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Author: U.S. Army, 82nd Airborne Division

Abstract: The following is a statement by CPT Frank Brown, Pathfinder Officer, of XVIII Corps, 1st Allied Airborne Army during a conference held on 20 February 1945.

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CONFERENCE

20 February 1945

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The following statements were made by Pathfinder Officer, Capt. Frank Brown, XVIII Corps, 1st Allied Airborne Army.

The basis for organization is one pathfinder stick for each parachute infantry battalion, so far we have found that to be enough. Nine enlisted men and one officer from each battalion. These men are selected by units and sent to the Group Pathfinder School. These men, after the initial school period report back to units and stay until about one week before the operation.

They are taught the nomenclature and operation of CRN-4, the Rebecca Eureka, and the Bups Beacon. The whole thing generally takes about two weeks. If you spend more than two hours a day the men get bored and fed up with it. Training manual furnished to each man. Two hours a day for code - 16 to 20 hours of code is enough to teach each man the complete Morse Code, that is all he ever has to know, no great code speed necessary.

on most
code,
74B

We prefer men who have had previous signal training, they learn more readily.

Once a man has become familiar with the various pieces, lighting, panels, smoke, etc., he then goes to work with the Air Corps. (About a week is necessary for the training period providing you have good weather - the men go out as teams.)

After that the various divisions usually assign teams of one division to one squadron operations officer and the men go out and set up their equipment in the field and drop dummies on it. After that drops are plotted on the map. Pilots and pathfinders get together and see why the dummies didn't come down where they were supposed to. This gives practice in figuring wind drift, weather and equipment relative to the position they expect to drop on.

During an afternoon's training, we have three aircraft dropping -- one cargo chute delivery and two more for equipment.

Another phase of joint training is to set up the equipment at a spot which the pilot don't know about at all and then the pilots come over using two aids, Radar and Radio.

For the first week or two weeks, the pilots are getting a whole lot more training than the men are. After the pathfinders become familiar with placing the equipment, we try to give them three actual drops.

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The senior airborne officer who is going to the DZ usually gives the senior pathfinder officer going to that DZ that information. (Col. DeGavre asked a question relative to who determines the flight line and whether the Air Corps expect the pathfinders to allow for wind drift, etc.) If the wind changes, it is our responsibility to so place the aids on the ground to get them in there. Memorandum specifically states that the Air Corps must be prepared to drop in the event that the Pathfinders are neutralized. The responsibility for delivery of troops is the responsibility of the Troop Carrier. There is no way for a troop carrier to know which way a wind speed will be two hundred miles away within the times it takes to go that distance the wind can easily change. In other words, when you decide on the ground where they are to go you also decide it for the Troop Carrier. Troop Carrier gauges the field, I so place the aids on the DZ that the troops will drop where the senior airborne commander desires they are to be dropped. Troop Carrier accepts responsibility for acts of our personnel.

After the men have received training on the ground setting up the equipment and are familiar with it, they have three drops, day light, using the same type aids as day-light drop equipment, dusk drop and after that a night drop. Sometimes they have as many as five to six drops while they are set up because we allow them to run their own training and planning schedules. They use good common horse-sense about the jumping and we have had only two men injured over a period of a year of training jumps.

The 82d Division has made it a policy to attach one M. C. man to each of their sticks, first as a pathfinder and second a medical man. He carries side arms and ammunition and everything else when he goes in but as far as the men are concerned he is a m.c. man and it is good for their morale.

No spare personnel allowed for casualties in training.

As far as jumping equipment is concerned, out of a 10-man stick you have an officer who doesn't jump anything except his combat load and 536 radio if he wants communication with other officers in the three sticks. Behind your team leader you jump your two CMN-4s because they are the two bulkiest pieces of equipment, it takes two men to set them up usually. One CMN-4 is jumped for a spare and is not set up. Your officer jump-master helps them set up the piece of equipment.

In Normandy when we used the Bups Beacon the jump-master jumped it himself in a leg bag. The whole thing weighs about 70 lbs.

No. 4 and 5 men jump two Kurekas.

No. 6, 7, 8, and 9 carry lights or panels depending on whether it is a day or night drop. Night drop they jump Halifane lights in canvas bags under the reserve chute (this is for the purpose of better balance).

The last man is the NCO in charge of visual signals on the ground. He jumps the same equipment as the other men. You need seven lights which necessitates three men dropping with two lights. We made it a policy to let each man jump two each so you have a total of eight lights in case of one piece being broken you have a spare.

Spare batteries and smoke are carried in a door bundle. You usually take three cases of smoke. If you pack the boxes one on top of the other and wrap with canvas you can usually pack in 30 - 32 grenades instead of 25. The smoke and batteries for the initial jump are carried by the men. Extra equipment is jumped in a door bundle and is pushed out on the green light. You can recover the latter at any time. The door bundle is dropped with the pathfinder stick.

On the ground you set up a "T" of lights with Eureka's position head of the T. Cross bar of "T" is the go point.


We never rejoin the units initially. We go to division headquarters. One officer is responsible for pathfinder work in the division. In the 82d it was the G-3. You go to the division and report your status. The information is given to AG because you have men from a lot of different units. After you have done that, they assign another mission to you, usually for re-supply. Re-supply schedule is usually quite long and there are a lot of dates and times and everything else to learn. It is fairly simple to memorize the time for initial drops or for glider landings but when you start trying to memorize them for pathfinder drops and glider landings for a week's re-supply, you usually get some of them mixed up. You go to the Assistant Commander and he gives you that information or he sends you to the G-4 and they give you that information.

Teams sometimes are used for recovering supplies. One the equipment is set up, all you actually need is one man to keep the smoke grenades. The men just went to work recovering supplies.

No. 6, 7, 8, and 9 have lights: The light has a 25-foot extension cord and the light battery has a telegraph key so it can be coded. He goes away from the box. The tail light is the only one coded for identification purposes, and is coded with the letters designating your drop zone. In the daytime you use colored letter on the drop zone with panels. All of the instruments are coded with the same code letters that designates your drop zone.

Halifane light is issued by the British, has a big wooden tripod. We took the tripods from XC-11 and used those to mount the lights on. **Halifane* The lights should have two small bubbles on the base of them. Light can be shielded 180° with only one half of the light toward the direction from which the aircraft will approach the zone.

The Troop Carrier Command provides you with the ^{light} unit, can be seen about 15 miles for marking the drop zone or for re-supply.



How are the lights used to mark glider landings? You move the lights down the field so that the gliders don't crash into each other. You bring in a certain number and then move the lights back. In the daytime you have to change landingstrips. The gliders cut loose over the cross-bar. The individual briefing in every case is different.

Relative time schedule of turning on the 3 devices:

Your Radar and Radio equipment is turned on just as soon as you can set it up on the ground. The Eureka: (As soon as he hits the dirt), the #2 man scouts around and finds the best pieces of ground for the head of the "T". After the equipment is set up #1 man codes it and #2 furnishes security for the operator and the set.

Briefing:

As soon as the division field order is published, we take it and brief the men on the division missions as a whole so they know what the mission of the group that drops on that particular DZ is. Then they study the map of the drop zone itself. We have been making each man draw sketches to get him totally familiar with the DZ and vicinity.

The main way to tell whether you are in the right place or not is a system that is used between the pilot and jump master. The navigator makes the jump master a strip map and picks out check points that both of them are going to use. He puts down the time that the aircraft should arrive there, he may be off a minute but it will give a good check. You check all the way in. Both the jump master and the next two men behind him can see out on the ground and see the strip map on the aircraft. The pilot gives you a bail-out bell, a red light and a green light, all at the same time in case you have to get out of the aircraft and lighten the load. (Usually in case the plane is badly shot up.) When you get on the ground you destroy your equipment and try and remember what you were told about security in case of capture. If you have been able to follow check points all along the course and get a normal signal to go and you can't orient yourself immediately on the ground, you go ahead and put your lights in anyway assuming you have been dropped in the correct spot.

We have never had any gliders miss a drop zone. Once you get a group of airplanes within four miles - two minutes away, unless it is absolutely socked in they can pick up LZ's. We dropped on G, 3/4 of a mile off the drop zone in one case. We were being fired on before we reached the earth, went ahead and set up the lights which were shot out, only had one light left but they brought them in anyway.

Our contention is that a radio aid within a half mile or a mile of the actual drop zone causing a drop together is a lot better than nothing at all and better than a lot of people running around scattered.

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We were dropped a little short and south of the drop zone. The pilots flew on over the Eureka troops and dropped closer to the DZ. You could use timing for this. Figure the time you are supposed to drop and if you have decided its in the wrong place, pilots can say it should be about there and can go on about a minute or two minutes further. It is up to the Group Commander as to where he will drop his troops.

How long ahead did the pathfinders go in? From an hour to 45 minutes. You have to pick a place for the lights where they can be seen.

Twenty to thirty minutes in France. You turn on the lights when you hear the aircraft. Not more than five minutes prior to the time the drop is scheduled. You gauge by hearing the aircraft. Your lead aircraft and deputy leader has Rebecca equipment and can tell when he is anywhere from one to two miles away from the drop zone. It is very hard for troops on ground to tell the distance. You can tell when the Eureka starts triggering but that may happen from 15 to 20 miles away.

Set up CRN-4 and Eureka simultaneously. CRN-4 is not so critical. The main thing is to get the two pieces of equipment up so the pilots begin to receive you and know you are on the ground. The Eureka is the more important than the visual signals. After laying down the panel in daylight the men push out as security positions around the Eureka and CRN-4. They carry Thompson Submachine Guns, M-1, and pistols.

No. 6, 7, 8, 9, and 10 men have grenade launchers on their rifles, too. The whole outfit can fight except your code man. We have never carried Bazookas.


What can you do if you get normal signals and are not sure you are on DZ? The only thing you can do if you are not sure is set up equipment anyway and hope the Troop Carrier will have a time and place check and disregard you.

When we landed in Holland one of our aircraft was shot down and the Eureka captured. That Eureka was set up on the right frequency to have re-supply and men dropped but was on a point three to six miles away from where expected. The Eureka wasn't coded so the pilots disregarded it, went on to the right drop zone.

Have you ever in your operations had any FFI or underground people meet you? Two minutes after we were on the ground in Holland we were surrounded by Dutch people.

I may have the wrong attitude but I have talked so much with the pilots and navigators and they have dropped us so close that I always take it for granted I am going to be dropped in the right place.

The use of a radio would not be worth its weight and would further violate your security. (Col. Ellis asked a question relative to the value of voice communication.)



Bastogne: Twenty men went in with the pathfinder equipment after the unit was completely cut off. The gliders came in at dusk that night, were used to take in communications equipment, surgeons and medical supplies. Eight hundred aircraft or supply and fifty gliders were carried into Bastogne and 32 aircraft dropped off the DZ. Lost nearly that many shot down.

Equipment:

The range on the Eureka should be run up to 50 miles. By using a British mast they can get 80 - 90 - 100 miles.

Definite requirement for containers for carrying jumping equipment which can be carried on the ground. The Bups Beacon up at M.I.T. weighs 70 lbs. and can be broken down so that the battery can be taken away from the set, gives the battery weight of about 25 lbs. If you can devise a leg bag in which the battery can be jumped, you will have definitely helped us.

Bupx APS-10 - Beacon designed to be dropped as a paratroop beacon. Production schedule - 50 by 1st of April, July 575.

Beacon designed for drop zones in combination with APS-10 will show a blip from the beacon so you have a definite helping point.

Mr. Arthur Roberts, Aviation Laboratory, M.I.T., (Phone Eliot 3311 - Extension 1651) will either send the beacon itself or send a mock-up that is the same size and weight.

From the time you hit the ground you use the Halifane, the Eureka and CRN-4. Do you have any recommendations as to modifications in those? The Eureka would be better with longer range.

Recommend smaller and lighter base plate for 81mm mortar.

What do you feel about giving pathfinders an additional weapon? I think they should have them. I would take about 5 Thompson Submachine guns and 5 M-1s.

Antenna of CRN-4 is mounted in a ball and socket joint on top of the set itself. If you can build us an antenna that can be put up faster, be more rigid and be a single piece of equipment without guys you will have helped us.

Would you recommend any changes in Halifane lights based on the fact that we will soon get these other lights? No.

This B-9 infrared beacon, I believe, is the answer to dropping at night. There is a definite requirement for a viewer in the aircraft. Depth perception is very poor.

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When a field order is published for a practice operation or for a combat operation, it lays down the color of smoke, lights, etc.

Pathfinders are briefed 24 hours ahead of the actual operation and sealed in but prior to that time they are studying maps without knowing location.

Pathfinders go back to the unit after they have finished training and from time to time they come back for training.

Here the discussion was about the Movie that TCC is making and the various equipment carried into combat; Men carry no gas masks or field bags. NCO wears a bar an inch wide and three inches long across the back of his camouflaged steel helmet. The officers identifying bar is the same size but runs up and down.

82d Division has made extensive use of marking with luminous tape.