemination, we know enough of the basic characteristics to be able to draw some conclusions about their role in increasing the flexibility and effectiveness of mine warfare.

Bulk and weight, to begin with, have been greatly reduced without any decrease in effect, and sometimes with a definite increase. This, in itself, is a significant improvement. In addition, scatterable mines (which are easily laid over broad areas) and

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Lt Col William J. Regner received a Regular Army commission upon completion of ROTC at the University of Oregon in 1942. During World War II he served as a company commander in MTO. After graduation from the USAIS Advanced Course in 1950, he became Infantry advisor to the Turkish Army. He commanded the 3d Battalion of the 34th Infantry in Korea, and later was plans and operations officer in Headquarters Eighth Army, Japan. In 1957 Colonel Regner was assigned to the Infantry School's Weapons Department as chairman of the Special Purpose Weapons Committee. He is now attending USACGSC.

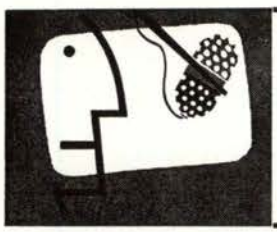
self-sterilizing mines (which are active only for a pre-set time interval) have been developed which greatly extend the applications of mine warfare. Obviously, these developments will reduce the danger that friendly mines may hamper our movement as much as the enemy's. In fact, such developments have produced a new weapon, with new capabilities that, we have seen, are much in demand on the nuclear battlefield.

Mine delivery has also been improved. Mechanical mine-planting devices have been invented which greatly speed the laying of conventional-type mines. In addition, techniques for the use of Army Aviation in mine-laying are being developed.

Aerial delivery of mines had previously been the province of the Air Force. However, lightweight, scatterable, "timed" mines are especially adaptable for use by Army Aviation. Aerial mining in the path of a moving enemy, accomplished with speed and ease, can deny him the use of a route or area, disrupt his organization or assembly, and create, when desirable, the prolonged effect which is beyond aerial bombing or artillery fires. Army aircraft are immediately responsive to the will of the combat commander and can, because of their low, slow flight characteristics, provide the kind of refined mine-laying capability which the ground forces need.

In order to win a war of mobility we must not only plan for maximum mobility ourselves, but must restrict and discourage the enemy's ability and will to move. Minefields selectively positioned and carefully marked and recorded will slow down and demoralize the enemy. The new mines themselves, plus new planting, breaching and clearing techniques and equipment, will help us to fight this kind of war.

Mine warfare is an effective weapon. The Communist armies appreciate its importance and from all indications plan to make wide use of mines. Now, more than ever, it is important for us to develop a familiarity with and confidence in mine warfare.



INFANTRY QUIZ

Answer the following questions. Determine whether you are a Bolo, Recruit, Marksman, Sharpshooter or Expert. Each of the questions is worth 10 points.

1. Before a 106mm rifle is fired, a triangular-shaped area behind the weapon should be cleared for a distance of:
   a. 50 feet.
   b. 80 feet.
   c. 130 feet.
   d. 175 feet.

2. How many and what types of aircraft are assigned to the Infantry division (ROCID)?

3. The standard field survey instrument authorized the rifle company for indicating the presence of radiation is the:
   a. ion chamber.
   b. pocket dosimeter.
   c. G–M meter.
   d. charger, radiac meter.

4. A soldier has mastered the fundamentals of marksmanship taught in preparatory marksmanship and 25-meter Trainfire I firing when he is able to:
   a. assume positions rapidly.
   b. obtain a battlesight zero.
   c. shoot tight shot groups.
   d. apply proper trigger control.

5. In airmobile operations, the primary mission of the Pathfinder is to:
   a. aid in the navigation and control of Army aircraft.
   b. operate air traffic control centers.
   c. select and prepare airfields.
   d. advise the commander on employment of aircraft.

6. When the rate of fire of the caliber .30 machinegun is not specified in the fire command, it should be:
   a. rapid.
   b. medium.
   c. slow.
   d. any of the above.

7. The maximum sight setting on the machinegun, M60, is:
   a. 2400 yards.
   b. 1200 yards.
   c. 2000 meters.
   d. 1100 meters.

8. In determining the exact allowable cargo load of transport helicopters for a specific airmobile operation, the supported ground unit commander should consult:
   a. FM 57–35, "Army Transport Aviation Combat Operation."
   b. the transport aviation unit representative.
   c. the aircraft handbook.
   d. the division aviation officer.

9. Incorrect sight alignment causes an error in the strike of the bullet which:
   a. remains constant as range increases.
   b. increases as range increases.
   c. is negligible.
   d. none of the above.

10. A phase line in a night attack is used primarily as a control measure to:
   a. designate the exact location for consolidation once the objective has been seized.
   b. ensure that the attacking troops have deployed as skirmishers prior to launching the assault on the objective.
   c. keep friendly attacking troops out of the supporting fires beyond this line, and to aid control after seizure of the objective.
   d. indicate a physical location on the ground for employment of the automatic and crew-served weapons of the rifle platoon.

How to

by Maj Clifford H. Ford
and Capt Harold J. Meyer

THE ADAGE "For want of a nail the shoe was lost . . ." is well known to most commanders. And it applies to the weapons of the rifle company. The success of the company mission and the lives of company members are dependent on the serviceability and correct functioning of its weapons.

Now, more than ever before, our tactical units throughout the world must maintain a high state of combat readiness. To be combat ready, their weapons must be continually serviceable. And to ensure that all weapons are ready to fire, each rifle company commander must wisely use his inspection time. Each inspection, whether announced or "on the spur of the moment," should be made to determine what the condition of the weapons is, whether repairs or adjustments are required, and what measures are necessary to maintain serviceability.

The rifle company commander usually performs inspections that are visual and non-technical. He does not ordinarily have gauges, mirrors and other devices to assist him. Yet for ensuring a weapon's serviceability, a visual inspection, supplemented by a few operational checks, is normally adequate.

During visual inspections, certain essentials should be looked for, such as proper lubrication, cleanliness, nature of surfaces, and completeness of unts. The commander should, when inspecting the bores of weapons, ensure that no unusual pitting, rusting, heavy scoring, gouging or burring has occurred. Dirt, rust and corrosion, whether in a bore, in a gas system or around a tiny screw, must always be the objects of special scrutiny. And each inspection should check related webbing equipment and accessories as well as proper assembly. Also a visual inspection will reveal worn or broken parts and other major deficiencies caused by abuse or lack of proper care.

After it has first been determined that the weapon is loaded, operational serviceability checks to include safeties, sights, control levers and other assembles should be made. These operational checks and visual inspections will give the commander reasonable assurance that

One of the commander's most important responsibilities is making sure that his unit's weapons are ready to fire. Good command inspections result from knowing what to look for.

Inspect Rifle Company Weapons

his weapons are serviceable. But even after following the recommended inspection procedures and implementing corrective action, he cannot be absolutely sure that the weapon will operate properly. The final test of serviceability for all weapons is, of course, actual firing. But, since test firing is sometimes impractical, weapons must be frequently inspected to ensure insofar as possible that they will be ready to fire when needed.

The importance of timely and thorough visual inspections and operational checks has been proved by the experience of commanders throughout the years.

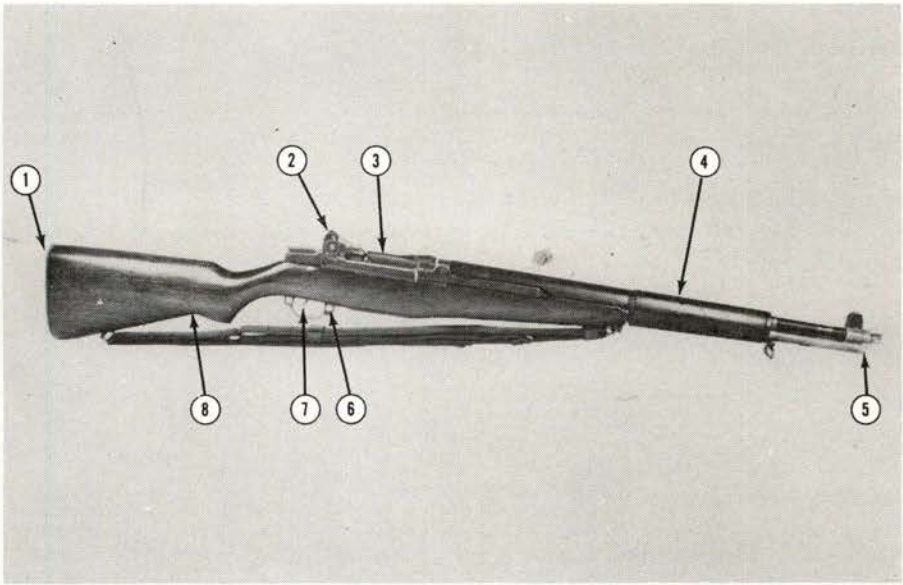
A long familiar subject of such inspections is the .30 caliber M1 rifle. It is true that latest draft revisions of current TOEs do not include the M1 rifle. In its place is listed the new 7.62mm M14 rifle. But we can safely assume that phase-in of the M14 rifle will be gradual, and the well known M1 will be with us for some time.

The commander, during his inspection of the M1 rifle, should test it for correct assembly. With the operating rod in its rearmost position, the bolt should stay open. Close the bolt, lock the safety, and squeeze the trigger. The hammer should not fall. With the safety off, a squeeze of the trigger should cause the hammer to fall.

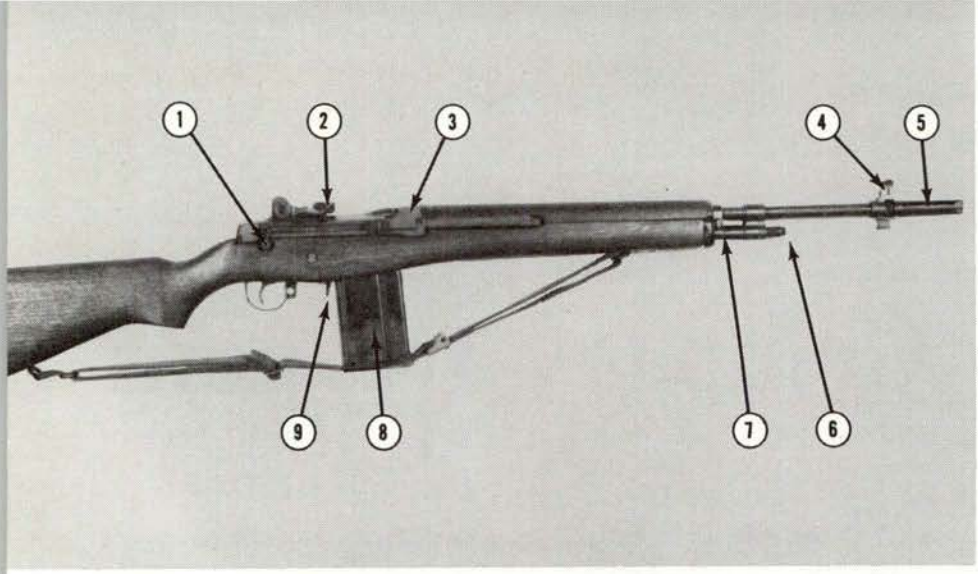
Trigger pull can be checked by judging if it is dangerously less or excessively greater than the 5½ to 7½-pound desirable range. While inspecting the receiver, the commander should ensure that the chamber is clean. And the rear sight deserves special attention. If sharp, clear clicks cannot be heard when the elevating knob is turned, the rear sight should be checked for proper tension. This can be done by running the aperture up to its topmost position and pressing down on it with the thumb. If the aperture drops, the tension must be adjusted. Then examine the eight checkpoints shown in the figure.

Experience has proved that more rifles become unserviceable through lack of maintenance than for any other reason. Because of this, accessories essential to the performance of proper maintenance are issued for use with the rifle. Some commanders prefer that accessories such as the oiler and thong case, the grease container, and the M10 cleaning rod should not be carried in the rifle stock. However, it is recommended that these items always be kept in the stock since their presence will permit, and perhaps even encourage, better rifle maintenance. Technology has not ruled out the need for maintenance. Care and cleaning, so important for the M1, is as necessary for the recently introduced M14 rifle.

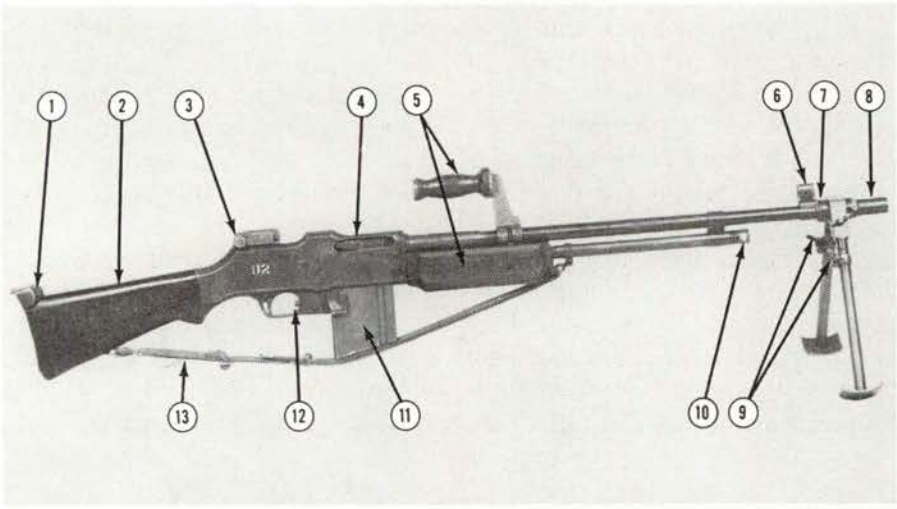
Although the 7.62mm M14 rifle has not been issued to most units, it will have an important role in future weapons inspections. The inspection procedure for the M14 is not radically different from that for the M1, but the box-type magazine and the selec-



U.S. Rifle, M1, Caliber .30. ① Butt-plate cap door fails to close properly—accessories missing; ② Rear sight loose, lacks tension or fails to produce audible clicks when elevation knob is turned; ③ Extractor, ejector or firing pin broken or missing (move bolt to rear to examine); ④ Front handguard loose; ⑤ Gas cylinder lock screw loose or missing; ⑥ Safety fails to function; ⑦ Incorrect trigger pull; ⑧ Stock cracked.



U.S. Rifle M14, 7.62mm. ① Inoperative selector (applicable only to those rifles having selector installed); ② Battered magazine charger guide; ③ Frozen or missing bolt roller (inside hump of operating rod); ④ Loose front sight; ⑤ Loose or broken flash suppressor; ⑥ Loose or improperly seated gas cylinder plug; ⑦ Improperly adjusted gas shutoff valve; ⑧ Defective magazine; ⑨ Inoperative magazine latch.



Automatic Rifle, M1918A2, Caliber .30. ① Hinged butt plate loose; ② Warped or broken stock; ③ Loose sight or binding elevating screw; ④ Worn or broken extractor, ejector or firing pin (cock weapon to examine); ⑤ Broken carrying handle or forearm; ⑥ Loose sight or cover; ⑦ Missing friction washer; ⑧ Loose or split flash hider; ⑨ Wing nuts fail to lock adjustable legs when tightened; ⑩ Gas cylinder assembly improperly aligned; ⑪ Defective magazine; ⑫ Faulty magazine release; ⑬ Unserviceable sling.

tive semi-automatic and automatic capability of the former make additional inspection necessary.

To test for correct assembly, with an empty magazine properly engaged in the receiver pull the operating rod to its rearmost position. The bolt should stay open. If it does not, either the bolt lock or the magazine follower is faulty. Remove the magazine and the bolt should still remain open. If it does not, the bolt lock is almost certain to be defective. Next, pull the operating rod slightly to the rear to release the bolt lock, close the bolt, move the safety to its locked position and squeeze the trigger. The hammer should not fall. After releasing the safety and squeezing the trigger, the hammer should fall.

With the magazine out, again pull the operating rod to the rear. This time the bolt should not remain open unless the bolt lock is pressed in. Now allow the bolt to go forward.

Next, examine the gas cylinder plug. This plug should be tight, with its shoulder flush against the gas cylinder lock. If it is tight but the shoulder is not flush with the gas cylinder lock, either the threads on the gas cylinder plug are damaged or the gas piston has been placed in the gas cylinder incorrectly.

A final point in checking for correct assembly is the gas shut-off valve located on the right side of the gas cylinder. The notch in the spindle of the shut-off valve must be perpendicular to the barrel before normal firing can occur.

When these tests are completed, remove the magazine and examine it carefully for dents or other damage. While the magazine is out, look into the receiver, operate the magazine latch to be sure it works properly, and examine the operating rod spring guide for excessive wear.

Next move the selector, if present, to each of its firing positions. If it lacks spring tension or moves with difficulty, check for a broken or missing selector spring. Then look for the same type of discrepancies which were pointed out in the figure covering the M1 rifle, and also check for the additional faults peculiar to the M14 rifle shown in the separate figure devoted to that weapon.

With the advent of the M14, the commander's inspection burden will be lightened somewhat, since a version of this weapon will replace the well-known Browning automatic rifle. Until the changeover is accomplished, however, BAR inspections must continue.

With the BAR, a defective magazine and a worn or broken magazine catch or spring are probably the most frequent causes of failure to feed or failure to chamber. Failure to fire often comes from a weak recoil spring, or from a worn or broken firing pin. And stoppages caused by failure to extract and failure to eject are commonly due to insufficient gas or a damaged or broken extractor or ejector.

Worn or broken parts are not the only cause of improper functioning. Incorrect assembly will cause difficulties. When inspecting a BAR, the commander should first cock the weapon, then check the safety, and finally release the safety and squeeze the trigger. If the bolt moves com-

pletely forward and locks into position, it is reasonable to assume that the operating and trigger groups are assembled correctly. The buffer and rate reducing group can be checked only by disassembly or test firing. However, the gas cylinder assembly and the bipod group can usually be visually inspected. When the gas cylinder body is positioned so that the body lock key is directly under the barrel of the weapon, the gas cylinder assembly is correctly aligned. After these assembly checks have been made, the commander is ready to inspect the points shown in the figure.

Along with the Browning automatic rifle, the .30 caliber M2 carbine is not included in the latest draft revisions of current TOEs. But the carbine will no doubt remain a member of our small arms system for a while.

During an inspection of the carbine, the commander should make a series of operational checks to find out if the weapon is properly assembled and safe to fire.

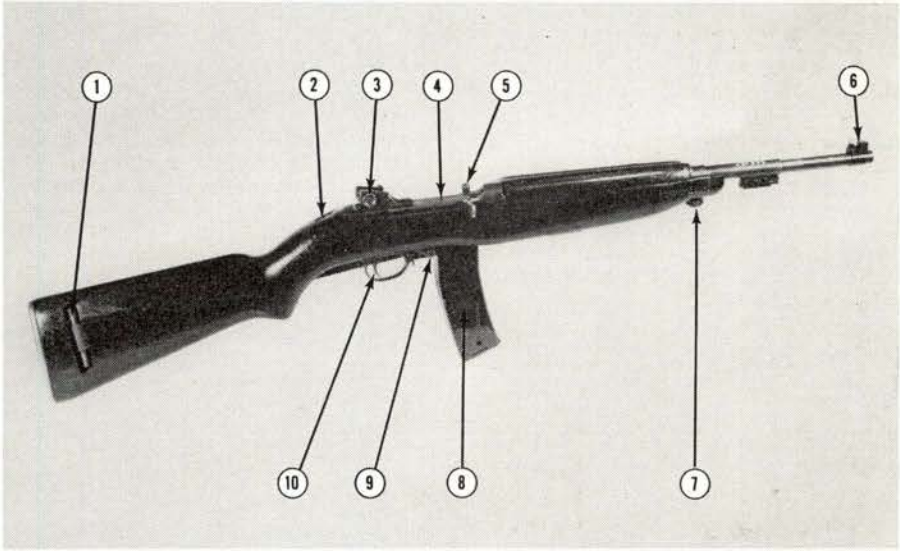
First pull the operating slide to the rear and depress the operating slide stop. The bolt should remain open. If it doesn't, either the operating slide stop or operating slide stop notch in the receiver is defective. Next, with the safety pointing to the rear, pull and release the trigger several times. The trigger should spring forward each time it is released. If it does not, it is likely that the trigger spring is improperly installed, and to fire the carbine in this condition would be extremely dangerous.

With the selector to the rear in the semi-automatic position, and the trigger released, pull the operating slide all the way to the rear and allow it to snap forward. The hammer should not fall. Pull the trigger and the hammer should fall. Next hold the trigger to the rear, pull the operating slide all the way back and allow it to snap forward. The hammer should not fall until the trigger is released and squeezed again. Perform this test several times. After this check, pull the operating slide completely to the rear and allow it to go forward.

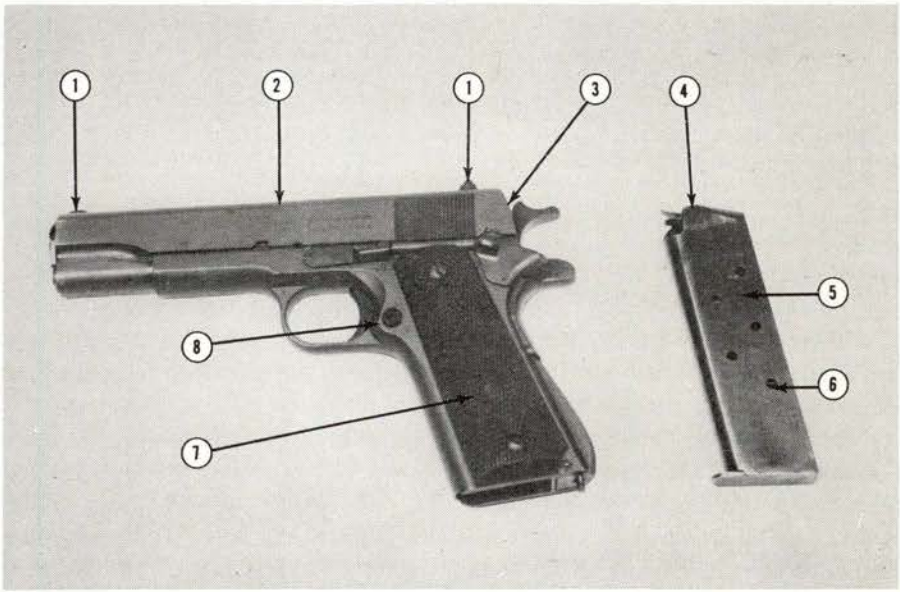
Now push the selector to the automatic position. The hammer should not fall until the trigger is pulled. Next, holding the trigger to the rear, pull the operating slide to the rear and release it. Perform this operation several times. Release the trigger and squeeze. The hammer should not fall.

With the selector still in the automatic position, pull the operating slide to the rear, hold the trigger back and allow the slide to go forward slowly. The hammer should fall just as the operating slide moves the last $5/16$ inch. If it falls before the bolt is fully locked, the weapon is defective.

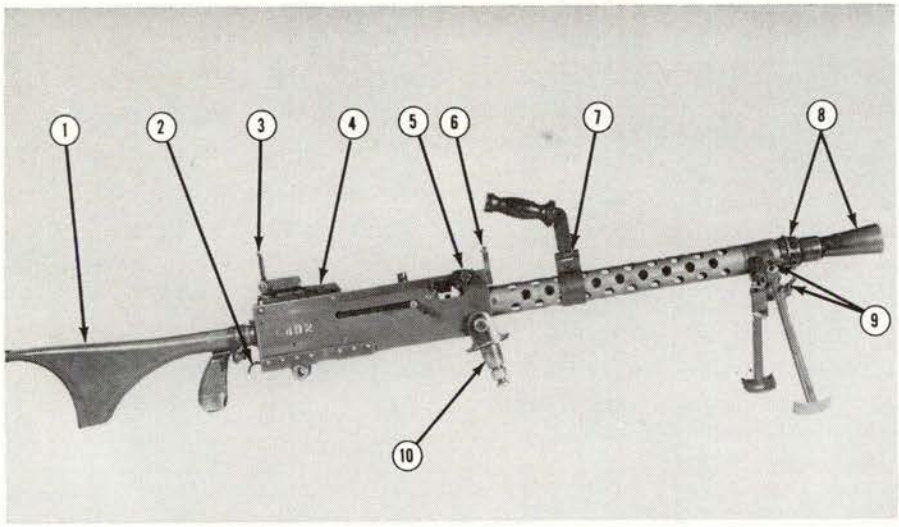
As a final operational check, test the safety with the selector in each position. The figure shows other points which should be checked as soon as you are sure the carbine is correctly assembled and is operationally safe.



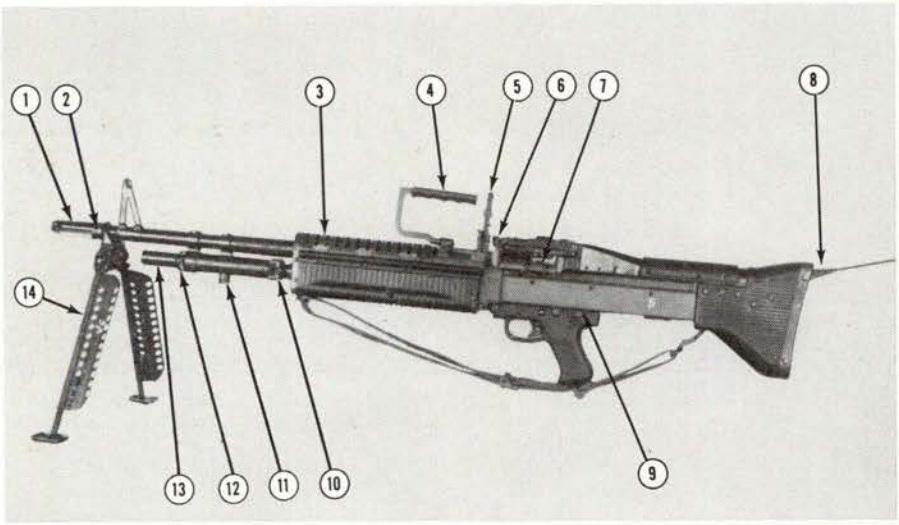
Carbine, M2, Caliber .30. ① Oiler or sling missing; ② Recoil plate screw loose; ③ Rear sight windage knob binds, elevation slide fails to properly engage range indentations on ramp; ④ Extractor, ejector or firing pin broken or missing (open bolt to examine); ⑤ Selector lacks spring tension; ⑥ Front sight loose; ⑦ Front band screw not tight; ⑧ Magazine dented or otherwise damaged; ⑨ Magazine catch inoperative; ⑩ Trigger pull excessively heavy or light.



Pistol, M1911A1, Caliber .45. ① Sights burred or otherwise damaged; ② Worn or broken firing pin; broken or missing extractor; worn or broken ejector (move slide to rear to examine); ③ Weak or broken firing pin spring; ④ Deformed magazine lips or magazine follower; ⑤ Dented or battered magazine; ⑥ Weak or broken magazine spring; ⑦ Cracked or broken stocks; ⑧ Inoperative magazine catch and release.



Machinegun, M1919A6, Caliber .30. ① Bent shoulder stock; ② Wing nut loose or missing, screw threads stripped; ③ Rear sight loose, windage screw knob or elevation knob binding; illegible sight graduations; ④ Cover latch inoperative; ⑤ Cover bolt cotter key missing, cover bolt spring broken; ⑥ Front sight assembly incomplete, fails to raise, lower, or lock in upright position, adjusting nut binding; ⑦ Carrying handle retaining pin loose; ⑧ Flash hider loose, retaining clip missing; ⑨ Thumb screws damaged, fail to tighten; ⑩ Pintle battered, cotter key missing from pintle bolt.



Machinegun, M60, 7.62mm. ① Loose flash suppressor; ② Broken bipod yoke; ③ Barrel guard mashed; ④ Broken carrying handle; ⑤ Loose rear sight, binding traversing or elevating knob, defective slide release, loose or missing range plate screws, illegible graduation marks; ⑥ Cover latch spring weak or broken; ⑦ Sticking feed plate rollers; ⑧ Hinged butt plate difficult to open and close; ⑨ Safety fails to function; ⑩ Rear gas cylinder nut loose, washer tabs or tab recesses worn or damaged; ⑪ Gas plug loose or missing; ⑫ Gas cylinder extension lock washer tabs worn, broken or bent, tab recesses worn or damaged; ⑬ Gas cylinder extension loose; ⑭ Bipod legs fail to position properly.

Although warfare has become characterized by increased firepower, and weapons like the carbine are being replaced, the faithful caliber .45 pistol remains on our armament scene. Future ammunition improvements may enhance the effectiveness of this weapon. Most of the irregularities common to the caliber .45 pistol are shown in the figure. However, prior to checking these items the commander should check for correct functioning of the safety lock, the disconnector, the grip safety and the half-cock feature of the hammer.

To check the safety lock, cock the hammer, press the safety lock upward into the "safe" position and, while depressing the grip safety, squeeze the trigger. The hammer should not fall.

To test the grip safety, cock the hammer, release the safety lock and, being careful not to depress the grip safety, point the pistol downward and squeeze the trigger. If the hammer falls or if the grip safety is depressed by its own weight, corrective measures are required.

The half-cock feature can be tested by half-cocking the hammer and pulling the trigger. The hammer should not fall. And too, when the hammer has been drawn back nearly to full cock and let slip, it should fall only to the half-cock position.

To determine if the disconnector functions properly, cock the hammer, shove the slide about ¼ inch to the rear and, while holding the slide in position, squeeze the trigger. Allow the slide to go forward while maintaining pressure on the trigger. If the hammer falls, the disconnector is faulty. For one final test, pull the slide all the way to the rear and engage the slide stop. Squeeze the trigger and at the same time release the slide. Again the hammer should not fall.

Trigger pull should also be tested to determine if it is excessively heavy or dangerously light.

A common source of malfunctions of the .45 caliber pistol is the magazine. It is easily dented or bent, and may fail to seat properly if the magazine catch is broken or worn.

Although the .45 caliber pistol is still with us, the Browning .30 caliber machinegun, veteran of over 40 years of service, is going to be retired. The Department of the Army has chosen the 7.62mm M60 machinegun to be its successor. However, the M1919A6 machinegun will continue to fill a key operational role during the phase-in period.

Granted, the M1919A6 is rather complicated internally, but it is quite easy to inspect for serviceability. After completing the checks shown in the figure, the commander should give his attention to the interior of the receiver.

Prior to raising the cover, pull the bolt handle to the rear and release it. The forward movement of the bolt should be smooth, rapid and sharp. Raise the trigger and the firing pin

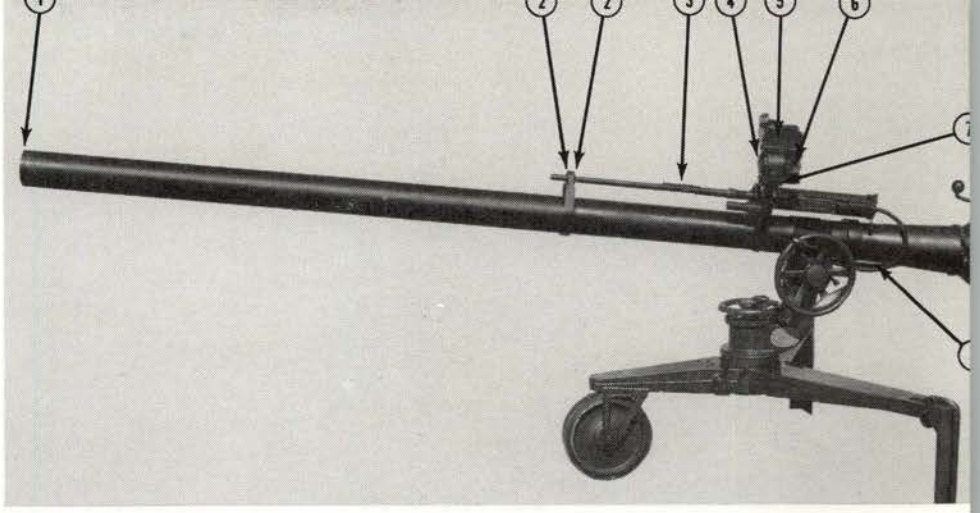
should go forward. This is an indication that the weapon is assembled correctly, but it is not a final operational check. Now raise the cover. Occasionally it is difficult to move the cover latch to the rear to release the cover. This difficulty may be due to a slightly elevated and improperly seated backplate group.

Inspection of the cover should reveal a free-moving belt feed lever, and an undamaged belt feed lever stud. The belt feed pawl and belt holding pawl should be under spring tension. Now cock the weapon, lift the extractor and raise the trigger. The firing pin should be visible in the T-slot of the bolt. Check the ejector to ensure its spring is not broken.

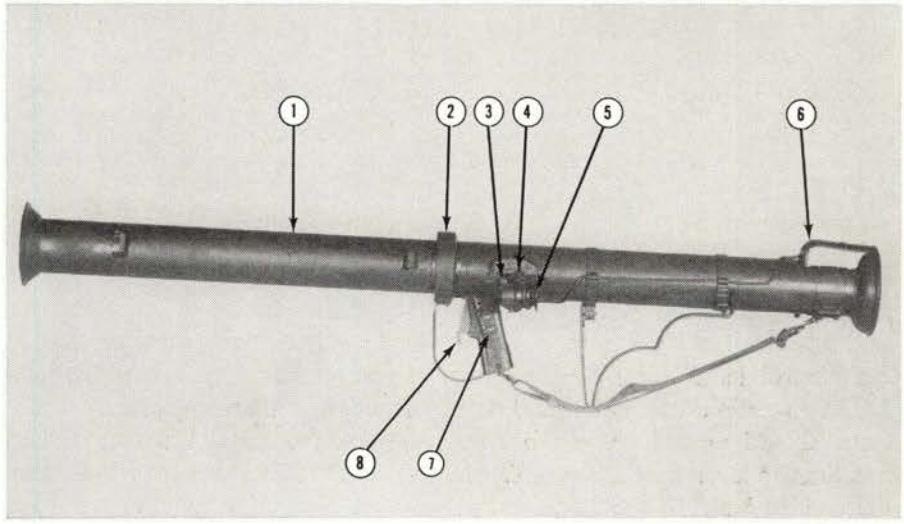
Final head spacing is described in the appropriate field manual. However, tight headspace exists if the notches on the rear of the barrel can be seen. Headspace is loose if the bolt can be pulled to the rear independently of the barrel and barrel extension.

So much for the A6 machinegun. Next, we will outline the inspection procedure for the 7.62mm M60 machinegun. The barrel assembly is easy to inspect. First move the bolt to the rear. Then lift the barrel locking lever and remove the barrel by pulling it to the front, away from the receiver group. The barrel should be examined for a cracked socket. It should be noted that with the M60, no adjustment for headspace is necessary.

An indication that the weapon is in proper mechanical operating condition can be gained by testing the operating group. Pull the cocking lever to the rear and then push it forward. The bolt should remain in its rearmost position since the M60 machinegun is an "open bolt" weapon. With the safety on the "S" position, press the trigger. The bolt should not move forward. Then, with the safety on the "F" position, again press the trigger. The bolt should now snap forward with considerable force. (Caution: Damage to the feed plate will result if the bolt is permitted to snap forward while the barrel is out of the weapon.)



Rifle M40A1, 106mm. ① Broken or gouged lands; ② Adjusting cams fail to lock; ③ Missing wing nut or gas regulator needle; ④ Loose lock screw; ⑤ Boresight screws frozen; ⑥ Broken cross-level bubble vial; ⑦ Cant correction knob inoperative; ⑧ Split or broken firing cables.



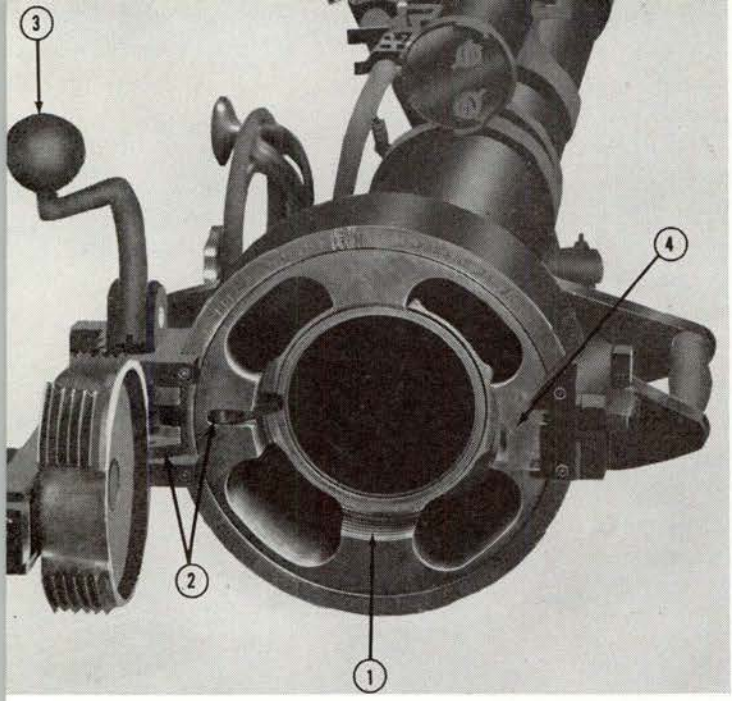
Rocket Launcher, M20A1B1, 3.5-inch. ① Dented or cracked barrel — scored interior; ② Loose barrel coupling; ③ Loose or binding sight hinge; ④ Bent indicator arm; weak indicator arm spring; marred elevation plate; ⑤ Scratched or broken lens; ⑥ Contactor latch group inoperative; ⑦ Safety fails to function; ⑧ Trigger has no spring action.

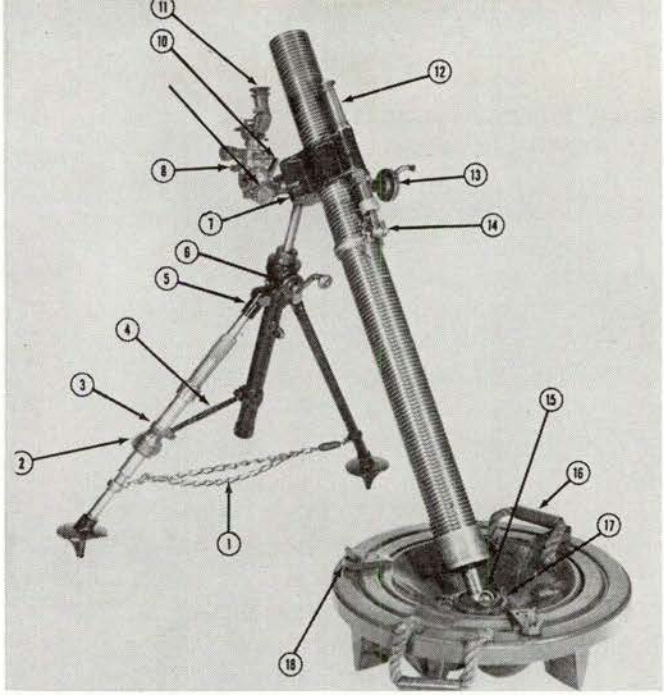
To check the interior of the receiver, raise the feed cover latch and lift the feed cover to its upright position. If the feed plate does not operate smoothly, the feed plate groove is probably rough. Also the bolt guide rails should not be bent or burred. The extractor and ejector should be present and unbroken.

These checks, in addition to those shown in the figure, will provide the commander with a good estimate of the weapon's serviceability.

The machinegun's partner in the weapons squad is the 3.5-inch rocket launcher. Although it presents few maintenance problems, its electrical firing system, unique among weapons of the rifle company, occasionally fails to function. Special equipment is needed to determine its complete operational readiness, but the company commander can obtain a fairly reliable indication of the electrical circuit's condition. To do this, he should check for paint-covered or corroded electrical contacts, loose connections, broken wires, damaged insulation, and broken or damaged trigger grips.

Detailed disassembly of both the firing mechanism and the contactor latch group should be made only by technically trained personnel. However, several back and forth movements of the control handle should





106 mm Rifle Breech. ① Damaged vent bushing threads; ② Lack of spring action in cartridge case detent or extractor; ③ Operating lever fails to work smoothly—loader's safety fails to function; ④ Vent assembly number and breech block number different.

Mortar, M29, 81mm. ① Broken spread chain or spring; ② Locking nut binds or fails to lock; ③ Sliding bracket binds; ④ Cracked or broken connecting rod; ⑤ Binding adjusting nut; ⑥ Loose or binding elevating mechanism; ⑦ Battered dovetail slot; ⑧ Broken elevation or cross-level bubble vials; ⑨ Marred deflection or elevation scales; ⑩ Weak latch spring; ⑪ Scratched or broken lens; ⑫ Inoperative shock absorber; ⑬ Loose or binding traversing mechanism; ⑭ Clevis lock pin missing or improperly inserted —chain missing or broken; ⑮ Spherical projection binds in movable socket cap; ⑯ Unserviceable rope handles; ⑰ Open end of movable socket cap points in wrong direction; ⑱ Broken or bent latch clamping screws.

show the commander the condition of the contactor latch group. When the control handle is moved to the LOAD position, the right and left stops should protrude into the bore and the trip lever should be up. When the control handle is rotated upward to the FIRE position, the stops should come up out of the bore, and the trip lever should rotate downward into the rear of the bore. After determining that the contactor latch group operates correctly, the commander, before proceeding to the items indicated in the figure, should inspect for such obvious defects as bent shoulder stock, loose or damaged trigger guard, frayed carrying strap or poor condition of painted surfaces.

While the 3.5-inch rocket launcher is an effective tank killer at short ranges, the principal anti-tank weapon organic to the rifle company is the 106mm rifle. This rifle consists of four major components: the M79 tripod mount; the 106mm rifle, M40A1; the .50 caliber spotting rifle, M8; and the M34D elbow telescope sight. When conducting an inspection of this weapon, it is a good technique to examine each component individually. The commander can determine the serviceability of the 106-mm rifle by making the simple checks shown in the figures.

With the M79 mount, sluggish movement of parts is often caused by paint that has collected at joints or pivot points. In testing for smooth operation of the traversing and elevating handwheels, normal balance of the weapon should first be achieved by duplicating the effect of having the 106mm rifle loaded. To do this, put your hand on the breech and push down.

During the inspection of the mount, an operational check of the firing knob should be made. A distinct click should be heard when the knob is pulled out, and when the knob is pushed in. Cocking and simulated firing of the spotting rifle and the major caliber will normally disclose any trouble that exists in the firing mechanism. Next check the legs. Improper dismounting from the ¼-ton truck can bend a front leg. This usually occurs just in front of the traversing handwheel.

Maj Clifford H. Ford graduated from OCS at Fort Benning and served with the 103d Infantry Division in Europe during World War II. He left the service in 1946, but was recalled to active duty as Assistant PMST at Mississippi State College in 1951. During 1953 he became air officer for the 25th Infantry Division in Korea. He attended the USAIS Advanced Course in 1957, and now is enrolled in the Associate Course of CGSC.

Capt Harold J. Meyer, author of "Weight—Nemesis of Mobility," enlisted into the Army in 1943 and graduated from OCS in 1945. He served in Europe until 1946, when he left active duty. In 1948 he returned to the active Army. He has served as Assistant PMST at Kent University and is a graduate of the USAIS Advanced Course. Captain Meyer is now Publications Officer with the School's Weapons Department. He is a frequent contributor to *Infantry*.

The inspection of the 106mm rifle should determine that the serial number of the vent bushing is the same as that of the breechblock. Undesirable recoil could occur if a breechblock with a different serial number is substituted. Also examine the Weapons Record Book. Entries in this book should show by lot number and types all service cartridges fired to date in the weapon.

The adjusting cams of the .50 caliber spotting rifle frequently give trouble, due to broken or extremely loose locking lugs. This defect can be discovered by using an M8 combination tool, or two screwdrivers, to turn the cams. If serviceable, the cams will operate smoothly and lock firmly when properly positioned. The magazine of the spotting rifle should not be bent or damaged. And the lens of the M34D elbow telescope should be checked for scratches or breakage. Inspection of these items will help the commander ensure that his principal direct fire weapons are in operational readiness.

While the 106mm rifle has increased the direct fire capability of the rifle company,organic indirect fire support has also been improved with the substitution of the larger 81mm mortar for the 60mm mortar.

Before looking for the specific deficiencies listed in the figure, the commander should make some general visual checks and manipulation tests. Initially he should examine how the mortar is mounted. The bipod legs should be approximately two feet in front of the baseplate, with the spread chain stretched tightly between. The two white etched markings on the barrel should be up and to the rear, with the mount attachment ring approximately midway between. Also, the open end of the socket cap should face in the direction of fire, and the clevis lock pin should be firmly in place, being inserted from left to right.

Next the commander can concentrate on the general condition of the mortar. The externally threaded barrel should have no nicks or gouges or bulges which would prevent its free rotation in the mount attachment ring. The bore must be free of cotton waste or other debris which would foul the firing pin. And the firing pin should be present and in good condition.

Then make a few mechanical checks. Elevate, depress and traverse the mortar several times to determine if the mechanism operates smoothly. Turn the sight knobs to check if they operate smoothly and freely and do not bind. And inspect the shock absorber mechanism by placing your foot on the base plate to steady the mortar and delivering a sharp downward thrust to the top of the barrel at the muzzle. When a downward blow is delivered in the direction of fire, the mortar barrel should move down slightly and spring back to its original position. Movement without any resistance, or the other extreme, sluggish or incomplete movement, suggests a faulty shock absorber.

With the 81mm mortar, as with the other weapons of the rifle company, timely and thorough inspections are imperative. Weapons are basic. Without communication equipment or vehicles the company can still fight if its weapons are ready. Formal inspections and frequent spot checks are a vital part of the commander's job. He must detect and correct. The lives of his men and the accomplishment of the mission hinge on the serviceability of company weapons.

WE MUST DEFEND AGAINST THE "SILENT" WEAPONS.

the 'B' of CBR

Enemy use of bacteriological warfare is a possibility we may face in any future war!

by Lt Col Walter L. Miller, Jr.

SO MUCH of our attention is focused on nuclear weapons and their dreadful implications that we tend to overlook an equally formidable threat to our security. Only a relatively small handful of people appear to foresee the catastrophe we could face if biological weapons were used against us.

There seems to be a tendency to dismiss this threat—perhaps because biological agents have been used only as "field expedients" in small-scale, isolated incidents in past conflicts. But who can say with any assurance that they will not be used against us in the future? We know that the Soviets are capable of conducting biological warfare on a large scale, and such a weapon would seem to be ideally suited to their purpose. As Maj Gen Marshall Stubbs, Army Chief Chemical Officer, pointed out recently: "We have had ample warning that chemical and biological weapons . . . figure prominently in Soviet planning. We would be more than foolhardy if we did not heed such warning and take whatever measures we consider necessary to our defense." If the Soviets could defeat the Free World with BW —and well they might—they could do so without destroying in a nuclear holocaust the material wealth and resources they seek to control. Certainly, Soviet leaders have no qualms about using any means to achieve their announced goal of world domination.

Many Infantrymen will say that biological warfare is of little concern or significance to the Infantry—it is a strategic weapon. While BW is predominantly strategic, the Infantry must be concerned with it. Not only would Infantrymen themselves become targets and casualties of biological agents, but their food and water supplies would also be affected. Actually, the use of BW agents could have an immediate and very significant bearing on tactical operations. Furthermore, the Infantryman, along with other members of the armed forces, can assist in the detection of these agents, should they be used against us.

To understand the problem clearly, the Infantryman should know exactly what BW is, what kind of agents he may have to face, what effects they could have and what he can do about it if they are used.

Biological warfare is the intentional employment of living disease-producing agents or their toxic derivatives for the purpose of causing illness or death in men, animals or plants. Through the use of such agents, one nation would establish artificial conditions in which disease would incapacitate or kill the population of other nations—civilians as well as the members of military forces—or which would destroy or prevent the growth of the plant life and animals required for food.

The biological agents which might be used include living organisms, toxins (toxic substances derived from living organisms) and vegetable organisms. The enemy could select the agent or combination of agents which would produce the desired effects. One type would produce temporary casualties, another a prolonged or recurring problem, while another would kill. For example, the bacteria which produces Brucellosis would cause serious, non-fatal illness, and plague would cause death. The toxin which produces Botulism would also

Target	Agent	Class	Purpose of Use or Effect
Man	Botulinum Toxin	Toxin	Death.
	Brucellosis	Bacteria	Serious non-fatal casualty.
	Plague	Bacteria	To cause death or serious casualty.
Animal	Anthrax	Bacteria	Death.
	Brucellosis	Bacteria	Serious infection.
	Hoof and Mouth	Virus	Infection requiring disposal.
Crop	Late Blight of Potato	Fungi	Kills plant, rots potato.
	Wheat Rust	Fungi	Affects plants to reduce yield to 10%.
	Rice Blast	Fungi	Affects plants to reduce yield at least 50%.
	Defoliants	Chemical Agent	Discoloration and defoliation (loss of leaves).
	Plant Growth Regulators	Chemical Agent	Dwarf or distort plant, and reduce yield.

Possible BW agents and their effects.

bring death to humans, and the hoof and mouth virus would require the disposal of infected animals. Fungi and chemical agents would kill, dwarf, cause defoliation of or reduce the yield of crops and plants.

In selecting the desired agent or combination of agents, the enemy would determine which type or types would best suit his immediate purpose. A death-producing disease would eliminate the victim. However, one which produced a prolonged illness would require medical supplies and personnel for his care. Against military forces the enemy might be expected to use an agent that would have a rapid effect on the individual's ability to fight.

While science cannot produce new diseases, it can grow strains of disease-producing organisms which can live and infect under field conditions. Maj Gen William M. Creasy, former Chief Chemical Officer, U.S. Army, has pointed out that "disease germs can be tailored to exact military requirements" and that "more than any other form of warfare, biological warfare lends itself to covert use by the enemy."

Detection of biological attack would be difficult. Germs can be introduced and spread subversively. They can be released at night to drift silently with the wind or to be carried by water. Their existence may not become apparent until later, when they have done their job and casualties begin to occur. There are no rapid methods of detection such as we now have to determine the presence of gases and chemical agents.

Defense against biological agents is difficult. They can enter the human or animal body through cuts or other openings in the skin, they can be carried into the stomach with food or water and they can be breathed into the lungs through the nose or mouth.

While there is no real solution to the threat we face, if the enemy uses biological agents there are some things we can do to detect their presence and to protect ourselves against them. The Infantryman should be fully aware of what can be done and he must be ready to assist others with this task at any time.

Within the Army, the Army Medical Service is responsible for obtaining samples and identifying biological agents. The Infantry can expect to be called upon to help with the job of early detection of their employment and in collecting samples. The Infantry soldier must be trained to be alert to any unusual signs or activities which could indicate biological agents are being used. Generally,

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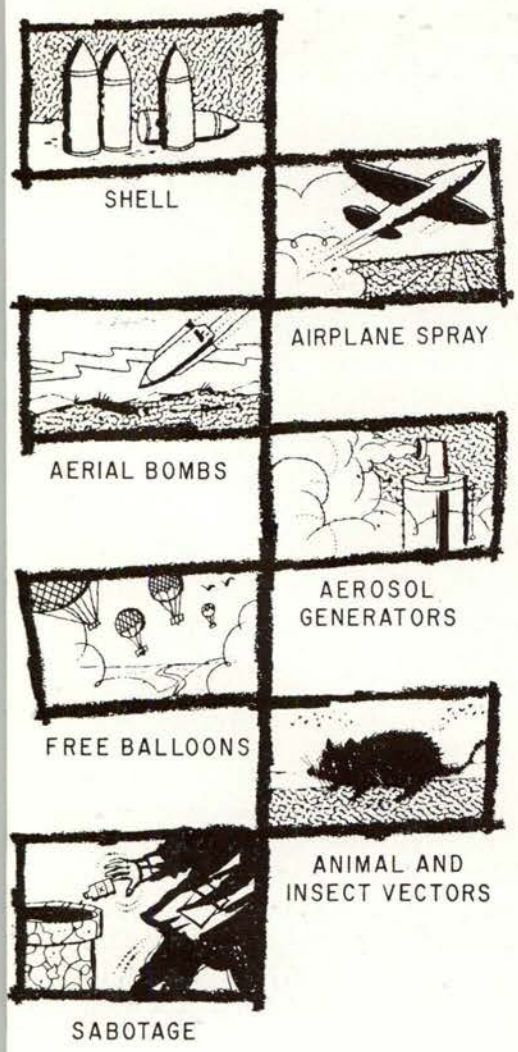


Possible methods of disseminating BW agents.

there will be no sound, light or other immediate evidence of release. Since almost all of the agents are living organisms, they are sensitive to shock and must be released in a manner that will prevent their destruction. The soldier should, therefore, be on the lookout for such signs as shells which explode with greatly reduced charges, releasing sprays of liquids, or for devices with jelly-like materials. If an aircraft sprays an area or if aerosol generators or other suspicious devices are used and there are no immediate effects on personnel, as usually would be the case in a gas attack, he should report the incident so that a check can be made.

To assist with the detection and identification of BW agents, a new filter device has been developed. When germ-laden air or liquid is drawn through a disc, the germs are trapped on a filter. The filter is then placed on a similar disc which contains a food material so that the entrapped germs can grow and multiply. A small sterile container is provided for the "exposed" filter and disc which can be carried in a shirt pocket. Body heat helps to incubate the germs until field identification facilities can be reached. This procedure could determine the presence of germs in a matter of hours. Previous methods require several days.

In preparation for the use of BW, the enemy may use "shots" to immunize their own troops, or they may stockpile or move CBR supplies. They may falsely accuse us of planning to use BW, and then equip their troops with masks and protective clothing, step up CBR training and take other steps preliminary to the use of biological agents. The discovery and reporting of information on such activities could give us some warning. The Infantryman is often in a position to do this. Actually, he did it in Korea. On numerous occasions, marks, training literature and other items were captured or reported, and we were thus alerted to the possibility that the enemy might use BW or other CBR agents.

Protection against BW attack is best achieved by high standards of personal hygiene, physical conditioning and sanitation. Cleanliness is essential in the body's natural defense against disease. Inoculations for some of the suspected agents can also be given to augment natural immunities. If a BW attack is expected or suspected, the mask should be worn. Personnel should shave regularly—a several days' growth of beard could cause the face mask to leak. Open cuts and exposed skin should be covered, and eating and drinking should be delayed until a safe area is reached. Food and water exposed to such an attack should be used only if absolutely necessary, and then only after thorough cooking and boiling. It would be preferable to use food and water from freshly opened containers which have been carefully washed and disinfected. Any individual who appears ill should be examined immediately by medical personnel.

We cannot afford to dismiss lightly the enemy's BW capabilities and the threat which they pose. We must be constantly alert now and on any future battlefield for evidence that biological agents may be used. And we should learn as much as we can about methods of combating BW.

Worth Repeating

"Russia has stated publicly by their Minister of Defense . . . that future wars would differ in size, shape and scope from previous wars. Then he lists what is going to be used: guided missiles, atomic, thermonuclear, chemical and biological weapons."

—Maj Gen William M. Creasy

"Those who understand little or nothing about the nature and characteristics of biological warfare often speak in horrified tones of mysterious new diseases being created to wipe out mankind. This is, of course, pure bunk. The likelihood of creating an entirely new agent of unique virulence or new disease-producing capacity is extremely remote."

—Brig Gen J. H. Rothschild

Get the Family on the Team

Here is how one unit develops high morale and good public relations by taking a personal interest in the soldier and his family.

by Capt William M. Glasgow, Jr.

THE ARMY has become increasingly aware of the need for good public relations, but the need is not often recognized at the lowest levels of command where a personal relationship can and should be developed. Each year, several hundred thousand young Americans enter our Army, many of them from homes which have had little direct contact with the service. Some parents have preconceived fears of military duty for their sons. These people need to discover for themselves that these fears are unfounded. They also need to become acquainted with the role their sons play in their country's defense. A better understanding of the individual's role naturally requires a better understanding of the Army's role and mission.

Upon entering the Army, the new soldier usually is highly motivated. At the same time, he is "anxious" concerning his future, and perhaps a little homesick. His parents, his wife and others share his anxieties and interests. They also miss him.

Aware of the need for better understanding, and seeing an opportunity to develop good will for the Army, Company D, 13th Battalion, 4th Training Regiment, USATC at Fort Knox, instituted a project which is designed to promote better public re-

TRAINING is witnessed by the visiting families.

FACILITIES of all types are open for inspection.

lations. The company recognizes that it is in an ideal position to benefit the men of the unit while at the same time creating favorable impressions of the Army among large numbers of our citizens. This is what it has done.

All new men assigned to D Company are requested to fill out a card giving their name, the names and addresses of their next of kin, and their former occupation. (While the occupation information is not required for the project, it is helpful to the company when specific skills are required.) The company commander then sends a personal letter to each soldier's family or closest relatives. The letter informs them of the soldier's arrival in the unit and invites them to attend a "visitors' week end," scheduled on specified dates approximately five weeks later. The letter also outlines, briefly, the training program at Fort Knox and points out how visits at inconvenient times would interfere with training. It requests that the company commander be contacted concerning any of the soldier's problems that may come to the attention of the folks at home.

Such a letter is helpful in a number of obvious ways. It shows the family that the unit and the Army are really interested in their son. It invites them to come see how he is doing, and it tends to keep down visits at undesirable times. Such a letter is not only good public relations—it is also good leadership.

Enclosed with the letter is a program explaining the three-day visitors' week end. The week end starts on Friday—a normal training day. The visitors may arrive as early as they desire. Smart-looking trainees greet the visitors and guide them to the battalion dayroom where coffee and cake are served from the unit mess. The guides come from the company's drill team, a volunteer unit with high *esprit*. At 1000 hours the early arrivals are given a brief orientation and are then taken on a tour of training areas for the remainder of the morning. As the day progresses, additional groups of visitors are welcomed, briefed and escorted on tours. A company officer or senior noncommissioned officer accompanies each group. He describes all training and points of interest. Transportation for the tours is furnished by post buses.

The first place visited on each tour is the area in which D Company is undergoing training. Upon the arrival of a tour group, the trainees are given a short break so they may meet their families. Following the break, the visitors observe the training for a brief period and then continue the tour which includes visits to other units in phases of training which D Company has undergone or will undergo in the future.

During the tour, both the regimental commander and the chaplain talk with the visitors in small informal groups. They answer any questions the guests may have, and do everything possible to make them feel welcome.

Capt William M. Glasgow, Jr., graduated from OCS in 1945. After assignments at Camp Livingston and Fort McPherson, he served as company commander with the 97th Infantry in the Philippines. Returning to the United States, he joined the 23d Infantry, later accompanying it to Korea as a company commander. Beginning in 1951, Captain Glasgow served in the Office of the Assistant Chief of Staff, G3, Department of the Army. He completed the Advanced Course at Fort Benning in 1954 and was assigned to MAAG to Saudi Arabia. Now a battalion executive officer at USATC, Fort Knox, he is the author of *Exhibition Drills*.

DINING with their soldier in his mess is one of the privileges accorded visitors.

After all tours have been completed, the visitors are shown the color film, "Pentomic Army," which explains the role and missions of the Army. The film helps the civilian to understand the many different types of jobs and skills required in our Army, and enables members of the family to see how their son or husband will fit into one of the required slots.

The trainee eats dinner and supper with his family or relatives in the unit's mess, and Friday night he may spend the evening with them.

On Saturday morning, additional visitors arrive at the company. The morning is devoted to observing the company at dismounted drill, visiting planned demonstrations, and taking an open-house tour of the company area. Many mothers learn for the first time that their sons can make beds, wash dishes, and perform other housekeeping chores. The discipline, orderly procedures, and precision make a deep and favorable impression.

The noon meal provides another opportunity for the soldier and his family to eat together in the unit mess. Most of the mothers are profuse in their compliments on the "chow." The visitors pay for their meals at separate-ration rates and are generally amazed to find out how well the Army feeds for such small cost.

Saturday afternoon is the big time for everyone. The trainee is given a pass and may take off until Sunday night for the rest of the big week end with his family. If desired, reservations for the family are made through the company at one of the post guest houses.

Before the three days are over, an average of 200 guests will have participated in visitors' week end with more than half of them having received the full tour and orientation. Throughout the week end, Company D makes no attempt to paint a "rosy" picture. It explains frankly the need for a thorough and rugged basic training program.

As they leave the company area, most of the visitors make a sincere effort to express their thanks for what many call "the biggest experience of my life."

The program has been so well received that the regimental commander plans to institute it throughout his 17 companies. In a year the program will reach approximately 15,000 individuals—trainees and members of their families. The impact that this project can have in developing good public relations for the Army is tremendous. It is a project that other units might consider.

Keep Abreast of Your Profession

You know that *Infantry* serves as a vital link between you and the Infantry School. To strengthen this established bond and to assist you further in keeping abreast of the latest developments, *Infantry* recommends enrollment in Army Extension Courses.

The Infantry School prepares and administers three extension courses—the Army-wide Pre-Commission Course, the Infantry Company Course, and the Infantry Advanced Course. Each of these courses parallels an Infantry School resident course.

You may enroll in any extension course or subcourse provided you have qualifying military background knowledge. However, military and civilian personnel who have a specific military requirement for information covered by certain subcourses may enroll under separate criteria.

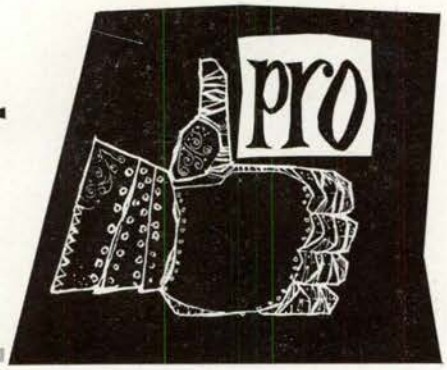
Detailed information may be obtained by reading Department of the Army Pamphlet 350-60 and the United States Army Infantry School Extension Course Catalogue. *Infantry* urges you to use the enclosed Department of the Army Form 145 to enroll in the subcourse for which you are qualified.

DO WE NEED AN

by Capt Larry S. Mickel

Centralization is the Answer

A branch is the surest means of integrating Aviation's potential into the total ground effort.



FORECASTING the shape of future wars is a continuing process. Perhaps the most valuable contribution such thought can make is in pointing out deficiencies in our current organization and equipment. We like, for instance, to picture the aerial vehicle as deploying hard-hitting troop formations to the farthest reaches of the battlefield with unparalled speed. Such thoughts are healthy and stimulating, but they conceal the simple fact that Army Aviation as organized today cannot achieve these mobility goals. An examination of the facts is revealing.

Army Aviation is presently organic to seven branches. Each of these branches claims to have definite need for integrated aerial support. Each is vitally interested in its growth and development, but for separate and distinct purposes. This splitting of effort has permitted numerous organizational and operational concepts to arise. These concepts have generally become separated into two schools of thought.

On one hand, we find the service branches—primarily the Transportation Corps—which consider Army Aviation to be logistical in nature and, therefore, subject to control of the services. On the other hand, the combat arms desire an air capability subject to immediate operations and contingent only on the requirements of troop commanders. The service branches' concepts have predominated, presumably because of the status of the Chief of Transportation at Department of the Army level. The Chief of Transportation, directly responsible to Deputy Chief of Staff for Logistics, has no counterpart in the combat arms. Army Regulations dictate the Chief of Transportation's responsibility for doctrine, procedures and techniques relating to aviation, while the combat arms are given a similar mission without equivalent status at the Chief level.

An examination of aviation management shows a confusion of responsibility, though the Director of Army Aviation, within the office of Deputy Chief of Staff for Operations, is responsible for over-all staff supervision and coordination of Army Air effort. Army Regulations dictate that the Commanding General, USCONARC, has specific responsibility toward aviation units and personnel in CONUS, except for activities directly assigned the Chief of Transportation. Yet, the Transportation Corps has identical responsibilities for all transportation units except Army transportation helicopter units. Further, the Chief of Transportation has a responsibility to advise the Army Aviation School on *all* matters relating to aviation—a rather sweeping coverage in view of the functions of aviation which are entirely unrelated to the Transportation Corps mission. Then, the Aviation School represents all seven of the Army Aviation user branches; furthermore, user branch schools represent themselves in matters concerning branch air doctrine.

This muddle closely approximates the situation which existed in the Army Air Corps prior to the establishment of the United States Army Air Force in 1941. From the period 1935 to 1941, the responsibility for air activities in the United States Army was divided between the Air Corps and GHQ Air Force. This responsibility was shared with nine corps areas (later called Service Commands), established on a geographical basis. In theory, GHQ Air Force had operational control, with administrative support the responsibility of the Air Corps, while the Corps Areas assisted both. A result of this divided responsibility was an inadequate system of supply, maintenance and training.

The words of the War Department Special Committee on the Army Air Corps, published on 18 July 1934, are true today. "The normal position of the Air Corps in the administrative organization of the Army should correspond to its functions, (1) as a combat arm . . . and (2) as a procurement and supply service. This was the lesson of experience in the World War and the lesson embodied in the National Defense Act of 1920." In other words, aviation must be accorded a branch status.

Among the problems which branch status would eliminate for Army Aviation is the unusual policy for officer

Continued on page 70

AVIATION BRANCH?

by Capt Roger M. Pezzelle

Not Branch, but Balance

An effective combination of over-all direction and specific ground control means greater combat power.

WITHIN THE Army as a whole, and particularly within Army Aviation itself, there is clear dissatisfaction with the state of Army air. An Army Aviation branch is frequently advanced as an acceptable solution to these difficulties. Proponents of a separate branch organization claim that it would reduce the disproportionate control which the Transportation Corps now exerts over the aviation program, eliminate the problems which have arisen over the "dual proficiency" requirement, and produce better equipped, more responsive, more effective Army air.

It is easy to understand why a separate aviation branch is the favorite suggestion—on superficial view, it seems to solve the immediate problems. As Army men, we automatically react favorably to any proposal that appears to strengthen Army air. Yet the fact is that an aviation branch might eventually complicate existing problems, and might create significant new problems which are too rarely mentioned.

To begin with, an Army air branch would encourage an ambitious expansion of Army air functions in the wrong directions. The mission, "to augment the capability of the Army," is so broad that, given the opportunity, there is little doubt that vast programs of research and development, independent applications of the air potential and over-refinement of standard methods and equipment would encroach upon the simple capability to "conduct prompt and sustained combat." It's easy to visualize aircraft which are the result of what aviation branch wants rather than what the Army as a whole needs—delicate and overspecialized equipment which is out of place on the battlefield and ill-adapted to it. It is easy to visualize methods and techniques which are the result of aerial convenience rather than ground necessity. The proper missions of Army air require a stark functionalism which is impossible under full branch organization.

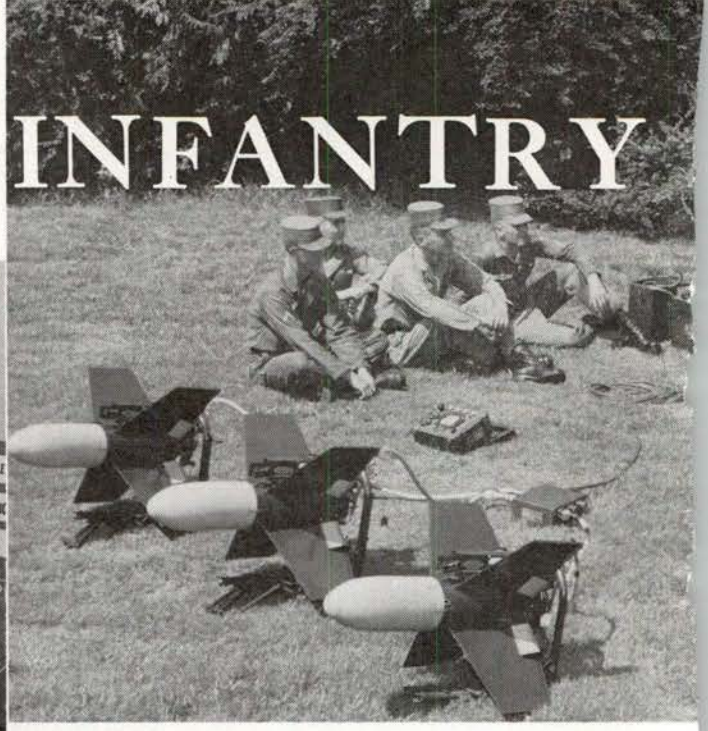
Moreover, an air branch would further separate by echelons and physical distance the combat commander from the aircraft which should be operating in close support of his unit. When the Army Air Corps was established as what was in effect a separate branch, the airplane was separated from the ground commander in a somewhat parallel way. In view of the types of aircraft and functions involved, this separation was logical at that time. While the commander received less of the kind of close support that Army Aviation is now striving to provide, the Air Corps itself was left free to perform some major functions for which its equipment was especially designed. Even then, though, it was clear that versatile light aircraft had an important role in close support, and that such aircraft would fulfill this role especially well if placed directly under the control of the ground commander. In 1942, for instance, light aircraft were authorized to the Artillery as aerial observation platforms.

This broad separation by types and functions clarified the role of aircraft in warfare, and contributed to the general efficiency of air support. On the one hand, large, fast, heavily armed aircraft would have strategic and certain tactical functions, and on the other small, slow, lightly armed or unarmed aircraft would have only immediate tactical functions. By establishing an Army Aviation branch we would be destroying this useful specialization which has developed as a result of the original separation. By repeating the original separation we would only be confusing it, and we would be seriously impairing the capabilities for close support that now exist.

Only very recently the regimental commander had organic to his unit—and therefore immediately responsive to his commands—two light aircraft. Now he has none. At a time when close air support has assumed great importance for reconnaissance, command and liaison transport, delivery of troops and supplies and, in some cases, as a weapons platform, we have made that kind of support less available. Even the pooling concept, which resulted from the great and various demands made upon Army Aviation, is a step in the wrong direction, simply because the ground commander has had to "beg" for whatever air

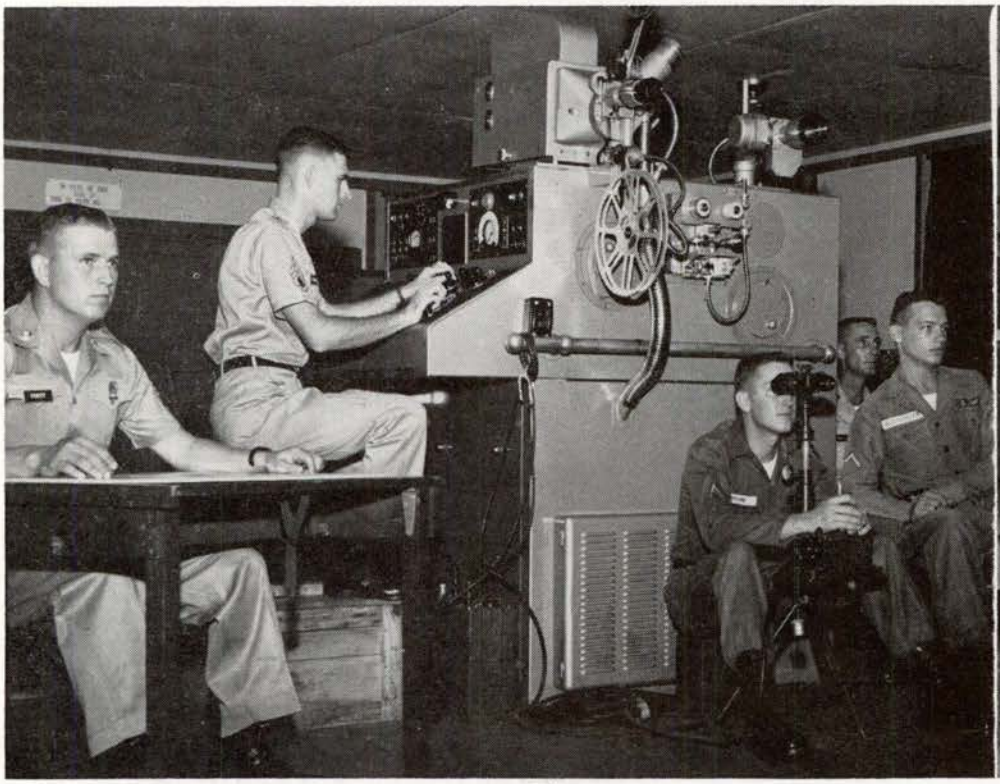
Continued on page 71

The Changing Face of The INFANTRY



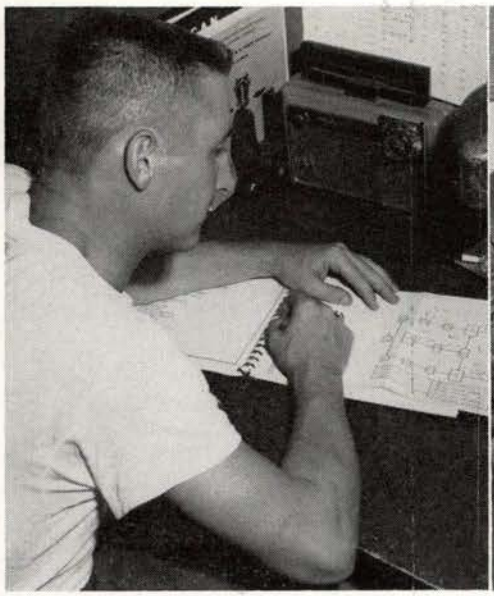
Above. Students at the USAIS Antitank Guided Missile Specialist Course are learning about Infantry's French-designed SS10. Here, they are oriented on ground launching. The missile is shown mounted on its zero-length launcher.

Left. A foundation for practical exercises is laid in the classroom. Among the topics discussed is the SS10 warhead. The missile is not only effective against armor but also against any point target, and the type of warhead employed varies with the target taken under fire.



The Cinetir training device develops accuracy. It projects a realistic target film while the student gunner, using the standard SS10 control and sighting apparatus, guides a white dot which represents the missile tail-flare in on target.

Informal chats, which contribute to the student's grasp of "fine points," are evidence of high esprit.



Left. Hard study is as necessary as practical experience. Students regularly "hole up" with their manuals, for instructors demand a high degree of initiative and technical competence. **Right.** The Simulator is another training device. It teaches the student to guide the SS10 flare on its scope.

THE INFANTRY is still the main element of our ground fighting force, and as such its mission is unchanged —to close with the enemy and destroy him. But the equipment and organization of the Infantry have undergone important changes since World War II. The Infantrymen pictured on these pages—students at the Infantry School's Missile Specialist Course—are representative of these changes. The lethal SS10 antitank guided missile which they are learning to handle marks an important application of missile power to the ground battle, and opens up vast possibilities in the refinement of electronic weaponry for Infantry use.

The vehicle-mounted SS10 gets its share of attention. Crew drill teaches precision and teamwork in mounting and firing missiles when the jeep is the launch platform.

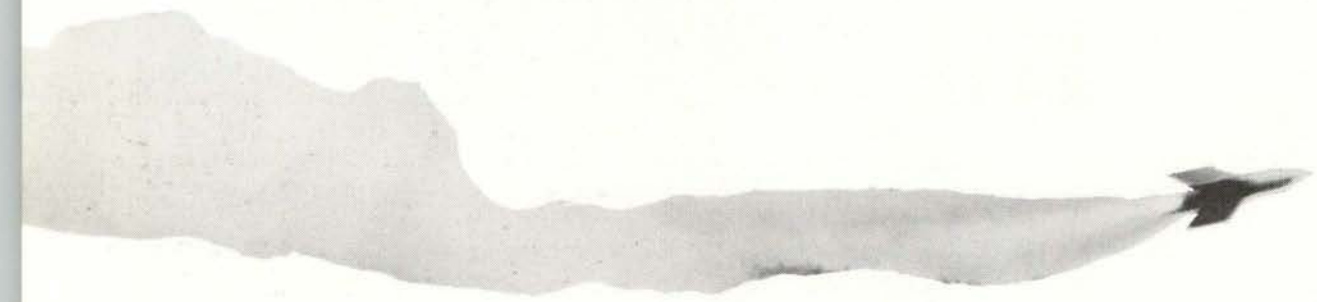
Launch procedures get careful emphasis as students apply a checklist printed in the circuit-tester cover. The circuit-tester checks for malfunctions and control.

The pay-off: Benning students will join crews like this to provide an antitank missile wallop for frontline Infantrymen.

Part Two

DEATH TO THE

The guided missiles of the new assault weapon platoon pack a lethal wallop that gives the battle group a powerful organic antitank capability.



by Lt Col Walter F. Nechey

THE ASSAULT weapon platoon, a part of the combat support company of the newly reorganized battle group, is a further step in the Infantry's continuing development of antitank strength. Self sufficient in transportation and strong in communication equipment, the platoon needs only intelligent employment and an understanding of its potential to provide the commander with a significant increase in antitank firepower. The present armament of the platoon, the SS10, is unique among our Infantry weapons. Conceived by the French in 1945 and brought to an effective development stage in 1956, the SS10 was troop-tested and adopted by the United States Infantry in 1958.

This relatively lightweight weapon —the missile itself weighs 33 pounds and the launch platform 15—is capable of defeating any known armor. It is equipped with an instantaneous inertia fuse and is propelled at speeds near 180 miles per hour by a two-stage solid-propellent motor. Insignificant backblast or flash coupled with a remote guidance system makes the missile almost invulnerable to enemy counteraction. Electrical impulses, originating in a single control stick, are transmitted to the missile during flight by wire laid from bobbins within the missile body. The guidance equipment has proved satisfactory, withstanding even abnormal treatment. However, tactical use has shown that two complete guidance sets per squad would increase flexibility of employment. With two sets the squad could operate from two locations and in both the ground mount and vehicle role simultaneously.

The missile's maximum range from launch platform to target is 1600 meters. The minimum feasible range is 450 meters and is a function of gunner reaction time—he must gain control of the missile, bring it into the gunner target line and then direct it into his target. At ranges less than 800 meters the gunner will normally observe and fly the missile without optical help. However, at greater ranges a pair of binoculars mounted near the control stick increase hit probability.

The assault weapon platoon is composed of a platoon headquarters and five launching squads. The platoon's transportation consists of seven ¼-ton trucks and five ¾-ton trucks and trailers. The ¼-ton's are assigned one each to the platoon leader, the platoon sergeant and the five squads. The ¾-ton trucks and trailers are assigned to the squads. The basic load for each squad is twenty-five missiles and is divided so that three missiles are carried in the launch racks of the squad's launching vehicle, fourteen on each squad's ¾-ton truck and trailer, and eight in the battle group trains. The ¾-ton trucks are utilized by the platoon sergeant in his resupply role. Normally, the trailers are left near the launch sites while the trucks displace

TANK!

to the rear for supplies. Should the launch vehicles then displace they may be used temporarily to tow the trailers.

Since the platoon must depend primarily on other units for reconnaissance it has been well equipped for communication. There are seven AN/PRC–10 radios organic and these allow the platoon leader, the platoon sergeant and the squads to operate in the platoon net. In addition, the platoon leader operates an AN/GRC–18 in the battle group command net and the platoon sergeant an AN/GRC–18 in the battle group administrative net. A wire capability has been provided but the platoon's inherent mobility limits its use. However, if time permits, wire will be laid by battle group to the platoon CP or, if the squads are attached, they will enter the wire system of the supported unit.

The wide frontages and numerous tank approaches which normally characterize the defense will dictate a role of attachment for the squads of the missile platoon. Whether the platoon is employed laterally or in depth, its assigned task must be the result of careful study by the platoon leader, the battle group staff and the commander. Naturally, position areas selected must take into account the over-all situation to include: blocking and switch positions, directions and areas of most likely avenues of approach, assumed penetrations and counterattack plans. Consideration must also be given the positions to be occupied by tanks operating in the battle group's zone.

In the deliberate defense the missile squads are normally attached to the rifle company manning the COPL until the COPL is withdrawn. The squads then return to pre-prepared position which should be sited to make full use of the missile's "remote" launch capability. A position with excellent observation may be occupied by the gunner, and the missiles located as much as 100 meters away. Wire communication is established between the gunner and the

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Lt Col Walter F. Nechey received his commission in 1942 under the CMTC program. During World War II he was a platoon leader and company commander with the 26th Infantry in Europe. After attending the Armor School, he served as headquarters commandant with the 26th Infantry in Germany. He graduated from the USAIS Advanced Course in 1952 and was then advisor to the 11th Infantry of the Pennsylvania National Guard. He served as a senior advisor with the Korean Military Advisory Group beginning in 1955, and then was assigned to the Infantry School, where he is now Chairman of the Missile Committee, Weapons Department.

The assault weapon platoon. Foreground: platoon headquarters, consisting of radio operator-driver in one ¼-ton truck with trailer, and platoon sergeant and radio operator-driver in the other ¼-ton truck with trailer. Background: five squads (arranged in column), each consisting of gunner and assistant gunner-driver in the ¼-ton launch truck, and squad leader, ammunition bearer and ammunition bearer-driver in the ¾-ton truck.

assistant gunner by means of the two telephones issued as part of the control equipment and the telephone circuit built into the control cable. When the gunner has a target he alerts the assistant gunner who, on command, activates and fires the missile. The gunner, at his OP, then takes command of the missile and flies it into the target. The launch site may thus be completely covered from enemy ground observation and fire, rendering counteraction extremely difficult and inaccurate. Alternate launch positions may be rapidly occupied, thereby increasing the battle group's antitank defense. The alternate positions will be developed to increase defense in depth, to support blocking and switch positions and to facilitate the counterattack.

The gunner, left, prepares to issue the fire command for the vehicle-mounted SS10 to the assistant gunner.

If the battle group is required to conduct a night withdrawal, all or a portion of the platoon may be left with the forces in contact providing illumination is available. Tests have shown that accuracy under illumination, from either flares or searchlight —the gunner tracking the missile by its tail-flare—makes night employment entirely feasible. Should illumination be unavailable the platoon is withdrawn to the new position with the main body. In the daylight withdrawal, assault weapon squads are attached to each company-sized unit left in contact, or, to facilitate control, the platoon may be attached to the covering-force commander.

In the movement to contact, the assault weapon platoon is positioned so that it may be promptly moved to the front, flanks or rear as contact is made or becomes imminent. If tanks are not attached during the movement to contact, one or more missile squads should be attached to the flank guards.

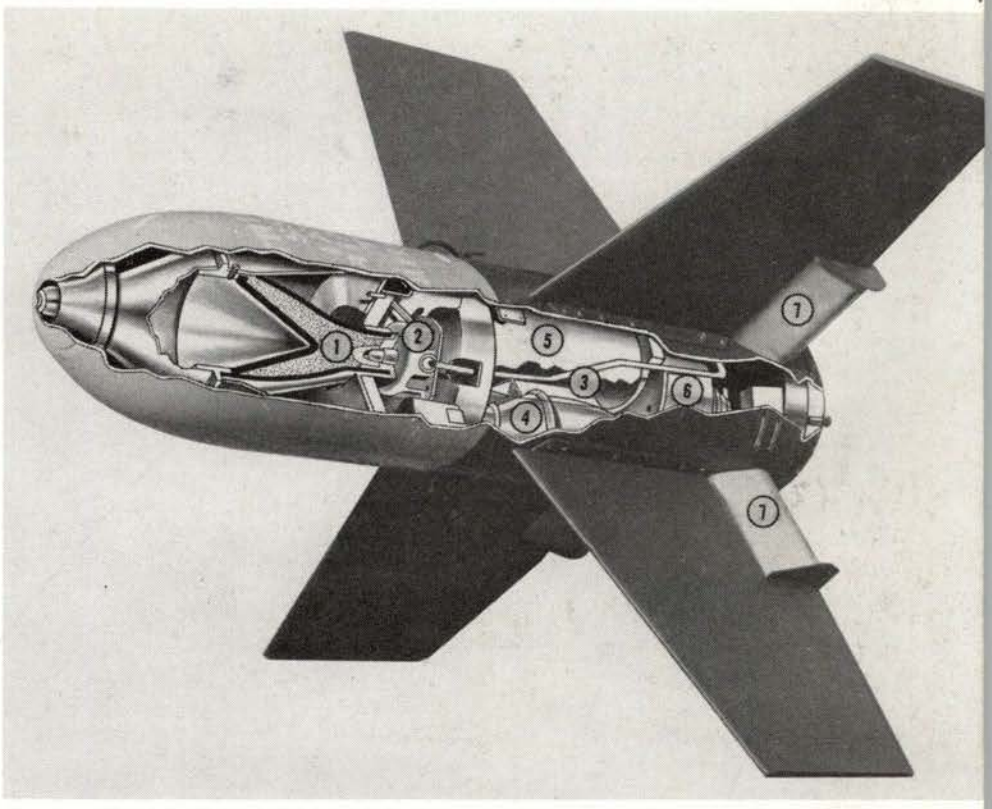
In the meeting engagement or the attack the dual capacity of the SS10 is

Utilizing the "gunner offset" method of employment, the gunner gives his fire command via sound-powered telephone to the assistant gunner at the missile launching position.

valuable. Though the primary warhead is the 105mm HEAT (the numerical designation refers to the diameter of the shaped-charge), there are also the 85mm HEAT-AP (antipersonnel) and the 114mm chemical warheads. These may be effectively used against any point target: bunkers, crew-served weapons or troop formations. From positions on or near the LD the squads may take part in preparatory fires and, once the attack is launched, take under fire targets of opportunity. Though the missile squads will respond to requests from supported units, their primary mission remains antitank fire and this will take precedence over any other fire request. When fires from the initial position are masked, or sooner if commanded, the squads will displace forward to take part in the consolidation of the objective or the continuation of the attack.

When the attack develops into the pursuit or the exploitation, the assault weapons platoon will be employed well forward to ensure early engagement of enemy armor or roadblocks and consequent reduction in their delaying effects. It is essential to remember, however, that the missile jeep is not a tank and must not be used as the point or to draw fire.

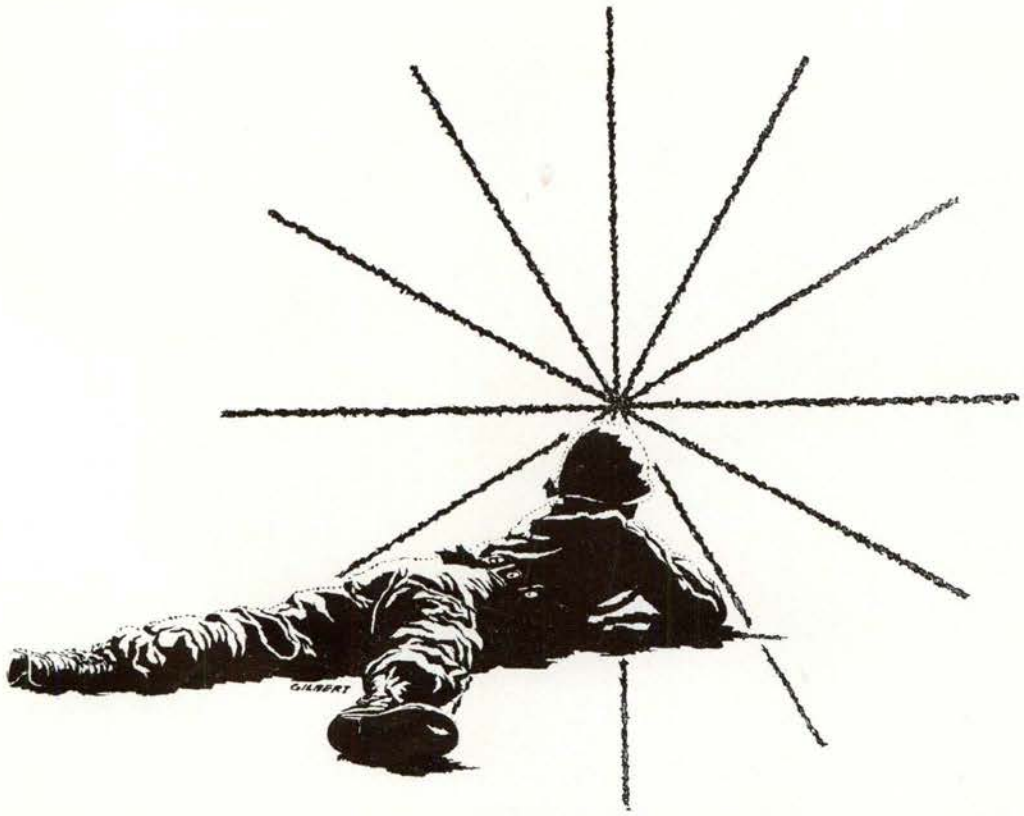
The assault weapon platoon is a valuable adjunct to the battle group's firepower. The light weight of the missile, its remote capability and the platoon's excellent communication combine to form a unit which can be the scourge of the tank. Nevertheless, the platoon has a mobility limitation—caused by the present launch vehicle, the jeep—which must be resolved. One solution, a tracked vehicle, would greatly increase the platoon's mobility and would be in line with Infantry's trend toward greater mechanization. Also, the feasibility of mounting the missile on an air vehicle must continue to receive close scrutiny and test. The point is that no possibility should be overlooked and that nothing must be allowed to stand in the way of complete exploitation of the missile's potential.



Cutaway view of SS10. (1) Shaped charge. (2) Fuse detonator assembly. (3) Arming tube, which arms the fused detonator 3½ seconds after ignition of sustainer motor. (4) One of two bobbins from which wires to launching mount are unreeled in flight. (5) Sustainer motor, which maintains missile speed during flight. (6) Booster motor, which provides initial acceleration. (7) Spoilers, the rate of oscillation of which affects the direction and elevation of the missile.

Helicopter-mounted SS10s combine Infantry's antitank missile firepower with air mobility. The rugged, adaptable SS10 system offers many possibilities of imaginative employment in a variety of roles.

The Infantry has entered the field of missilery with the SS10—a field in which applications such as the Redeye are showing great promise. Now undergoing Ordnance service tests is the SS11, which has added range (3,500 meters) and increased lethality. The SS10, the SS11 and their logical successors represent the packaging for Infantry of tremendous firepower—firepower which will ensure that Infantry remains the decisive force on the battlefield.



SMALLBORE TRAINFIRE I . . . INDOORS

Converting a smallbore range to Trainfire I can mean increased proficiency for your unit on the Army's new standard marksmanship course.

by Maj Walter R. Davis

TRAINFIRE I exercises and field firing normally require the kind of professional layout which is likely to be available only at Regular Army installations. National Guard, Army Reserve and ROTC units are faced with the difficulty of providing Trainfire instruction using facilities grossly inadequate for the unmodified program. Some practical adaptation of Trainfire I for an indoor smallbore range—such as most units of this type have available—is clearly necessary.

The current ATPs and Training Aids Bulletins have offered some suggestions in this direction. "Bustible" targets (or candy wafers which may be used in their place) are offered as one expedient, and scaled-down 25-meter Trainfire half-bull targets as another. In addition, a good training film on Trainfire I is available. Beyond these particulars, little has been done to adapt Trainfire I for indoor ranges.

At Alfred University, Alfred, N.Y., the Department of Military Science and Tactics has introduced some innovations which it believes provide a successful solution to the problem. Doubtless, other Reserve, National Guard or ROTC units have tackled the problem also. The Alfred innovations represent one useful means of Trainfire I adaptation, and are presented as a guide for other units concerned.

Of prime importance in conducting a Trainfire course on a conventional indoor range is the necessity of retaining the integrity of the existing range facilities. Presumably, the range available for employment usually must retain its conventional utility. For the Alfred program, no permanent modification of the range layout or equipment is necessary. The expedients and equipment employed during Trainfire periods do not interrupt or alter the basic char-

acter of the range and they are easily installed and removed.

Another basic problem is the small number of firers which the ordinary indoor range will accept. Military instruction, which commonly involves groups of some size—such as the large freshman basic course ROTC enrollment at Alfred—requires ranges of considerable capacity.

The University has a 50-foot indoor smallbore range with only four firing points, but gets around this severe limitation by conducting Trainfire I and Individual Weapons Training concurrently. Each of the five class-sections is divided into two subsections, each of these containing a maximum of 16 students. Also, since classes are obviously scheduled at differing times, the basic division resulting from the way the ordinary university curriculum is set up goes a long way towards separating the students into manageable groups. Some such separation by time and by concurrent training will probably be necessary for National Guard and Reserve units that plan to send large numbers of men through the course.

In Alfred's particular case one more Trainfire I period is scheduled than is strictly demanded by the number of students, simply to provide a means of accommodating those students who for one reason or another can't attend the period for which they originally are scheduled. The Individual Weapons Training classes can be conducted in larger groups, so that coordination problems are not nearly so great and an extra, overflow period is not needed.

When the 12-hour block of instruction allotted for each subsection is completed, the subsections change over. Instruction therefore totals 24 hours, as compared to the 25 hours prescribed in the ATP for Individual Weapons and Marksmanship. This slight difference is well within the latitude for local modification allowed by the ATP.

Although four orders of four men each for every 50-minute period of firing are necessary in the Alfred program to keep the time schedule within manageable limits, sufficient experience is provided to achieve average-to-excellent proficiency levels in all but a few students. Volunteer remedial firing, conducted during the students' free time, is offered to low performers as they are identified in the scheduled firing periods.

ALFRED TRAINFIRE I
Training Program

Period	Subject	Special Equipment	Hours
1	Introduction to Trainfire I, mechanical training, familiarization firing. Concurrently, MF 21–8797.	Trainfire I half-bull targets scaled for 50-foot range.	1
2	Preparatory marksmanship, sighting and aiming instruction and exercises.	Scaled-down half-bull targets.	1
3	Preparatory marksmanship, dry-firing in prone position, the steady hold.	Scaled-down half-bull targets.	1
4	"Range-firing" for zero. Concurrently, dry-firing exercises.	Scaled-down half-bull targets.	1
5	"Field-firing," unsupported prone position. Concurrently, combat firing positions, the supported kneeling position.	Bustible targets, or candy wafers.	1
6	"Field-firing" with half-bulls, the supported kneeling position. Concurrently, dry-firing with silhouettes, the unsupported squatting position.	Scaled-down half-bull targets, special silhouette targets.	1
7	"Field-firing," unsupported squatting position. Concurrently, dry-firing, unsupported kneeling position.	Special silhouette targets.	1
8	"Field-firing," unsupported kneeling position. Concurrently, dry-firing, standing position.	Special silhouette targets.	1
9	"Field-firing," with fleeting targets. Concurrently, orientation on landscape targets.	Bobbing silhouette targets.	1
10	"Field-firing" to engage disappearing targets. Concurrently, review.	Landscape target panels.	1
11	Proficiency test.	Bustible targets (or candy wafers), bobbing silhouette targets, landscape target panels.	2

Indoor Trainfire I training program devised by Alfred University ROTC instructors.

The 12 hours allotted to indoor Trainfire are divided into 10 periods of one hour and one final period of two hours. This period is occupied with record firing.

Period 1 is the introduction to Trainfire I, designed to familiarize students with Trainfire concepts and to introduce the weapon to be used

at Alfred (the caliber .22 Remington with 6-round clip is preferred to the 5-round Winchester match weapon). Also covered at this time are range safety and techniques of loading, firing and clearing the weapon. Six rounds of free-style, familiarization firing at Trainfire half-bull targets scaled for our 50-foot range follows. Students who are not immediately occupied with firing are shown a training film—MF 21–8797, "Trainfire I."

In Period 2, the Trainfire half-bull is again employed, this time to teach sighting and aiming. In accordance with Trainfire I concepts—which, incidentally, are kept prominently posted on the range—the 6 o'clock hold is eliminated so that the point of aim and the point of intended impact coincide. Practical work employs standard training aids: the sighting and aiming bar, the instructional sighting device which is affixed to the muzzle-end of the rifle, and triangulation equipment.

Since to teach shooting as one integrated act is a major aim of Trainfire I, in Period 3 this "whole" method of instruction is applied to dry firing in the prone position. The student uses the sighting-and-aiming techniques he has learned and is introduced to the several aspects of the "steady hold." The coach-and-pupil method is employed during the exercises.

In Period 4, zeroing is preceded by a discussion of techniques of sight adjustment and pertinent Trainfire concepts, including reasons for zeroing service weapons on the battle-sight setting of 250 meters. As individual zeros are arrived at for particular weapons, they are recorded on a progress envelope issued to each student. His targets are retained in this envelope, and provide the instructor with a continuous means of marksmanship evaluation. This evaluation is not only useful for grading, but also for determining whether remedial action is needed. The student, of course, once he has established his zero, fires the same rifle throughout the program.

ALFRED TRAINFIRE I
Record Firing Exercise, Period II

Target	Rounds	Position	Possible
Bustible or candy wafer.	10	Supported kneeling position (scoring: five hits and five unused rounds).	100
Bobbing silhouette.	5	Kneeling or squatting position (from standing at ready for each round, seven seconds per round).	50
Bobbing silhouette.	5	Standing position (from ready, five seconds per round).	50
Landscape.	4	Supported kneeling.	40
		Total:	240

This record firing exercise comprises Period 11.

The bustible target employed in Period 5 consists of five chocolate candy wafers spot-glued on a sheet of white paper. Two clips of six rounds each are fired in this period, as many as four rounds for zero on the first wafer (aiming at the center of visible mass), leaving at least eight rounds for the remaining four wafers. Hits on each of the five wafers, at 10 points each, are worth a total of 50 points. A maximum of five unused rounds allowed for scoring are, at 10 points each, worth 50 additional points, for a grand total of 100.

Concurrent training during the period covers typical combat firing positions and, particularly, the supported kneeling position to be used in live-firing during the following period. The support is a typical laboratory stool, often employed in indoor ranges as a leaning-rest for relaxation during the conduct of standing-position firing. The stool is tilted off the forward edge of the indoor firing-pad which has been raised by placing a loose 2x4 underneath this edge. Kneeling behind the stool, the firer places the entire left upper arm on the seat of the forward-tilting stool, with the elbow under the weapon,

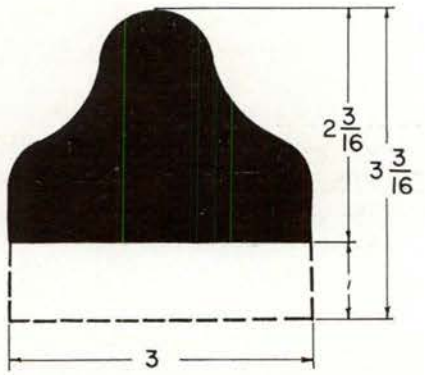


Figure 1. Silhouette target scaled for use on a 50-foot range. Dimensions are in inches.

for a very stable position. Shorter firers may kneel on one of the partially filled sandbags used for the supported prone position. All practical work during this concurrent training again utilizes the coach-and-pupil method.

In Period 6, the supported kneeling position is employed in live-firing at

Maj Walter R. Davis completed OCS in 1943. During World War II he served as an Infantry instructor. After leaving service to teach at the Sewanee Military Academy, he was recalled in 1951 to become a battalion adjutant in the USAIS School Brigade. He served in Hawaii as an instructor and later as a company commander. Returning to CONUS, he became Chief, Officer Personnel Division, in Second Army headquarters. In 1956 he went to Korea as Chief of the Plans Division, Headquarters, Eighth Army. A graduate of the Infantry Advanced Course, Major Davis transferred to the Artillery in 1958 and is now Assistant PMST at Alfred University.

bustible targets. The small-scale silhouette target (Figure 1) is used in concurrent training for dry-firing exercises in the unsupported squatting position. This target includes a "low-hit zone," described by dotted lines. Strikes within the zone are scored as hits to provide parallelism with the richochet-produced hits on the "killable" targets used in the standard Trainfire I program. However, because not all low strikes on the standard course will richochet into the target, strikes within the low-hit zone are scored eight points, while strikes within the black area of the silhouette itself are scored ten.

The unsupported squatting position is employed in live-firing on small-silhouette targets during the next period, while concurrent training is given in the unsupported kneeling position. That position is, in turn, used in Period 8 for live-firing on small-silhouette targets, and concurrently the standing position is introduced.

The Trainfire fleeting-target effect is applied in Period 9 by the employment of bobbing targets in timed-fire exercises. The small-scale silhouette targets are utilized for this purpose but they are mounted in an improvised target-carrier rod to which lateral twist can be applied from the firing line by means of the indoor-range target-carrier pulley lines. Figure 2 illustrates the necessary modification of the standard target carrier for this purpose. The squatting and standing positions are used in this firing. Concurrent training stresses sector of fire and the employment of reference points on the landscape to engage fleeting targets after their disappearance from view.

The final period of the Alfred Trainfire Program utilizes landscape target panels to familiarize the student with this technique of engaging fleeting targets by recall. For each firing point on the range, two identical landscape panels are mounted one in front of the other on a lightweight wooden frame which is attached to the target-sheet clamp on the lower

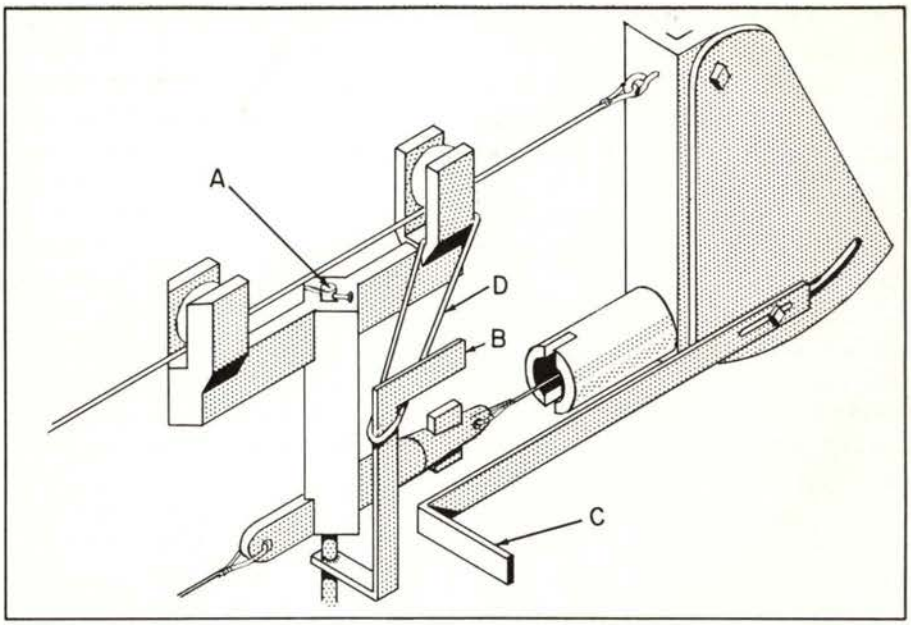
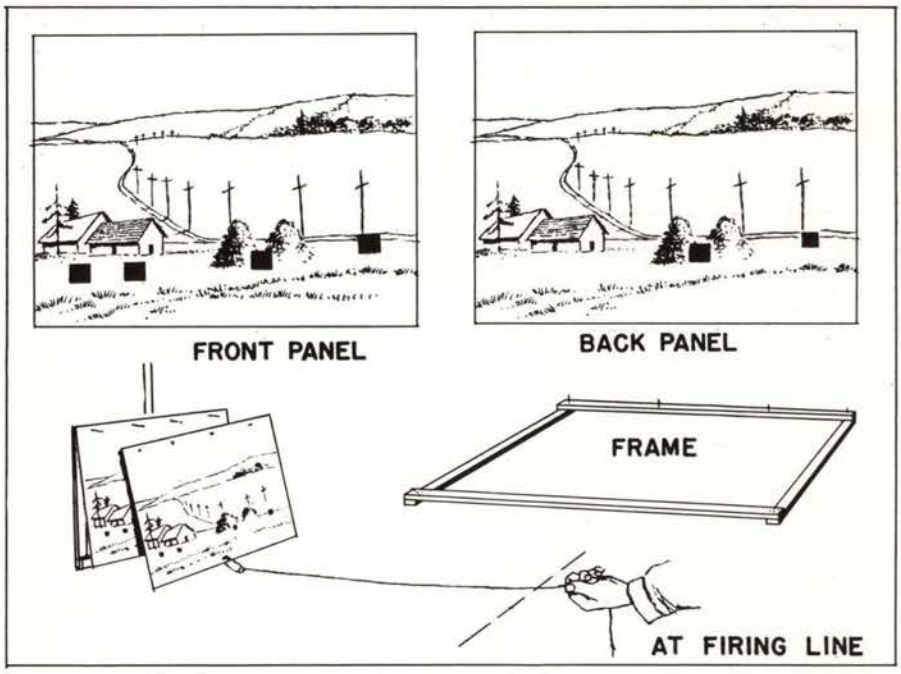


Figure 2. The standard square target carrier rod is replaced by a round carrier rod (A) that will turn freely in the carrier rod slot. The carrier rod operating arm (at B) controls the twist of the target which is clamped at the lower end of the carrier rod. When the target carrier is pulled into the wall bracket, the lever arm (B) is cammed against the extended camming arm (C), twisting the carrier rod to present the target to the firer. The carrier rod twists back into position, with target facing away from the line of sight, by counter-tension of the loop of elastic ribbon (D) when the target carrier is pulled back toward the firing line.



Landscape target panels used to train firers in target recall.

end of the target-carrier rod (Figure 3). Four ordinary target pasters, colored bright orange, mark four separate positions, generally in line, on the front landscape panel to denote the places where four enemy Infantrymen are observed to hit the ground. This front panel is held in place by protruding nail points along the top edge of the target frame, and a string attached to the lower edge of the panel leads back to the firing point. Initially, the pit lights are off. When they are turned on, the live-firing exercise begins. After exposure to the firer for 15 seconds, the front panel is pulled off the target frame by an assistant instructor, and the

firer is confronted by the rear panel, identical to the front panel, except that only one of the pasters appears. This single paster is engaged on the premise that it represents an enemy rifleman who continues to expose himself. Then the firer engages the other three positions, relying on recall and reference points he earlier selected. For scoring purposes, these positions are outlined lightly in pencil, using a template slightly larger than the original pasters. All four targets are scored 10 points each. Each firer is allowed four rounds.

Period 11 tests the student's proficiency in a record firing exercise, and completes the Alfred program.

Advanced Course ROTC cadets (juniors who will attend summer camp during the following summer) are utilized as assistant instructors throughout the course, particularly in the conduct of concurrent training. In the same way, the more experienced personnel of a National Guard or Reserve unit may be employed to give the kind of individual attention and immediate supervision which ensures that the student understands and learns.

Students respond well to the Alfred Trainfire I Program. They are particularly enthusiastic about the fleeting (bobbing) and landscape target exercises. By requiring the use of reference points to engage likely but hidden targets, the landscape target provides a means of applying on indoor ranges many of the elements of the Trainfire concept.

The Alfred program cannot, of course, duplicate Trainfire I. It does, however, provide a means of teaching many Trainfire techniques as thoroughly as possible on indoor ranges. The logistical support it requires is rudimentary. The Alfred University maintenance shop and conventional channels of military procurement are able to supply all but two of the necessary items of equipment. These two items—the Trainfire I half-bull target scaled down for the 50-foot range and the small-scale silhouette target—are obtained from a local printer at low cost.

Besides the specific evidence it provides of the possibility of adapting Trainfire I to the indoor range, the Alfred program seems generally to be a good example of creative thinking in solving training problems. There are probably many other areas in which similar ingenuity might improve standard training, or introduce some of the advantages of standard training where circumstances do not permit full-scale implementation.

The Alfred Trainfire I program is not only a guide for ROTC, Reserve and National Guard units, but also for active Army units which have indoor ranges available and may find it possible to use them in teaching some of the Trainfire I principles and techniques before standard, full-scale Trainfire I ranges become available.—Editor.

SMALLBORE TRAINFIRE I:
AN INFANTRY SCHOOL SOLUTION

by Capt James R. Semmens

THE BIGGEST problem found in devising any indoor Trainfire I program is the presentation of field firing and record firing. The fact that an indoor range does not have enough depth to allow the trajectory of a bullet to drop appreciably, and that, regardless of target arrangement, depth cannot be simulated effectively by ordinary means, is a serious drawback to some of the proposed programs. The Rifle Committee of the Weapons Department, United States Army Infantry School, has developed a system which, if adopted, may help to solve the problem of recreating field and record firing on an indoor range.

The USAIS system is a modification of the DUFFCO indoor range system and consists of a 16mm projector, suitable films of both the field firing and record firing ranges, and a special projection screen at which the soldier can fire a .22-caliber rifle. This equipment may sound expensive, but the projector is a normal item of issue and the other components of a prototype system were assembled at Fort Benning at a cost of less than 50 dollars.

The projection screen is placed 50 feet from the firing line on the indoor range. The projector itself is placed above and behind the firing line. Films of a single lane on both the field and record firing ranges are projected on the special screen. The firer watches the screen and waits for the normal range commands. When a target appears, he engages it in much the same manner as he would on an actual outdoor range.

One of the important advantages of the School system is that it requires application of the principle of hold-off. This is because during battlesight zeroing the firer has set his rear sights so that the point of aim and the point of impact are kept two centimeters apart—the height of the zeroing paster. In order to hit his target, he must therefore correct this difference by using hold-off.

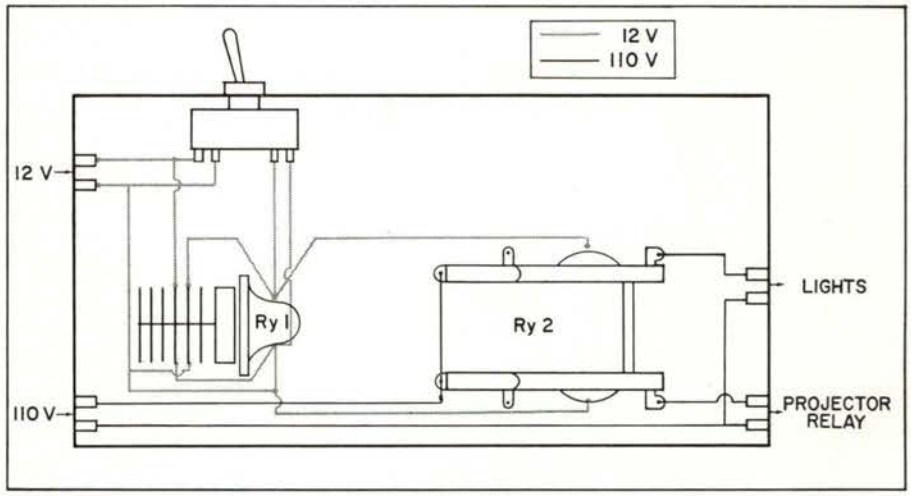
Wind may be simulated in an analogous way, by placing a windage setting on the sights which will cause the rifle to fire either to the right or left, as though a wind were blowing from either three or nine o'clock. The firer must compensate for this initial "missetting" by making the customary correction for the three or nine o'clock wind.

As the bullet passes through the projection screen, micro-switches are activated which stop the projector—leaving the picture projected on the screen—and turn on lights behind the screen. The lights clearly illuminate bullet holes, and the relation of the point of impact to the target can be easily determined.

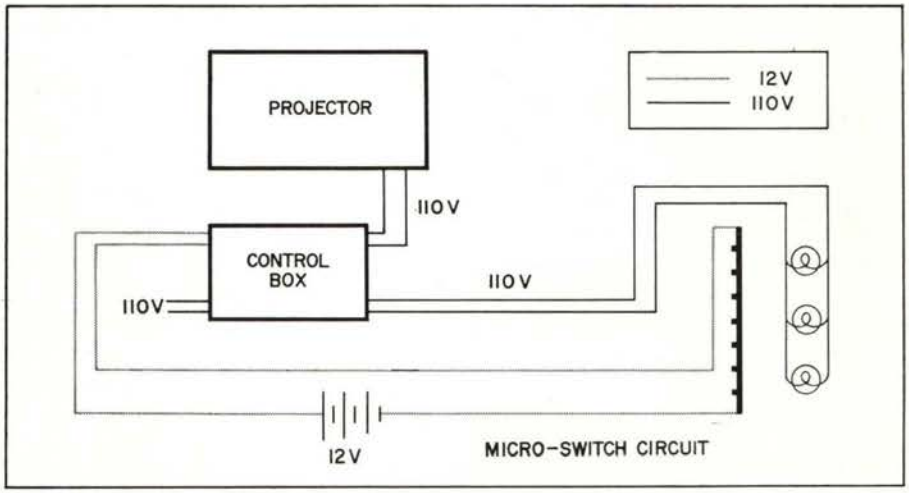
Films depict the actual sequence of target appearance for a particular period of instruction on actual Trainfire I field or record firing ranges. These films are photographed in color for maximum realism, and can always be kept within 10 minutes running time. The appearance of depth, obviously, exists because close-in targets are large, and near the bottom of the screen, while distant targets are small and near the top of the screen.

The School system cannot be used for those periods of field or record firing in which the student actually advances upon his targets, but this is not a serious disadvantage, since the indoor range will be used mainly to familiarize the Reserve, National Guard or ROTC student with the Trainfire I course prior to actual range firing during annual training or summer encampment.

The projector used in the prototype system was an obsolete PH131. It was modified by replacing the mechanical linkage to the clutch with an electrical relay which stops the projector automatically through the activation of a series of relays in a control box and the micro-switches located on the projection screen. The control box (Figure 1) is mounted on the left side of the projector so it does not interfere with projector operation. It is 2 x 4 x 6 inches, and contains a reset switch, two relays, and plugs and jacks for 12-volt and 110-volt wires. The electrical circuit of the whole system is represented in Figure 2. Relay 1 in the control box is a "hold relay" which holds Relay 2 in a closed position until the micro-switches are activated. When the micro-switches are activated, Relay 1 opens, allowing Relay 2 to open as well. When Relay 2 is opened, 110 volts are transmitted to the relay controlling projector movement, and also to the lights behind the screen. The film stops, and the lights come on. When the reset switch is manually moved to the "on" position by the projector operator, 12 volts are transmitted to the coils of both relays in the control box, and power is consequently cut off from the projector relay and the floodlights. The film then continues. Returning the reset switch



Control box wiring diagram.



Wiring diagram for the complete target system.

Capt James R. Semmens was graduated from the U. S. Military Academy in 1951. He served as platoon leader with the 112th Infantry, 28th Division, until 1954. After completing the Advanced Course, he was assigned to the Infantry School's Weapons Department as a team chief on the Rifle Committee. Early this year he transferred to the Corps of Engineers and will soon receive a Korean assignment. This is the second article Captain Semmens has contributed to *Infantry*.

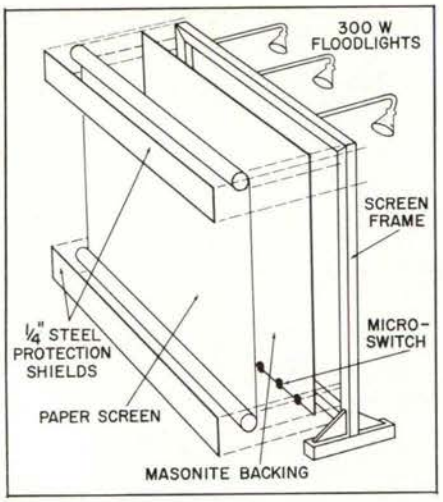
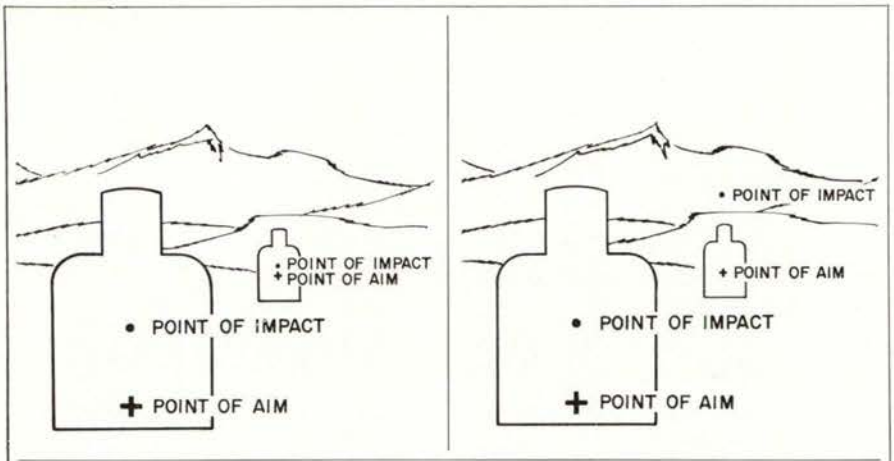


Figure 3. Expanded view of target screen.



The School system of indoor Trainfire I requires the firer to correct for distant (smaller) targets by lowering his aim. This is exactly the reverse of the correction required under normal field conditions. In the field (above, left), the point of aim for a distant target will be higher than the point of aim for a nearer target in order for the point of bullet impact to remain "on target" in both cases. But on the indoor screen (above, right), which only gives the illusion of depth, if the point of aim rises, the bullet will overshoot. The only way to obtain hits on "distant" targets under the School system is to lower the point of aim, as if the targets were merely smaller and not farther away. There exists, in consequence, the problem of transition from the School's indoor Trainfire I to standard Trainfire I ranges. The Weapons Department feels that this problem is a minor one, and does not detract from the realism the School system provides.—Editor

to "off" has no effect except to prepare the system for a new cycle of operation. A 110-volt relay is required on the projector, incidentally, to provide sufficient force to operate the clutch.

The screen (Figure 3) employed in the School system consists of a roll of paper six feet wide upon which the picture is projected, a masonite backing board which transmits the shock of the bullet strike to micro-switches mounted at the bottom of the backing board, a frame to elevate the screen approximately two feet from the floor, a series of lights mounted on the top rear of the frame, and two quarter-inch steel shields in front of the bottom and top of the screen which protect the micro-switches, lights and paper-rolls.

Once a round has been fired and scored, the paper is rolled up approximately one-quarter inch, so as to disalign the bullet hole in the paper and the hole in the backing plate. In this way, light is prevented from shining through an old hole when the next round is being scored. Rather than doing this manually, two servo-mechanisms, one connected to the paper roller and one mounted by the projector, will allow the paper to be advanced by the projector operator. The prototype system did not include this refinement, but it may be added at nominal additional cost.

Not only does the School system permit the presentation of Trainfire I field and record firing on an indoor range, but special training on jungle, desert or arctic courses could easily be provided merely by obtaining relevant films. Target detection in varying terrains could also be taught by this technique.

At the present time, a requirement exists at the U.S. Naval Training Device Center, Port Washington, N.Y., for the development of a standard indoor Trainfire I range based on the results of the prototype tests conducted at Fort Benning. The School system goes a long way towards providing an indoor recreation of all the outdoor realism of Trainfire I and, as a result, is a significant step towards providing modern training where complex ranges are not available.

Worth Repeating

"It should be no more difficult to deliver such devices than other weapons. The same delivery vehicles—aircraft, submarines or guided missiles—could be used. If it is possible for an enemy to drop an atomic bomb on a city, it should be equally possible to disseminate a cloud of biological agent over that city."

"More than any other form of warfare, biological warfare lends itself best to covert use by an enemy. By undercover methods, saboteurs could plant disease germs almost anywhere they chose—in water supplies, in food, in air-conditioning systems, and by almost any means you can think of which would bring the disease agent in contact with the intended victims, whether man, animals or plants."

—Maj Gen William M. Creasy

YOUR INFANTRY CAREER

This department provides important information on policies and personnel actions which affect your Infantry career. Material for Regular Army and active duty Reserve officers is furnished by Infantry Branch of the Officers Assignment Division. Similar material for Infantry officers of the USAR is provided by the Army Reserve Branch of the Adjutant General's Office. Information for the enlisted Infantryman is obtained from other Department of the Army agencies.

From Infantry Branch

THE LAST article in this series answered questions pertaining to officer assignment. In this issue questions are covered concerning personnel actions, other than assignment and education, in which officers visiting Infantry Branch have indicated an interest.

RETENTION BEYOND RETIREMENT ELIGIBILITY

Question: Can a Reserve officer remain on active duty after attaining 20-year retirement eligibility?

Answer: Yes. Under the Long Range Active Duty Program, the records of all Reserve officers who are scheduled for 20-year retirement during the next fiscal year are screened annually to determine those who should be retained on active duty.

Selections are made by a board of officers convened under the provisions of paragraph 11, AR 135–215. This board meets each fall. Consideration for all officers is automatic and applications are not required. For example, the board that convenes in the fall of this year will consider for retention all Reserve officers scheduled for 20-year retirement in FY 1961.

Officers selected for retention will be invited by letter to remain on active duty. Those not selected will be notified by letter approximately six months prior to their retirement eligibility date.

The number of selections in the past has been small. For FY 1960, six Infantry officers out of 367 considered were offered the opportunity to remain on active duty. Army wide, 80 officers out of 1650 considered were invited to remain on active duty. No fixed number or percentage per year has been established for the future. Too many variables affect this portion of the Long Range Active Duty Program to permit projection more than one year in advance.

Question: How long will those selected be retained?

Answer: Selected officers are retained generally until the Reserve Officers Personnel Act requires their release.

REGULAR ARMY AUGMENTATION

Question: Should an officer continue to apply for Regular Army appointment after failing to be selected under the same or a previous program?

Answer: Yes. The disappointment following notification of non-selection for Regular Army should not discourage any officer from applying again after the required interval. Many officers who were not selected under the Circular 601–26 Augmentation Program have resubmitted under AR 601–100 and have been selected. In some cases this was due to revised ceilings on all year groups junior to 1941. In other cases it was due to additional efficiency reports being available to the board, or to qualifications attained by the officer during the interim period through attendance at civilian and military schools.

Question: Does lack of a college degree preclude selection?

Answer: No. However, a college education is very important in this era of technical advance. A baccalaureate degree of any kind is a basic indicator of educational progress and learning capacity for further military schooling. Strong support is always available for the officer who has not yet been graduated but who is actively continuing his academic progress toward a degree. If reasonable indication exists that a degree will be forthcoming, even in several years, the lack of a college degree is not an unfavorable factor. On the other hand, the individual who is doing nothing to improve his scholastic level will find himself less favorably considered. In short, there is no magic formula for selection. An outstanding performance and demonstrated leadership ability will in many cases outweigh a lack of formal education.

INTERSERVICE TRANSFERS

Question: Can I transfer to another service?

Answer: Yes. Recent publication of AR 618–100 announces the procedure for application for interservice transfer to the Navy, the Marine Corps or the Air Force.

Applications from Army officers should be in letter form, including information outlined in the regulation, and should be submitted to The Adjutant General, Department of Army, through command channels.

No loss or gain of relative rank will be incurred by the individual as a result of transfer, nor will the transfer be accomplished unless the individual is especially qualified to contribute to the success of an activity of another service.

BRANCH TRANSFERS

Question: Should I request transfer from Infantry to another branch?

Answer: This is a decision that must be made by the individual officer concerned after careful consideration of his length of service, experience, background and overall qualifications. Primarily because of branch overstrength, Infantry Branch policy on transfers from Infantry is liberal and no objection will be interposed to a transfer application provided the officer is eligible under appropriate regulations.

AUS PROMOTIONS

Question: What is the meaning of the term "best qualified" as applied to methods of selection for promotion?

Answer: The policies and procedures for the temporary promotion of officers in the AUS are outlined in AR 624–115. This regulation prescribes that promotion selection boards will use the "best qualified" method in selections for temporary promotion to the grades of colonel, lieutenant colonel and major. Under this method the board determines from all officers in the zone of consideration those considered to be "fully qualified" for promotion and those considered to be "not fully qualified" for promotion. From the group of officers found "fully qualified," the board then selects and recommends for promotion those officers that are considered to be "best qualified." The names of officers selected by promotion boards as "best qualified" are published in DA Circulars. Officers considered by the board to be "fully qualified" and "not fully qualified" are informed of the board's decision in their case by individual letter.

Question: What is the meaning of the term "fully qualified but not selected" as applied to selection for temporary promotion to the grades of major, lieutenant colonel and colonel?

Answer: To be found "fully qualified but not selected" by a promotion selection board means that the officer is considered by the board to be qualified professionally and morally, and is capable of performing the duties and assuming the responsibilities of the next higher grade; however, the officer is not selected for promotion as best qualified. To be found "fully qualified but not selected" by a selection board is not a promotion passover.

Question: What is the policy of the Department of the Army concerning personnel actions on officers found to be "fully qualified but not selected" for promotion?

Answer: It is the intent of DA that no disadvantage should accrue to officers as a result of their having been considered "fully qualified but not selected" for promotion. These officers are considered for assignments and other personnel actions on the same basis as all other officers of their grade and experience.

FAILURE OF THE INFANTRY ADVANCED COURSE

Question: What is the significance when an officer fails to complete successfully the Infantry Officers Advanced Course?

Answer: Failure of the Advanced Course indicates the officer lacks the ability to acquire the technical proficiency required of his grade. Therefore, his over-all record is screened to determine if his failure of the course, when viewed in conjunction with other aspects of his record, warrants his release from the service under appropriate regulations.

RETENTION ON AD AS PARTIALLY DISABLED

Question: As a result of my annual physical examination, I have been declared unfit for retention in the service because of a physical disability. I feel I am able to perform certain duties and would like to remain on active duty rather than be retired or discharged. Is this possible?

Answer: Yes. Under the provisions of AR 616–41, an individual may request retention as partially disabled if his disability is of a non-progressive permanent nature incurred incident to service. The individual must signify a desire to be continued on active duty by formal application as provided in paragraph 4 of the regulation, be capable of caring for personal needs unaided, be in such physical condition that hospitalization or loss of duty time because of the disabilities considered may not

be expected, be otherwise qualified for retention except for the specific disability, and be capable of performing useful service in a current MOS for which he is qualified or potentially trainable.

EFFICIENCY REPORTS

Question: After a review of my efficiency report file maintained in Infantry Branch, I note that certain efficiency reports contain adverse comments and low manner-of-performance ratings. What should I do to lessen the adverse effects a low report may have on my future career?

Answer: You should thoroughly analyze the comments contained in your reports to determine your weak points. You should then evolve a course of action to overcome these weaknesses. Your efforts, capabilities and limitations form the basis of your efficiency reports. Therefore, you must always remember that the greatest responsibility for improving efficiency and obtaining higher efficiency ratings lies with the individual officer.

SCHOOL LISTS 1959-1960

The following Infantry officers have been selected to attend service school courses for FY 1960.

Armed Forces Service College

Lt Colonels

Brust, Robert P.
Carley, John T., Jr.
Connell, James M.
Hicks, Harold A.
Kelley, Peter E.
May, Roy R., Jr.
Moore, Harold G.
Oliver, George S.
Viney, George C.

Majors

Clark, Alphus R.
Fix, Joseph E., III
Garrett, O. G.
Gatsis, Andrew J.
Hankins, William B., Jr.
Hoefling, John A.
Karhohs, Fred E.
Krause, Frederick G.
Miller, Raymond O.
Sniffin, Charles R.
Spragins, Charles E.

United Kingdom Joint Services Staff College

Major John P. Barker

NONCOMMISSIONED OFFICERS

Proficiency Testing

All eligible persons in selected MOSs—including those already receiving proficiency pay, but not including E8s and E9s—will be retested during November and December for award of proficiency ratings. Retaining or obtaining proficiency pay depends upon test scores at least as high as a prescribed minimum set for each MOS. Those EM now receiving proficiency pay who fail to obtain the requisite scores will lose pro-pay status beginning January 1.

To be eligible for the coming tests, personnel must be in designated MOSs, and must hold pay grade E4 or higher, but not higher than that authorized for their MOS, including skill digit, or lower than the grade demanded by the PMOS. In addition, they must have at least six months' continuous active duty.

Only E8s and E9s are exempt from the tests at this time. If they are already receiving pro-pay, or have qualified for it, they retain their rating pending announcement of proficiency testing in their E8 or E9 MOS.

MOS Proficiency Test Aids for each MOS will be published periodically through the medium of DA pamphlets to provide study guidance.

Extension of Enlistments

A revision of AR 601–10 embodies changes in DA policy on extension of Regular Army enlistments. These changes will permit qualified Regular Army enlisted personnel to extend a current enlistment for periods of three, six, nine or eleven months. Extension of enlistments for one- or two-year periods will no longer be authorized. Also, any extension of six-year enlistments is prohibited. More than one extension per enlistment will not be authorized except upon specific approval of the Department of the Army.

Position Identification, Grades E8 and E9

Directives which will permit the identification of E8 and E9 positions in TOEs and TDs will soon be available to field commanders. These directives are part of the general upgrading program which has as its purposes relieving compression in the upper grades of E6 and E7, regarding key leadership and technical supervisory positions in line with the increased technical requirements of the modern Army, restoring the prestige of top NCOs, attracting and retaining better individuals for an Army career, and reducing high turnover and costly training in critical job areas.

The upgrading program to date has been directed towards identifying MOSs in the NCO area which warrant positions in the grades of E8 and E9. The second phase of the program will be directed towards identifying positions in the technical areas. The third phase of the program will consist of a continuing review and further job analysis to ensure that the structure remains realistic and current.

Automatic Soldiers' Deposits

On 1 August 1959 the Army enlarged the Soldiers' Deposits program to include deposits by payroll deduction. Department of the Army Circular 35–88, 22 June 1959, provides that enlisted members may authorize local finance officers to make collections from regular monthly military pay vouchers.

Electronic Eyes and Ears

Surveillance devices now authorized the Infantry division and the battle group can give added security and enhance target detection if properly employed.

by Maj William B. Fowlkes and Capt Rolfe G. Arnhym

OF PARTICULAR concern to Infantrymen are recent changes in the organization and equipment of the Infantry division which have increased over-all organic surveillance capabilities. In the past, our ability to conduct effective operations at night and during periods of poor visibility was limited. Without eyes to see, we depended on obtaining information about the enemy from listening posts, sound ranging equipment and reconnaissance patrols. Now, however, to extend our battle surveillance beyond the influence of weather or darkness, a new family of ground and aerial surveillance devices has been developed. Some of this equipment will become available during 1960.

To employ these devices, new units have been organized in the Infantry division. Among these is the radar section of the Infantry division battle group, which is composed of two medium range radar teams and five short range radar teams. The section headquarters consists of the section leader (a lieutenant), a section sergeant and a radar mechanic. It is the section leader who recommends to the battle group commander methods of employment of the section. Within the guidance of the surveillance plan, the section leader selects primary positions and assigns team surveillance sectors for the medium range radar teams. He ensures that the medium range radars are oriented so as to permit proper target identification and location, and checks with the fire support coordinator to ensure that fires can be applied within the area of surveillance. In addition, he coordinates communication, security, administration and logistical support with unit commanders in whose area his radar teams are operating.

The section sergeant is second in command, and the radar mechanic performs second-echelon maintenance on radar equipment. Third-echelon

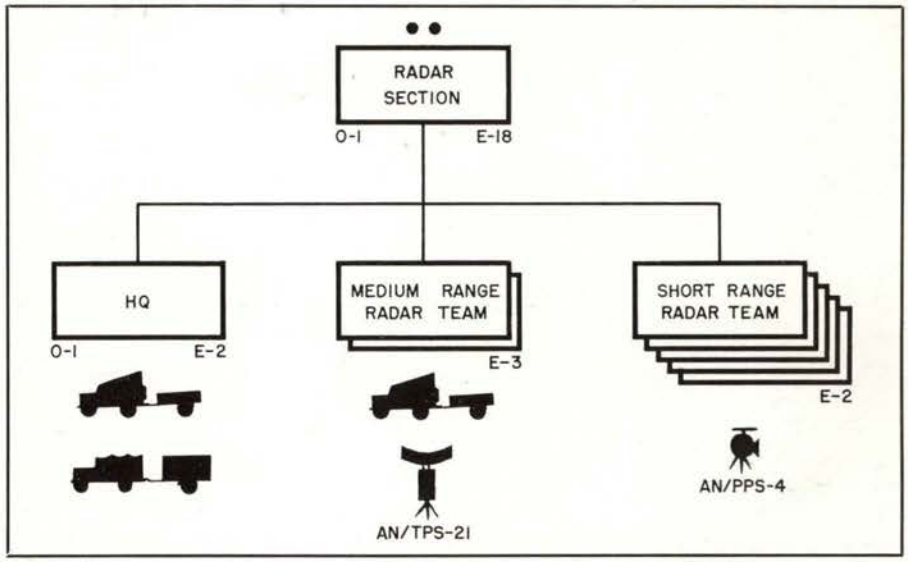
maintenance will normally be provided by the division signal battalion.

Each medium range radar team also consists of three men—a senior radar operator and two assistant operators. The senior operator's duties generally parallel those of a crew-served weapons squad leader, while the assistant operators actually operate the radar and communication equipment.

The short range radar team, which consists of one senior operator and one assistant operator, is normally attached to a rifle company or other subordinate unit of the battle group, and in this case receives its instructions concerning primary positioning and is assigned specific surveillance areas from the commander of the subordinate unit. When the short range team is not attached, these instructions are provided by the radar section leader. The senior operator in the short range team is responsible for reporting all information obtained by his team to the commander of the unit to which it is attached, or to the section leader. Wire or radio communication is established with the unit for this purpose.

As organized, there are not enough operators in the radar section to employ the radars over extended periods of time. Experience indicates that to attain maximum efficiency of operation, operators should alternate every 30 minutes. Should it become necessary to operate the equipment over prolonged periods, cross-training of other battle group personnel will be necessary to provide additional operators. Operators of the medium range radar, who must have an elementary communication background, may be trained in two weeks. Short range operators need no specific technical background and may also be trained in two weeks.

Transportation organic to the radar section consists of one ¾-ton truck (driver: radar repairman) and one ¼-ton truck (driver: section sergeant) for the section headquarters, and one ¼-ton truck (drivers: radar operators) for each medium range radar team. Every truck is provided with a trailer. The short range radar teams have no organic transportation. Consequently, when a short range team is attached to a subordinate unit of the battle group, and that unit is motorized or mechanized, transportation must be made available by the unit or the ¾-ton truck of the section headquarters must be employed by the team. Ordinarily, however, each short range radar is transported on two packboards by its team.



Organization, organic transportation and radar equipment.

The communication equipment of the radar section consists of an AN/VRQ–3 radio mounted on the section leader's ¼-ton truck, an AN/VRC–10 radio mounted on each of the two ¼-ton trucks of the medium range teams, and one AN/PRC–10 per short range radar team. The section leader's AN/VRQ–3 nets with the medium and short range radar teams as well as with higher headquarters.

The radar employed by the short range teams is the AN/PPS–4 Silent

The AN/PPS–4 Silent Sentry used by the short range team.

The AN/TPS-21 used by the long range teams.

Sentry. The weight of this radar, including generator, is 108 pounds. Future versions of this set will utilize a battery pack power supply, which will reduce the weight.

Its two-man crew can put the AN/PPS–4 in operation in 10 minutes. It is a line-of-sight radar which can detect moving individuals at ranges from 50 meters to 3500 meters and moving vehicles at ranges from 50 meters to 6000 meters. On-target indication is a characteristic audio tone in the operator's headset. Within the cited ranges, the Silent Sentry has an accuracy of plus or minus 25 meters and will penetrate light underbrush. Heavy brush and similar obstacles cannot be penetrated, and wind, rain and snow will slightly obscure the characteristic audio tone.

Variations in the audio tone permit the operator to identify types and speeds of targets. Maximum signal indicates "on target." Target range is indicated on a dial on the operator's panel. Azimuth may be read on the tripod mount. The Silent Sentry beam is 6.5 degrees in width, and the set searches a preset area of 30, 180 or 550 meters' depth (Figure 1) within its range. Azimuth is set manually through 6400 mils. No provision is made for automatic or remote operation.

The medium range radar teams use the AN/TPS–21. This set consists of seven major units, which may be carried on five standard packboards or, when loaded into two boxes, in a ¼-ton truck trailer. The range of the AN/TPS–21 is from 90 to 5000 meters for vehicles. Here again, the on-target indication is an audio tone which varies with the type and speed of target. Pitch of tone increases with target speed.

The AN/TPS–21, like the AN/PPS–4, is a line-of-sight device, and any large object which impedes radio waves will also prevent target indication. However, the AN/TPS–21 will penetrate wind, fog, rain, snow, and light brush, and in some instances lightly fabricated buildings. The device is equipped for automatic "sweep" surveillance of an area 800 meters deep and 100 to 3200 mils wide (Figure 2) within its range. Any such sector within 6400 mils may be selected. Remote control operation is accomplished through the use of a 150-foot cable.

The battle group S2 has primary staff responsibility for the employment of the radar section. He recommends to the battle group commander whether the radars should be employed in general support, employed in direct support, or attached. In conjunction with the radar section leader and the S3, he also prepares the surveillance plan and designates general radar sites and specific areas of surveillance. A careful surveillance plan is the only way of obtaining adequate coverage and fire support coordination.

Proper orientation of the radars is of great importance, since it allows targets detected by the radars to be taken under fire by fire support elements firing preplanned concentrations. Radar orientation and fire support coordination should, of course, be accomplished during daylight hours when feasible. Since the radars operate on line of sight and require background against which to detect movement, they are normally situated on dominating terrain, similar to that required for a company or battle group observation post. Radars are moved into previously prepared positions during periods of poor visibility or darkness. When the medium range radar must be located in an exposed position, remote control operation is desirable. If enemy activity is detected in an area not included in the surveillance plan, a new mission may be prescribed which redirects the employment of the radar, whether medium or short range. When the mission is complete, the operator returns to the original surveillance plan.

Assigning each radar team a specific sector of surveillance ensures proper coverage of critical terrain. In making such assignment, consideration is given to terrain, enemy disposition, enemy capabilities, equipment capabilities and desired degree of area overlap. Frequency of coverage must also be specified.

Radars are normally employed during periods of reduced visibility. However, they may also be employed to search dangerous avenues of approach, open areas or road junctions even during periods of good visibility, while patrols and observation posts are used where line of sight is obscured. With good visibility, the visual capability of the Infantry or Artillery observer is only about 3500 meters. The use of far-seeing radar to supplement visual observation will obviously provide the Infantry commander with earlier warning, and correspondingly greater reaction time.

In the offense, radar teams are employed to provide surveillance forward of the line of contact as well as surveillance of an open or exposed flank. They are also used to vector friendly elements during the hours of darkness or poor visibility. In general, they should be used as far forward as the tactical situation permits. In

the defense, the short range radar teams are normally attached to the forward units or security elements. Subordinate unit commanders will usually employ the short range radars to cover gaps between platoons and companies, and for surveillance of specific areas to the front or flank. The medium range radars, normally employed in general support to extend the coverage of the shorter range devices, add depth to the battle group surveillance coverage.

In retrograde operations, medium range radar sites, or positions to which the medium range teams will displace, are selected and prepared. Medium range radar teams may remain with detachments left in contact in a night withdrawal, in which case they are attached to a unit for the withdrawal. Short range radar teams operating under the control of the company or subordinate unit to which they are attached may remain with detachments left in contact or displace to new surveillance sites in a manner similar to the displacement of the medium range teams.

In airmobile and airborne operations, the radar section can be delivered into combat by parachute, assault aircraft or transport helicopter. The section is transported to the objective area as early as practicable to provide maximum time for reconnaissance and preparation of radar sites. Usually the section lands with the main body but teams may land earlier with security elements.

The radar section's ground surveillance capabilities are complemented by the aerial capabilities of the Infantry division aerial surveillance platoon. The platoon is organic to the division aviation company, and gives Infantry its own direct aerial observation, both through the use of aircraft and surveillance drones.

The aerial surveillance platoon furnishes information of enemy movement, provides security, acquires targets and conducts post-strike analysis of the effects of nuclear weapons by means of aerial observation, aerial photography and aerial imagery (photographs of the radar scope). The platoon is normally employed as a unit, but its organization permits attachment of sections to subordinate units.

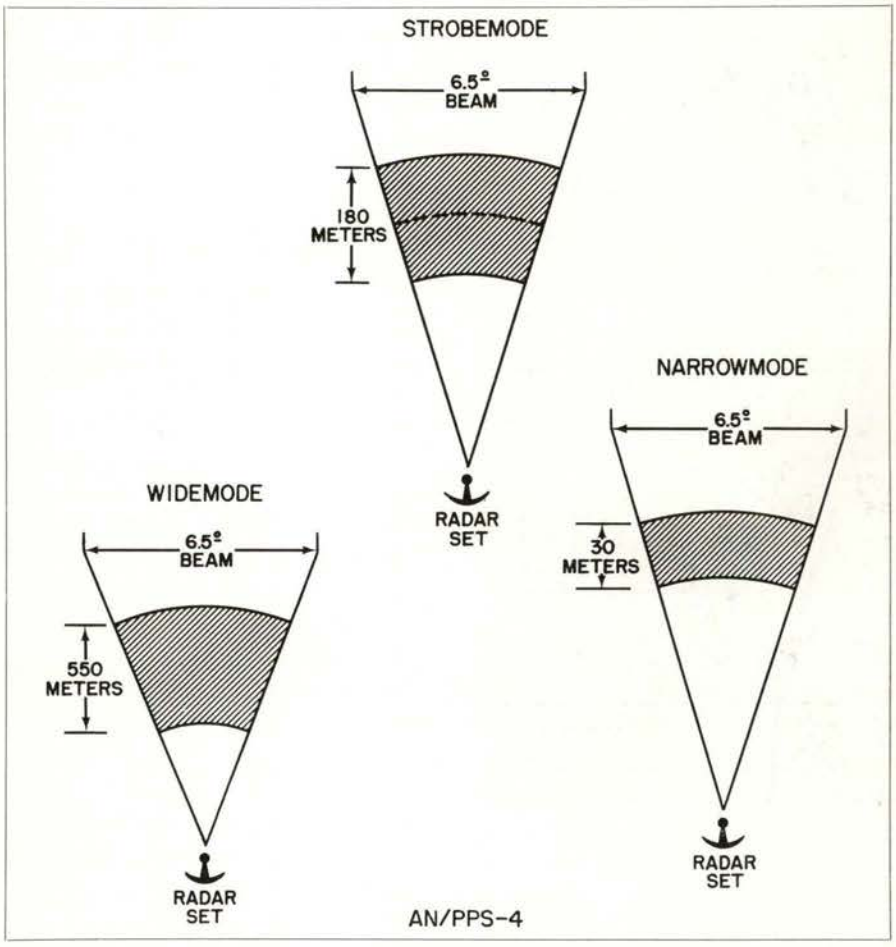


Figure 1. The three depths of search of the AN/PPS-4 are represented by the shaded areas.

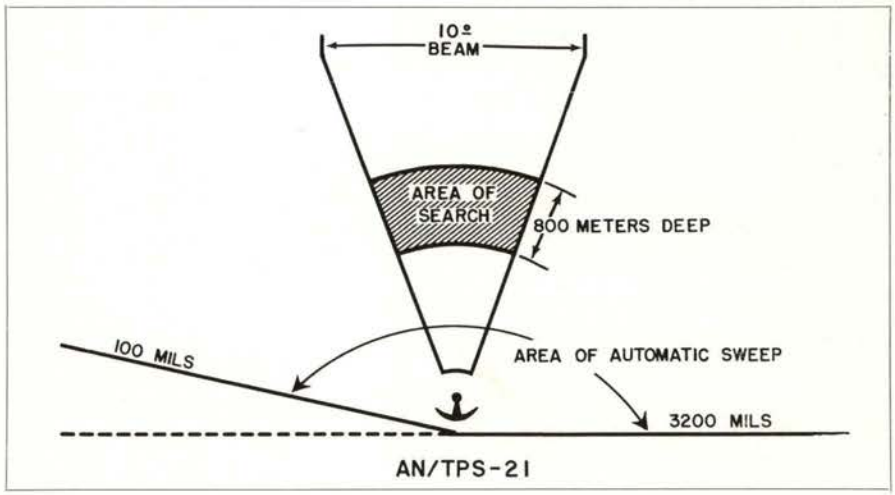
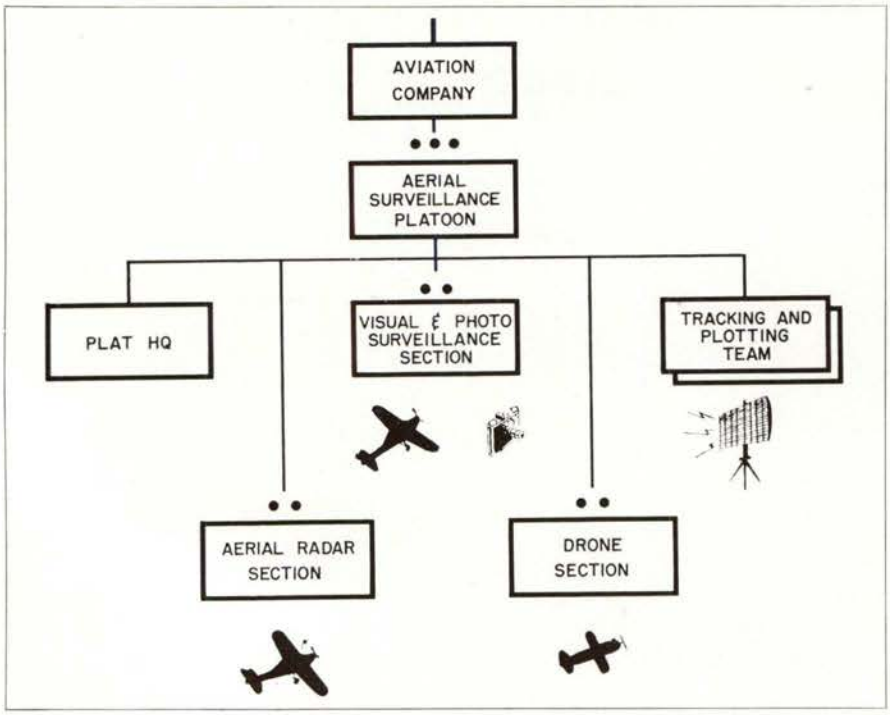


Figure 2. Coverage of the AN/TPS-21. Area from dotted line to 100 mils indicates minimum automatic sweep; area from dotted line to 3200 mils indicates maximum automatic sweep.

The visual and photographic surveillance section employs four aircraft. Cameras (KA–20) mounted on these aircraft provide a day and night photographic capability. The KA–20 uses a 75 foot roll of film, 9½ inches wide. One roll of film



The division aviation company.

will produce 95 negatives which may be matched to form stereo pairs or reconnaissance strips.

The aerial radar section uses AN/APS–94 radars mounted at present on the RL–23D reconnaissance aircraft. The AN/APS–94 will eventually be mounted in the new Mohawk aircraft, however. This aerial radar, operated by one man, scans the ground to either side of the plane, and can therefore search forward of the FEBA without exposing the plane to enemy fire.

The drone section consists of 12 SD1 drones which are controlled in flight by a drone controller who tracks altitude and location by means of the tracking and plotting section's radar (AN/MPQ–29) van.

The surveillance drone system includes support and maintenance equipment necessary to perform drone surveillance missions under tactical conditions. The drone section has a sustained operational capability of three to four missions daily. The speed of the SD1 drone is 192 miles per hour at sea level. It has an endurance of 30 minutes, thus giving it an overall range of 100 miles, or an operational radius of 50 miles. Since the radio control system operates in the UHF band, control is limited to line of sight. Therefore, maximum range missions cannot be conducted at low altitudes.

The drone can carry 90 pounds of surveillance equipment. At present, the KA–20 camera is mounted on the drone. Weather conditions do not limit drone operations when the AN/MPQ–29 is used. The only limitation imposed upon the equipment is the ability of the camera to see the target. Drone recovery is accomplished through a self-contained parachute activated by the operator.

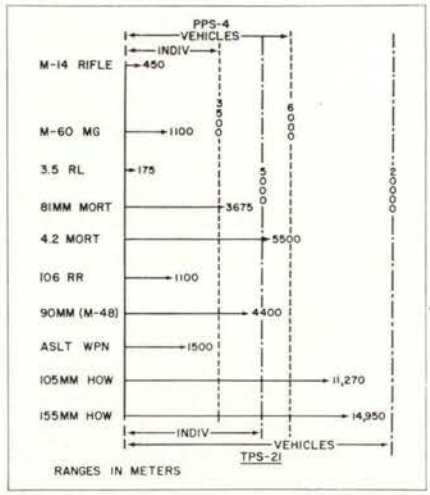
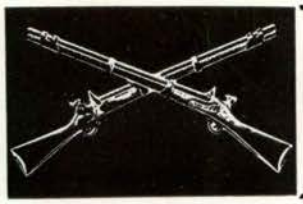


Figure 3. Comparison of ranges of common weapons with vehicle-identification and individual-identification ranges of AN/PPS-4 and AN/TPS-21 radars.

The combined capabilities of the devices employed by the battle group radar section and the division aerial surveillance platoon provide Infantry commanders with combat surveillance that is commensurate with the range of their weapons (Figure 3). This new equipment will not replace standard surveillance means—observation or listening posts, and patrols—but it will add new means which will improve our ability to perform our present missions. In recent years, great emphasis has been placed on operations at night or during periods of limited visibility. In such operations, surveillance devices will be of particular value. The vast increases in our firepower are only effective when they are applied, and the surveillance devices described above will contribute to the kind of wide, sensitive target detection the fluid, all-weather, twenty-four hour battlefield demands.

Maj William B. Fowlkes received an OCS commission in 1944. In 1945 he was a platoon leader with the 378th Infantry in Europe. The following year he was assigned as G3 of the 4th Infantry Division. Returning to Europe, he became 18th Infantry S2 and S3. He served as assistant G3, 3d Armored Division until 1951, when he attended the Armor School. In 1952 he went to Korea to become advisor to the assistant G3, Headquarters, ROK Army. He attended the USACGSC in 1955, and then was assigned to the Joint Intelligence Group, Office of the Joint Chiefs of Staff. Major Fowlkes is now an instructor in the USAIS Command and Staff Department.

Capt Rolfe G. Arnhym is a graduate of the United States Military Academy. After attending the Basic Infantry Officers Course at the Infantry School, he was a company commander with the 145th Infantry Regiment at Camp Polk. He served as aide-de-camp to the commanding general of the 10th Infantry Division until 1955, when he became company executive officer, and later company commander, battle group S3 and battle group S1 with the 87th Infantry in Europe. After attending the Infantry Officers Advanced Course in 1958, Captain Arnhym was given his present assignment as an instructor in the USAIS Command and Staff Department.



THE SOUNDING BOARD

This department gives every soldier an opportunity to "sound off" on a wide variety of subjects. It provides an outlet for thinking which need not conform to doctrine or policy. We are interested in constructive ideas—well-conceived and concisely expressed—which challenge or inform. Articles will be paid for at regular rates.

The Regiment Must Return

by Capt Harold J. Meyer

CHANGE and progress have characterized the recent history of the Infantry. Advances since the dark days of the Pusan Perimeter, especially in firepower, mechanization and organization, have been rapid and sweeping. One change which deserves some rather close scrutiny is the Regimental Combat Arms System.

This system, implemented at the time of the inception of the Pentomic organization, was designed to ensure that all Infantry units stemmed from Regiments with glorious histories and worthy traditions. Thus, today's basic battlefield unit consists of a number of companies and a headquarters lumped together under the quasi-military title of "group." This combination has been given a number to identify it as the first, second or what have you, group and then assigned a regimental designation. In this case change has not meant progress, and has succeeded only in emasculating proud and cherished Army traditions.

A study of any change must ask the question: will it bring about the desired effect or will it engender a state of affairs even less desirable than that which it was intended to alter? The desired result of RCAS was the automatic extension to any battle group, upon activation, of a built-in esprit de corps. A soldier assigned to a battle group is supposed to identify himself automatically with the traditions of the regiment for which his battle group was named. Then, we are assured, his morale will be high and his efficiency above reproach, for morale, of course, stems in large part from pride of achievement. This is fine, and is true as far as it goes, but any experienced leader of men will tell you that spirit is an intangible thing—it cannot be concocted, decreed or issued.

The Infantry regimental spirit, sometimes shown by the tilt of a soldier's chin, a clasp of an officer's handshake, or the smartness of the salute between two fighting men, cannot be legislated and officially published. Regimental spirit is competition in all the activities that a soldier encounters in training. It is a colonel, a staff officer, a sentinel—perhaps not unlike those colonels and staff officers and sentinels of other regiments—but still unique, for they are members of *the* regiment, be it the 1st or the 23rd or the 506th. Regimental spirit is combat, with its darkness and fear. It is the sight of a fallen soldier known, but not really known, for he just joined—yet still he leaves a dreadful sense of loss for he is the regiment. The regimental spirit is a feeling of belonging, of being a part of a larger unit with its active headquarters close enough to recognize the individual man. The spirit of the regiment is professional soldiering, and when necessary the citizen answering the call. It is a sense of belonging, of contributing, and it is the knowledge that what we are and what we do is singular for we are the *only* regiment. No other similar sized unit can claim our heritage or speak with a pride which stems from our past.

The designers of RCAS failed to take the American soldier into consideration. He is a realist. He recognizes factors and elements which are close to him. His sentiments depend on what his unit is at the moment; his regard for his regiment rises and falls. He will be the first to subscribe allegiance, but he will be just as quick to say that a victory won long ago has little to do with his morale. A soldier is interested in the active element—not a musty, faded regimental color hanging in a museum or a somber chapel guarded by the uninterested. His feelings change if he passes in review with that same regimental color, for then he is the regiment and there is no other.

The RCAS was supposed to provide a regimental home for the combat Infantryman as does the British Regimental System. While it was hoped that this would support mobilization, and bring the Army closer to the public, it is unlikely that America as a nation will ever be as "military area" centered as are the English. A study of the historical development of our country fails to reveal a nationwide basis for the creation of military area loyalties. Further, those few area traditions which this country

does have in common with its Army have been destroyed by the unnecessary changes of the RCAS. Newspapers in Massachusetts, Georgia and Virginia have made adverse editorial comment about the "retiring" of the proud National Guard and Reserve units their towns and cities have traditionally sponsored. A staff officer's shallow thinking has in part destroyed the military traditions of three of the original colonies.

The solution to the problem is simplicity itself. Do away with the questionable title of "group" and call the unit an Infantry regiment. Too small for a regiment? Not so. The number of companies in a regiment has never been a stable thing. It has changed whenever new concepts and equipment have required. Whenever a system has been tried and found impractical it makes sense to do away with it. When a system has been tried and found to be detrimental it is mandatory that it be eliminated. Such is the case with RCAS. Let's return our regiments to active duty. Let's do away with a system which causes a soldier to look at another wearing the same regimental crests and wonder if they are members of the same outfit. Let's do away with a system which has removed proud old regiments from the divisions they have served so long. Let's give our regiments the chance once again to make a living contribution to the Army and the Infantry.

Capt Harold J. Meyer, Publications Officer for the Infantry School's Weapons Department, is a frequent contributor to *Infantry*. He is the author of "Weight —Nemesis of Mobility," and, in this issue, coauthor of "How to Inspect Company Weapons."

The opinions expressed in this article are those of the author and do not necessarily reflect thinking of the School.

We Don't Need "Improved" Equipment

by Capt Winfield A. Holt and Sp4 Howard R. Webber

OUR STRATEGY relies upon technical superiority to compensate for our lack of manpower. In effect, the theory is that one American is worth ten Russians, or forty Chinese Reds or whatever, provided that American military technology is without equal.

This theory operates in our planning for possible nuclear conflict—we rely on the massive firepower of nuclear energies to negate numerical superiority, and presume that victory will belong to the army which is swifter, more daring and lighter on its feet.

It also operates in non-nuclear warfare—we expect our electronic surveillance devices to see more clearly than a hundred eyes, our vehicles to bring a larger portion of our smaller forces to bear, and our weapons to deliver more non-nuclear fires with more effect.

It is understandable, then, why we have placed so much emphasis on equipment—on modernizing what we have and developing what we do not have.

Military research and development is an area of problem and compromise. Obsolescence is always breathing down our necks. Quite often it actually outstrips us and the weapons we are able to put in the hands of the troops in the field are far inferior to those on our drawing board. Our constant dilemma, then, is to decide how long to endure obsolescence in the interest of tomorrow's breakthrough, and how soon to retool and reequip for what improvements.

If dilemmas are ever resolved, it is by judgment and perspective. Without these virtues, our development program may produce change for the sake of change, "improvements" that do not really improve but instead only alter. In the end, we find ourselves with a large class of new equipment which does a standard job better than its predecessor, but not enough better to make the change worthwhile — equipment which, for one reason or another, doesn't have the breadth, simplicity and ruggedness Infantry use requires. Each element in this class is in itself reasonable. The class as a whole, however, represents a kind of progress which is comforting, but really doesn't get us anywhere. The trend which produces this "progress" has aggregate, long-range effects which deserve attention.

Often such minor improvements are as expensive as radical changes, and since they are minor, there are infinitely more of them. As a result, when a true innovation in equipment is proposed, we are not only caught short of the funds we need for full emphasis and speedy development, but we are caught short of good will—in the Army, in the Defense Department, in the Congress and the public at large. The same citizen who is willing to devote several millions of tax dollars to the development of paper sandbags or a vacuum canteen might later object strenuously to spending a fraction of that on nuclear power sources. This would be especially true if the sandbag and canteen were rammed down

his throat in the form of increased taxes and then after a while discarded or again "improved."

The time has come for serious second-thoughts about this kind of "improved" equipment. Genuine improvement, of course, is all to the good. Yet convenience, for instance, can be very inconvenient on the battlefield if it requires complex echelons of supply and maintenance, or extraordinary skills which the ordinary Infantryman is not likely to possess. Change, after all, is not always for the good.

Theoretically, equipment specifications are established by military specialists and, theoretically, they must be held responsible for whatever trend there has been toward "improvements" versus genuine progress. Yet here again the danger is that the designers who are supposedly in the driver's seat will allow someone else to do the actual driving, that these designers will themselves be so mesmerized by "improvements" that industry is actively encouraged to produce them.

Our emphasis on equipment, of course, keeps us looking over our shoulders to see what the Communists are doing. This over-the-shoulder look creates additional problems. Of course, we must compare our preparedness to the enemy's, and we should be guided by what this comparison reveals. On the other hand, however, we must exert judgment of the kind mentioned above to determine exactly what we should match or surpass in kind, and what can be matched and surpassed by radical new departures in equipment (and for that matter, doctrine).

We must not allow the process of comparison to foster a "tit for tat" program of technical development. Just because the Russians have in their inventory an improved 2½-ton truck is not necessarily a good reason why we should have an improved deuce-and-a-half in ours. We may, indeed, need a tracked cargo vehicle, or a revolutionary cargo helicopter, but the point is that there are a million possibilities, and we must not lose sight of any of them. Correspondingly, we must learn to discard equipment which no longer answers our needs, regardless of whether or not the Soviets have retained it.

Just as we cannot allow the Russians to "improve" us, we cannot allow the Navy or the Air Force to do so. The Nautilus and the X15 are remarkable achievements, but as far as the mission of the Army is concerned, they are somewhat irrelevant ones. Such contrivances make loud noises in the press, but we must not be influenced by that. We have never been an arm of gadgetry but changes which are made simply to show how modern and vital we are will eventually make us gadgeteers and destroy us.

There is something to be said for "antique" Infantry weapons: they may be old, but they are at least plentiful and proved. Our 1911 pistol does an effective job for us in 1959. Our mess kit is little changed from 1918, but it works just as well as any mess kit can. We ride in vehicles substantially the same as those used in the 1940s, and yet the wheeled transportation they provide is as good as we can get. This equipment has been modified but it has not been "improved," in the sense the authors have used the word. It is not frivolous. In our hands it does the job. Let's leave it alone and go for the big leap rather than the slow, indecisive, expensive crawl. In combat, the offensive is decisive; the counterattack only restores the position. As long as the Infantry is content with research and development which concerns itself with matching either friends or enemies, point for point, we will always be counterattacking. We'll always be scrabbling to catch up and the initiative will never be ours.

Change we need, yes, but not "improvements" which save a few ounces or increase cyclic rates by a few rounds. We must, instead, be grimly content with our present gear—rather than wasting ourselves on interim items—so that we can develop startling new approaches. We must establish clear, progressive equipment requirements so that industry will supply not what the Russians have, the Air Force or the Navy has, we already have, or it is willing to give, but instead *what we need.* This technology—based on *what we need* —is the only kind that will win.

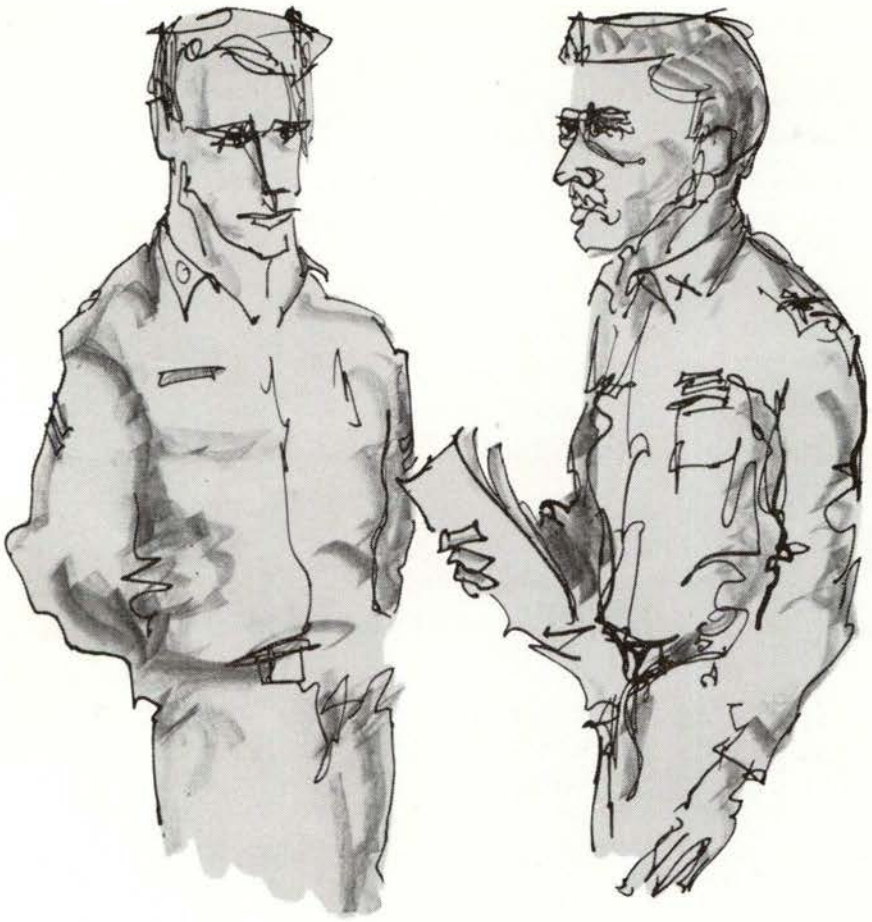
The opinions expressed in this article are those of the authors and do not necessarily reflect official thinking of the Infantry School.

Capt Winfield A. Holt, who is a graduate of the United States Military Academy, attended the Associate Infantry Company Officer Course and Airborne and Ranger Schools at Fort Benning. He served three years with the 8th Cavalry, 1st Cavalry Division in Japan, first as a platoon leader, then as assistant S3 and company commander. In 1956 he was assigned as company commander with the 101st Airborne Division. He is now assistant editor of *Infantry*.

Sp4 Howard R. Webber graduated from Dartmouth College as Phi Beta Kappa and Summa Cum Laude. He took graduate studies at Lehigh University where he taught English until 1957, when he entered the Army. Specialist Webber received basic training at Fort Dix and Armor training at Fort Benning. He was later assigned to the staff of *Infantry* and is now assistant editor. He is the author of a number of nationally published poems.

An Equitable ENLISTED

by Lt Walter F. Wilm



Recommendation by the unit commander . . .

THE NEED for a highly professional noncommissioned officer has become more obvious in view of the decreasing size of our Army and our increasing requirements for technically trained men. The enactment of the recent pay bill and the adoption of proficiency pay places a greater responsibility on commanders to promote only the best men. In the 1st Battle Group, 9th (Manchu) Infantry, the requirement for a more equitable promotion system was recognized.

Search for such a system required a great deal of research. We found, first of all, that methods used by many Army units, though they vary in details, generally follow a similar pattern. The pattern includes a recommendation from the unit commander, evaluation by a board of officers, and finally, selection and promotion. This system is better than none at all but, in our opinion, there is room for improvement.

We therefore initiated a study of differing methods for promotion followed in other Army units, as well as of the systems used by the Air Force and Navy. The promotion system used by the 20th Infantry in Panama seemed to provide the best framework for our program. With the results of this study, we formulated a program to achieve the following objectives: (1) To improve the selection of noncommissioned officers for promotion as recommended by paragraph 9c of AR 624–200; (2) To permit the new Department of the Army program of enlisted MOS-proficiency and leadership-performance tests to be phased into our system; (3) To encourage soldiers to earn faster promotion by self-study and application; (4) To enhance the morale, efficiency, quality and prestige of noncommissioned officers by selecting the "best qualified" for promotion and letting each soldier know where he stands on the Promotion Eligibility List; (5) To improve the status of training and develop unit *esprit* through the leadership of an outstanding corps of noncommissioned officers; (6) To reduce delinquencies.

The broad concept of our plan envisions that promotions to E5, E6 and E7 will be made from a Battle Group Promotion Eligibility List established for each MOS career field. Standing on the Promotion Eligibility List is based on: (1) Recommendation by the unit commander; (2) An examination in general military knowledge; (3) An examination in a specific MOS; (4) An interview by a Noncommissioned Officer Advisory Council; (5) Credit for length of service, time in grade, combat decorations and awards.

PROMOTION SYSTEM

Does your organization have a comprehensive promotion policy that is fair to all? Here is one that can pay dividends in NCO prestige, and in unit esprit and efficiency.

Allocation of quotas is prorated among the various career fields, with precedence given to those fields having the lowest percentage of authorized personnel in the grade to be allocated. When vacancies occur from reductions, they are filled by personnel from the Promotion Eligibility List.

Now let's look at these five steps more closely and see how the details are worked out:

Step 1. Initially, an individual must be recommended for promotion by his unit commander. The commander may cancel his recommendation at any time if the individual fails to maintain an "Excellent" in conduct and efficiency. This authority to recommend promotions and to delete candidates from the Promotion Eligibility List always remains in the hands of the unit commander.

Step 2. The next step to promotion is to take the qualifying General Military Knowledge Test. All applicants regardless of MOS must take it. It consists of nine basic military subjects: CBR, Drill and Ceremonies, First Aid, Military Justice, Map Reading, Interior Guard, Military Courtesy, Code of Conduct and Geneva Convention. This is a written test consisting of 290 questions. It was produced and reviewed by a board of one officer and selected noncommissioned officers from the eight organic and attached units of the battle group.

An individual need only have 50 percent of the required time in grade (AR 624–200) before he can take the test. This increases the number of soldiers eligible to take the test and provides the company commander with a broader base from which to select the best qualified candidate.

Individuals reduced for misconduct are ineligible to take the test until they complete the time-in-grade requirements established by Army Regulations. A delinquency report disqualifies an individual from taking the test for a three-month period. This encourages soldiers to keep out of trouble and reduces the number of delinquency reports passing over the commander's desk.

References are provided for study and test dates are scheduled so that a minimum of two weeks' preparatory time is available to all applicants. One test failure results in a two-month ineligibility period. Each succeeding test failure requires an additional four-month waiting period. Passing scores for E5, E6 and E7 are

. . . a written test in general military knowledge . .

70, 75 and 80 percent respectively. The maximum weight of the test towards promotion is 100 points.

. . . a practical MOS examination . . .

Step 3. The third step is the taking of the MOS Test in the career field in which the applicant is seeking promotion. A test for each three-digit MOS was drafted, reviewed and finalized by officers and noncommissioned officers skilled in the appropriate career field. Tests for each skill-level were not initially developed. In lieu of such tests, successively higher scores were required for the E5, E6 and E7. However, some skill-level examinations were developed for those MOSs involving many diverse job qualifications.

A man must have the full time in grade as set forth by AR 624–200 to take the MOS Test. Waivers are granted for exceptionally meritorious individuals. The applicant must have passed the General Military Knowledge Test, be in a promotable status, and possess the proper MOS, to include the skill digit required for the grade to which promotion is being sought. Lists of study references for each MOS are provided. Passing scores, ineligibility periods for delinquency reports and test failures, conduct-efficiency ratings and the scheduling of test dates are the same as outlined above for the qualifying General Military Knowledge Test. The maximum weight of the MOS Test towards promotion is 100 points.

Step 4. Assuming an individual has satisfactorily passed the General Military Knowledge and Military Occupational Specialty Tests, he is now eligible to appear before the Battle Group Noncommissioned Officer Advisory Council. In the 9th Infantry Regiment, this council includes the battle group sergeant-major and the first sergeants of the organic and attached units. These key noncommissioned officers objectively question a candidate to discover his outstanding traits, accomplishments and limitations. The Advisory Council uses a letter written by Gen Bruce C. Clarke as a guide in questioning the applicant. This letter, addressed to all members of the 7th Army on 26 November 1956, lists 23 qualifications and attributes that should be considered in promoting noncommissioned officers.

The Advisory Council is composed of senior noncommissioned officers because they are well acquainted with the requirements and should help to determine who joins their ranks. Also,

. . . objective questioning by the NCO Advisory Council . . .

this enhances the prestige of the noncommissioned officer corps.

The maximum weight of the council evaluation towards promotion is 100 points.

Step 5. After an individual has appeared before the Battle Group Advisory Council his personnel records are checked for three items. The first item, the length of active Federal service, is worth one point per month. The second, time in grade, is valued at two points per month; and the third, combat decorations and awards, ranges from five points for the Combat Infantry Badge to 25 points for the Medal of Honor.

The points earned in Steps 2 through 5 are totaled. This gives the soldier a numerical grade and determines his standing on the Battle Group Promotion Eligibility List which is published monthly.

. . . a records check . . .

The 1st Battle Group, 9th Infantry, feels that this system has definite advantages over one in which selection is made by a board of officers. Some commanders may feel that it is too cumbersome and will produce many administrative headaches, but this is not so. It was found that once preparation of the various tests was completed, one officer could handle the whole program in addition to his other duties.

There are similarities between this system and the Enlisted Evaluation System announced by the Department of the Army. One of the features of the Army's system will be a uniform procedure for determining promotion in the same grade, MOS and skill-level on a world-wide basis in the achievement of a Promotion Qualification Score. This score will be related to the promotion of enlisted personnel as appropriate. Commanders will then be able to select per-

sonnel for promotion from among those who meet all the eligibility requirements. Full implementation of this program will not be achieved for some time. However, the program we have developed can be used both during and after the interim period when Department of the Army will be phasing in this system.

Once the Department of the Army system is fully implemented, units undoubtedly will have more personnel eligible for promotion than can actually be promoted. Commanders will still have the problem of screening personnel. The program outlined here will simplify this problem. By substituting the Department of the Army promotion eligibility score for Steps 3 and 5, commanders can easily develop a promotion eligibility list utilizing Steps 1, 2, and 4 as a basis for a new integrated promotion score.

. . . and the top man is promoted.

Since the 1st Battle Group's system has had a favorable impact on training, and is, in effect, a training test, the S3 has been made responsible for the preparation, conduct and scoring of all examinations. The program has encouraged self-study and has materially raised the over-all training level of the battle group's noncommissioned officers.

The program also has contributed to a steady decline in delinquencies and it has enhanced morale by eliminating "gripes" found under the old board system. Each man knows where he stands on the Promotion Eligibility List and how he got there. Finally, from the viewpoint of the battle group commander, the test scores have revealed both weaknesses and strengths in the over-all training program.

The commander should be concerned with the following qualifications and attributes when considering a man for promotion.

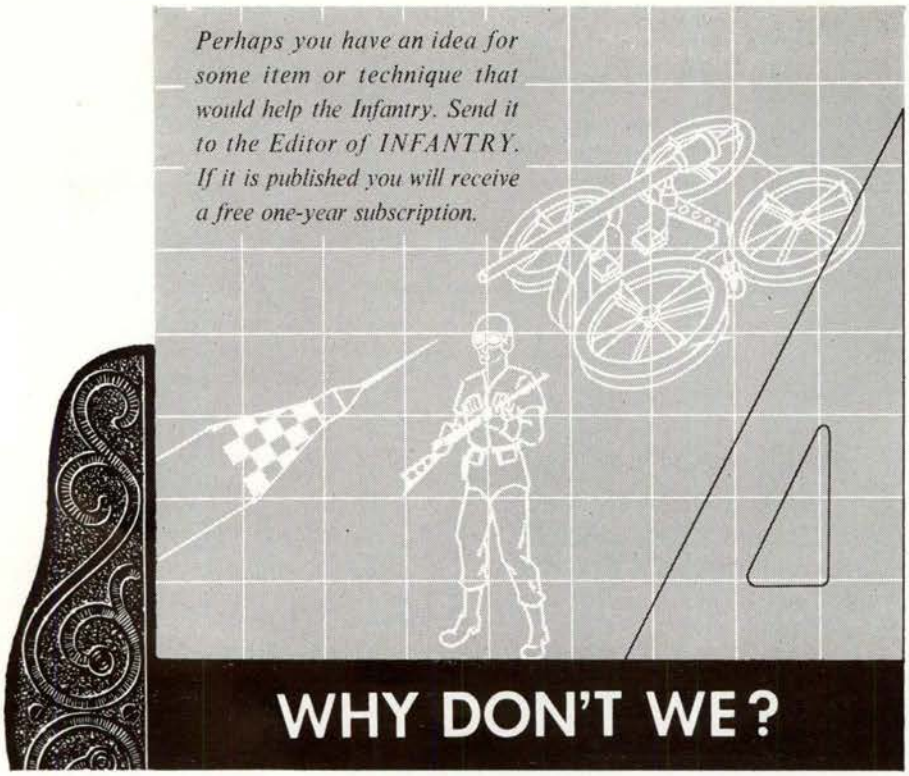
(1) Reliability.
(2) His knowledge of his present job and his preparation for the next higher one.
(3) Leadership: Can he direct men?
(4) Ability to organize and manage a job.
(5) Knowledge to detect, and courage to correct, errors in subordinates.
(6) Initiative: Does he perform well without close supervision?
(7) Appearance; military courtesy; neatness.
(8) Attitude; loyalty; enthusiasm.
(9) Ability as an instructor.
(10) Participation in athletics.
(11) Does he use his off-time to improve himself?
(12) Is he a good soldier all the time?
(13) Is the job he is charged with being done better now than when he took it over?
(14) Judgment and common sense: A good scale of values.
(15) Ability to receive and carry out instructions.
(16) Has he been efficiently filling his grade position?
(17) Accident record.
(18) VD record.
(19) Incident record.
(20) AWOL and Article 15 record.

General Bruce C. Clarke's checklist for determining promotion potential.

It should be pointed out, however, that the system does not reduce selection to a mere matter of arithemetic. There are still factors which are not easy to evaluate. For example: Should an ex-Navy man who had a battleship blown out from under him receive more promotion points than an Artilleryman who supported front-line Infantry units during combat? Should a wearer of the Combat Infantry Badge receive more points than either of these men? The equitable awarding of stripes can only be obtained through careful consideration and detailed planning. It is worth the effort.

The 1st Battle Group's system has been in effect since April 1958. It is one of the principal factors in our over-all program aimed at developing the finest noncommissioned officers to be found in any battle group in the United States Army. We feel that it is helping us achieve that objective.

Lt Walter F. Wilm entered the Army in 1955. He graduated from OCS in 1956, and became Pioneer and ammunition platoon leader with the 9th Infantry in Alaska. In 1957, he was assigned to the 18th Engineer Company (Construction), Ladd Air Force Base, as platoon leader. He has recently completed an assignment as Assistant S3 of the 1st battle Group, 9th Infantry, Eielson Air Force Base.



. . . manufacture reinforced fiberglass water and gasoline cans. These would eliminate the current rust problem and give a sizeable decrease in weight with no reduction in strength, if properly designed. Repair would be simplified by the issuance of a repair kit to each unit. No special training is required to effect such repairs.

Capt Lee D. Ellis, Jr.

. . . establish a Distinguished Infantry Badge. This would set apart the experienced, professional Infantryman of very broad background from the holder of the Expert Infantryman Badge much as the Distinguished Marksman Badge sets the wearer apart from the soldier with qualification awards. For this purpose, not only is a new badge required, but the requirements for achievement must be broad as well as lofty. To earn the badge, the Infantryman would have to be Airborne- and Ranger-qualified, obtain a score of 350 on the physical fitness test and establish a higher degree of proficiency in common military subjects than is presently specified for the EIB.

These requirements are high enough to challenge Infantry's best, and to prevent the badge from becoming a common award.

As far as the badge itself is concerned, it would recognize and consolidate Infantry, Airborne and Ranger skills. As depicted, it could be worn on the pocket, as is the current General Staff identification badge.

It would be a real mark of distinction for a man of distinction—the distinguished Infantryman.

Capt Lewis R. Baumann

. . . authorize a standard necktie clasp. In most offices it is customary to remove the green or TW blouse while working. This reveals a variety of tie clasps depicting miniature aircraft, golf clubs, colorful sports cars, and what have you. While these secure the necktie, they hardly contribute to uniformity.

The U.S. Marine Corps has chosen the Marine emblem as a standard. For Army use, a practical clasp would consist of a simple bar upon which the insignia of rank or grade has been superimposed. This solution would alleviate the embarrassing situation created by not knowing a man's rank when his coat is removed.

Capt Larry S. Mickel

. . . use a three-quarter ton ambulance-type vehicle for the net control station for each Infantry battle group. Use of such a vehicle would allow the radio operators to "black out" the vehicle completely while allowing them sufficient light inside to speed operations. The use of a sealed vehicle of this type would also help to eliminate the problem of sound "leakage" when the operators are not wearing headsets. The advantages of a metal-covered vehicle during periods of inclement weather are obvious. The only reason for the use of the present ¾-ton radio vehicle is to allow the operators to lower the silhouette for camouflage purposes by removing the canvas top. Yet the top is seldom removed from radio vehicles, as the operators must work out of the elements for maximum efficiency.

The present 100 ampere generator system would work satisfactorily, but an additional direct-current generator is recommended to supply power for radio equipment. Separate storage batteries could also be provided, with a switching system to allow independent operation of the radio power-supply system (thus permitting the vehicle to be started if the radios are inadvertently allowed to drain one set of batteries). This separate system would allow gearing of the drive train so that the vehicle engine does not run at a high rpm with low load factor, and spark plug fouling and excessive engine wear are reduced. The auxiliary generator could also be used to charge Sniperscope batteries, power

battle group message-center cipher machines and for a variety of other purposes.

Capt Lee D. Ellis, Jr.

. . . develop and issue an ear-plug receiver for the AN/PRC–10 and AN/PRC–6 type radios. Many of the problems of communication stem from the difficulty operators have in keeping the receiver up to their ears. A simple ear-plug arrangement would allow the operator to monitor the net while moving, firing or using his hands for other duties. Many small commercial radios make use of the ear-plug receiver to afford privacy.

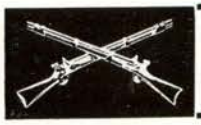
Lt Col James C. Wilkins

. . . devise an electronic board which, using standard symbols, represents battle situations on realistic terrain. Battle group commanders and their staffs could, by means of this "fighting machine," oppose each other in electronic warfare as challenging as actual battle. A random element—which might result in the unexpected loss of an S3 or a company commander—could be engineered into the device for the effect of the "fortunes of war." Every tactical factor which it is possible to isolate could be simulated by the machine. Decisions could be fed into it by the opposing sides, and the machine would create a continuing representation of battle.

Certain other factors, of course, would have to be introduced outside the field of electronics. The fatigue of battle upon the commanders could be injected through the use of noise devices and by keeping the participants awake for 24 hours before an electronic battle.

Such a machine would provide invaluable experience, and would develop and test capabilities of command.

Col James H. Hayes



ANSWERS TO INFANTRY QUIZ *(See page 23)*

Possible score 100 points. Expert 90-100, Sharpshooter 70-80, Marksman 50-60, Recruit 30-40 and Bolo 0-20. For a more detailed discussion of the answers check the references listed.

1.c. The backblast danger area of a 106mm rifle extends 130 feet to the rear. It is triangular in shape, with the apex at the breech of the weapon, and has a base of 150 feet. Blast can cause serious casualties in the first 80 feet. The danger in the final 50 feet is from flying debris. (Chap 6, Sec III, Par 83, FM 23–52, June 1958)

2. The Infantry division (ROCID) has a total of 50 aircraft—16 reconnaissance, fixed-wing L19s; 6 utility, fixed-wing L20s; 20 reconnaissance helicopters H13 or H23; and 8 utility helicopters H19. (TOE 7T, "Infantry Division (ROCID)," December 1956)

3.a. The ion chamber (IM–108), which reveals the presence of radiation, has recently been standardized. It replaces the AN/PDR–39 as the standard field survey instrument. The pocket dosimeter measures total exposure to radiation. The charger, radiac meter, is used to charge the pocket dosimeter. The G–M meter is used by Medical and Engineer personnel for the detection of very small amounts of radioactive materials in food or water. (Par 30, TOE 7–17C, and FM 21–40, November 1958)

4.c. Tight shot groups are an indication of mastery of fundamentals taught in preparatory marksmanship and 25-meter Trainfire I. Each soldier is required to fire a three-round shot group from each of the eight positions taught. Each group is marked "passed" or "failed" based on its size checked against a scoring template. (Chap 3, Par 22, FM 23–71, September 1957)

5.a. Pathfinders are specially selected and trained Army personnel whose primary mission is to aid in the navigation and control of Army aircraft. (App 5, Par 1, FM 57–35, June 1958)

6.a. The rapid rate will be used when the rate of fire for a caliber .30 machinegun is not specified in the fire command. (Chap 6, Sec V, Par 132d, FM 23–55, October 1955)

7.d. 1100 meters is the maximum setting on the rear sight of the machinegun, M60. Pilot models only were graduated to 1200 yards. (*Infantry,* p 83, October-December 1957)

8.b. The transport aviation unit representative will provide the supported ground unit commander with the exact allowable cargo load figures during the planning phase of the mission. Such variables as weather, temperature, elevation, wind, etc., preclude the possibility of providing a figure for the allowable cargo load that will remain constant. (App 2, Par 1b, FM 57–35, June 1958)

9.b. Incorrect sight alignment causes an error in the strike of the bullet which increases as the range to the target increases. An error in the placement of the front sight, providing sight alignment is correct, causes an error which is approximately the same for all ranges. (Chap 3, Par 10b, FM 23–71, September 1957)

10.c. The phase line keeps friendly attacking troops out of supporting fire beyond this line. The phase line should follow some terrain feature which is easily located on the ground at night. It is normally prescribed by the battle group commander and is not crossed without battle group authority. (Chap 2, Sec XI, Par 72h, Advance Sheet, Rifle Company, Infantry Division Battle Group) NOTE: Term "phase line" replaces term "limit of advance" per USAIS Position Paper, "Fire Coordination Measures," May 1958.

(Continued from page 38)

Centralization is the Answer

aviators called "dual proficiency." As described in AR 600–105, "Army Aviation Career Program," an aviator is required to maintain ground proficiency consistent with his non-rated contemporary.

The announced objective of "dual proficiency" is to "produce and develop qualified and experienced commissioned officers for the professional and technical phases of Army Aviation." Yet, it is true that an aviator entering the "best qualified" echelon of promotion *must* have a high degree of branch proficiency to compete with the non-rated officer whose entire time is spent in branch-material assignments.

During those periods when an aviator is on a ground assignment attempting to retain his branch proficiency, his flying proficiency will suffer, since in most cases he is able to accumulate only the minimum of 80 hours' flying time per year. Thus, the program defeats the first priority task for the aviator: achieving the maximum combat performance from his aircraft.

A recent survey of aviators at Fort Benning shows that 18 percent of the 150 aviators questioned had transferred, or intended to transfer, from the Infantry to the Transportation Corps. Aviators see in the Transportation Corps a unifying Chief and an opportunity for a full-time aviation job, with a wide variety of aviation assignments and command opportunities. Infantry pilots further note that TC is the procurement agency for Army Aviation, that Transportation Corps is authorized a larger percentage of field grade aviators than any of the combat arms, and that Transportation Corps assignment means an opportunity to fly large aircraft.

As a consequence, the Transportation Corps will become the "aviation branch" unless sweeping changes are made in the aviation organization.

Already the Transportation Corps' very strong hold on aviation has had some undesirable effects. Army Aviation has cost $900,000,000 in the last eight years, the majority of these funds going to procurement of "freighter" aircraft that are too large to be concealed in the combat zone and too expensive to be risked forward of the FEBA. The battle group has not one single aircraft.

Under a branch system, coordination of aircraft procurement by the Chief of Army Aviation would insure the necessary balance between heavy transport and frontline aircraft. Establishment of an aviation branch as a combat arm would further guarantee that development and procurement are consistent with Army Aviation's mission: "To augment the capability of the Army to conduct prompt and sustained combat, incident to operations on land."

Establishing an aviation branch, which is within the statutory authority of the Secretary of the Army, would provide a solution to the majority of growing pains now suffered by Army Aviation. It would involve major changes, and would encounter strong opposition as it has since 1954 when first recommended by Army Aviation representatives in the Department of the Army. This opposition has developed as a result of a fear that the Army Aviation Branch would develop an "Army Air Corps attitude," thus separating itself from the ground combat echelons of the Army, and on the other hand, that constituting an aviation branch would provided the Air Force with an argument for assimilating that organization into its structure.

The first of these fears stems from the historical background of military aviation. Now that the Air Force has assumed the strategic aviation roles, there is no reason to suppose that the proposed aviation branch would follow the example of the Army Air Corps, which grew to have missions so independent of the ground arms that it ceased to provide them with effective support. Army Aviation's mission is clear enough and the preexistence of the Air Force will effectively discourage any departure from it.

The fear of assimilation by the Air Force is also groundless. It need only be pointed out that the Air Force has constantly treated those missions now assigned Army Aviation as a thorn in its side. The use of supersonic aircraft in ground support roles indicates an apparent lack of interest in aviation aspects of the ground fight. The Army is now authorized by law to engage in aviation activities and a reorganization of Army Aviation in the interest of efficiency would be of no more concern to the Air Force than any other internal activity of the Army.

The Army Aviation Branch, although primarily a combat branch, would function as both an arm and a service, as for example does the Corps of Engineers. The responsibilities for

Capt Larry S. Mickel is a graduate of the United States Military Academy and holds an M.S. in Aeronautical Engineering from Georgia Tech. After attending Airborne School, he became a platoon leader in the 11th Airborne Division and, in Korea, a platoon leader and company commander with the 27th Infantry. In 1955 he was aide-de-camp to the commanding general of I Corps, and, back in CONUS, G2 for air and assistant secretary of the general staff with the XVIII Airborne Corps. A graduate of the USAIS Advanced Course, Captain Mickel is now a member of the Air Mobility Group of the Airborne-Air Mobility Department.

(Continued from page 39)

Not Branch, but Balance

support he gets. Because aviation has itself an argument against branch. On the one hand, branch is predicated on the basis of use, and not equipment. That is why we did not create a separate missile branch, but integrated our new missiles within appropriate existing branches. We gave the missiles to the people who would use them. Similarly, we must give the aircraft to the people who will use them—Infantry, Artillery, or whatever, must have organic aircraft. On the other hand, aviation, if left to itself in a branch organization, would, precisely because of its difference, tend to acquire trappings of mystery and witchcraft which do not contribute to efficiency. Airplanes are in every sense "air vehicles," and there is nothing exotic about them. As "vehicles," they must be controlled by the user, the ground commander.

Furthermore, with the advent of the zero ground-pressure device, a separate aviation branch would not only be inadvisable, but impracticable. This piece of equipment, presently in the developmental stage, may soon be as common as the jeep is now. Plainly enough, the logical direction of Army Aviation is not towards more sophisticated aircraft but towards equipment which is easy to operate, simple to maintain and economical to produce—and which, moreover, will be available and appropriate for sustained tactical use on an unprecedented scale. We must not allow branch proponents to imprison Army Aviation within the 1959–1960 time frame, for branch and AV are incompatible. Imagine, for example, how absurd it would be to talk about a "jeep branch," and yet branch exponents are in effect talking about the same kind of thing. When zero ground pressure vehicles are a dime a dozen, then obviously the domain of the air must be common to all branches.

If officers continue to pilot Army aircraft, the branch concept would also create prohibitive personnel difficulties. The role of Army Aviation is so defined by law and convention that though at the lower echelons a considerable number of personnel are required, at the higher echelons of command and on staff levels there simply would be no room for placement within a branch. Even now, field-grade, air-qualified officers must be employed in other duties than Army Aviation. When expanded aviation requires expanded numbers of lieutenants and captains as pilots of light aircraft, then high-level command room will be even scarcer. A profusion of AVs would complicate the problem, and adding branch on top of these elements would create an inoperable system.

Frequent assignment of Army Aviation personnel of one branch to air support duties with another has already taken its toll in efficiency of operation and good personnel management. Infantry officers who should be flying with Infantry units are flying with separate Artillery battalions, and Artillery officers are flying for Infantry battle groups. Situations like this contribute to a lack of effective support. If, however, an aviation branch were adopted, it is likely that aviation personnel would become even more disoriented. Whereas there is at the present time some incidence of branch uniformity between aviator and supported ground forces, under the branch concept, of course, there would be none.

Perhaps one of the most compelling considerations acting against the branch concept is also one of the least mentioned. The fact is that the country simply cannot afford a fourth air force. The Army doesn't need, doesn't want a "private" air force. We don't feel possessive about aerial warfare. What we do want is an Army air that will help us to do the Army job. What we need is an integrated air capability that allows an Army which is thinking in three dimensions to act in three dimensions—to perform its unique Army missions. For the Army's sake, as well as the country's, we need organic air and not a separate branch.

Nevertheless, problems do exist in Army Aviation and, if an aviation branch is no answer to them, neither is the preservation of the status quo. But a separate aviation branch is by no means the only alternative. There are certain logical revisions of the present aviation program which would solve these problems without creating new ones.

Generally speaking, Army Aviation grew in response to short-range necessity rather than long-range planning. It is not surprising, then, that the program is out of joint and has major defects, and that rather sweeping changes are indicated.

Among these is a concentration of budgetary responsibility in an overall aviation authority. The Director

Capt Roger M. Pezzelle was graduated from OCS in 1943. He served with the 197th Infantry Battalion, and then went to Italy with the 473d Infantry. Returning to CONUS, he became an OCS tactical officer. In 1948 he was again assigned to Italy, this time with the 351st Infantry. He then attended the Airborne and Jumpmaster Courses, afterwards serving with the 505th Infantry. Joining the 10th Special Forces Group, he accompanied that organization to Germany. In 1958 he completed the USAIS Advanced Course and began his present assignment in the School's Combat Developments Office. He recently was selected for admittance to USACGSC.

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Centralization is the Answer

development, procurement, organization, maintenance and training would then logically come under one office for direction and coordination, the office of the Chief of Aviation. Aviation units would be assigned within the combat arms and technical services as required. Here they would respond to operational requirements of the ground commander under the same command relationship as found between the Infantry division and the Infantry division engineer battalion.

Many advantages would accrue from an aviation branch. These include: central control of responsibilities for aviation, centralization of career management for Army aviators, elimination of the need for "dual proficiency," elimination of the present "struggle for power" between the branches, and provision of a basis for rapid mobilization expansion. Further, an aviation branch would insure that proper recognition is given to the growth of all Army Aviation functions.

The Army must recognize that Army Aviation is a full-time profession. As a corollary, the Army must also recognize that a properly developed and vigorously executed school, unit and combined arms training program is the surest means of achieving effective, integrated performance of aviation and combat arms on the battlefield. The Infantry and other combat arms must finally recognize that the ultimate organization for Army Aviation is an aviation branch—a combat arm and service so organized that it centralizes all aviation effort now fractionalized between seven arms and services.

Army Aviation has come to have a variety of roles, some of them conflicting. To fulfill them efficiently under all conditions, Army air must be balanced and adaptable. An aviation branch is the best and most equitable way of insuring that we give every role the emphasis it requires, that we develop the equipment needed to fulfill each role in the best manner possible, and that we make maximum use of Army's aviation potential.

The opinions expressed in this article are those of the author and do not necessarily reflect official thinking of the Infantry School.

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Not Branch, but Balance

of Army Aviation should, in coordination with using branches, be given research, procurement and doctrine responsibility for Army Aviation. In this way, the requirements which ground forces have for air support would be developed by air personnel, adjusted by ground personnel and supervised within a single framework of control. The Chief of Transportation would in this case no longer have total responsibility for aircraft procurement, and equipment design would be equitably coordinated among all the users. The ground forces would obtain a direct, balanced voice in Army Aviation. No longer would there exist the unfortunate situation which has Infantrymen operating on the FEBA in aircraft better suited to carry bulky cargo in rear areas. No longer would essential reconnaissance wait upon complicated maintenance. No longer would aircraft arrive too late to carry too little too short a distance. Aviation would be what it has not yet been—and would not be under the branch concept—*Army* Aviation.

In addition, Army Aviation should be completely integrated within the combat arms and services in supports. Only in this way will we forestall the fascination with branch, with pooling and with centralized control of operations—and, more important, only in this way will we remove once and for all the "borrower basis" on which field commanders must operate at this time. Pooling of aircraft at higher and higher levels may, indeed, decrease maintenance problems. I suggest that this decrease occurs partially because pooled aircraft are less frequently used than they would be were they organic. But the point to remember is that fewer maintenance problems must not become an end in itself. We are not primarily concerned with increasing maintenance ease, but with providing effective support. And organic aircraft are the only ones that can give us effective support. In addition, while centralized control of administration and procurement is fine, when applied to operations centralization is distinctly harmful. We want equanimity, not unanimity, and there is a difference between the two.

One further alteration will solve what is among the most pressing difficulties now facing Army Aviation: the "dual proficiency" requirement. The whole dual proficiency problem arises from the fact that commissioned officers pilot Army aircraft, for dual proficiency itself is by no means an extraordinary requirement. The jeep driver is also a radio-telephone operator. The NCO tank commander combines the functions of a communicator, an Artilleryman and an Ordnance shop foreman. It is only because careers are at stake that dual proficiency in Army Aviation has assumed its present proportions, that there have come to be major personnel difficulties. Even though it may be unreasonable to require of the officer aviator a performance of competitive quality in two fields, the concept of dual proficiency in itself is not unreasonable.

The obvious solution, therefore, is to substitute for the officer aviator a noncommissioned officer aviator. After all, the tradition of the officer pilot is nothing but a vestige of the days of the leather helmet, the white scarf and Eddie Rickenbacker's Hat-in-the-Ring Squadron. We have demanded

—and successfully—a high degree of technical competence from the modern NCO. There is no reason why we cannot apply the NCO technical potential to Army Aviation by assigning NCOs as aviators. In fact, the NCO is likely to develop a sustained excellence in the technical aspects of Army air which is beyond that allowed by the present system.

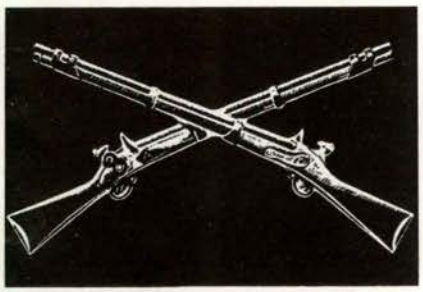
Actually, this transition from officer aviator to NCO aviator is not one of choice. The aerial vehicle—designed for operation by enlisted men—will unavoidably change the face of Army Aviation. Just as the AV invalidates the branch concept, it invalidates the commissioned pilot custom. With expanding Army Aviation, it is quite likely that, even disregarding the AV, we would soon need more pilots than our officer-procurement program could provide. Because Army Aviation will always have an auxiliary role, we cannot afford to divert to Army air sufficient resources to support a continuing officer-pilot program. Clearly, a change is in the offing. To prevent the lack of consistency and system which has sometimes characterized the development of Army Aviation in the past, we should accept the NCO pilot concept now, and we should begin a coordinated program of planning and training.

We can do this without wasting the valuable reservoir of knowledge and experience which is represented by officer pilots. This knowledge and experience would, in fact, be demanded by the type of aviation program described above. Aviation-trained officers would be used as "air officers" on the staffs of the units they supported. They would be used in research and development programs in the office of the Director of Army Aviation. They would be used as instructors in aviation-training. And, of course, they would be used to supervise, guide and direct the program as a whole.

If there is any impetus within the Army to extend Army Aviation into the area of legitimate Air Force operation, then it is not the result of Army ambition. We must not, however, seize upon the failure of the Air Force to provide the kind of support to which it is committed by law as an excuse for falling into the aviation branch trap. The branch concept promises a great deal, but in reality would operate with only the same efficiency—and sometimes with considerably less efficiency—than the present system.

What we really need is a sensible revision of this system, which creates an Army Aviation that is less than an air force or branch, but substantially more than an uncoordinated and unbalanced stepchild of necessity. Such a revision is the only way we will obtain practical responsiveness to the tactical commander's will, refinement of the equipment development process, effective use of personnel and an equitable emphasis within the Army on specific air functions.

The opinions expressed in this article are those of the author and do not necessarily reflect official thinking of the Infantry School.



Lead Lines

INFANTRY needs — and has always welcomed — unsolicited manuscripts from the field. Unfortunately, however, many of the manuscripts we receive fail, for clear reasons not associated with grasp of subject matter or competence at expression, to meet *Infantry* requirements. Perhaps some of the manuscripts are too similar to others we have received or recently published. Perhaps they only cover certain aspects of a larger problem which *Infantry* must, for reasons of space economy, treat more completely or not at all. Perhaps they aim too high or too low. All of these deficiencies really result from the author's lack of information or orientation.

To avoid such errors many professional writers use the "query letter." They submit to the magazine of their choice an outline of a proposed article, together with two or three introductory paragraphs and an explanation of the purpose and scope of the article. The editor of the publication concerned can then provide guidance which will help the author avoid needless errors of the kind described. While editorial instructions, of course, do not indicate automatic acceptance for publication, chances of acceptance are materially increased simply because the author is able to write precisely what is needed.

From time to time *Infantry* will publish suggested titles or leadlines for articles which it feels are particularly appropriate. Why don't you query us about these and other subjects which you think would be of interest to *Infantry* readers.

Trainfire: A Reappraisal

The ROTC Program

Mobility in Nuclear Warfare: How Do We Get It Today?

Principles of War for the Junior Leader

Should Attendance at Army Schools be Purely on a Competitive Basis?

The Soldier's View of NATO

Army Sports Program—Its Value to the Average Soldier

Do the Combat Arms Get Their Fair Share of Civil Schooling Quotas?

Specialize or Generalize: Should Officers be Jacks of All Trades or Masters of One?

Is OCS Producing the Kind of Officer Needed Today?

LETTERS *(Continued from page 12)*

KUDOS

Sir:

My thanks to Col John Dibble, wherever he may be, for his article "Of Words and Weeds and Nice Clear Print" [July-September 1958 issue of *Infantry*] in which he explains the assistance available from the Magazine and Book Branch, Department of the army PIO.

Where the entry fee is only a four-cent stamp, I can be considered a big-time gambler, so I pulled from a dusty file my first and only attempt at fiction and fired it off.

For this effort I have recently received a check in five figures—including the cents—and some some very complimentary letters. Considering the current price of beans and shoes, it was most welcome.

I thought perhaps other readers with similar dusty files might like to know that following Colonel Dibble's suggestion pays off . . .

ROLFE L. HILLMAN, JR.
Maj, Infantry
Fort Benning, Ga.

Sir:

. . . You will be interested to know that *Infantry* has been our guide during the reorganization that was effective 15 February 1959. . . .

. . . through *Infantry* this brigade will be better organized and trained to take its place and form on the right flank with any organization.

L. H. JOHNSON, JR.
Lt Col, Infantry
Brigade Advisor
29th Infantry Brigade (Sep)
Fort Roger, Hawaii

Sir:

Congratulations on increasing the number of issues and I hope that in the future it will become a monthly magazine.

The way tactics and weapons are changing, plus the fact that new information is hard to get here in the reserves, your magazine has saved the day in quite a few discussions already.

JOHN F. KOROSEC
MSgt Army Reserve
Cleveland, Ohio
3d Battle Group, 83d Division

Collectors and Collections

Sir:

The Fort Leavenworth Museum is endeavoring to improve its collection of U.S. Army uniforms and uniform insignia and equipment, both enlisted and officer, in use from 1827 to 1920, in all branches of the Army.

The Museum welcomes gifts of uniform and equipment items in addition to donations of pioneer relics, small arms (1800 to date), and pictures, documents or other memorabilia of any period relating to the Fort or persons or groups associated with the Fort.

Gifts will be suitably acknowledged and credit will be given to the donor in the display of his gift. Correspondence and donations should be directed to:

CURATOR
Fort Leavenworth Museum
Fort Leavenworth, Kan.

Sir:

I am collecting unit distinctive insignia, battalion crests, regimental crests, etc., i.e. the uniform insignia worn on the shoulder loops of shirts or blouses. I shall be deeply indebted to any *Infantry* reader who will send me the insignia of his unit. Please include your name, unit designation and component. Duplicates I receive will be shared with anyone else collecting such items.

NELSON BORDEN
Lt, Armor
Nebraska National Guard
Auburn, Neb.

WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Specific or General Interest to Infantrymen

M17 Gas Mask

The canisterless M17 gas mask developed by the Army Chemical Corps has been adopted as a standard item of issue. Affording protection against chemical and biological agents, and against radiological particles, the mask has lower breathing resistance, and affords superior vision and better speech transmission. Pliable pads of a newly developed lightweight filter material are enclosed in cavities molded into the rubber facepiece of the mask, and the canister is thereby eliminated.

The new M17 marks the first significant change in gas masks since 1947, when the side-canister M9 was adopted. The M17 will considerably simplify supply and stock problems, since it will not require the M9's full assortment of sizes in both left- and right-handed facepieces. M17 deliveries are expected to begin in the spring of 1960.

Plastic Bone "Glue"

A plastic glue designed to "repair" damaged bones and put a patient back on his feet in 48 hours has been developed by the Army Medical Service. This project is of particular importance to the Army since at least 60 percent of combat injuries consist of bone fractures.

The substance, a polyurethane foam, is applied by opening the break or fracture site and "glueing" the bones together again. Over a period of several months the body completely replaces the plastic with natural bone.

The polyurethane can also be used in the place of bone fragments, and in this case would be molded by the surgeon to match original bone contours.

Experiments continue to determine the long-range effects of the substance on the body.

Miniaturization

Development of an electric light slightly larger than a pinhead and a radio transmitter the size of a pencil eraser has been announced by Department of the Army.

The lamp, one-tenth of an inch long and three-hundredths of an inch in diameter, may be used for dial-lighting, in medical endoscopes, in industrial probes and in optical systems requiring a near-point source of light.

The transmitter is used in ballistic studies to transmit back to ground receivers the temperature of an artillery shell in flight. Other applications are being considered.

Surface-to-air missile launcher.

The Redeye

A surface-to-air shoulder-fired guided missile system called Redeye is now under development. It is designed to provide combat troops with the means to destroy low-flying strafing or bombing aircraft.

Redeye, effective against either jets or conventional aircraft, may be employed at altitudes and ranges commensurate with defense of field army positions. The weapons system is approximately four feet long, about three inches in diameter and weighs approximately 20 pounds. The launch tube serves as the shipping container for the missile.

The missile itself is a composite of propellant, high-explosive warhead and electronic guidance system. Both the missile and its launcher can be easily transported by one man across rugged terrain.

Radars Developed and Improved

The Silent Sentry AN/PPS–4 frontline radar has been transistorized and converted from generator-supply to battery-supply. These improvements contribute to a reduction in weight and noise, while enhancing portability.

The Silent Sentry translates movement of tanks, trucks and troops into characteristic sounds in the headset worn by the soldier operator. Using these "electronic ears," the operator is able to pick up and pinpoint the movement of targets up to three miles away.

In addition, the Army has developed a new, ultrasensitive frontline radar which can spot a rolling tank, truck or jeep up to ten miles away, or a crawling enemy soldier up to two miles away. This type of radar also produces characteristic headset tones as a target identification, but in addition it creates patterns on a radar scope which provide more precise information on target position and direction of movement.

This new set, the AN/TPS–25, scans a 30-degree sector. When the operator receives initial identification signals, he can narrow the beam and zero in on the target. A tiny indicator light mounted under a map of the area under surveillance shows the object's exact ground position.

The AN/TPS–25 will give the Army its first ground-to-ground radar which can detect moving targets at very long ranges.

Lacrosse forward command station.

Lacrosse Units

The Army's first Lacrosse missile battalion has received its equipment and a second Lacrosse battalion has been activated during ceremonies at Fort Sill.

The Lacrosse is the Army's surface-to-surface missile intended for close support in combat. It is a swept-fin, solid-propellant missile launched from a mobile launcher on a standard 2½-ton truck. It is guided to its target from a forward command station and has a nuclear and non-nuclear capability. The missile can be prepared for firing in a matter of minutes and is used to supplement tactical air or conventional artillery fire.

M151 truck.

Quarter-ton Truck

Deliveries of a new ¼-ton truck, designed to replace the jeep as the Army's tactical, utility and reconnaissance vehicle, will begin early next year. The M151 truck, lighter than the jeep, is air-droppable and features rugged construction, cross-country mobility, low fuel consumption and a high degree of economy in maintenance. Increased performance is provided by a new overhead-value engine and a new four-speed forward transmission.

Amphibious truck.

LARC–5

The Army's newest lightweight, highly mobile amphibian, the all-aluminum LARC–5 (lighter, amphibious, resupply, cargo) is undergoing tests at Fort Custer, Michigan.

Designed to replace the World War II DUKW, the LARC–5 is 35 feet long, 9 feet wide and is powered by a 270 horsepower engine. It has a water speed of approximately 10 mph and a land speed of between 30 and 35 mph. The LARC-5 has a five-ton load capacity.

Boomerang

Use of a small helicopter has been proposed as an anti-tank weapon. Called Boomerang, the device is actually a flying bomb which weighs about 70 pounds and is fitted with rotors approximately six feet long.

The Boomerang would be guided to its target by remote control and would employ an infrared homing device.

Missile-Support Vehicle

An experimental multi-purpose vehicle designed to reduce operating costs and simplify the handling of Army missile components at launching sites is now being evaluated for use at Nike installations.

Named the "Telefork," this new addition to the Army Quartermaster family of ground-support equipment for missiles serves as a forklift, a tractor and a crane. Developed originally as a rough-terrain forklift truck, the Telefork has a lifting capacity of 10,000 pounds, can pull 19,000 pounds and can hoist 10,000 pounds with its slewing crane boom.

Instructional Aids

Monthly List of Instructional Material

The *Monthly List*, an official publication of the Infantry School, is produced to facilitate the coordination of Infantry doctrine among Army service schools and to offer Infantry School instructional materials to Army agencies which conduct, support or monitor School-type instruction. The *Monthly List* is distributed under the provisions of USCONARC Memorandum Number 48, dated 14 October 1958, and each authorized addressee is furnished one gratuitous copy of any item listed which he specifically requests for official use.

Infantry reproduces items listed in current issues of the *List* as a reader service. Items which are preceded by an asterisk may be purchased from the Book Department, USAIS, Fort Benning, Ga., at the prices indicated, by anyone who is a member of the United States Armed Forces and who so states when ordering. The official military unit or agency address should be included with all such orders since franked mail cannot be sent to a private residence. If a personal address is given, the cost of postage must be enclosed with the order.

Items not marked with an asterisk are produced in limited quantities for resident instruction at the Infantry School and are not available for purchase. However, a unit or agency having a strong official need for any of these items may request a gratuitous copy from the Doctrine Publications Office, USAIS, Fort Benning, Ga. Such requests must state the purpose for which the material is needed and must include the official title and unit or agency address of the requester. Properly justified requests will be filled so long as the supply lasts.

***Infantry Reference Data.** A handbook containing charts, tables and diagrams of Infantry organization, and including pertinent reference data for Infantry commanders and staff sections. $1.20.

***Commander's Handbook for Preventive Maintenance.** A handbook outlining a course of instruction which will qualify Infantry commanders to plan, direct, control and evaluate results of inspections of motor vehicles, and providing reference material for personnel interested in improving their professional qualifications in motor vehicle maintenance and operation. $1.60.

***Operations and Training Handbook.** A handbook on operations and training including sections on organization, command and staff action, operations estimate, operation orders, overlay technique, troop movements, air-ground operations, training management, and records and reports. $2.25.

***Artillery Handbook.** Handbook on Field Artillery organization, characteristics of weapons, tactical employment, fire support planning and coordination, fire requests and adjustment of fire, and air defense artillery. 60¢

***Infantry Division Battle Group Organization Pamphlet.** A pamphlet on the organization of the Infantry division battle group including diagrams and general guidance data. 50¢.

***Infantry and Arborne Division Battle Groups,** 6020–A4, 6025–A2, 6035–A3. An instructional text covering Airborne and Infantry division battle groups, including organization, offense and defense, retrograde and breakout operations, airborne operations, fire support, task forces and troop leading procedures. $1.20.

106mm Rifle, M40A1, ST 7–178. A Special Text covering organization and crew drill, mechanical training, maintenance, fire control instruments, marksmanship and technique of fire.

Combat Intelligence, 6206–B3. A conference and practical exercise covering importance of combat intelligence in formulation of tactical decisions; analysis of weather and terrain; analysis of information on enemy strength, location and activity; handling of prisoners of war and correct intelligence reporting procedures.

Intelligence and Patrol Reporting, 6237–S2. A map exercise used in conjunction with training film and covering preparation of reconnaissance patrol reports.

March Planning, 6324–S3. A conference and practical exercise on planning daylight and night motor marches including planning of route reconnaissance and use of assembled data in preparation of strip maps.

Officer Efficiency Report, 6410–I2–USAR(RDT), two

hours. A conference and practical exercise on the purpose, use and format of officer efficiency reports.

Traffic Control, 6525–A1, USAR(RDT), one hour. A practical exercise covering highway traffic control plans and orders.

New Training Literature & Films

THE FOLLOWING manuals and training literature have recently been printed by Department of the Army and are available to instructors through normal supply channels.

Manuals

TC 20–1, Airmobile Operations (new).

ATP 7–12, Headquarters and Headquarters Company, Infantry Division Battle Group (new).

ATP 20–52, Headquarters and Headquarters Detachment, Replacement Group; Headquarters and Headquarters Detachment, Replacement Battalion; Replacement Company (new).

ATT 7–11, Airborne Division Battle Group (new).

ATT 7–168, Pathfinder Team (new).

ATT 57–1, Air Movement (new).

ASubjScd 7–11, Advanced Rifle Marksmanship (new).

ASubjScd 7–20, Rifle Squad Tactical Exercises (revision).

ASubjScd 7–40, Rifle Company Tactical Exercises (revision).

ASubjScd 7–52, Heavy-Drop Technques (revision).

ASubjScd 21–30, 3.5-inch Rocket Launcher, M20A1 and M20A1B1 (revision).

ASubjScd 21–34, Submachinegun, Caliber .45, M3 and M3A1.

ASubjScd 21–35, Machinegun, Caliber .30, M1919A4 and M1919A6.

ASubjScd 7–113.1, MOS Technical Training of Infantry Operations and Intelligence Specialist MOS 113.1 —Counterfire Specialist, Counterfire Computer, Counterfire Plotter.

The following manuals and training literature have been forwarded to Department of the Army for publication:

FM 7–24, Communication in Infantry and Airborne Divisions (revision).

FM 7–40, Infantry and Airborne Division Battle Groups (revision).

FM 21–5, Military Training (revision).

FM 23–43, 90mm, Full-Tracked, Self-Propelled Gun, M56 (new).

FM 57–21, Headquarters and Headquarters Company, Airborne Division Battle Group (new).

ATP 7–32, Headquarters and Headquarters Company, Airborne Division Battle Group (new).

ATP 7–52, Headquarters and Headquarters Company, Infantry Brigade, Separate (new).

ATP 57–6, Headquarters and Headquarters Company, Airborne Division Command and Control Battalion; Airborne Division Administrative Company (new).

ATT 7–2–1, Security Squad and Security Platoon, Headquarters and Headquarters Company, Infantry Division (TOE 7–2T) (new).

ATT 7–17, Rifle Company, Infantry and Airborne Division Battle Groups (new).

ATT 7–52, Security Platoon, Headquarters and Headquarters Company, Infantry Brigade, Separate (new).

ATT 57–6, Security Platoon and Band, Headquarters and Headquarters Company, Airborne Division Command and Control Batallion (new).

ASubjScd 7–7, 81mm Mortar Squad Tactical Training (revision).

ASubjScd 7–8, 106mm Recoilless Rifle Squad Tactical Training (revision).

ASubjScd 7–15, 106mm Rifle, M40A1 (revision).

ASubjScd 7–17, 81mm Mortar, M29 (revision).

ASubjScd 7–18, Flame Warfare, Flame Thrower, M2A1 (revision).

ASubjScd 7–19, Sniperscope and Other Infrared Equipment (revision).

ASubjScd 7–30, Rifle Platoon Tactical Exercises (revision).

ASubjScd 7–51, Airborne Proficiency (revision).

ASubjScd 7–53, Drop Zone Assembly (revision).

ASubjScd 21–29, Hand and Rifle Grenades (revision).

ASubjScd 21–31, U.S. Rifle, Caliber .30, M1 (revision).

ASubjScd 21–32, Carbine, Caliber .30, M1, M1A1, M2 and M3 (revision).

ASubjScd 21–36, Technique of Rifle Fire and Combat Firing (new).

ASubjScd 22–1, Basic Leadership Training, The Leader's Course (new).

The following field manuals and other training texts are being written or rewritten. Publication may be expected later this year, or during 1960.

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Groups (revision).

FM 7–21, Headquarters and Headquarters Company, Infantry Division Battle Group (revision).

FM 7–( ), Combat Support Company, Infantry Division Battle Group (new).

FM 20–( ), Military Dog Training and Employment (new).

FM 20–( ), Ground Flame Warfare (new).

FM 22–5, C1, Drill and Ceremonies (change).

FM 23–( ), U.S. Rifle, 7.62mm, M14 (new).

FM 23–5, C1, U.S. Rifle Caliber .30, M1 (change).

FM 23–15, C4, Browning Automatic Rifle, Caliber .30, M1918A2 (change).

FM 23–82, C1, 106mm Rifle, M40A1 (change).

FM 23–92, 4.2-inch Mortar, M2 (revision).

FM 31–50, Combat in Fortified Areas and Towns (revision).

FM 57–35, Army Transport Aviation, Combat Operations (revision).

TM 57–210 and **TM–210A,** Air Movement of Troops and Equipment (revision).

TC 7–( ), Functioning and Employment, Antipersonnel Weapon (CLAYMORE), M18 and T48E1 (new).

TC 57–( ), Pathfinder Techniques (new).

TC ( )–( ), DAVY CROCKETT Weapons Systems in the Infantry and Airborne Divisions (new).

ATP 7–2, C1, Headquarters and Headquarters Company and Administrative Company, Infantry Division (change).

ATP 7–12, Headquarters and Headquarters Company, Infantry Division Battle Group (revision).

ATP 7–19, Combat Support Company, Infantry Division Battle Group (new).

ATP 20–5, ATP for Field Exercises and Maneuvers (revision).

ATP 21–114, BCTP for Male Military Personnel without Prior Service (revision).

ATT 7–12, Headquarters and Headquarters Company, Infantry and Airborne Division Battle Groups (new).

ATT 7–33, S2 Section, Battle Group (TOE 7–12T ROCID) (revision).

ASubjScd, 7–1, Organization, Mission and Employment of Regiment (revision).

ASubjScd 7–3, Weapons Squad Tactical Training (revision).

ASubjScd 7–9, Patrolling (revision).

ASubjScd 7–21, Weapons Squad Tactical Exercises (revision).

ASubjScd 7–( ), Assault Gun Platoon Tactical Exercises (new).

ASubjScd 7–( ), 90mm Full-Tracked, Self-Propelled Gun, M56 (new).

ASubjScd ( )–( ), 4.2-Inch Mortar Qualification (revision).

ASubjScd 17–56, Tactical Exercises of 81mm Mortar Platoon (revision).

ASubjScd 21–2, Drill and Ceremonies (revision).

ASubjScd 21–5, Guard Duty (revision).

ASubjScd 21–14, Military Courtesy and Customs (revision).

ASubjScd 21–17, Inspections (revision).

ASubjScd 21–20, Individual Day and Night Training (revision).

ASubjScd 21–25, Rifle Squad Tactical Training (revision).

ASubjScd 21–26, Squad Patrolling (revision).

ASubjScd 21–( ), Physical Training (new).

The following manuals and training literature have been submitted to United States Continental Army Command for review and approval.

TC 23–( ), SS10 Guided Missile (Infantry and Armor Units) (new).

ATP 7–17, C1, Rifle Company, Infantry and Airborne Division Battle Group; Light Weapons Infantryman, Heavy Weapons Infantryman (change).

ATT 7–62, Headquarters and Headquarters Detach-

You can help Infantry magazine

Infantry is your professional journal, and only continuous support by all Infantrymen will assure its steady growth. One important way you can help is by writing for *Infantry*. You don't have to be a professional author—what you have to say as a professional soldier can be more important than the manner in which you say it. If you have knowledge or experience which will help to improve the Infantry, or which will enable other Infantrymen to do a better job, get it down on paper. Our editorial staff will help you to put it in suitable form for publication. Manuscripts submitted to *Infantry* should be typed, double-spaced, on one side of either legal or standard sized paper. A brief biographical sketch of the author should accompany every manuscript. *Infantry* pays for all the material it publishes. Manuscripts may be sent directly to *Infantry,* Box F, Fort Benning, Ga.

You can write . . . you should write . . . why not get started today?

ment, Band and Security Section, Infantry Division Trains and Infantry Division Band (new).

FM 21–20, C1, Physical Training (change).

FM 21–76, C1, Survival (change).

FM 23–30, Grenades and Pyrotechnics (revision).

TM 21–200, C1, Physical Conditioning (change).

Training Films

The following training films have been approved for release to requesting units:

CF 10–47, Inspection and Handling of Food at Mess Level, 24 minutes.

MF 3–9027, The CBR Story, 37 minutes.

MF 12–9026, 90 Day Wondering, 8 minutes.

MF 20–9040A, A Sharper Sword and a Stronger Shield, 43 minutes.

MF 45–9089, World War I—A Documentary of the Role of the U.S.A., 28 minutes.

MF 46–9029, Helicopter Arctic Operations, 29 minutes.

TF 7–2750, Troop Movement by Air, Air Force Aircraft, 24 minutes.

TF 7–2760, Range Management, 17 minutes.

TF 8–2713, Management of Mass Casualties—Part IX—Burns, 15 minutes.

TF 11–2755, Installation and Operation of Switchboard SB–22PT, 18 minutes.

TF 11–2756, Installation and Operation of Switchboard SB–86PT, 27 minutes.

TF 11–2764, Radio Relay Equipment AN/TRC–35 and 36, Part II—Tuning of the Transmitter, 30 minutes.

TF 11–2765, Radio Relay Equipment AN/TRC–35, Part III—Tuning of the Receiver, 15 minutes.

TF 11–2767, Radio Relay Equipment AN/TRC–35 and 36—Part V—Installation of Antenna System, 24 minutes.

TF 16–2742, Chastity, 8 minutes.

TF 19–2751, Military Prisoners—Part I—Duties of Guards within a Confinement Facility, 23 minutes.

TF 19–2752, Military Prisoners—Part II—Duties of Prisoner Guards outside a Confinement Facility, 19 minutes.

TF 19–2753, Military Prisoners—Part III—Movement of Military Prisoners, 20 minutes.

TF 20–2561, The Pentomic Army, 50 minutes.

TF 44–2610, Nike Hercules Sam Battalion—Part I—Emplacement of the Monorail Launcher, 19 minutes.

TF 44–2611, Nike Hercules Sam Battalion—Part III Preparation of the Monorail Launcher, 13 minutes.

TF 44–2612, Nike Hercules Sam Battalion Reload Procedures, 15 minutes.

TF 44–2613, Nike Hercules Sam Battalion, Battery Control Area, Emplacement and March Order of the Nike Acquisition Radar, 38 minutes.

TF 44–2625, Nike Radar Test Set—Part I—Preliminary Adjustments, 4 minutes.

TF 44–2626, Nike Radar Test Set—Part II—Measurement and Adjustment of Receiver Frequency and Sensitivity of Tracking Radars, 5 minutes.

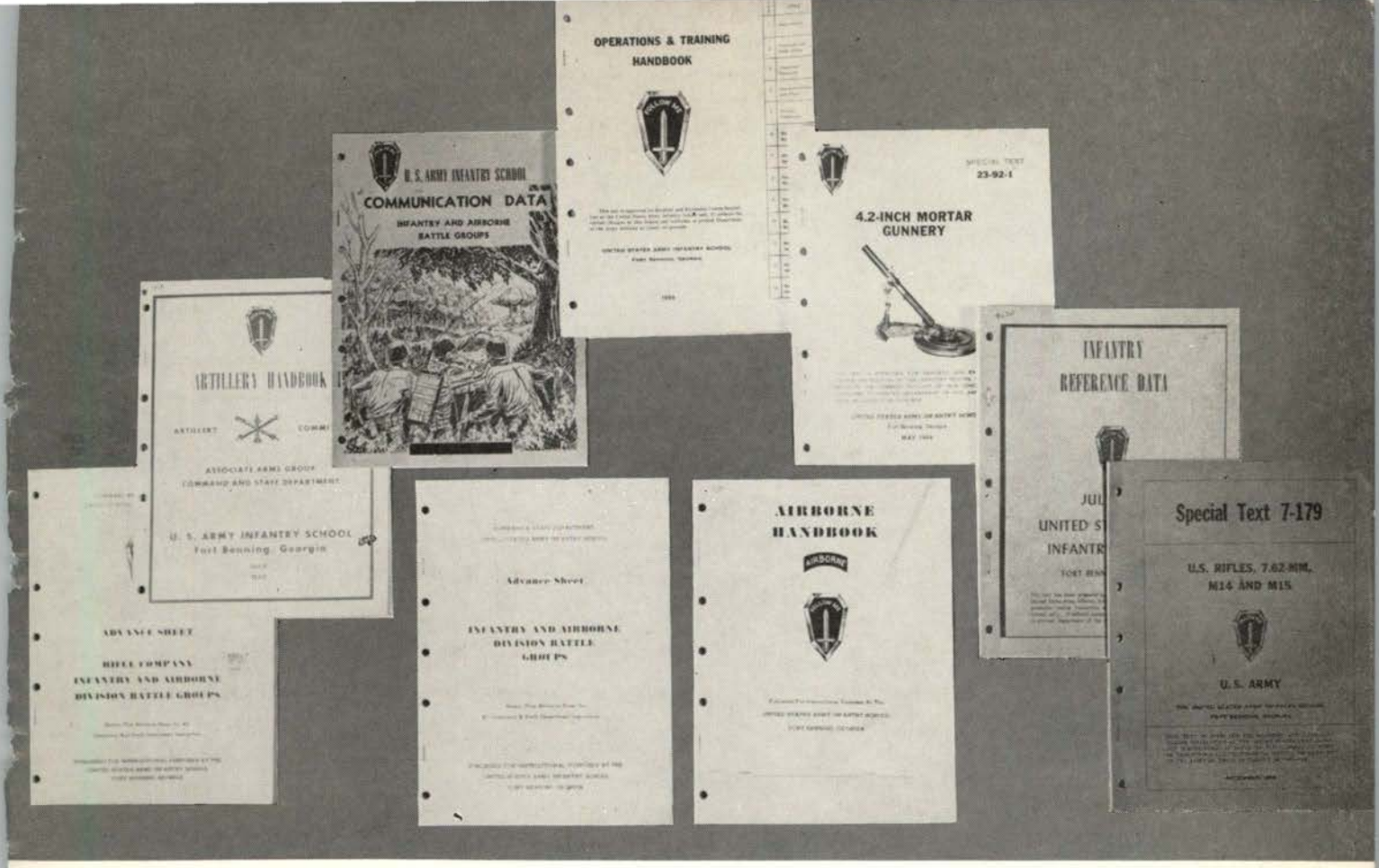
TF 44–2627, Nike Radar Test Set—Part III—Measurement and Adjustment of Transmitter Frequency and Power of Tracking Radars, 3 minutes.

TF 44–2628, Nike System, Automatic Frequency Control Adjustment, 8 minutes.

TF 44–2630, Nike Ajax System, Tracking Radar, Range Unit Zero and Slope Adjustment, 4 minutes.

TF 44–2631, Nike System: Orientation and Synchronization, Tracking Radar Collimation, Data Dial Method, 6 minutes.

TF 44–2633, Nike Ajax Missile, Using UDMH as Starting Fluid, 6 minutes.



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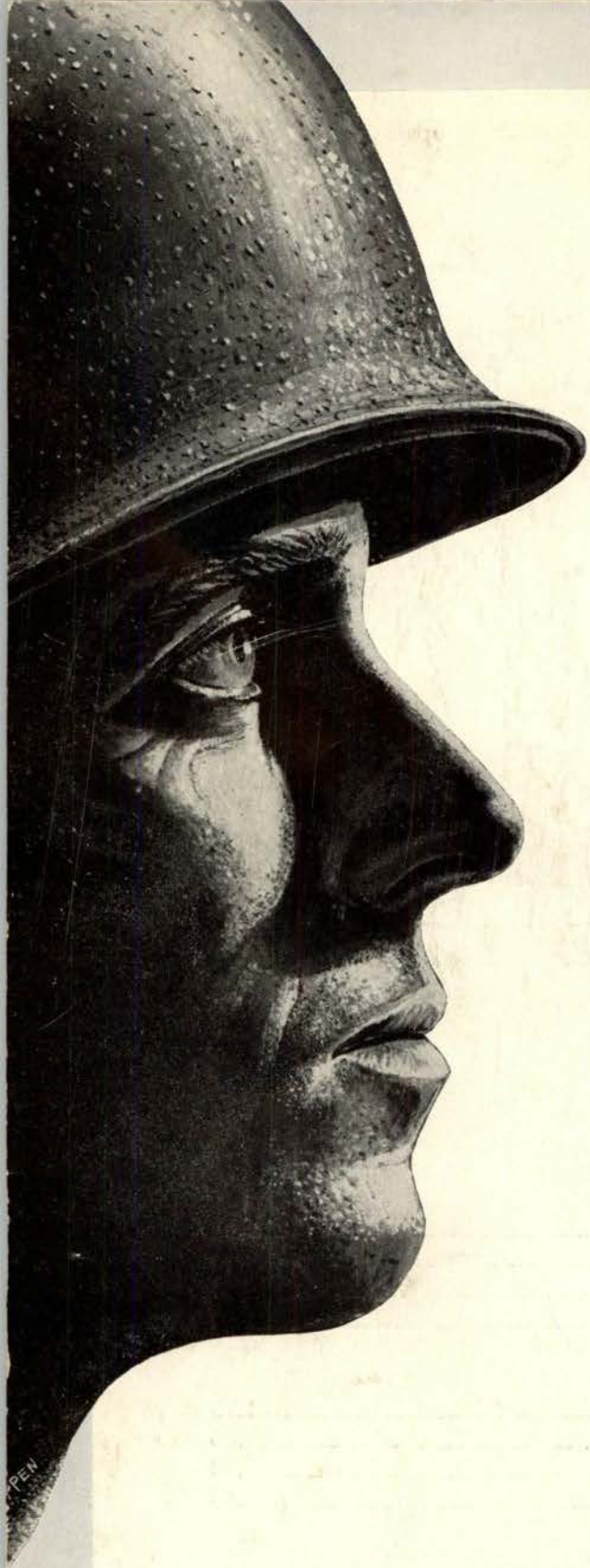
7–179—U.S. Rifles, 7.62mm, M14 and M15	.45
Communication Data	1.10
Infantry Reference Data	1.20

To obtain these items write: The Book Dept., U.S. Army Infantry School, Fort Benning, Ga.

Send order with full purchase price plus 5% for purchases over $5.00 or a minimum of $ .25 for postage and handling charges.



IN FLANDERS FIELDS

In Flanders Fields the poppies blow
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie
In Flanders fields.

Take up our quarrel with the foe:
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

John McCrae

VETERANS' DAY
November 11th