



3 Wind machine

Figure 32—Continued.

- (i) The teams then recover to the starting line.
- (j) The procedure is repeated until the jumper has at least two drags. Then the details will be switched by the principal instructor.

Section XI. 250-FOOT TOWER TRAINING

34. General

The free tower is a steel structure 250 feet high. At the top of the tower there are four projections or arms. These arms are used to lift and release parachute trainees using a special canopy. Because of wind conditions only three of the four arms can be used at any one time. The base area of the tower is kept in a plowed condition to minimize the possibility of student injury upon landing. The canopies (J-1 type) are attached to a large spreader ring. The canopy has an aluminum peak which is inserted into a lifting block of the spreader ring assembly, making the peak the sole point of suspension. For safety reasons, a safety line is attached to the jumper. This line goes over the spreader ring. The parachutist is carried aloft with the canopy in the open position (fig. 33).

35. Purpose

The free tower is designed to give the student practice in control of the parachute during descent and in execution of a parachute landing fall under conditions approximating those of an actual parachute jump. Proficiency in landing falls and suspended harness training is obtained prior to making free tower jumps.

36. Conduct of Training

a. Training Objectives (Grading Points).

- (1) To test the student's ability to respond to commands while being hauled aloft and upon being dropped free from the top of the tower.
- (2) To test the student's ability to control his parachute during descent.
- (3) To test the student's ability to execute a correct parachute landing fall.

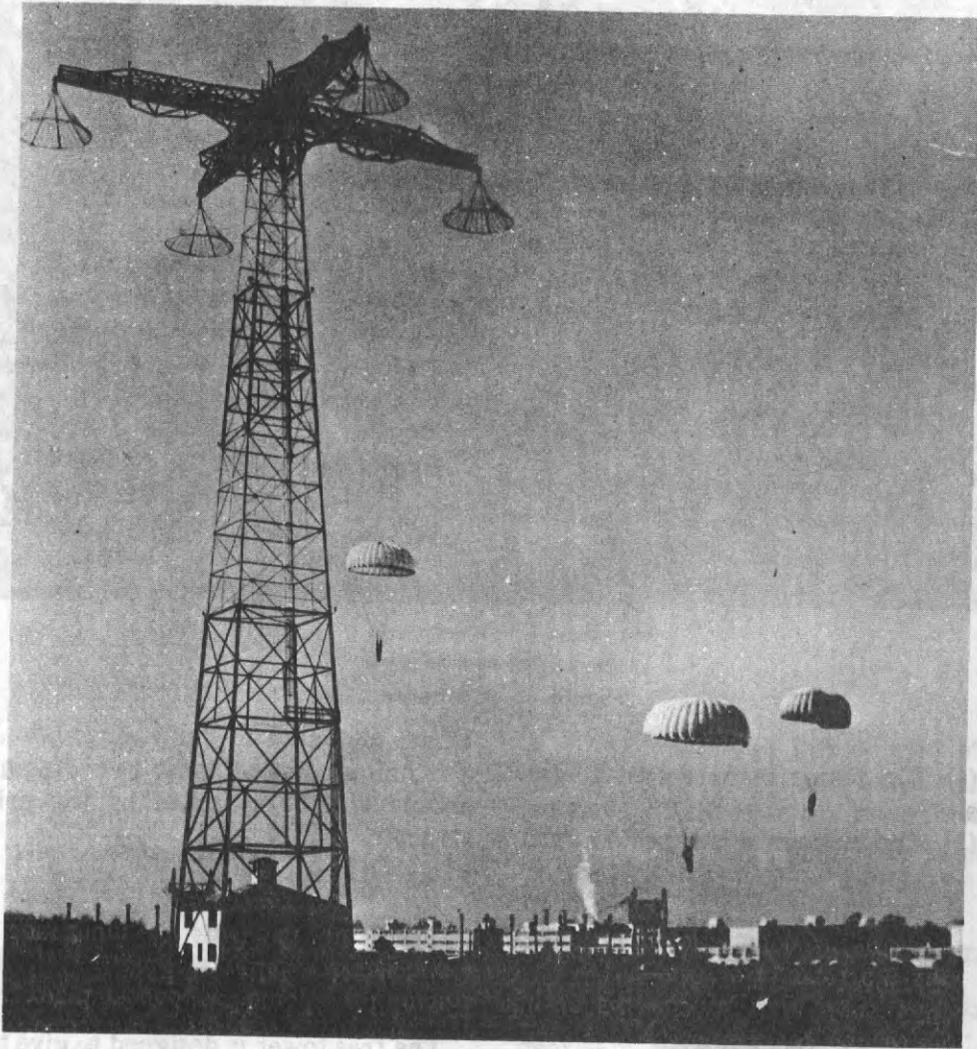


Figure 33. The 250-foot free tower.

b. Personnel and Equipment Requirements.

(1) *Personnel.*

- (a) 1 principal instructor.
- (b) 1 mike sergeant.
- (c) 1 button sergeant.
- (d) 3 base sergeants.
- (e) 3 arm sergeants.
- (f) 1 maintenance sergeant.

(2) *Equipment.*

- (a) 1 spreader ring per operating arm.
- (b) 2 T-10 parachute harnesses per arm.
- (c) 2 J-1 type parachutes per arm.
- (d) 1 safety line per arm.

(e) 1 pole per arm.

(f) 1 public address system.

c. Training. As the student is hauled aloft, he is coached into a good landing attitude by the principal instructor. When the student reaches the 6-foot automatic stop, he will release his safety line and let it drop to the ground. He then will receive a directional slip which he must take in order to clear the steel framework of the tower. Once he is dropped free from the top of the tower, he will receive additional instructions from the assistant instructor who is positioned in the plowed area. These instructions are kept to a minimum to allow the student full initiative in parachute control.

d. Typical Errors Made in Free Tower training.

- (1) Making an improper slip.
- (2) Making a faulty parachute landing fall.
- (3) Slowness in reacting to commands.

e. Safety.

(1) Winds aloft and on the ground should not exceed 12 mph.

(2) The base area should be plowed as often as required.

(3) The upwind arm should not be used. This will decrease the possibility of the wind blowing a parachutist into the tower.

Section XII. MALFUNCTIONS AND USE OF THE RESERVE PARACHUTE

37. Malfunctions

a. General. A malfunction is any discrepancy in the deployment or inflation of the parachute which can create any faulty, irregular, or abnormal condition which may increase the jumper's rate of descent.

b. Classification of Malfunctions. Malfunctions can be classified into two general groupings: complete or total malfunctions, and partial malfunctions.

(1) A complete or total malfunction is the failure of the parachute to deploy, or, if deployed, the failure of the canopy to provide any lift capability. A malfunction of this classification is an extreme rarity for the T-10 parachute. The failure of the parachute to deploy is normally caused by a severed static line or broken snaphook. Although not a parachute malfunction, a broken anchor line cable or the failure of the jumper to hook up will result in the failure of the parachute to deploy. A jumper who is hung up because of a misrouted static line, and who is cut loose by the jumpmaster or crew chief on the pilot's order, also will have a failure of his main parachute to deploy. A "streamer" is a deployed parachute which has failed to inflate. This failure is caused by a blockage of air into the canopy.

(2) A partial malfunction is the failure of the parachute to function properly; it may decrease the parachute's lift capability and increase the jumper's rate of descent. This classification of malfunction should not be considered rare, although they are infrequent when compared with total number of jumps made. The malfunctions most often incurred with the T-10 parachute are the complete inversion, the semi-inversion, the "cigarette roll," and the blown section.

(a) Complete inversion. A complete inversion may occur when a portion of the skirt blows inward and between a pair of suspension lines on the opposite side of the parachute. This portion of the skirt forms a secondary lobe that fills with air and must grow at the expense of the rest of the canopy. The portion of the canopy forming the secondary lobe is inverted. The canopy turns completely inside out with no decrease in its lifting surface. If a complete inversion occurs during the initial deployment of the canopy, it is difficult to detect except that the rear risers will control the front of the canopy and the front risers will control the rear of the canopy. There is no need for the jumper to activate his reserve parachute unless the canopy was damaged during the inversion (fig. 34).

(b) Semi-inversion. A semi-inversion may occur if the development of the secondary lobe stops before completely inverting. This malfunction may remain stable, become completely inverted, or revert to normal during descent. The total lifting capability of the canopy is decreased by the formation of a secondary lobe. Each additional lobe, of course, decreases the lifting capability even further. The fabric is generally burned by friction and weakened during descent. This type of malfunction is commonly referred to as a "Mae West" because of the large brassiere-shaped canopy configuration that it produces (fig. 35).

(c) "Cigarette roll." A "cigarette roll" occurs when a portion of the skirt blows between two suspension lines and commences to roll with the opposite fabric. The heat generated by the friction of the fabric being rolled may cause the nylon to fuze. This type of malfunction may cause a "streamer" if it develops

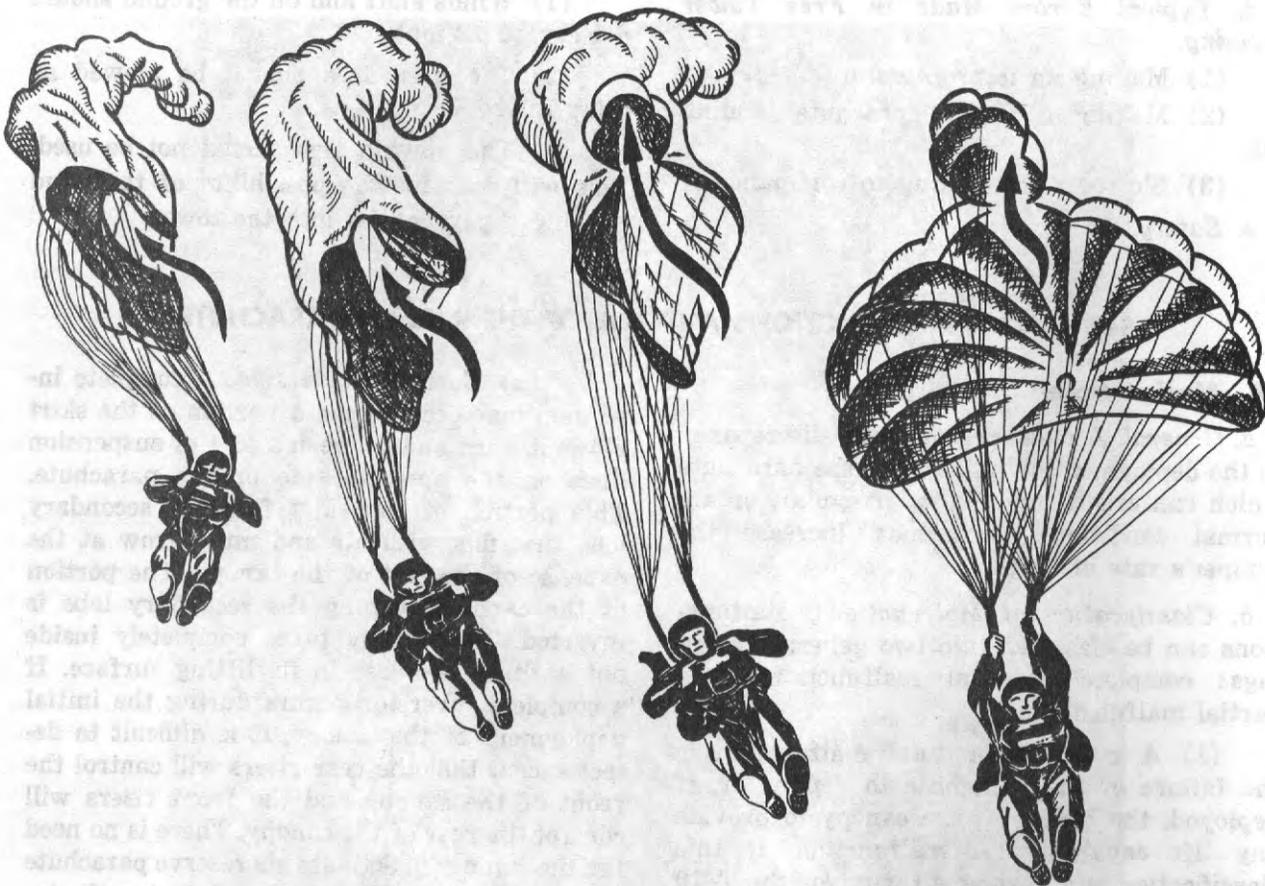


Figure 34. A part of the skirt may blow inward under the skirt on the opposite side.

in the initial phases of deployment and blocks the air channel in the canopy.

(d) *Blown section.* A blown section occurs when the strain placed on the canopy during inflation is so great that a panel or section is ripped or torn out, resulting in a gapping hole or holes in the canopy. If the jumper's rate of descent is normal as compared to other jumpers, he should continue with the other points of performance. If his rate of descent is increased, he must deploy his reserve parachute. Holes in the canopy should be treated in the same manner as a blown section. A rule of thumb is if a hole is larger than the apex of the canopy, activate the reserve. If not, continue the normal points of performance.

(e) *Broken lines.* This type of malfunction is rare, however, should a jumper experience broken lines, he should compare his rate of descent with fellow jumpers and act accordingly. If the reserve must be used, extreme

care must be taken to keep the reserve canopy from fouling in the broken lines.

38. Use of the Reserve Parachute

a. *General.* The reserve parachute is used in the event of a malfunction of the main parachute. There are two general classifications of a malfunction: a complete malfunction, which gives the jumper no lifting support; and a partial malfunction, which offers the jumper some support (para 37).

b. *Complete Malfunction.* When a complete malfunction occurs, the jumper will immediately activate his reserve parachute in the following manner:

- (1) Keep a good, tight body position.
- (2) Keep the feet and knees together.
- (3) Grasp the left carrying handle of the reserve parachute with the left hand.

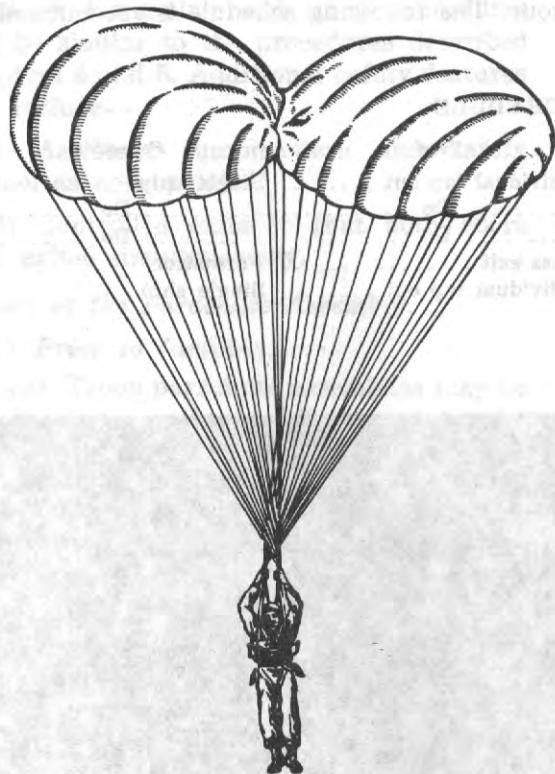


Figure 35. Semi-inversion or Mae West.

(4) Pull the ripcord grip with the right hand.

Note. When descending with only the reserve parachute inflated, the parachutist will find he can control directional movement by slipping. Assume the proper landing attitude by reaching up and grasping as many suspension lines as possible with each hand. Upon landing, make a quick recovery and collapse the reserve canopy. In high winds a quick recovery is impossible; release the reserve parachute by pulling the quick-release of the waist-band and detaching the snap connectors from the D-rings of the main lift web.

c. Partial Malfunction. When a partial malfunction occurs, the jumper will activate the reserve parachute in exactly the same manner as described in *b* above. With a partial malfunction the reserve parachute, upon activa-

tion, usually will fall momentarily below the jumper's feet before it begins inflation. Any stowed suspension lines must be freed as quickly as possible by the parachutist. The jumper must not allow the reserve canopy or the suspension lines to pass between his legs or under his arms prior to inflation. In the event the canopy does not inflate, gather in as much of it as possible and throw it out in the same direction that the wind is blowing. If, for any reason, the reserve parachute becomes entangled in the suspension lines of the main parachute, or with the jumper's equipment, or fails to function, then the jumper must immediately assume a good landing attitude and execute a parachute landing fall.

Note. When the reserve parachute has been activated in case of a partial malfunction, it may cause the parachutist to have two inflated canopies. When descending with two inflated canopies, the parachutist has no directional control over the parachutes. In this case, it is imperative that all other parachutists slip clear. To assume the proper landing attitude, reach high on all four risers of the main parachute, and maintain this attitude until making contact with the ground. Immediately upon landing release the main parachute using the canopy release assemblies, then either use the quick recovery method to collapse the reserve or use the method described in paragraph *b* above.

d. Hung-Up Parachutist. See paragraph 61.

39. Conduct of Training

Thorough training in types of malfunctions is essential for every parachutist in order that he may recognize a malfunction and react properly without hesitation. Practical exercises involving the activation of the reserve parachute can be incorporated into the 34-foot mock tower training as well as in an advanced "hit it" exercise, where the student responds to the command MALFUNCTION. Demonstrations of each type of malfunction should be given the students so that they can see exactly how each type of malfunction looks.

Section XIII. JUMP TRAINING

40. General

Those students that have met the training proficiency requirements (mastered the five basic jump techniques) and have met the physical

fitness requirements are advanced forward from the ground training phase to the jump training phase. During the jump training phase the student will be required to make five

qualifying jumps from an aircraft in flight. All training jumps should be from an actual altitude of 1,250 feet (fig. 36). Ground winds will

not be in excess of 13 knots, or 15 miles per hour. The following schedule is recommended:

JUMP WEEK SCHEDULE

Jump No.	Equipment	Type	Formation
1	Steel helmet	Individual tap out	Single ship.
2	Do	Do	Do
3	Do	Do	Do
4	Do	Mass exit	Formation.
5	Combat equipment in II-harness, individual weapons container.	Individual tap out	Single ship.



Figure 36. Jumping the C-141 Starlifter.

41. Conduct of Training

a. *Before Jumping.* The students should be given a complete briefing to include the following:

(1) Review of basic fundamentals, putting on the parachute, the nine jump commands, malfunctions, and the five points of performance.

(2) Orientation on packing the T-10

parachute and shakeout and stowing after landing.

(3) Aircraft orientation.

(4) Drop zone and approximate impact area.

(5) Question and answer period.

b. *Training.* Putting on the parachute should be done by the numbers for the first and second jumps. Adequate instructors should be

available for close supervision and jumpmaster inspections. Enplaning and jump procedures should be similar to the procedures described in chapters 4 and 5. Additional safety features should include—

(1) Assistant jumpmasters and safety personnel as appropriate.

(2) Controlled exits so that both doors are not exited simultaneously.

c. Care of the Parachute Assembly.

(1) *Prior to jumping.*

(a) Troop parachute assemblies may be issued to using units in kit bags to make handling easier and to prevent damage or unintentional opening. Parachutes should remain in these kit bags until they are removed for fitting by individual parachutists. Parachute equipment should be protected from moisture to prevent malfunctions or mildew.

(b) Kit bags are not waterproof and do not provide adequate protection when stored in wet weather or on damp ground. Parachutes may be stored in covered trucks, tents with dunnage, or transport aircraft when adequate storage buildings are not available.

(2) *After jumping.*

(a) Whenever possible, the parachute should be recovered and properly cared for so that supply and maintenance will not be a problem.

(b) After landing, collapse the canopy or release the canopy the remove the harness. If required to stow the parachute, move to the apex of the canopy, grasp the bridle loop, and pull the parachute to straighten the canopy and suspension lines. Fold the canopy and suspension lines into a series of figure eights, using both arms. Do not twist the canopy unnecessarily because friction can cause the nylon to fuse. Place the parachute harness in the kit bag; lay the canopy on the harness and secure it with the waistband, being careful not to pull any of the canopy through the waistband adjuster. If it is necessary to release the canopy after landing, figure-eight the canopy by itself and place it in the kit bag with the harness (fig. 37). Lay the reserve parachute on top of the main canopy and fasten the kit bag.

(c) After each jump, clear the parachutes of all dirt and foreign particles picked

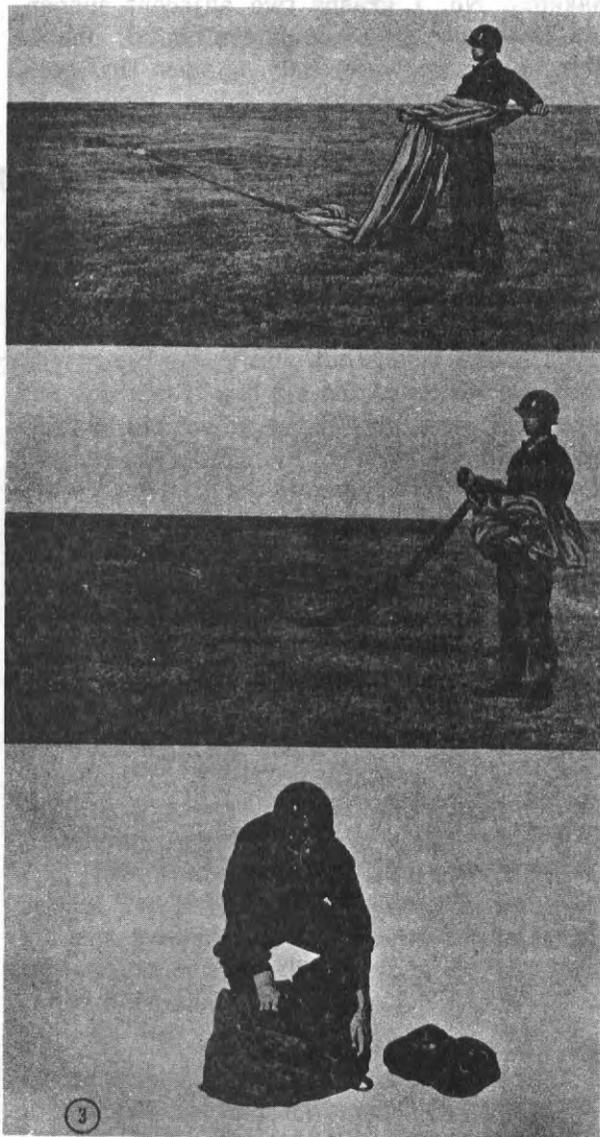


Figure 37. Stowing the parachute.

up from the ground. This procedure is called "shakeout." A parachute is cleaned by suspending it from a rope, passed over a pulley, suspended from the ceiling or from poles with sufficient height to allow the canopy to clear the floor.

1. A two-man shakeout team is recommended. No. 1 man holds the bridle loop while No. 2 man fastens the rope to the loop. No. 2 pulls the rope until the skirt is approximately 1 foot above No. 1's head. The bulk of the suspension lines and the parachute harness remain in the kit bag. No. 2 holds the suspended canopy until No. 1 completes the

shakeout. No. 1 grasps two adjacent suspension lines at the lower lateral band, one in each hand. He vigorously shakes the gore, making certain no grass, twigs, insects, or other foreign matter are left on the fabric. He grasps the suspension lines of the next gore and continues the same procedure, working counterclockwise until each consecutive gore has been shaken and all suspension lines are in his left hand. No. 2 slowly pulls the canopy up so the suspension lines are suspended and No. 1 shakes them out and dusts them with his hand. He turns the kit bag inside out and cleans it thoroughly. If the parachute is to be replaced in the kit bag, No. 1 puts the harness in the bag and No. 2 lowers the parachute while No. 1 coils the suspension lines on top of the harness and replaces the canopy inside the kit bag. If the parachute is not to be replaced in the kit bag, No. 1 places the harness on the

floor with the quick-release side up. He folds the harness neatly on top of the parachute pack and, as No. 2 lowers the canopy, coils the suspension lines on the pack and lays the canopy on top of the lines in accordion folds. The canopy and suspension lines are secured by fastening the waistband to the waistband adjusters.

2. The shakeout procedure used with the reserve parachute is similar to that used with the main parachute.

3. Shakeout should be accomplished as soon after jumping as practicable.

(d) Parachutes that have been jumped in wet weather, or that have been exposed to moisture after landing, must not be repacked until dry. The shakeout procedure described above should be accomplished and the parachutes moved immediately to "drying" sheds.

CHAPTER 3

COMBAT LOADS

Section I. INDIVIDUAL EQUIPMENT

42. General

a. The parachutist normally jumps with the equipment and weapons he carries in combat. The combat load carried by the individual soldier should be as light as possible, consistent with his mission. Include only those items absolutely necessary for the immediate combat effectiveness of the parachutist. Exploit other methods of air delivery of equipment, weapons, and ammunition not immediately required to perform the parachutist's combat mission.

b. In the interest of safety, do not attach hard, bulky, or irregularly shaped items to the rear of the thigh or the buttocks. When necessary, attach equipment on the front or sides away from the five points of contact.

c. Use sufficient padding to avoid metal-to-metal, metal-to-wood, or wood-to-wood contact between items of equipment packed in one container.

d. Package weapons and equipment loads by operating units. *For example*, a radio and its battery pack are jumped as one load because the loss of temporary separation of one part makes the other inoperable.

e. Tape exposed snaps, hooks, and other sharp projections on the parachutist's clothing and equipment.

f. The remainder of this chapter will explain how to prepare individual equipment and equipment containers for attachment to the parachutists. Only equipment currently in the Army inventory and available for issue will be discussed. It should be noted that a method of preparing this equipment will be explained in this chapter and that unit SOPs may modify

this as necessary consistent with maximum safety requirements.

43. Methods of Attaching and Wearing Combat Equipment

a. Use of the H-Harness and Kit Bag.

(1) The H-harness (fig. 38) consists of two nylon straps approximately 56 inches long held together by two straps approximately 11 inches long. One end of each long strap has two friction adapters attached approximately 3 inches apart. Two additional straps approximately 18 inches long have a snaphook on the end. These are called D-ring attaching the straps. The H-harness is designed to secure the kit bag, loaded with equipment, to the jumper by attachment to the D-rings of the parachute harness.

(2) The kit bag is an all canvas bag, used by parachutists to carry parachutes and for jumping individual equipment. It has two carrying handles on top and is secured by a zipper and snaps which extend across the top of the bag.

(3) The parachutist equipped with individual load-carrying equipment, M1956, and H-harness will prepare and carry his equipment as prescribed below.

(a) *Stowing of individual load carrying equipment in kit bag.*

1. Prepare the field pack combat load in accordance with unit operating procedure.

2. Fit the individual load-carrying equipment as outlined in FM 21-15.

3. Prepare the kit bag to receive the load-carrying equipment. The snaps are unfastened and the zipper is undone. Fold the top

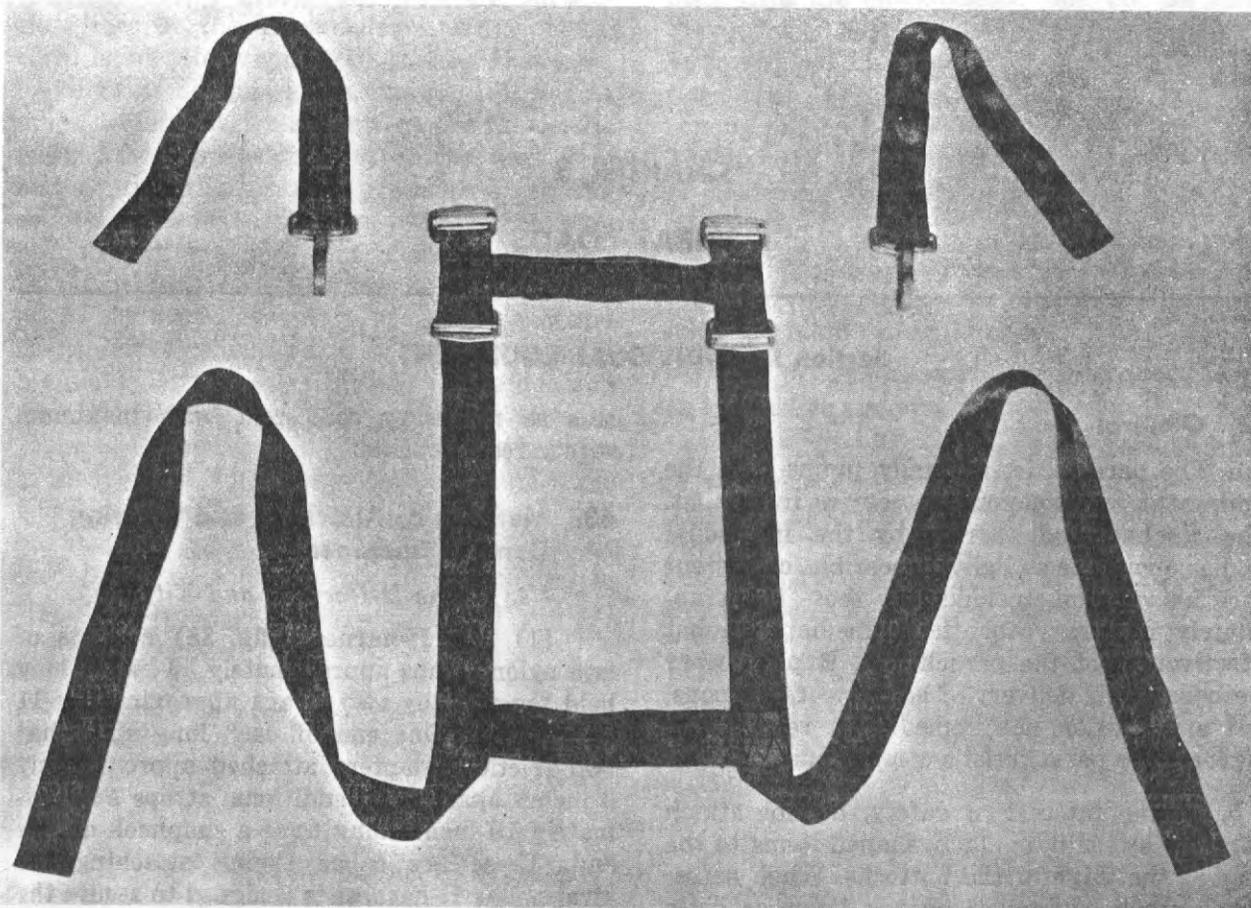


Figure 38. The H-harness.

of the kit bag down so that it approximates one-half its filled bulk.

4. Place the load-carrying equipment in the kit bag, centering the light pack.

(a) Rotate the entrenching tool handle to the left, edge up, so it rests corner-to-corner in the bottom of the kit bag and centers on the light pack.

(b) Insert the left ammunition pouch, placing it directly to the left of the pack.

(c) Center the protective mask on the top of the light pack.

(d) Insert the right ammunition pouch, placing it directly to the right of the light pack. The canteen is directly on top of the pack, between the protective mask and the right ammunition pouch.

(e) Pull the carrying suspenders up over the mask and canteen for easy accessibility.

(f) Rotate the sleeping bag (if car-

ried) into the prepared kit bag so it fits on the opposite side from the entrenching tool.

(g) The kit bag should now be zippered and snapped shut. The excess material of the bag is gathered up and folded on top of the load so that the handles are exposed.

(b) *Preparing H-harness to receive load:*

1. Grab the two end web adapters and lay out the harness with the adapters nearest the body, and the second two adapters on the top. Attach D-ring attaching straps as follows: with the snap nearest the body and opening down, thread the end of the D-ring attaching strap under the adjusting bar of the second adapter, back over the top of the bar and tighten (leaving approximately 3 inches between nap and bar), and thread the end through the adapter, forming a quick-release. Repeat procedure for the second strap.

2. Lay out the H-harness with D-ring

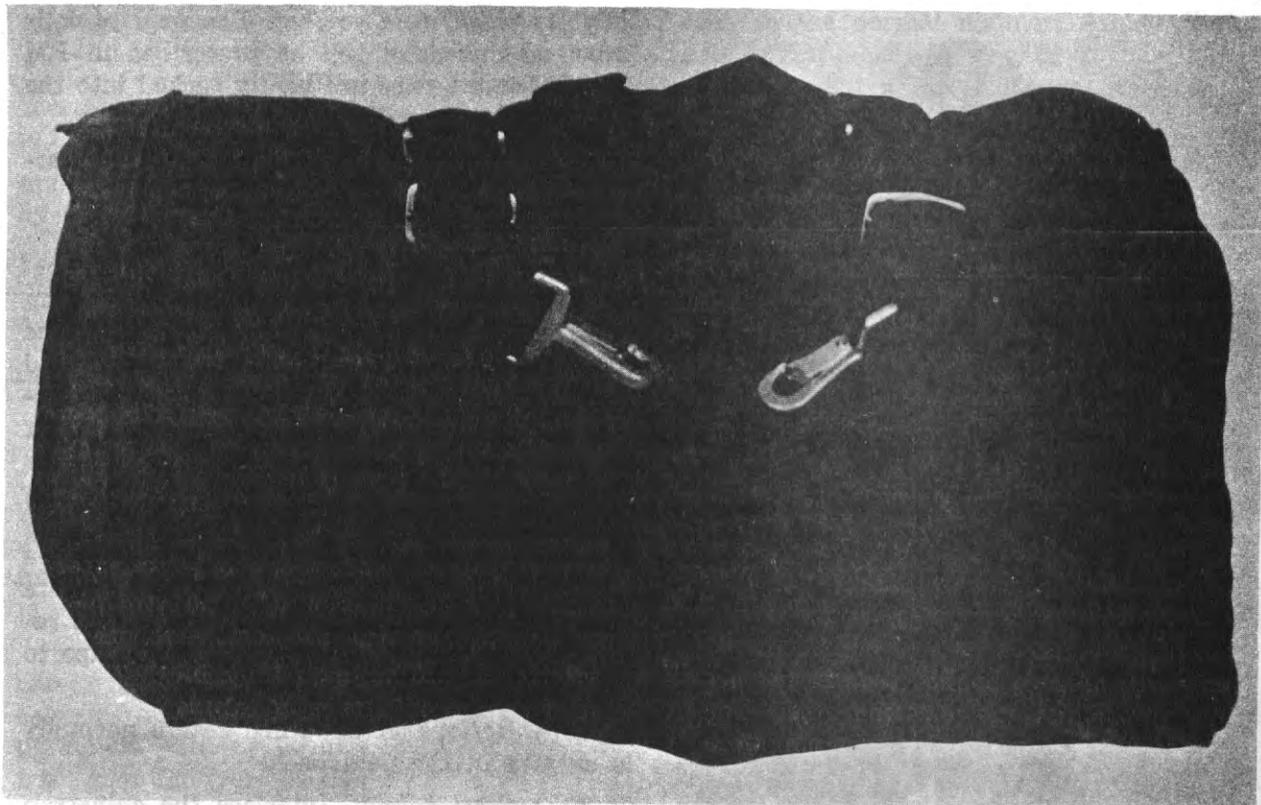


Figure 39. Kit bag with H-harness prepared for rigging.

attaching straps down and snap openings up.

3. When completely rigged the H-harness is attached to the T-10 parachute harness D-rings with the snap fasteners of the H-harness outside the reserve parachute connector snaps.

(c) *Attaching the H-harness to the kit bag.*

1. Center the kit bag with contents on the H-harness approximately 6 inches from the snap fastener with the entrenching tool toward the snap fastener.

2. Place the H-harness straps around the kit bag, threading them through the friction adapters to form a quick-release, insuring that the straps are not tightened over the protective mask. The snap fasteners are threaded through the handles of the kit bag and are to be at the top of the load. If necessary, tuck excess length of straps under the harness, leaving 6 to 8 inches of running ends free for quick-release (fig. 39).

3. When completely rigged the H-harness is attached to the T-10 parachute

D-rings by running the D-ring attachment straps through the handles of the kit bag and then attaching them to the outside of the reserve parachute connector snaps (fig. 40).

Note. The right reserve connector snaps must be safetied with a safety pin which is located on the right carrying handle or right side of the reserve parachute.

(d) *Releasing the load.* After landing, the jumper releases the load by pulling the quick-releases of the D-ring attaching straps. These straps should be removed from the parachute harness and secured to the H-harness before the parachute is turned in.

b. *Wearing of Combat Equipment.*

(1) *Ammunition.* The amount and type of ammunition carried will vary with the combat situation. Normally, a weapon is jumped with a clip or magazine inserted, chamber empty, and the weapon locked. The other clips or magazines, which comprise the individual parachutist's assigned load of ammunition, are carried in the universal small arms ammunition pouches. Additional small arms ammuni-



Figure 40. Attaching kit bag to parachutist.

tion may be carried in the combat pack, bandoleers, or trouser pockets.

(2) *Hand grenades.* Hand grenades should remain in the individual container and be placed inside the parachute kit bag.

(3) *Bayonet with scabbard.* Attach the bayonet with scabbard to the entrenching tool carrier, using the grommets and strap provided.

(4) *Belt, pistol.* Adjust the pistol belt to proper waist measurement and wear it unfastened under the parachute harness.

(5) *Canteen with cup and cover.* Attach the canteen to the outside of the pistol belt directly beneath the left armpit and position it between the individual weapon and its sling.

(6) *Case, first aid packet, or lensatic compass.* The case is worn attached to the left side of the right ammunition pouch or attached to the belt on the right side in front of the ammunition pouch.

(7) *Pack, field combat.* The field pack is worn on the pistol belt as prescribed in FM 21-15. Loose straps are neatly tucked into the pack or taped together to prevent sagging.

(8) *Poncho.* The poncho should be carried in the field pack.

(9) *Pouch, small arms ammunition, universal.* The individual parachutist will normally be equipped with two ammunition pouches. These pouches are secured to the pistol belt by the two attaching clips provided on the back side of each pouch. They are carried by placing one on each side of the belt fastener with both pouches placed as near the fastener as possible. The pouch supporting straps are adjusted to the field pack suspenders and then fastened together in front of the parachutist before he puts on the parachute assembly. After the parachute assembly is removed, fasten the pouch supporting straps to the metal loops on the pack suspenders.

(10) *Rations.* A one-third ration normally is carried in the field pack.

(11) *Steel helmet.* Interlace the chinstrap of the steel helmet through the horizontal piece of webbing on the side of the parachutist's chinstrap and secure it under the chin. The parachutist's chinstrap is worn with the sewed portion across the front of the chin, and with the continuous piece of webbing under the point of the chin.

(12) *Suspenders, field pack, combat.* The suspenders are adjusted to the size of the individual parachutist. They are attached to the front of the pistol belt as described by FM 21-15 and to the back of the pistol belt by attaching the hooks to the two top eyelets immediately below the two combat pack web eyelets. The suspenders are worn under the parachute harness.

(13) *Toilet articles.* Toilet articles are normally carried in the field jacket pockets.

(14) *Tool, entrenching, with carrier.* The entrenching tool is carried in the carrier attached on the right side of the pistol belt by attaching clips provided on the underside of the carrier. It is worn under the main lift web of the parachute harness and slightly to the rear of the right leg. The entrenching tool handle is secured to the leg with cord or cot-

ton tape tiedowns, using a clove hitch around the tool handle.

c. Special Equipment.

(1) *Bag, carrying, ammunition.* Attach a general purpose strap to the bag and sling it over either shoulder underneath the combat pack suspenders and belt; let the bag rest on the front or side of either leg. Using quick-release knots, secure the bag to the leg with cord or cotton tape passed through the D-ring on the side of the bag.

(2) *Bag, kit, aviator's.* Fold the kit bag and place it, handles up and the smooth portion next to the body, under the quick-release assembly of the parachute harness. The right chest strap is inserted through the carrying handles. (This is done when the parachutist is wearing his individual combat equipment.)

(3) *Binoculars.* Sling binoculars, in their case, over either shoulder and then extend the carrying strap under the pistol belt and the parachute harness. Let the binocular case rest high upon the front or side of either leg.

(4) *Demolition equipment set No. 5 or No. 7.* Wear demolition sets on either leg. Attach the snap fastener on the equipment bag to the parachute harness D-ring above the leg on which the bag is jumped and, using quick-release knots, tie the bag to the leg with the attached tiedown tapes.

(5) *Flashlight, TL 122.* Carry the flashlight in a pocket or in the combat pack.

(6) *Knife, parachutist's.* Loop the knife's thong through the buttonhole of the left lapel of the jacket. After the parachute is fitted, drop the knife underneath the clothing.

(7) *Mask, protective, field (gas) (M17).* Insure that all accessories are in the pockets inside the carrier. Do not place the accessories to the mask inside the rubber facepiece. This action may cause damage to the facepiece lens or render the mask unserviceable. To attach the mask to the parachutist, sling the mask on the right leg with the vertical flap next to the leg and the opening to the front. Place the top carrying strap around the leg with the lower strap over the top of the mask, then around the right leg, and secure.

(8) *Pack, field, combat, with horseshoe roll.* Attach the horseshoe roll to the combat

pack in the normal manner. Assure that no item of equipment is attached to the outside of the pack that might entangle the parachute and create a hazard. Place the pack (with the ~~smooth portion~~ attached) flapside down with the bottom of the pack toward the body. Turn all snaphooks so that they face away from the body of the pack and fasten them. Tape the fastened snaphooks. Twist the suspenders and snap the remaining snaphooks. Pass the leg straps of the parachute harness through the leg strap loops and through the openings in the twisted suspenders. When the leg strap adjustable lugs are inserted into the quick-release assembly, the pack rides snugly against the parachutist's body just beneath the reserve parachute.

(9) *Radio sets.* For the AN/PRC-6 radio, pass the waistband of the parachute through the right rear retaining loop of the reserve parachute, through the radio's carrying strap, and then through the left rear retaining loop of the reserve. Tighten the waistband and the carrying strap. This holds the radio snugly against the bottom of the reserve parachute. Other radios carried by the individual are carried in the parachutist's adjustable equipment bag.

(10) *Telephones and wire reel equipment.* Wire reels, containers, and telephones are carried in the parachutist's adjustable equipment bag. If the field telephone is carried without wire, sling the strap over either shoulder beneath the parachute harness.

(11) *B-7 life preserver.* The B-7 life preserver is worn under the parachute harness. To fit the life preserver, place the flotation packet under each arm, toggle cords to the front. Run the neck strap up in front of the left shoulder behind the neck, down in front of the right shoulder, and attach it to the ring on the flotation packet under the right arm. Adjust the neck strap so that a flotation packet rests against each armpit. Attach the chest strap across the chest. Insure that the life preserver is worn so that the inflatable portion is not between the parachute harness and the body. *Serious injury may result if it is in this position when inflated* (2, fig. 5).

(12) *B-5 life preserver.* The B-5 life preserver is worn under the parachute harness.

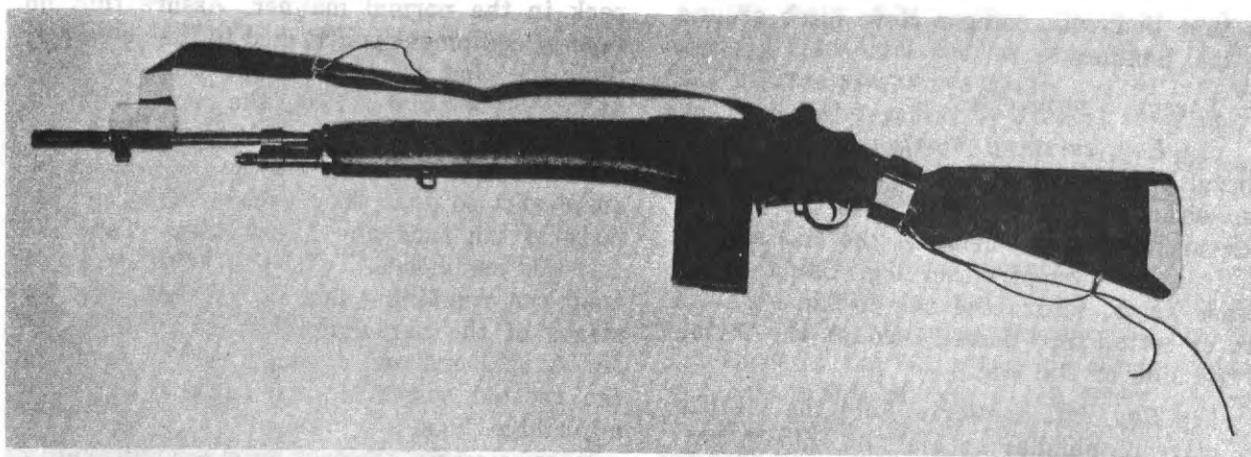


Figure 41. M14 rifle with sling repositioned for jumping.

The flotation vest is placed over the neck so the inflatable vest is on the jumper's chest. The back strap and leg straps are adjusted. It is inflated by pulling two toggle cords at the bottom of the vest. An alternate provision for inflating the vest is by blowing into rubber hoses located on the upper right side of the vest. Manual inflating valves should be completely closed when donning the lifevest. Manual inflation should be used only if CO₂ valves fail to operate.

Warning: The B-5 life lifevest must never be inflated until the parachute harness is removed. The B-5 can crush an individual's chest if inflated beneath a parachute harness.

d. Unit Equipment. Radios and other equipment such as telephones, wire, additional small arms ammunition, and mines may accompany the individual load-carrying equipment provided the total load does not exceed 35 pounds. Loads in excess of 35 pounds should be carried in the parachutist's adjustable equipment bag (para 47) or weapon and individual equipment container (para 48).

44. Weapons

a. General. Individual weapons are normally carried secured to the left side. They may be bare or in the individual weapons case (para 46). It is preferable to use the weapons case to avoid possible entanglement of the suspension lines with protrusions on the weapon. Care must be taken to insure that the muzzle

does not become clogged while landing and that sharp edges are covered. All tiedowns are 80-pound test cotton webbing or a like item (string or cord).

b. M14 Rifle.

(1) *Preparation* (fig. 41). The sling is removed from the weapon. The sling keeper is removed from the sling. A loop is formed by running the sling through the sling hook. The sling is replaced by placing the loop around the small of the stock. The sling keeper is replaced and the sling is secured to the barrel, just below the front sight, with a half pitch. The butt plates is taped closed. Cover the flash suppressor, front sight, and bayonet lug with plastic cover or tape to avoid possible entanglement with the suspension lines of the parachute as it deploys.

(2) *Positioning.* The weapon is placed on the left shoulder, muzzle up, with the operating handle out. The muzzle should be positioned as close to shoulder level of the jumper as possible. The sling will be placed inside the left D-ring of the harness and held there with the reserve parachute snap connector. The waistband goes under the sling, over the weapon, and into the waistband adjuster (figs. 42 and 43).

(3) *Tiedowns.* Two tiedowns with bow-knots further secure the weapon. The upper tiedown secures the sling to the harness just below the canopy release assembly. The lower tiedown secures the butt to the jumper's leg.



Figure 42. Parachutist with the M14 rifle (side view).

The lower tiedown is removed during descent.

c. M1 Rifle.

(1) *Preparation.* The sling is removed from the upper sling swivel. The sling keeper



Figure 43. Parachutist with the M14 rifle (front view).

is removed. The sling is routed through the butt swivel. The sling keeper is replaced and the sling is refitted to the upper sling swivel with a half hitch. The muzzle is covered with a small piece of tape or suitable cover.

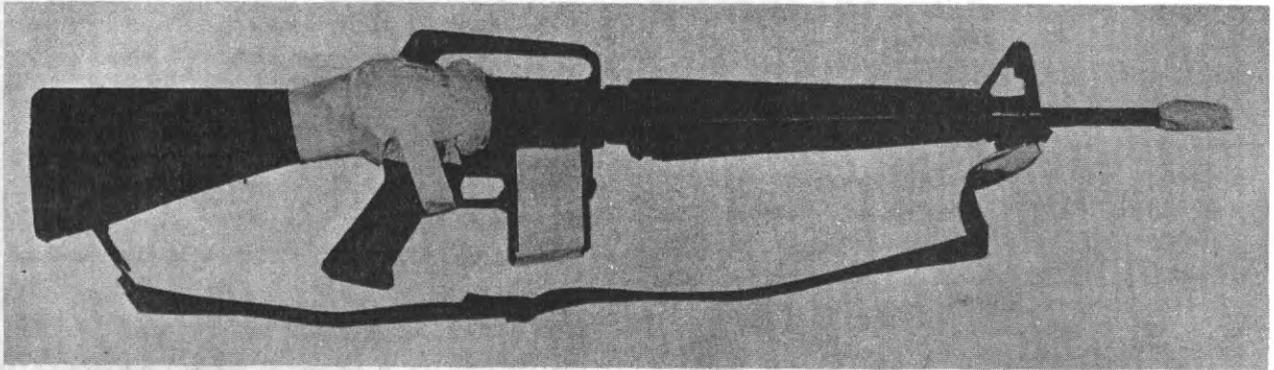


Figure 44. Preparing the M16 for jumping



Figure 45. Positioning the M16 for jumping.

(2) *Positioning.* The weapon is positioned on the left shoulder, muzzle down. The sling may be fitted inside the left D-ring of the harness similarly to the M14. The waistband also fits in the same manner as the M14 (under the sling and over the rifle).

(3) *Tiedowns.* Two tiedowns with bow-knots are used. The upper tiedown secures the sling to the harness below the canopy release assembly. The lower tiedown holds the muzzle close to the jumper's leg and is removed before landing.

d. Submachinegun.

(1) *Preparation.* Remove the sling from the upper sling swivel and let out all the slack. Fold over the end of the sling and run the fold through the upper sling swivel. Pass the tip of the sling through the fold and fasten the snap. Close the cover and remove the magazine. Collapse the stock. Tape one magazine to the left of the receiver or carry it elsewhere. Cover the muzzle.

(2) *Positioning.* Place the weapon on the left shoulder, muzzle down, pistol grip forward. The waistband passes under the sling, over the weapon, and into the waistband adjuster.

(3) *Tiedowns.* Secure the sling to the harness below the canopy release assembly with a bowknot.

e. M16 Rifle.

(1) *Preparation* (fig. 44). The sling is extended all the way and the keeper is taped in place. Padding is secured over the side mounted bolt assist and the operating handle. The muzzle is padded and taped to avoid clogging of

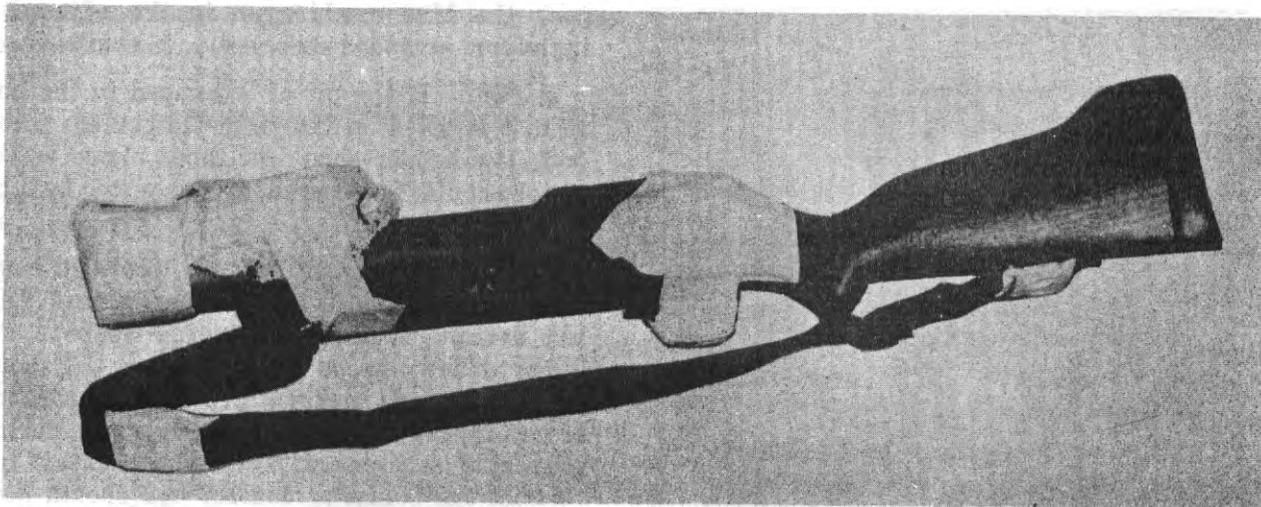


Figure 46. Preparing the M79 for jumping.

the weapon upon landing or possible entanglement with the suspension lines of the parachute. The magazine is taped to the receiver to prevent loss.

(2) *Positioning* (fig. 45). The weapon is slung over the left shoulder, muzzle up. It should ride as low as possible so that the muzzle is positioned as close to shoulder level as possible. The sling is placed inside the left D-ring of the harness and is held there by the left snap connector of the reserve parachute. The waistband is placed over the front handguard and into the waistband adjuster.

Note. The M16 may be carried in the individual weapons case similar to the M14 (para 46).

(3) *Tiedowns.* Two tiedowns with bow-knots further secure the weapon. The upper tiedown is a 12-inch tie tape securing the sling to the main lift web. The lower tiedown secures the butt of the rifle to the jumper's leg to prevent possible entanglement with the suspension lines of the parachute. It is removed prior to landing to avoid injury to the jumper.

f. M79 Grenade Launcher.

(1) *Preparation* (fig. 46). The sling is let out approximately three-fourths of the way and the keeper is taped in place. The leaf-type sight is placed in the down position and padded and taped to avoid snagging. The lower sling swivel, breechlock, and muzzle are also taped.

(2) *Positioning* (fig. 47). The weapon is slung over the left shoulder, muzzle up, with the trigger guard to the front. The muzzle should be below the level of the jumper's shoulder with the sling supporting the weight of the weapon. The sling is placed inside the left D-ring of the harness and held with the left snap connector of the reserve parachute. The waistband is placed over the sling and the weapon and into the waistband adjuster.

(3) *Tiedowns.* Two tiedowns with bow-knots further secure the weapon. The upper tiedown secures the sling to the main lift web. The lower tiedown secures the butt to the jumper's leg to prevent possible entanglement with the parachute suspension lines. The lower tiedown is removed prior to landing to avoid injury to the jumper.

g. *Machinegun, 7.62-mm, M60.* The machinegun may be dropped either as a one- or two-man load. As a one-man load the complete gun, accessories, and ammunition may be placed in the parachutist's adjustable equipment bag or weapon and individual equipment container. As a two-man load, the gunner carries the weapon in the individual weapons case. The assistant gunner may carry the tripod and spare barrel container with components in either the weapons case, the kit bag, or both. Ammunition, in bandoleers, may be packed with the gun and accessories, if desired. To



Figure 47. Positioning the M79 for jumping.

Section II. PERSONNEL EQUIPMENT CONTAINERS

45. General

a. When the parachutist jumps with loads of less than 35 pounds, the jumpmaster decides (depending upon the length and bulkiness of the load) whether the lowering strap will be used. Loads over 35 pounds require the use of the lowering strap.

b. Whenever equipment is attached to the D-rings of the parachute harness, a safety

pack the M60 machinegun in the adjustable individual weapons case, see paragraph 46.

h. Pistol. If the pistol is jumped in the holster, it is fitted on the right side of the pistol belt. The holster should be taped closed or the pistol should be secured to the pistol belt by means of a lanyard.

i. Other Weapons. Weapons not mentioned here may be jumped in a similar manner. The left shoulder is used for slinging weapons. An upper tiedown keeps the weapon on the shoulder and a lower tiedown prevents the weapon from rotating toward the jumper's face during parachute deployment. The weapon should not restrict the points of contact and should have sharp or irregular edges taped or padded to prevent injury. The muzzle should also be protected if there is a possibility of its becoming clogged with dirt or mud upon landing. The weapon should also be rigged so there is no interference between the static line or other parts of the parachute during deployment. Usually the sling must be resecured (use of half hitch instead of sling keeper) to prevent loss from the opening shock during canopy inflation.

wire is inserted in the right connector snap of the reserve parachute. The right connector snap is secured with a safety wire since attachment of equipment to the D-rings may cause connector straps to unfasten. The reserve parachute will still function in this manner and provide the necessary support if required. For ease of release, it is recommended that a 20-inch length of cord be threaded

through each handle of the quick-release snaps as discussed in the following paragraphs.

46. Adjustable Individual Weapons Case

a. Description. The parachutist's adjustable individual weapon's case, M1950, is designed to carry individual or crew-served weapons. It is 10 inches wide and is adjustable in length from 33½ inches to 50½ inches (fig. 48). It is secured vertically by a quick-release snap attached to the left D-ring on the parachute harness. To prevent the case from swaying during the opening shock of the parachute, two tiedown tapes fasten the case to the parachutist. One tiedown is tied around the main lift web of the harness and the other around the parachutist's leg. The lowering strap is approximately 20 feet long (it is not issued with the weapons case). One end of the lowering strap is fastened to the case and the free end to the parachute harness. An 18-inch rubber strand shock absorber (bungee cord) on the upper end of the lowering strap reduces the shock when the case is dropped. Upon landing, the parachutist can reach the weapon quickly by opening the slide fastener which is protected by the closing flap.

b. Packing.

(1) *General.*

(a) Lay the case down with the closing flap facing up.

(b) Open the slide fastener to its full length and open the closing flap.

(c) Insert the weapon, muzzle down (except the M14, see (4) below) into the case. When magazines of ammunition are packed with the weapon, pad each magazine to prevent metal-to-metal contact.

(d) Using the adjusting strap, fold the bottom end of the case and adjust to the required length by running the strap through the upper adjusting strap connections. (When the muzzle of the weapon is too short to fit into the leather boot provided in the end of the case, pad it to prevent its tearing through the case on contact with the ground.)

(e) Close the flap and the slide fastener.

(f) Place the loop of the fastener tab thong around the stud of the lift-the-dot fastener and snap the closing flap.

(2) *To pack the caliber .30 machinegun and 250 rounds of ammunition.*

(a) Remove the stock from the gun, pad it, and place it in the case.

(b) Pad the gun and place it, muzzle toward the bottom end, over the padded stock.

(c) Accordion fold the ammunition belt and place padding between each fold and around the complete unit. Place the padded ammunition belt under the padded gun.

(d) Fasten the closing flap as in (1) (e) and (f) above.

(3) *To pack the M60 in the adjustable individual weapons case.*

(a) *Assembled.*

1. Lay the case down with closing flap facing up.

2. Place the muzzle of the M60 into the lower right corner of the weapons case. Press downward until the weapon is seated inside the case with the operating bolt up.

3. Fasten the closing flap as in (1) (e) and (f) above.

(b) *Disassembled (required when length restrictions dictate due to characteristics of a particular aircraft) (ch. 6).*

1. Shorten the case to 36 inches and lay it down with the closing flap facing up.

2. Disassemble the M60 into two groups by removing the barrel group.

3. Place the receiver group in the weapons case with the forearm assembly to the right and the cover facing down.

4. Place the barrel group in the case with the front sight to the left and pointing down.

5. Slide the barrel group to the right as far as possible so that the bipod-leg feet will not be opposite the trigger housing group.

6. Add padding between the two groups.

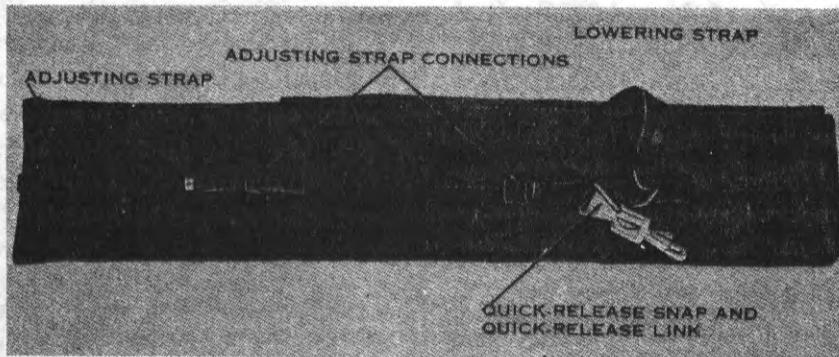
(4) *To pack the M14 rifle in adjustable individual weapons case.*

(a) *Assembled.*

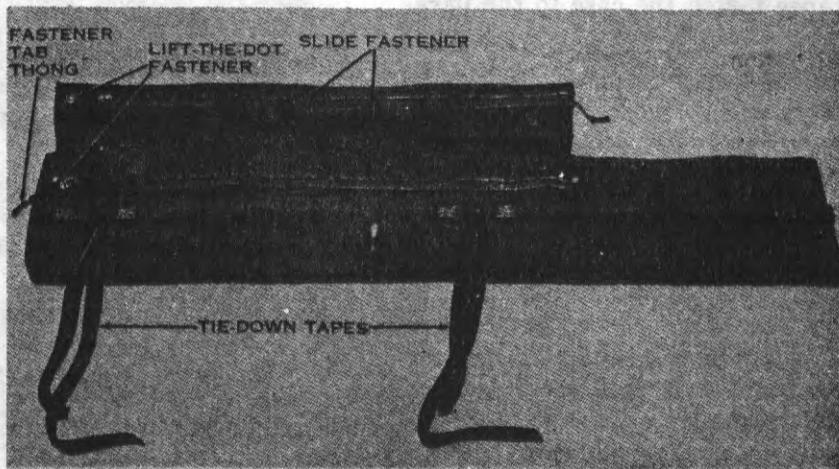
1. Lay the case down with closing flap facing up.

2. Place assembled M14 rifle in weapons case, stock down, with the operating rod handle away from the parachutist.

(b) *Disassembled (required when length restrictions dictate due to characteristics of a particular aircraft).*



1. With flap closed (top view).



2. With flap open.

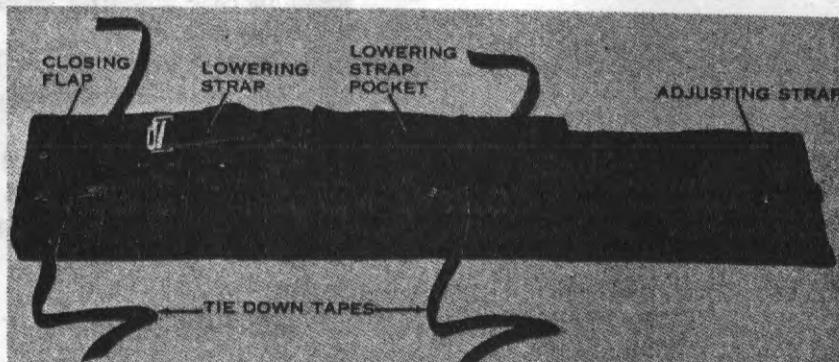


Figure 48. Adjustable individual weapons case.

1. Lay the case down with closing flap facing up.
2. Disassemble M14 into two groups: firing mechanism assembly attached to the barrel, and receiver group and stock group.
3. Place barrel and receiver group in the case with the barrel down.

4. Place stock group in weapons case with butt down.
5. Add padding between the two groups.
6. Adjust to proper length.

c. *Attaching the Weapons Case to the Parachutist.*



Figure 49. Weapons case attached to parachutist.

(1) *Attach the case to the parachutist after he has put on and adjusted the main and reserve parachutes (fig. 49).*

(a) *Attach the quick-release snap to the quick-release link on the case. Make sure the opening of the snap faces the parachutist.*

(b) *Attach the quick-release snap to the left D-ring on the parachute harness.*

(c) *Pass the long end of the lower tie-down tape around the outside of the case and in back of the left leg above the knee. Using a bowknot, tie the ends of this tape together on the front of the parachutist's leg. The knot is untied before landing.*

(d) *Pass the long end of the upper tie-down around the case and the main lift web of the harness from left to right. Using a bowknot, tie the ends of this tape together at the parachutist's front.*

(2) *To attach the lowering strap.*

(a) *If it is not required, remove it before packing the case.*

(b) *If it is required, attach it to the parachute harness by passing the running end of the strap under and around the main lift web and through the backstrap loop. Secure the running end of the lowering strap to the quick-adjustable buckle using a quick-release fold.*

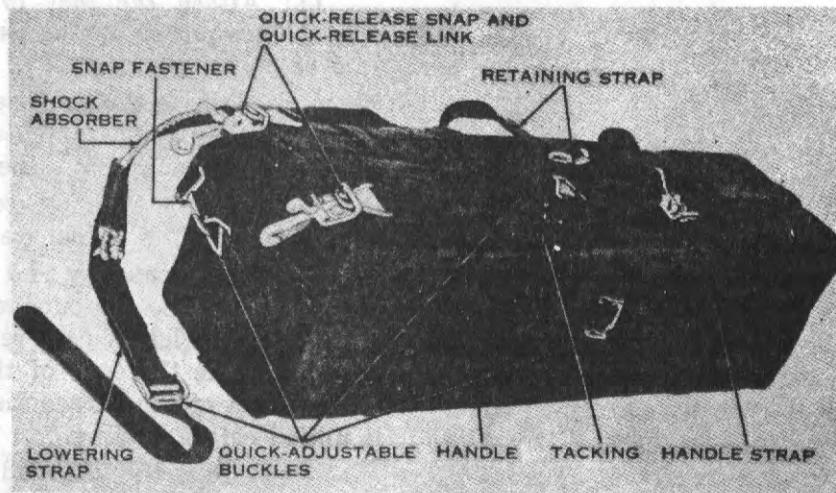
(c) *Accordion fold the lowering strap, making each fold approximately 8 inches long. Leave the portion with the shock absorbing cord and quick-adjustable buckle free for attachment to the parachute harness. Place two retainer bands around the folds and stow it in its pocket, the first folds to the bottom. Snap the pocket closed.*

(3) *When using the lowering strap, release the case in the following manner.*

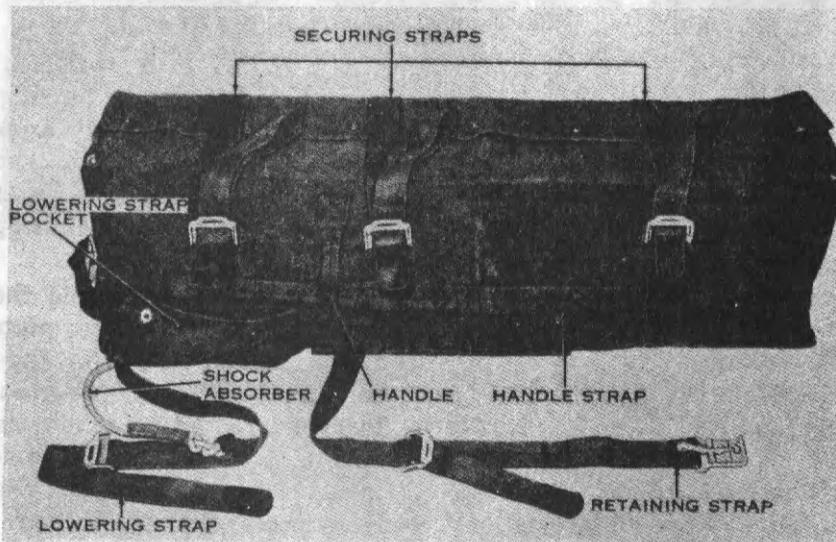
(a) *After leaving the aircraft and executing the first two points of performance, release the bowknots on the upper and lower tiedown tapes holding the case.*

(b) *When approximately 200 feet from the ground, pull the handle on the quick-release snap. The case drops and the lowering strap is deployed.*

(c) *In an emergency landing (high tension wires, or water), jettison the case by releasing the quick-release snap and pulling*



2. Oblique view.



3. Side view.

Figure 50. Parachutist's adjustable equipment (PAE) bag.

the quick-release fold on the end of the lowering strap at the left side. In case of a tree landing, the jumper should not release the weapons case.

47. Adjustable Equipment Bag

a. *Description.* The parachutist's adjustable equipment bag, when closed, is 12 inches deep, 12 inches wide, and adjustable in length from 22 to 42 inches (fig. 50). It has three internal

pockets lined with 1/2-inch thick felt pads, 19 inches long, and 10 inches wide (fig. 51). The bag weighs 13 pounds. The total loaded weight of the bag will not exceed 95 pounds. Two quick-release snaps attach to the D-rings on the parachute harness and secure the bag vertically on the front of the parachutist. A 53-inch retaining strap prevents the bag from swaying away from the parachutist during the opening of the parachute. This strap passes

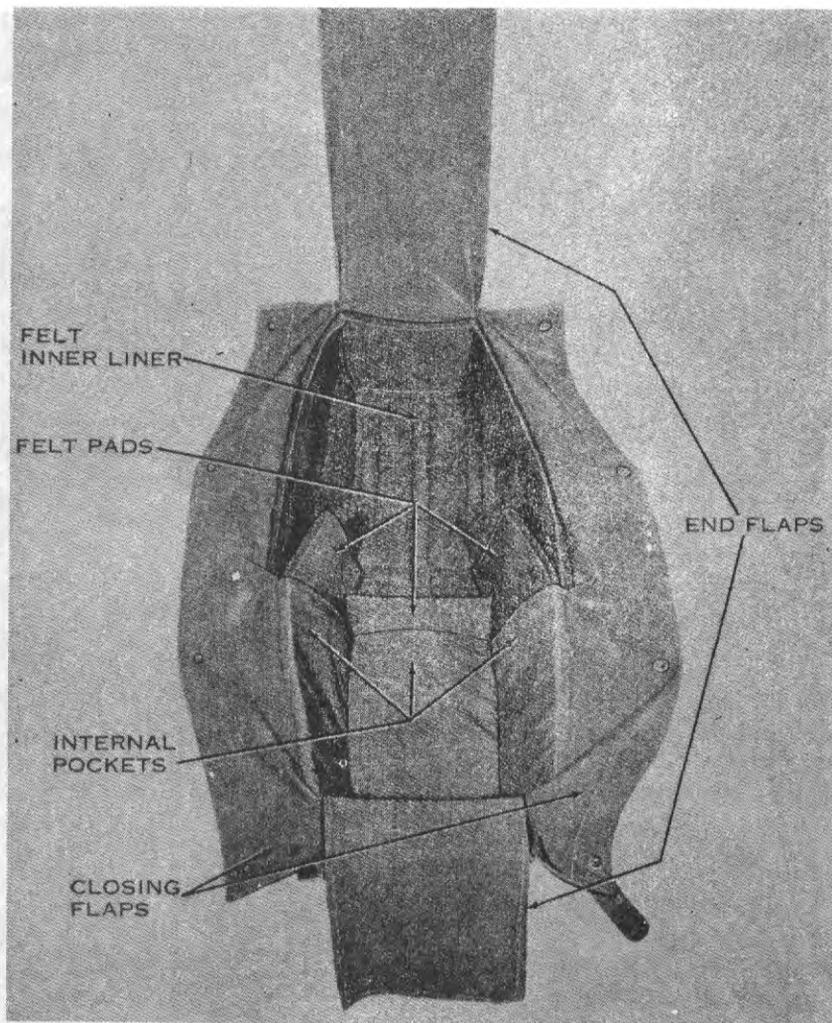


Figure 51. The parachutist's adjustable equipment bag (inside view).

around the parachutist's outboard leg and is fastened by a quick-release snap. One end of a 20-foot lowering strap is permanently attached to the bag and the free end of the strap is fastened to the parachutist's harness. An 18-inch bungee cord shock absorber on the lowering strap reduces shock when the bag is dropped. The bag may be suspended vertically or horizontally, as desired, by proper attachment of the lowering strap. Side handles are provided for carrying the bag. It also may be carried by shoulder loops which are formed by adjusting the securing straps.

b. Preparing the Bag for Packing.

(1) Lay the bag down with the retaining strap side up, checking to insure that the bag is complete with quick-release snap, link, and

the retaining strap, and all are serviceable.

(2) Turn the bag over and open the top two closing flaps.

(3) If the load requires maximum extension of the bag, insert the full length of the felt pads into the internal pockets. If the load requires only partial extension of the bag, insert the felt pads into the pockets only as far as required, allowing the portions of the pads not needed to hang on the outside of the pockets.

(4) Pass the running end of the handle strap through the quick-adjustable buckle, pull it snug, and fasten it. If the bag is not used at its fullest extension, accordion fold the bottom end of the bag before fastening the handle strap.



Figure 52. Stowing the lowering strap.

c. Packing the Bag.

(1) Use sufficient padding between items to prevent metal-to-metal or metal-to-wood contact. Give special care to fragile items such as radios.

(2) Disassemble weapons that are too long to fit into the bag and wrap the parts in padding.

(3) When the bag is dropped vertically, place the combat pack in the end of the bag which will touch the ground first to help cushion the load. Pack related items as one load.

(4) Load the heaviest items of equipment at the bottom of the bag. Keep in mind whether the bag is to be dropped in the horizontal or vertical position.

d. Closing the Bag.

(1) Fold the two end flaps over the contents. Then fold the top, closing the flaps over and fastening them with the four fasteners.

(2) Pass the running ends of the securing straps over the top of the bag and fasten them to the quick-adjustable buckles, using quick-release folds. Fold the excess webbing between the securing straps and the bag.

e. Attaching the Lowering Strap.

(1) When the bag is to be dropped vertically, attach the snaphooks on the lowering strap to the V-ring at the bag's top end. When the bag is to be dropped horizontally, attach a snaphook on the lowering strap to the V-ring at each end of the bag.



Figure 53. Parachutist wearing the adjustable equipment bag (side view).

(2) Accordion fold the lowering strap, making each fold approximately 8 inches long. Leave the portion with the shock absorbing cord and quick-adjustable buckle free for attachment to the parachute harness. Place two retaining bands around the folds of the strap and stow it in its pocket with the first folds to the bottom (fig. 52). Snap the pocket fastener

(3) Accordion fold the portion of the lowering strap with the shock absorbing cord. Secure these folds in place with retainer bands.

(4) Safety the snap fastener on the end

of the lowering strap with a cotter pin or safety wire and then tape it.

f. Securing the Bag to the Parachutist (figs. 53 and 54). After the main and reserve parachutes have been put on, adjusted, and a safety wire placed in the right connector



Figure 54. Parachutist wearing the adjustable equipment bag (front view).

snap of the reserve parachute, attach the parachutist's adjustable equipment bag as follows:

(1) Stand the bag on end with the quick-release links up and the retaining strap toward the parachutist.

(2) Interlock a quick-release snap to each quick-release line on the top end of the bag. Make sure the handles of the quick-release snap are up and facing outward. The cord may be used on the handle of the quick-release snap to facilitate releasing the bag.

(3) Turn the interlocked snaps and links one-quarter turn outward from the body and attach the quick-release snaps to the D-rings of the parachute harness.

(4) Passing the free end of the retaining strap around the outboard leg above the knee, interlock the quick-release assembly and link. This retaining strap is placed around the left leg when jumping the right door.

(5) Attach the lowering strap to the parachute harness by passing the running end of the strap under and around the right main lift web and through the right rear backstrap loop. Fasten the quick-adjustable buckle with a quick-release fold.

g. Releasing the Bag.

(1) After leaving the aircraft, the jumper must—

(a) Execute the first three points of performance.

(b) Release the retaining strap from around the leg.

(c) When approximately 200 feet above the ground, check below to insure no other parachutist is in the way, pull the handles on the quick-release snaps (attached to the D-rings on the parachute harness) simultaneously and allow the bag to drop the length of the lowering strap.

(2) To protect certain type loads against possible damage, a parachutist may be ordered to land without releasing his load in the air. Moderately light, small, or fragile loads normally are not released while in the air.

(3) Emergency landings with the PAE bag.

(a) *Tree landings.* If a tree landing is

certain, do not release or lower the PAE bag. The bag will provide protection for the jumper during his descent through the trees. If the bag was lowered it could conceivably get hung up in one tree and the jumper in another. This is a potentially injurious situation for the jumper. In addition, the equipment in the PAE bag would be difficult to recover for continuation of the jumper's mission. If the PAE bag was released and dropped free, the inclosed equipment could be destroyed, hindering the unit's mission.

(b) *Water or wire landings.* If a water or wire landing is imminent, the PAE bag must be jettisoned. This is done by releasing the bag to the length of the lowering strap and pulling out the quick-release fold in the lowering strap buckle. This detaches the bag from the parachute harness and permits it to drop free.

48. Container, Weapon and Individual Equipment

a. *Description.* The container, weapon and individual equipment, is a general purpose item to be used to carry designated combat equipment (fig. 55). It consists of a cotton duck container and harness assembly. The container is equipped with adjustable carrying straps which permit it to be carried in the same manner as a field pack. When rigged for jumping, the container is encased in the harness assembly. The harness assembly is equipped with a quick-release device activated by a release knob with safety pin, an 18-foot nylon lowering line, a lowering line stowage pocket, carrying handles, container securing straps, and an adjustable quick-release leg strap. It measures 12 inches in width and depth and is 36 inches long. It can be adjusted to 12 inches in width, 6 inches in depth, and 18 inches in length. The bag weighs 16½ pounds. The total loaded weight will not exceed 95 pounds.

b. *Preparing and Packing the Container.* To pack the container, see paragraph 47b and c.

c. *Attaching Harness Assembly to Container.*

(1) Lay the harness assembly down with the inside portion facing up.

(2) Straighten all straps.

(3) Lay container on the harness assem-

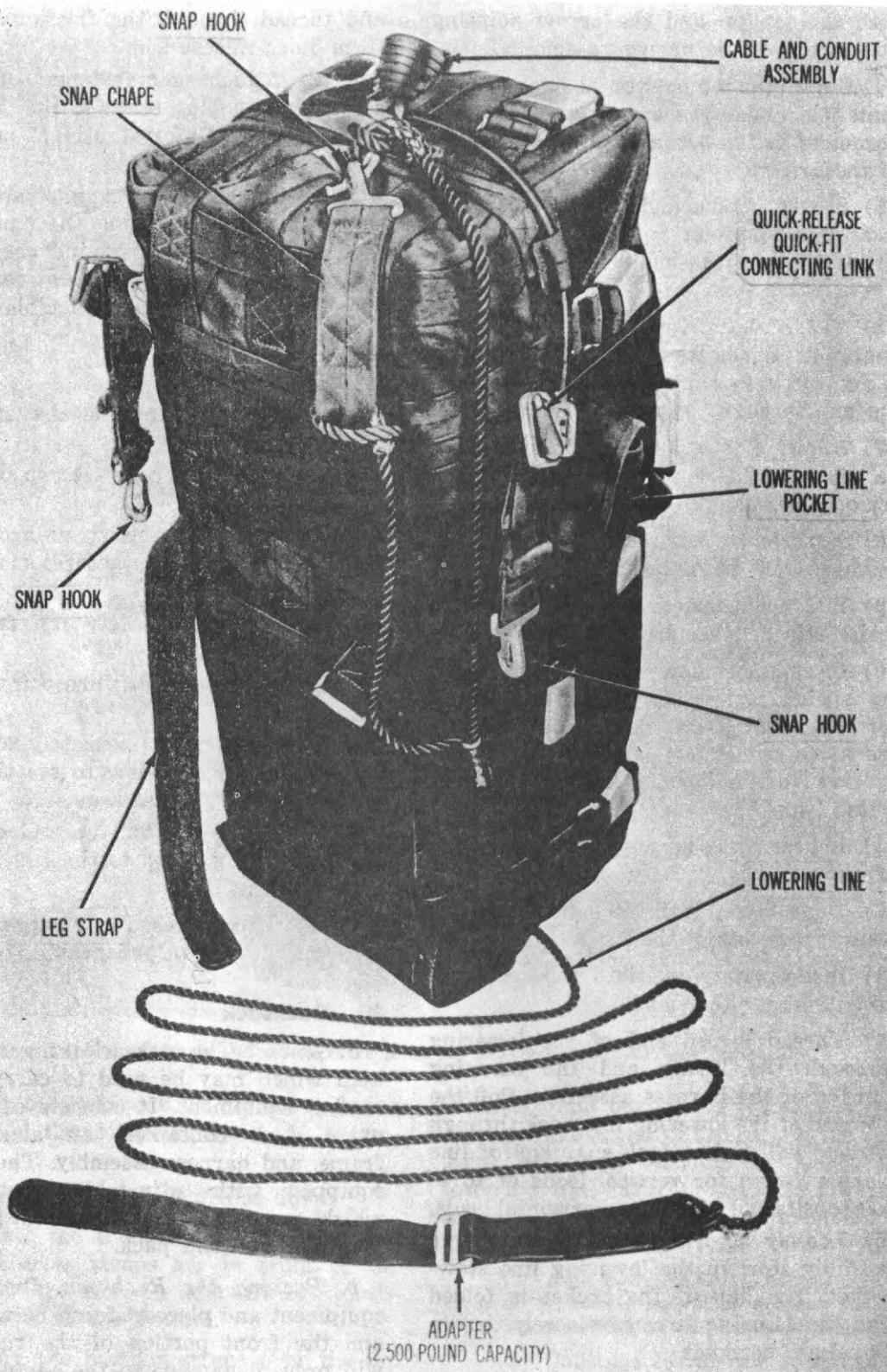


Figure 55. Container, weapon, and individual equipment.

bly with the top up and the arrow pointing toward the top of the harness assembly.

(4) Secure the top horizontal strap around the container under the carrying straps and pull through the friction adapter on the right side of the harness.

(5) Secure middle and bottom horizontal straps around container and pull through the friction adapter on the right side of the harness.

(6) Secure both vertical straps around the container under the container carrying straps and the top strap of the harness assembly and pull through the friction adapters.

(7) Secure side strap around the bottom of the container and pull through friction adapter on other side of the harness assembly.

(8) Stand entire assembly on end, top up, and tighten all straps. Tape all strap excess.

(9) Pull up on single point release knob (red ball) attached to harness assembly.

(10) Insert the right release assembly attaching strap lug assembly into the female part of the connecting link assembly on the harness assembly. Rotate pin downward, engaging claw in the hole of the quick-release connecting link.

(11) Repeat procedure in (10) above for the left side.

(12) Depress red ball, engaging the two keepers in the recess of the lug assemblies.

(13) Insert safety pin into the recess in the red ball from either side.

(14) Thread looped end of the lowering line through the V-ring and the carrying strap on top of the harness assembly. Pull the entire length of the lowering line back through the loop and pull tight. Hook snap end of line to the same V-ring for vertical loads or to V-ring on opposite end of bag for horizontal loads.

(15) Loosely accordion roll lowering line and carefully stow in the lowering line stowage pocket. The flap of the pocket is folded over and the securing laces are loosely tied in a quick-release bowknot.

d. Attaching Container and Assembly to the Parachutist.

(1) Fasten leg strap around outboard leg

and thread through the friction adapter and form quick-release loop.

(2) Attach snap fasteners on the release assembly attaching strap to the D-ring on the main lift web. Safety the right snap fastener of the reserve parachute.

(3) Attach the lowering strap to the parachute harness by passing the running end of the strap under and around the right main lift web and through the right rear backstrap loop. Fasten the quick-adjustable buckle with a quick-release fold.

e. Releasing the Bag.

(1) After leaving the aircraft, a jumper must—

(a) Execute the first two points of performance.

(b) Release leg strap around the leg and laces securing the accordion roll lowering line.

(c) Remove safety pin from the red ball.

(d) Execute the third point of performance.

(e) When approximately 200 feet above the ground, check below to see that no other parachutists are in the way.

(f) Pull red ball up and out, allowing the container to drop to the full length of its lowering line.

(2) Procedures for emergency are the same as outlined in paragraph 47g(3).

49. Rucksack

a. General. The rucksack is a general purpose item which may be used to carry designated combat equipment. It consists of a cotton or nylon duck container, an aluminum pack frame, and harness assembly. The rucksack is equipped with adjustable carrying straps which permit it to be carried in the same manner as a field pack.

b. Packing the Rucksack. Insert items of equipment and place padding between the load and the front portion of the rucksack. This will prevent damage to the equipment, as the rucksack is on its front when properly rigged. Close the rucksack and engage the pack closing straps.

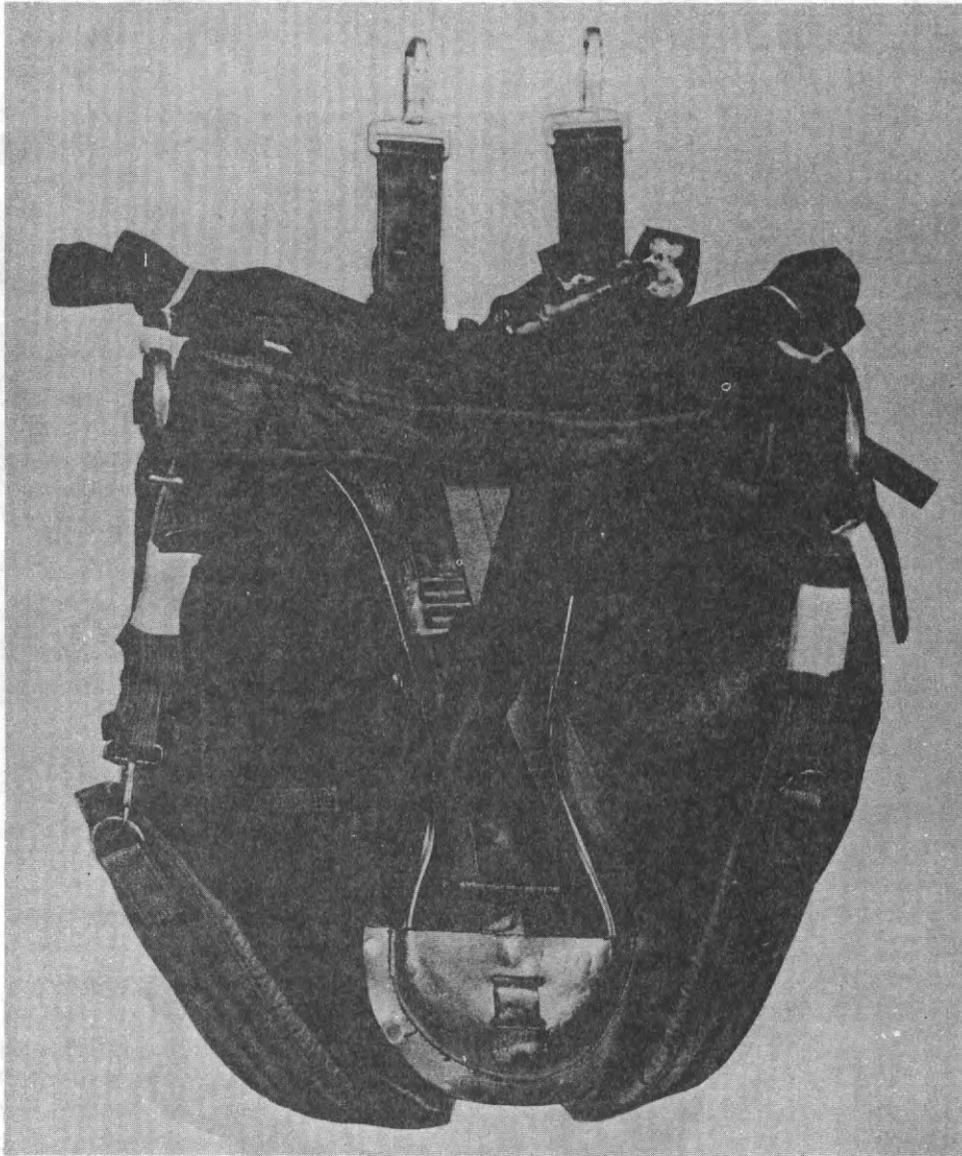


Figure 56. Rucksack, cotton, with lowering line from weapons case attached.

c. Rigging the Rucksack. To rig the rucksack for jumping, the following must be accomplished:

(1) Turn the rucksack upside down.

(2) Place the H-harness on the rucksack so that the cross straps are in front of the rucksack and the friction adapters are touching the frame at the bottom.

(3) Run the harness straps over the top of the rucksack load and then under the top portion of the frame.

(4) Run the harness straps over the mid-

dle horizontal bar of the frame and cross the straps at the center of the back of the rucksack. Run the straps through the loop(s) of the lowering line, insuring that the lowering line loop(s) is alined at the intersection of the straps (figs. 56 and 57).

Note. Lowering line to be used may be taken from an adjustable individual weapons case or from the weapon and individual equipment container.

(5) Continue to run the straps under the frame and secure them to the friction adapters, forming a quick-release.

(6) Accordion fold the lowering line and



Figure 57. Rucksack, nylon, with lowering line from weapon and individual equipment container attached.

attach it with retainer bands to the frame at the bottom of the rucksack. Each fold should be approximately 19 inches long. Leave the portion with the quick-adjustable buckle free for attachment to the parachute harness. Accordion fold this portion of the lowering line and secure these folds with retainer bands.

(7) Thread the H-harness D-ring attaching straps through the intermediate friction adapters, forming a quick-release with the run-

ning ends pointing away from the parachutist (fig. 59).

d. Attaching the Rucksack. To attach the rucksack to the parachutist, the following steps are taken:

(1) Attach the snaphooks of the D-ring attaching straps to the D-rings of the main lift web of the parachute harness, insuring that the snaphooks are attached outside of the re-



Figure 58. Attaching rucksack to parachutist.

serve parachute connector snaps (figs. 58 and 59).

Note. The right reserve connector snap must be safetied with a safety pin and lanyard located on the right carrying handle of the reserve parachute.

(2) Attach a tiedown (80-pound cotton webbing) to the frame of the rucksack and around the right leg of the parachutist, insuring that the quick-release knot is easily accessible.

e. Special Provisions. The following special provisions may be necessary in jumping the rucksack:

(1) Special provisions must be made when jumping the rucksack with an extremely large load, as the H-harness straps are too short to go around the loaded rucksack. By using a length of type VIII nylon webbing and an H-harness friction adapter, each H-harness strap can be extended to the desired length to accommodate the load (fig. 60).

(2) If desired, type VIII nylon webbing



Figure 59. Parachutist with rucksack attached.

may be used to supplement the H-harness to provide horizontal support on a rucksack containing a heavy or bulky load. The ends of the nylon webbing are secured with an H-harness friction adapter as shown in figure 60.

(3) If the H-harness is not available, units may use locally prefabricated harness in lieu of the H-harness. Unit SOPs will govern the rigging of these harnesses, consistent with maximum safety considerations.

f. *Attaching the Lowering Line to the Parachutist.* Attach the lowering line to the parachute harness by passing the running end of the strap under and around the right main lift web and through the right rear backstrap loop. Fasten the quick-adjustable buckle with a quick-release fold.

g. *Releasing the Rucksack.*

(1) After leaving the aircraft—

(a) Execute the first three points of performance.

(b) Release the tiedown from around the right leg.

(c) When approximately 200 feet above the ground, check below to insure no other parachutist is in the way, pull the quick-releases of the D-ring attaching straps simultaneously and allow the rucksack to drop the length of the lowering line.

Note. The D-ring attaching straps should be removed from the parachute harness and secured to the H-harness before the parachute is turned in.

(2) To jettison the rucksack in an emergency, release the rucksack to the length of the lowering line and pull out the quick-release fold in the lowering strap buckle. This detaches the bag from the parachute harness and permits it to drop free.

Section III. SPECIAL EQUIPMENT FOR ARCTIC CONDITIONS

50. General

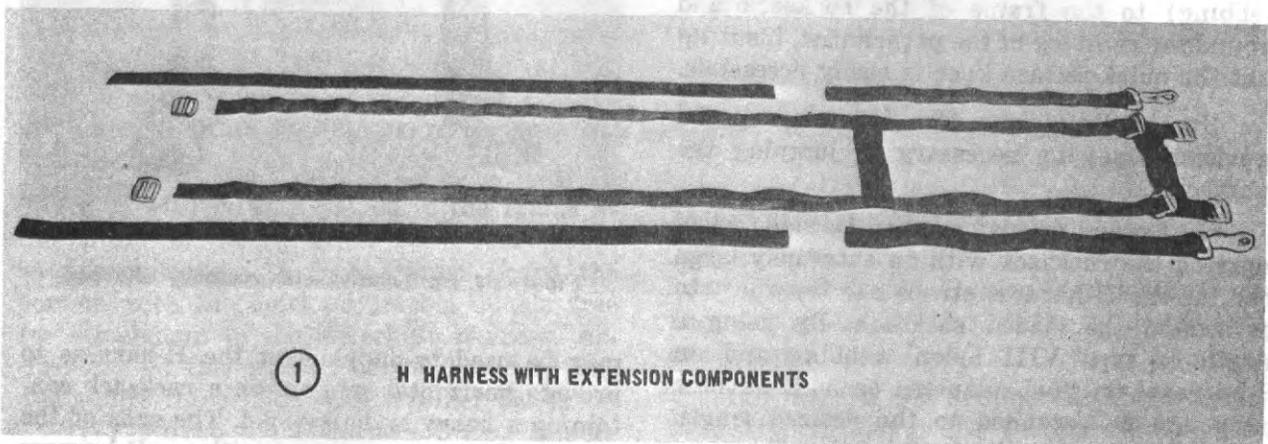
In cold weather operations, prolonged exposure of troops to the extreme and sudden fluctuations in temperature cause both psychological and physiological stresses. Individual combat effectiveness may be lessened because of these stresses and by the additional weight which an individual must carry to survive. To overcome any reduction of the airborne soldier's combat effectiveness, he must be in a high state of physical conditioning and have immediately accessible those items necessary for 72 hours of self-sustaining operation without benefit of resupply. Because of the weight and

bulkiness of his clothing, much of the equipment normally carried off the drop zone by the individual must be loaded on sleds (and pulled by hand) or on oversnow vehicles. Airborne commanders must familiarize themselves with the airborne operations portion of FM 31-71.

51. Equipment Modifications

Certain modifications of standard equipment must be made for airborne operations under cold weather conditions.

a. *Waistband.* A 6-foot A7A strap is used in lieu of the standard waistband when parachut-



①

H HARNESS WITH EXTENSION COMPONENTS

Figure 60. Extending the H-harness.

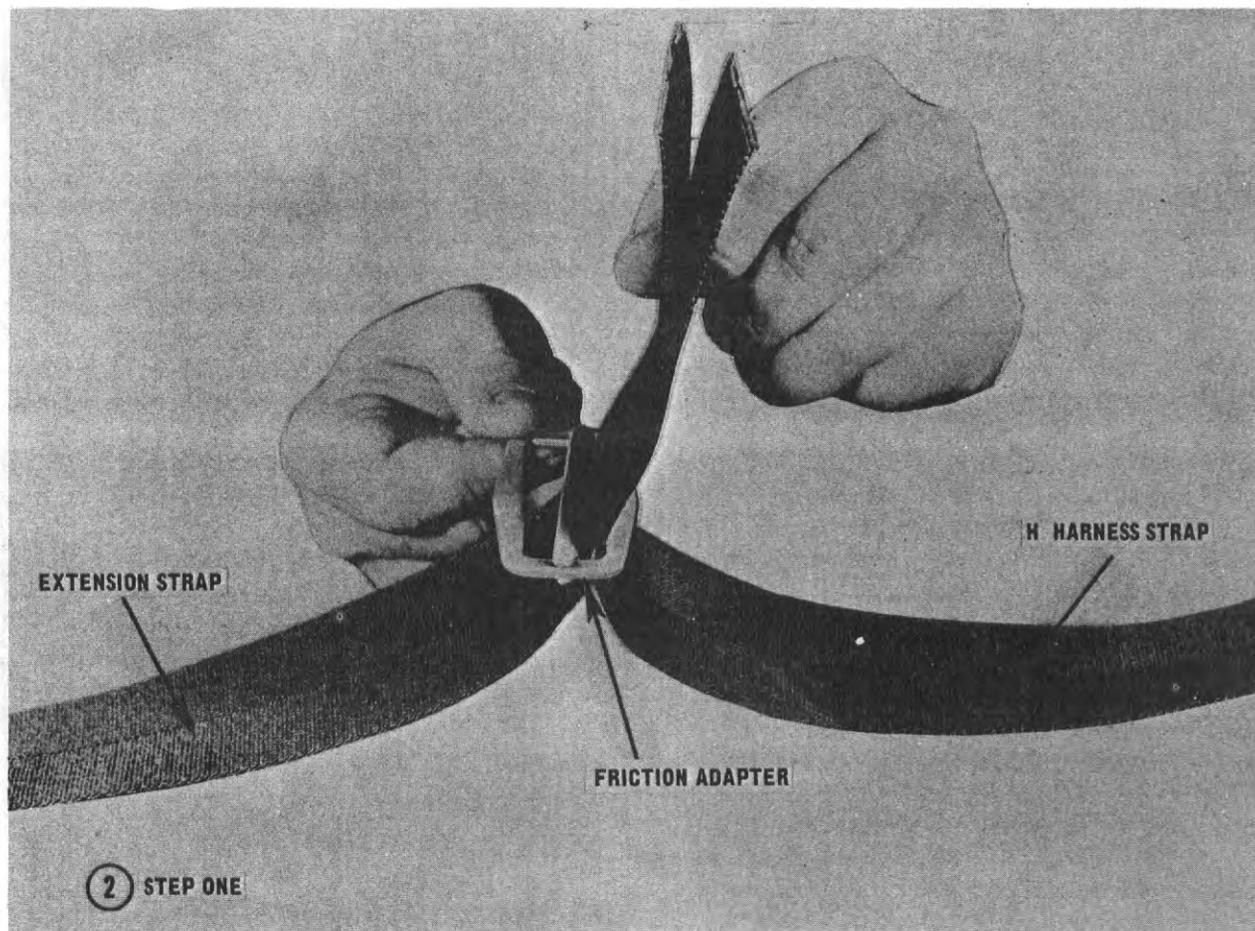


Figure 60—Continued.

ing with snowshoes or skis. The standard waistband is placed across the harness side of the parachute pack and threaded through its adjuster, with the excess folded back and taped. The running end of the A7A strap is fed through the lower backstrap keepers (fig. 61). The buckle of the strap should always be on the side of the parachutist corresponding to the aircraft door he will exit as that is the side on which the snowshoes or skis are carried.

b. H-Harness. Rucksacks which contain cold weather equipment will normally weight more than 50 pounds and should be lowered during parachute descents by the use of an H-harness and lowering line. The H-harness should be lengthened to 76 inches and rigged so that the second lateral strap falls across the center of

the rucksack frame. The lowering line is attached to the second lateral strap.

52. Special Cold Weather Equipment

a. Arctic Mittens. When wearing arctic mittens difficulty often occurs in releasing the quick-release snaps which hold the H-harness to the D-rings of the parachute harness. To avoid difficulty a 20 inch length of nylon cord is threaded through the handle of each quick-release snap and bound with cloth or other tape for rigidity. Wooden balls 1 inch in diameter or similar objects are fastened to the end of the cord for hand stops. Parachutists may be instructed to tuck their arctic mittens under the harness during the actual jump period. In this case the leather shell glove and wool insert is worn during actual descent to permit ease of operation of equipment. After

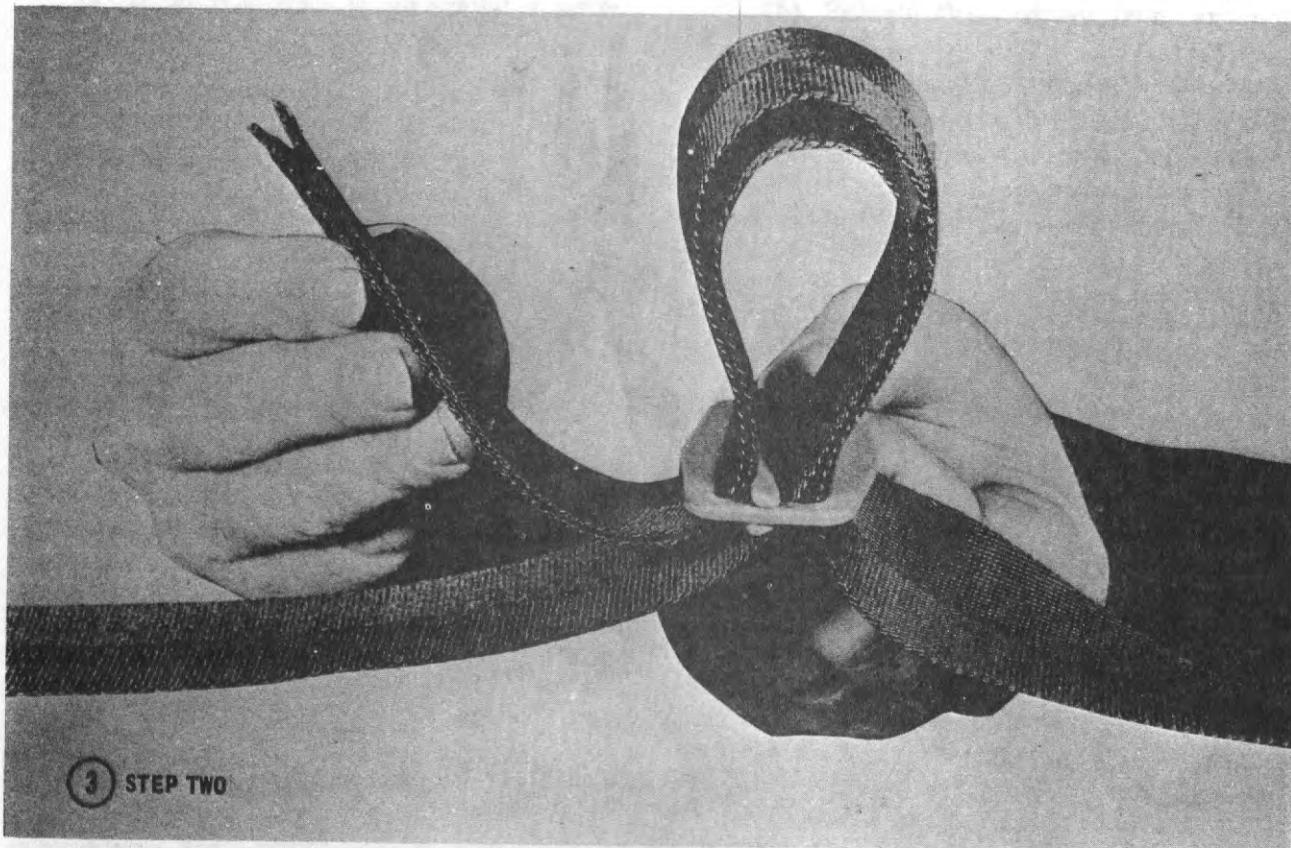


Figure 60—Continued.

landing and release of chutes, mittens are employed in performance of duties.

b. Snowshoes. Snowshoes and individual weapon can be carried to the ground by the parachutist using the following procedure:

(1) Place the prefitted snowshoes one on top of the other. Run the heel strap of the lower snowshoe under the bottom of the lower shoe and up between the frame and webbing of both snowshoes. The heel strap buckle is brought up in a similar manner on the other side of the snowshoes.

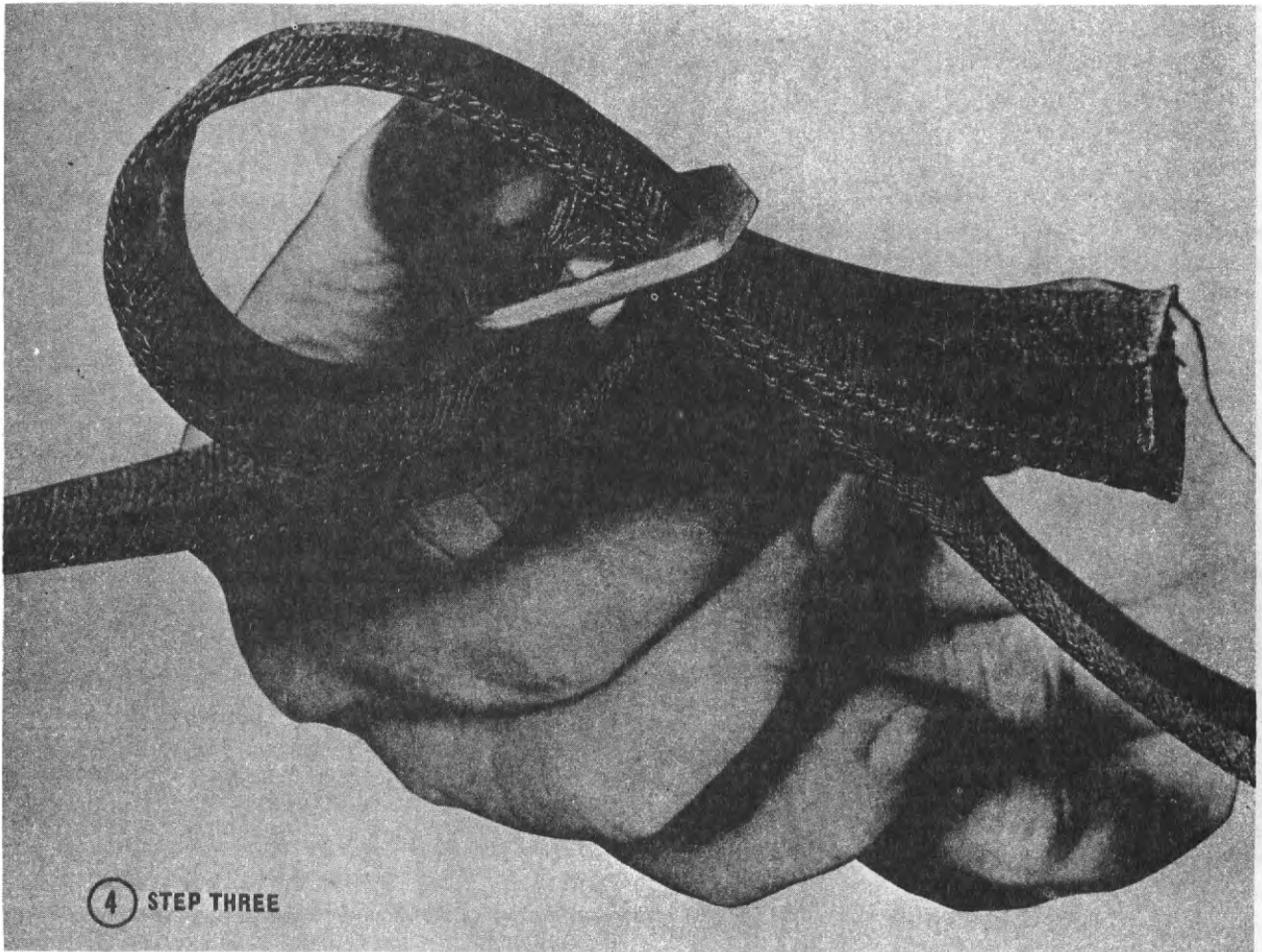
(2) Secure the rifle sling as shown in figure 62. Place the rifle so that the barrel is resting on top of the trails of the snowshoes with the operating rod handle up (down when rigged for right door exit). Secure the butt to the snowshoes by buckling the harness heel strap around the small of the stock. Secure the barrel of the weapon to the yoke of the snowshoes with a length of 550 pound nylon

cord, using a bowknot. The M79 grenade launcher is rigged in a similar manner (fig. 63). The breech and muzzle should be covered with cloth or plastic material to protect them from the snow when landing.

(3) Put on the parachute and rucksack in the prescribed manner. Using the rifle sling, suspend the snowshoes and rifle over the shoulder opposite the static line side. Thread the running end of the A7A strap through the retaining bands of the reserve parachute and around the snowshoes to terminate in a readily accessible quick-release fold (fig. 64). The rucksack lowering line is then threaded through the rifle sling and attached to the main lift web of the parachute.

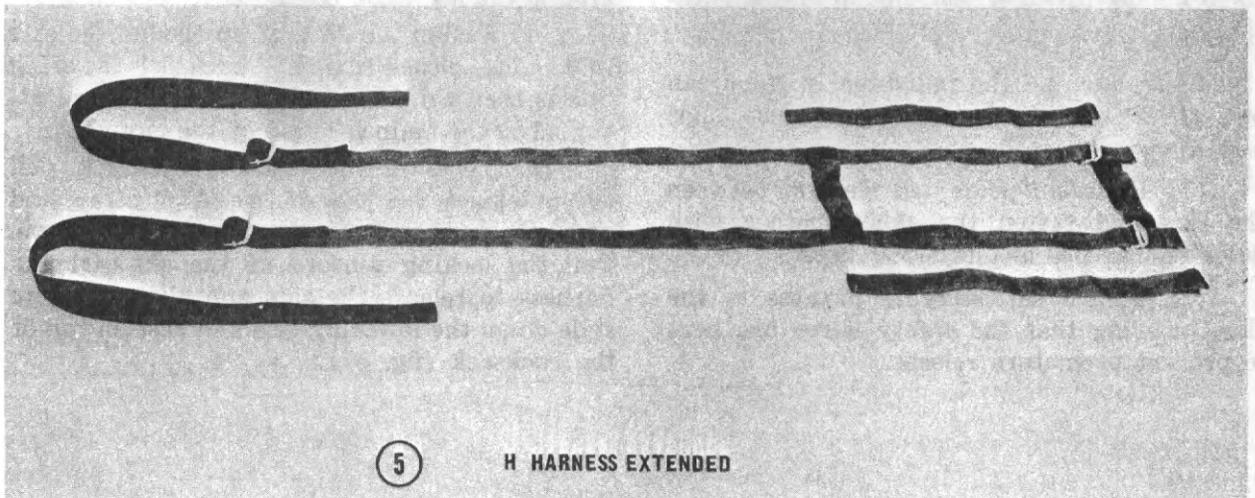
(4) The snowshoes, without weapon, may be carried in a similar manner by fabricating a sling from suitable cord.

(5) To lower the snowshoes and rucksack, pull the quick-release fold on the A7A strap



④ STEP THREE

Figure 60—Continued.



⑤

H HARNESS EXTENDED

Figure 60—Continued.

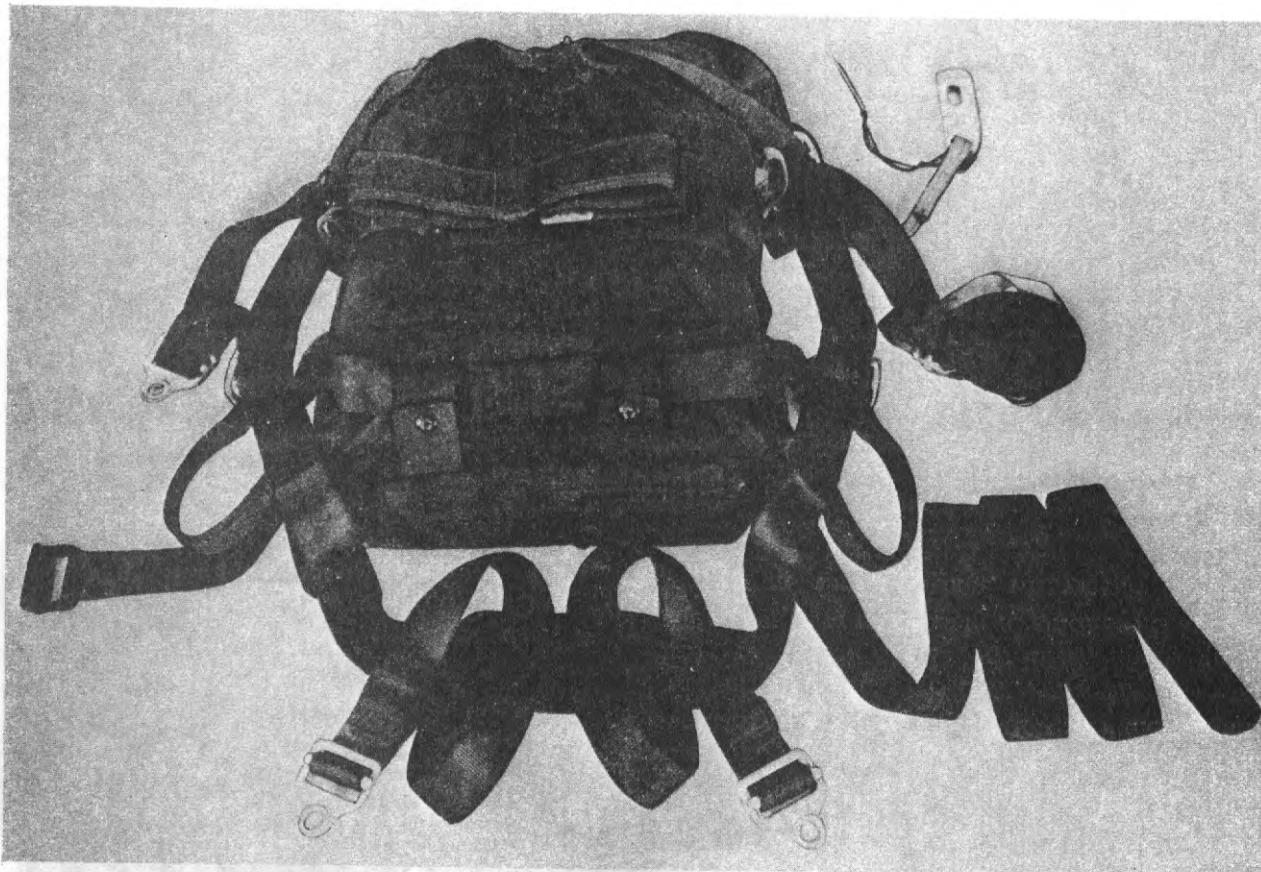


Figure 61. Six-foot A7A strap used in lieu of waistband.

and drop the rucksack by simultaneously pulling the quick-release cords on the H-harness. Release the snowshoes, which will slide down the lowering line and rest on top of the rucksack.

c. *Skis*. Skis and the individual weapon can be carried using the following procedure (figs. 65 and 66):

(1) Place ski poles and weapon between the skis and fasten the skis together with quick-release ties and masking tape.

(2) Attach ski carrying harness to the skis, insuring that the safety wires are bent to prevent premature release.

(3) Secure the top tie of the ski carrying harness to the main lift web just below the canopy release assembly. Secure the bottom tie around the leg (figs. 65 and 66).

(4) Fasten the A7A strap around the skis in a quick-release fold. The rucksack lowering line is then threaded between the skis and attached to the main lift web of the parachute.

(5) To lower the skis and rucksack, pull the quick-release fold of the A7A strap and drop the rucksack as described in *b* above. Pull the locking pincord of the ski carrying harness to release the skis and allow them to slide down the lowering line and rest on top of the rucksack (fig. 67).

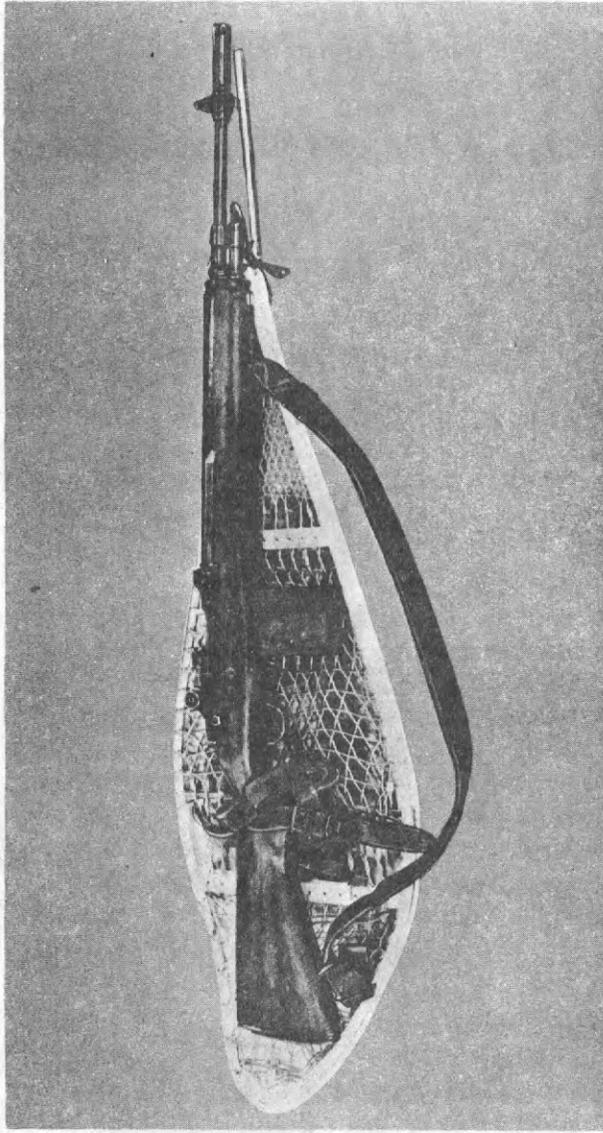


Figure 62. Snowshoes and rifle prepared for left door exit.

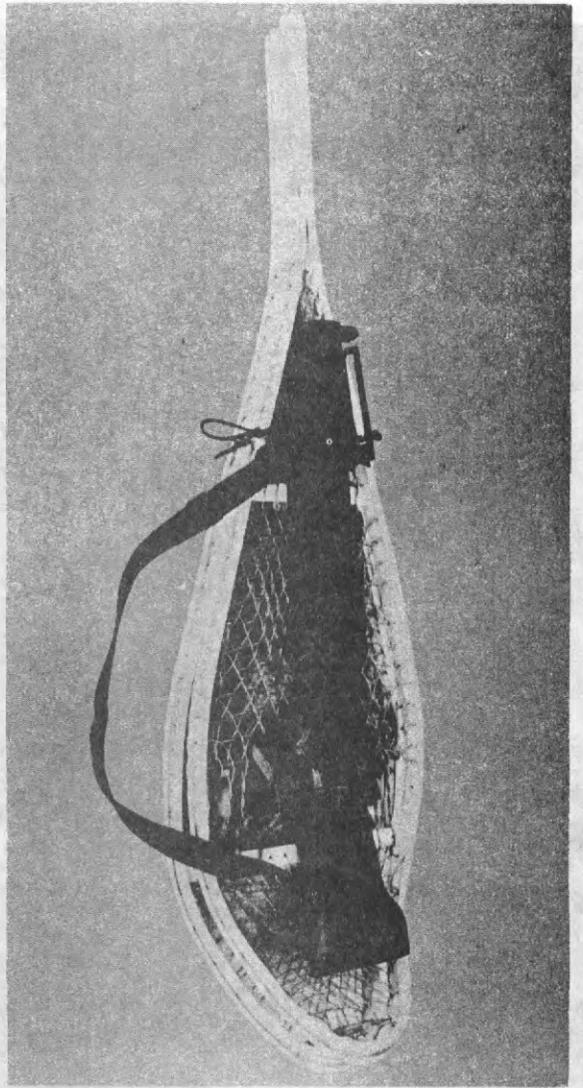


Figure 63. Snowshoes and grenade launcher prepared for right door exit.



Figure 64. Snowshoes and rifle secured by A7A strap.



Figure 65. Skis and rifle secured for jumping (front view).



Figure 66. Skis and rifle received for jumping (side view).



Figure 67. Rucksack and skis released during descent.

CHAPTER 4

JUMPMASER DUTIES

Section I. GENERAL

53. Qualifications

The jumpmaster is the senior qualified airborne individual on board the aircraft or his designated representative. He must be a graduate of a jumpmaster course or must be specially trained or experienced in airborne techniques to perform the duties outlined below.

54. Responsibilities

a. There is only one Army jumpmaster in any one aircraft. He has command authority over and responsibility for all airborne personnel in the aircraft. The jumpmaster is responsible for an inspection of the aircraft and the personnel, the enplaning and jumping of

personnel, and the dropping of air delivery containers. His responsibility includes assurance that all airborne personnel aboard the aircraft observe flight safety regulations and comply with instructions from the pilot.

b. In a tactical unit, he usually jumps with his planeload. He may be assisted by stick leaders, who also jump, or by designated nonjumping safety officers or noncommissioned officers. Unit SOPs should be checked for additional instruction.

c. During the conduct of parachute qualification training, the static jumpmaster normally does not jump with the students.

Section II. DUTIES PRIOR TO ENPLANING

55. Inspection of the Aircraft

The jumpmaster, accompanied by the pilot or his representative, inspects the interior and exterior of the aircraft.

a. The exterior inspection insures that—

(1) Protruding objects or sharp edges in the vicinity or aft of the jump doors are taped or padded.

(2) The air delivery system functions properly when it is to be used.

b. The interior inspection insures that—

(1) Door handles, edges of doors, and projections are taped securely, if necessary.

(a) Platforms (C-130).

(b) Clamshell locks (C-119).

(c) Doors lashed to cargo floor (C-123).

(2) Unused doors are locked.

(3) All equipment is securely stowed and lashed.

(4) The floor is clean and not slippery and that no projections are in the aisles.

(5) Seats are properly installed and equipped with seat belts to accommodate all passengers.

(6) Red and green jump lights are operable.

(7) The intercommunications system is operable.

(8) Interior lighting is adequate.

Note. For C-130 type aircraft special consideration must be given when the cargo loading system (dual rail) is used (ch. 5, sec. V).

56. Inspection of Personnel

a. Before enplaning, the jumpmaster in-

spects the parachutists from the front (head to toe) to insure that—

(1) Helmet (chin straps and neck strap) are fitted and fastened.

(2) The canopy release assemblies are assembled properly and the protective covers are properly positioned.

(3) Chest straps are even and without twists.

(4) The kit bag is secured properly.

(5) The quick-release assembly is in the locked position with the safety clip inserted and all lugs firmly secured.

(6) The waistband is through the two waistband retainer loops on the rear of the reserve parachute; the free end of the waistband is formed into a quick-release fold.

(7) The reserve parachute —

(a) Connector snaps are buckled in D-rings on the harness.

(b) Ripcord grip is on the parachutist's right.

(c) Pins fully inserted in the cones.

(d) Pack opening spring bands are free of the ripcord grip.

(e) Pack opening spring bands are not frayed or broken.

(f) Canopy is not showing.

(g) The safety wire is inserted into right side of reserve snap connector, when jumping equipment attached to the D-ring.

(8) Leg straps are through the leg strap loops, are not twisted, and are locked in the quick-release assembly.

(9) Entire harness is free of frays and twists.

b. The jumpmaster then inspects the parachutists from the rear (head to toe) to insure that—

(1) Risers are without twists.

(2) Diagonal and horizontal backstraps are not twisted and are tight.

(3) The static line is routed over the proper shoulder and is not twisted or misrouted and the static line snaphook is fastened to the top carrying handle of the reserve para-

chute; the static line snaphook functions properly and has a safety wire attached.

(4) The static line is not frayed, broken, or cut.

(5) A 1/4-inch type I cotton webbing passes through all four pack closing loops of the pack under the static line and through the pack opening loop of the static line.

(6) Entire pack is compact.

(7) Saddle is not twisted.

c. The jumpmaster inspects the parachutist's equipment to insure that—

(1) It is securely packed.

(2) That it is properly rigged and taped.

(3) That the tiedown straps/lines are positioned and are of sufficient length.

(4) That the quick-releases are correctly attached and function properly.

(5) That the lowerling line strap is attached and stowed.

57. Final Briefing

a. Before entering the aircraft, the jumpmaster reviews and briefs the parachutists for the following:

(1) Emergency procedures in flight. Do not remove the protective covers from the canopy release assemblies or tamper with them in any way.

(2) Sequence of events from the 20-minute warning signal to the GO signal.

(3) Action to be taken when a parachutist is towed behind an aircraft.

(4) Inform parachutists of any last minute changes in the operations order.

b. Following the final briefing, each stick of parachutists counts off and loads in reverse order depending on the aircraft. The jumpmaster is responsible that personnel are loaded and ready for takeoff at airborne station time.

c. Before takeoff, the jumpmaster insures that all personnel—

(1) Are seated with seat belts fastened.

(2) Understand emergency procedures.

(3) Have helmets on and fastened properly.

Section III. DUTIES DURING FLIGHT

58. General

In flight the jumpmaster—

a. Remains in constant communication with the pilot by use of the interphone located in the rear of the aircraft. The crew chief may assist by acting as operator of the interphone.

b. Keeps himself oriented at all times as to the position of the aircraft in relation to the flight route and drop zone.

c. Is alert for sick or nervous jumpers and is responsible for the conduct of personnel throughout the flight.

d. Makes a check upon receipt of the 20-minute warning to see that—

(1) Static lines are over the proper shoulder and fastened to the top carrying handle of the reserve parachute.

(2) Helmets are fastened.

(3) The quick-release assembly is in the locked position with safety clip inserted and all lugs attached.

(4) The ripcord grip is snug in its pocket.

(5) Equipment is firmly secured.

(6) The men are in their proper seats.

59. Jumping of Personnel

a. *The Jump Commands.* Approximately 20 minutes before drop time, the pilot alerts the jumpmaster. All personnel are alerted. Personnel jumping with equipment bags at this time hookup their equipment and are normally positioned near the jump doors. When the aircraft is approximately 6 minutes from the drop zone, the pilot turns on the red light and notifies the jumpmaster. The jumpmaster will give a verbal 6-minute warning and then starts the jump commands.

b. *Command Sequence.* The jump commands are listed in paragraph 13. Small modifications may be necessary depending on the size load or type aircraft (chs. 5 and 6). The jumpmaster positions himself in the rear of the aircraft where he may be seen by the greatest number of jumpers and gives the jump commands. Because the noise of the engines makes it difficult to hear, arm-and-hand signals

are used with each command. These signals are given vigorously with smooth, coordinated movements (para 14). Both hands are used unless air turbulence prevents it. The jumpmaster is hooked up before he starts the commands. (For aircraft preparation and other particulars (chs. 5 and 6). Modifications to the jump commands are discussed with each aircraft.)

c. *Action at 1-Minute Warning.* The jumpmaster alerts the jumpers and then makes a safety check outside the aircraft. He observes to the front, side, rear, and above for other aircraft that may interfere with jumpers. He observes the drop zone for identification and for unsafe ground conditions. When he estimates approximately 10 seconds to exit time, he commands "Stand in the door."

60. Safety Considerations

a. In aircraft requiring seats to be up for jumping parachutists will insure that all seats are firmly secured in the "up" position and that no part of the seats protrudes into the aisle.

b. Each parachutist pays particular attention on moving into the door to insure he does not become entangled in the static line of the man preceding him.

c. A maximum of static line is stowed to prevent the airblast from whipping the loose static line and endangering the exiting parachutist and the following parachutists.

d. Safety considerations applicable to specific aircraft are discussed in separate sections in chapters 5 and 6.

e. When dropping door bundles and personnel, insure by checking visually to the rear that the bundles have cleared the aircraft prior to allowing personnel to exit the aircraft.

f. The jumpmaster will carry a sheath knife.

61. Standing Operating Procedures for Use When a Parachutist Is Towed Behind an Aircraft

In the event a parachutist has malfunction of the static line (becomes entangled) immedi-

ately after clearing the door of the aircraft, the following action is taken:

a. Notify pilot.

b. The pilot maintains an altitude of at least 1,000 feet and avoids flying over water or built-up areas.

c. The parachutist indicates that he is conscious and his reserve parachute is ready for use by placing one or both hands on the top of his helmet.

d. No parachutist will activate his reserve until his connection with the aircraft has been released.

e. If the parachutist has indicated that he is conscious and his reserve parachute is ready for operation, the towing static line is cut immediately unless the aircraft is over water. *The decision to cut the parachutist free will be made by the pilot.*

f. If the parachutist has not indicated that he is conscious or his reserve parachute is not ready for immediate and positive inflation, he is retrieved into the aircraft. *The recovery methods will be prescribed by the pilot.*

g. During retrieving attempts all possible action is taken to insure the parachutist will not slip back at any time.

h. In the event the parachutist can be drawn to the door but not into the aircraft, he is securely fastened as close to the aircraft as possible and a landing will be made on a foamed runway as soon as practicable. The parachutist is not cut loose on landing unless it appears dragging will be fatal. In event the parachutist is not immediately cut free, *the recovery methods will be prescribed by the pilot.*

62. Standing Operating Procedure for Use When a Parachutist Refuses to Jump

In the event of a jump refusal, the jumpmaster or assistant jumpmaster will order the individual to move to the forward end of the troop compartment and out of the way of the jumpers and be seated.

63. Activation of the Reserve Parachute Inside the Aircraft

In the event a jumper's reserve parachute is activated inside of the aircraft, he should immediately be removed from the stick and moved to the forward end of the aircraft out of the way of the other jumpers. If the activation occurs near a jump door and the reserve is pulled outside the aircraft, the jumper should exit as quickly as possible whether he has hooked up or not.

CHAPTER 5

AIR FORCE AIRCRAFT: PREPARATION AND JUMPING

Section I. GENERAL

64. Introduction

a. U.S. Air Force troop carrier and assault aircraft are the primary aircraft used in joint airborne operations, airborne qualification training, and airborne proficiency training. This chapter will cover aspects of U.S. Air Force aircraft used in military parachuting.

b. Any aircraft may be used for parachuting with the T-10 parachute providing an anchor line cable can be safely employed, drop speed is not in excess of 150 knots, exit can be made without hazard, and the jumper can clear the aircraft completely before his parachute starts to deploy.

c. Minimum safe altitudes for making peacetime tactical training jumps, wartime tactical training jumps, combat jumps, and qualifying jumps with the T-10 parachute are outlined

in chapter 7 and in USCONARC TT 110-101-1/TACM 55-2, Joint Airborne Operations, and FM 57-1, AFM 2-51 U.S. Army/U.S. Air Force Doctrine for Airborne Operations.

65: Responsibilities

a. Air Force personnel are responsible for preparing the aircraft for equipment and personnel drops, to include furnishing any special equipment. Detailed instructions for delivery of equipment using Air Force aircraft are contained in TM 10-500-series.

b. The responsibilities of the jumpmaster are discussed in chapter 4. Certain Air Force aircraft require modification of one or more of the jump commands. These modifications are discussed in the appropriate sections. In addition, the jumpmaster must be familiar with the safety considerations applicable to each aircraft as discussed in each section.

Section II. C-119 (PACKET)

66. Characteristics

The C-119 is a twin-engine, medium-range troop carrier aircraft. Forty-two parachutists may jump from this aircraft using two jump doors in the aft end of the airplane. When the clamshell doors are removed, aft end jumping can be accomplished.

67. Loading Techniques and Seating Arrangement

a. The C-119 can accommodate two sticks. A 20-man stick sits on the portside (left) of the aircraft and a 22-man stick sits on the starboard side (right).

b. Troops are normally loaded through the aft troop doors.

68. Jump Procedures

Since only outboard seats are used, a modification of commands outlined in paragraph 13b and c is necessary. The second command is STAND UP. On this command, all parachutists stand up as previously described. Only the Nos. 1, 2, 3, and 4 men need raise the seats. All subsequent commands follow the sequence of paragraph 13.

69. Safety Considerations

a. Care must be used to employ the 15-foot static line with drogue when dropping equip-

ment containers from the personnel doors when troops are following. The 15-foot static line with drogue or the breakaway static line must be used for airdrop of container loads from the aft end when troops are following (TM 10-500-series).

b. Caution must be used in dropping equipment from the monorail system and personnel from the troop doors simultaneously. Monorail containers may not exceed 32 inches in width, 62 inches in height, and 36 inches in length, and may not weigh less than 375 pounds. In order to attain a reasonable degree of safety, simultaneous deliver should be limited to a single aircraft except under emergency conditions. When used in mass formation during training, the possibility of equipment bundles free-falling through parachutists in the air introduces a safety hazard. The static lines on

the equipment containers must be 85 feet in length to preclude possible danger of entanglement of personnel and equipment parachutes during deployment. Simultaneous drops will not be made during peacetime training.

70. Aft End Jumping From the C-1/9

a. When personnel jump from the rear of C-119 aircraft with clamshell doors removed, both the aircraft and jump procedures must be modified. Two sticks may be jumped simultaneously only when wheeled conveyors are not installed on the floor of the aircraft. Only one stick can jump using the aisle between the wheeled conveyors.

b. The aircraft is modified with a kit composed of two extension arms mounted on the clamshell door hinge fittings (fig. 68). Modi-

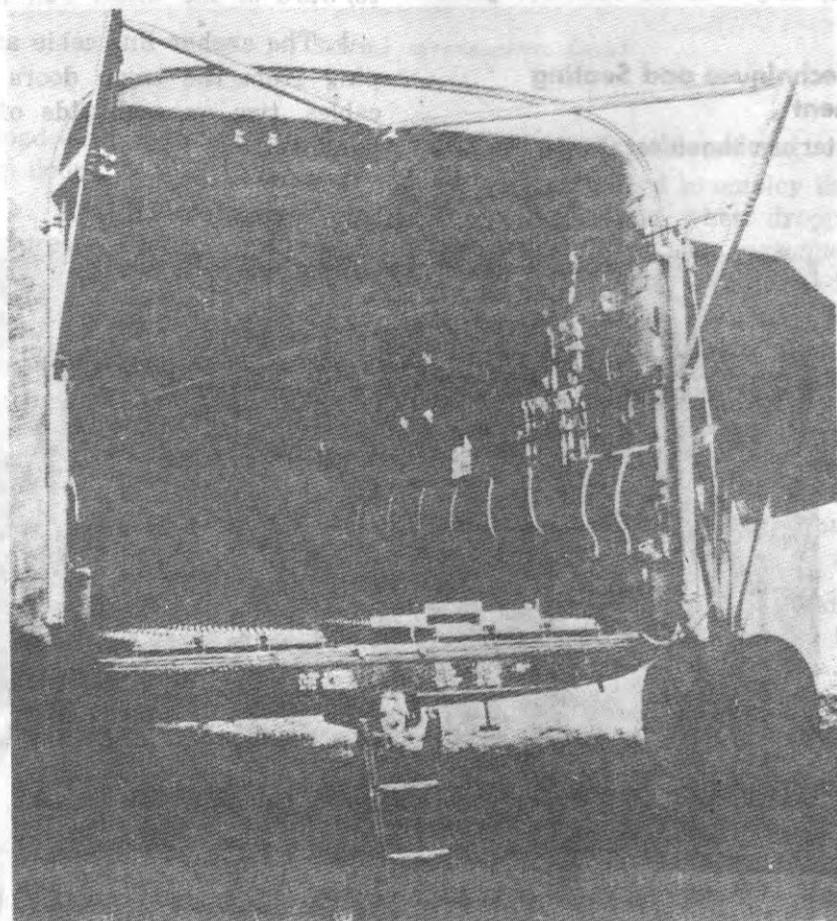


Figure 68. Anchor line cable extension kit, C-119.

fication kits are provided and installed by the unit furnishing the aircraft.

c. The sequence of commands outlined in paragraph 13 apply; however, certain modifications in the commands STAND IN THE DOOR and GO are made.

(1) *STAND IN THE DOOR.* The door position is as shown in figure 69.

(2) *GO.* This command is given when the last equipment platform begins to move or

when the jump signal is given. Each jumper spaces himself approximately 5 feet behind the preceding man and walks briskly to the rear. He stays near the bulkhead if wheeled conveyors are not installed. When he reaches the rear edge of the cargo compartment, he releases the static line, places both hands on the reserve parachute, and steps out approximately 18 inches, bending forward slightly at the waist and bringing his feet together. *The exit should not be vigorous.*

Section III. C-123 (PROVIDER)

71. Characteristics

The C-123 is a twin-engine, medium-range assault troop carrier aircraft. A total of 46 parachutists may be jumped from this aircraft using two jump doors in the aft end of the aircraft. The aft end loading ramp, when properly rigged, may also be used for parachuting.

72. Loading Techniques and Seating Arrangement

a. Before entering the aircraft, sticks are

numbered and briefed to insure that individual parachutists will be properly seated. The seating arrangement for two 23-man sticks is as follows: Nos. 1 through 15 of each stick are seated inboard forward of the ramp; Nos. 16 through 23 of each stick are seated outboard forward of the wheel well (fig. 70).

b. The anchor line cable assembly for dropping from the troop doors consists of four cables, two on each side of the cargo compartment.

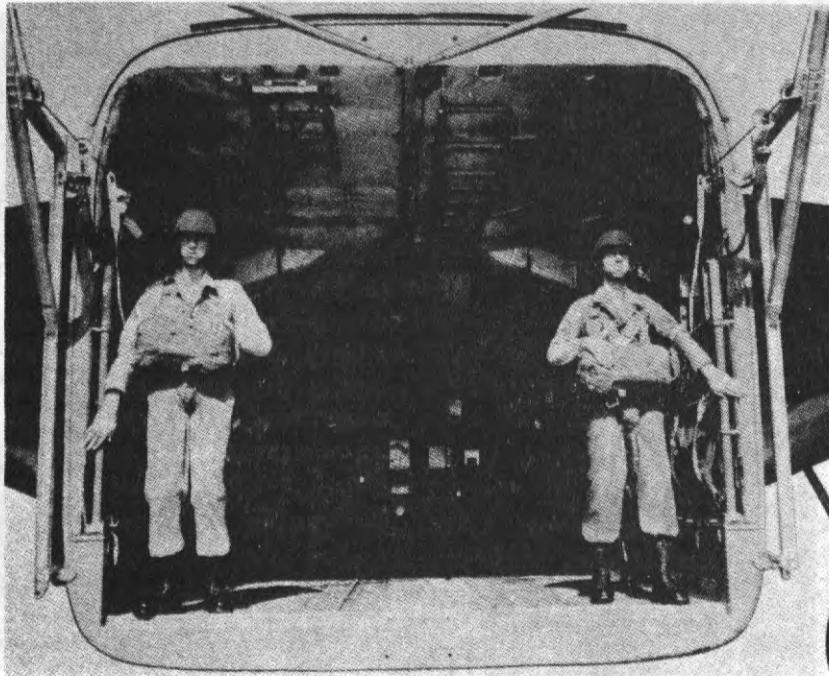


Figure 69. Door position, aft end, C-119.

← DIRECTION OF FLIGHT

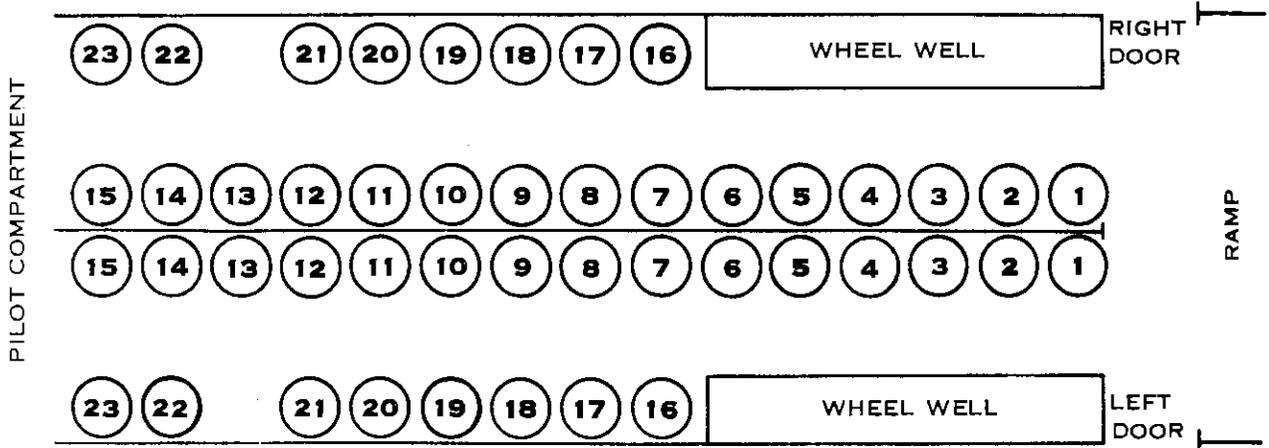


Figure 70. Seating arrangement, C-123.

c. Troops are loaded through the aft cargo ramp or the troop doors.

73. Jump Procedures

a. At the 20-minute warning, or as directed by the pilot, the paratroop doors are removed and stowed on the aft cargo ramp.

b. The jump commands are the same as described in paragraph 13 except for—

(1) **SOUND OFF FOR EQUIPMENT CHECK.** No. 16, who is the front man in the outboard section of the stick forward of the wheel well, cannot tap No. 15, who is the end man of the inboard section of the stick. No. 16 must signal No. 15 over his inboard shoulder. The No. 1 man then moves forward until he is even with the rear edge of the wheel well with his outboard foot forward.

(2) **GO.** As No. 15 passes No. 16, the parachutists on the outboard anchor line move to form a continuous line behind those using the inboard anchor line cable.

74. Safety Considerations

Care must be used to employ the 15-foot static line with drogue when dropping equipment containers from the personnel doors when troops are following. The 15-foot static line with drogue or the breakway static line must be used for airdrop of container loads from the ramp when troops are following.

75. Aft End Jumping From the C-123

a. Only one anchor line cable of the anchor line assembly is used because only one stick of 19 parachutists can be dropped at a given time.

b. The procedure followed at the command **STAND UP** is determined by the seating arrangement.

c. Parachutists stand inboard of the anchor line when hooking up. The static line passes over the outboard shoulder.

d. The commands **STAND IN THE DOOR** and **GO** are conducted according to paragraph 70.

Section IV. C-124 (GLOBEMASTER II)

76. Characteristics

a. The C-124 is a four-engine, long-range heavy transport aircraft. A total of 112 parachutists may be delivered from this aircraft when an air delivery kit is installed, using two jump doors located in the aft end of the aircraft.

b. Aircraft modifications include—

(1) Three standard modification kits used to equip the aircraft for airborne missions: a personnel delivery kit, a cargo delivery kit, and a personnel and cargo delivery kit. The modification kits include provisions for installing anchor line cables, jump lights, and a stairway at the forward end of the auxiliary floor (fig. 71). When the cargo is dropped after parachutists have jumped, provisions for blocking off the cargo well are included (fig. 72). The aircraft is equipped with the modification kits only when specifically requested.

(2) The anchor line cables consists of four 1/4-inch cables, two on each side of the fuselage. These cables are rigged between stations 421 and 1050 on 2-inch aluminum posts

and beams secured by 10,000-pound tiedown devices. The cables on each side are 23 inches apart at the forward end and 12 inches apart at the aft end. The cables are 7 1/2 feet from the floor at the forward end and 6 feet from the floor at the aft end.

77. Loading Techniques and Seating Arrangement

a. Before entering the aircraft, sticks are numbered so the outboard sticks are Nos. 1 and 2 and the inboard sticks are Nos. 3 and 4. Sticks 1 and 3 jump from the port side door and sticks 2 and 4 from the starboard side. Sticks 1 and 2 are seated on the outboard seats of the main floor and the inboard seats of the auxiliary floor. Sticks 3 and 4 are seated on the outboard seats of the auxiliary floor and the inboard seats of the main floor (fig. 73).

b. Troops are loaded by means of integral ramps in the nose of the aircraft. When dropping 62 troops or less, all parachutists are seated on the main floor. All parachutists in excess of 62 are seated on the auxiliary floor.

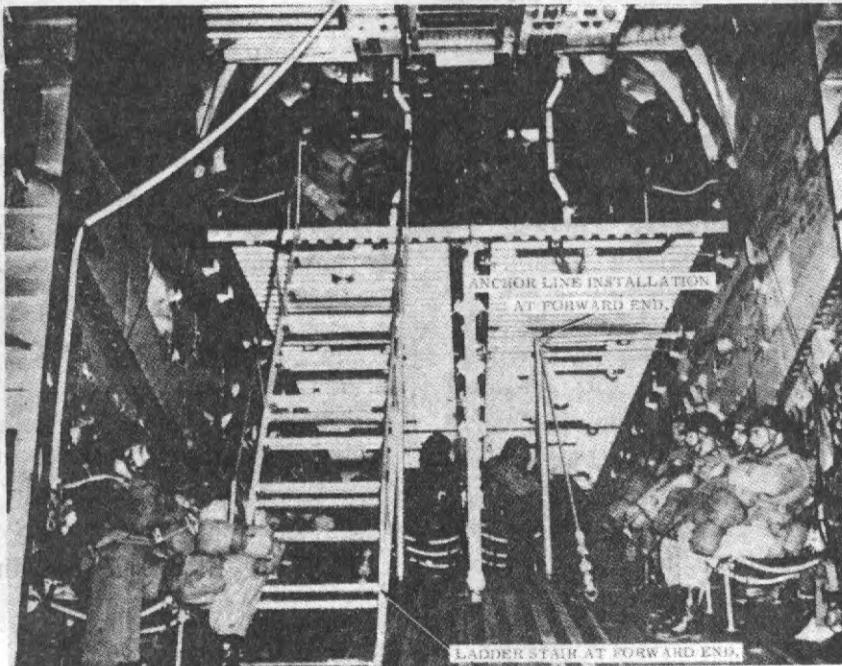


Figure 71. Parachute jump installations, C-124.

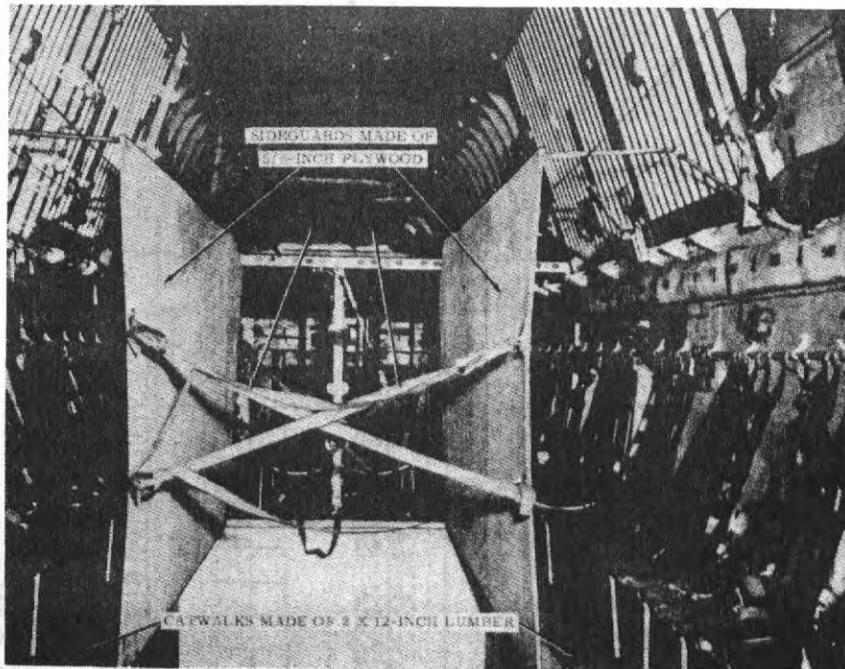


Figure 72. Cargo well safeguards, C-124.

78. Jump Procedures

a. Twenty minutes from the drop zone, the red warning light is turned on. The jumpmaster gives jump commands over the aircraft public address system, supplementing these oral commands by visual signals. Alternate means will be planned prior to enplaning to insure rapid dissemination of commands in event of failure of the aircraft public address system. To avoid congestion, the first three commands are given to the outboard stick (Nos. 1 and 2) first and then to the inboard stick (Nos. 3 and 4).

b. The commands and actions to be taken at each command are as follows:

(1) *Sticks 1 and 2—GET READY.* This alerts the jumpers and they prepare for the following commands.

(2) *Sticks 1 and 2—STAND UP.* Jumpers on the main floor stand up, fold the seats, and fasten them in place. When fastened, they should be flat against the backrest with the legs and seat belts folded inside the seat portion. Jumpers on the auxiliary floor stand up, stow their seats, and move to the stairway at the forward end of the aircraft.

(3) *Sticks 1 and 2—HOOK UP.* Jumpers on the main floor hook up to the outboard cables and close up to the jump doors. Jumpers on the auxiliary floor move down the stairs, one stick at a time, close up on the jumpers on the appropriate outboard cable, and hook up.

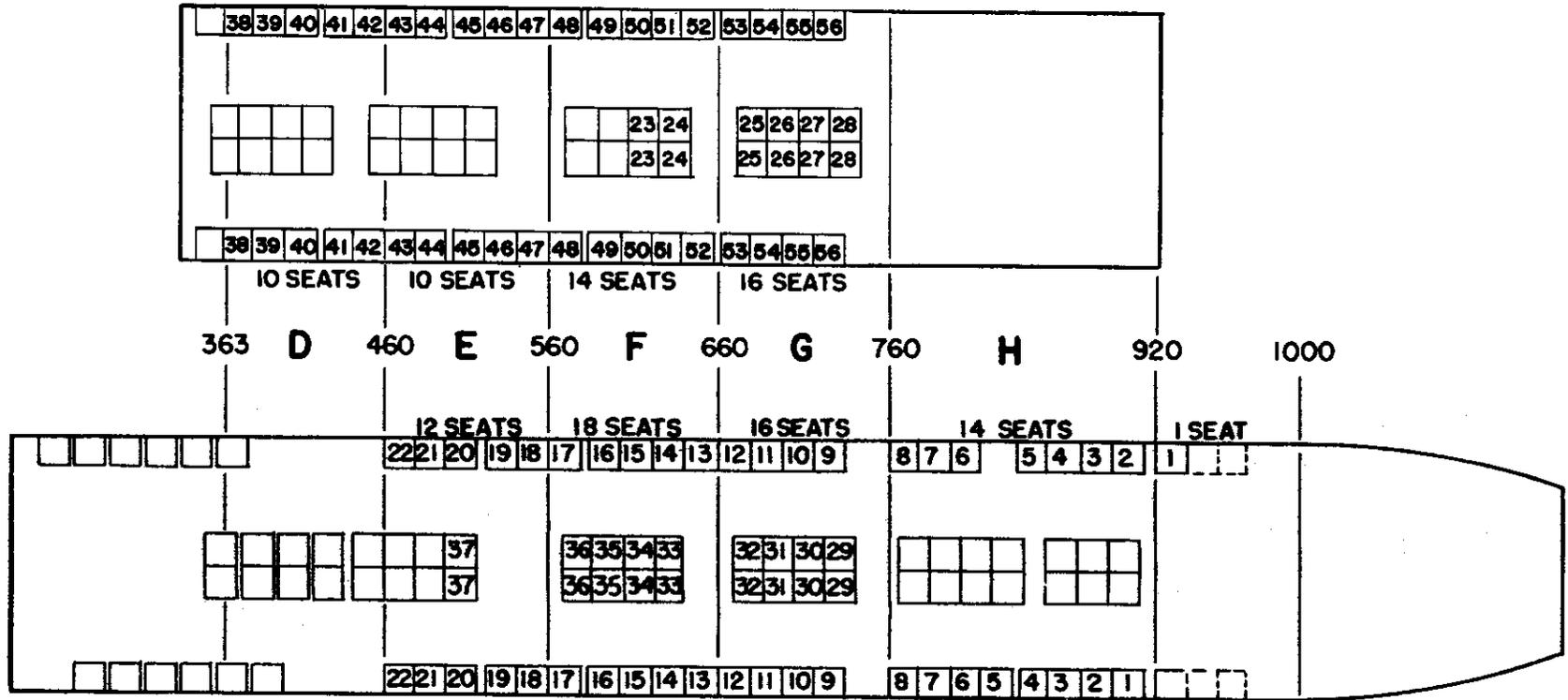
(4) *Sticks 3 and 4—GET READY.* This alerts the jumpers for the following commands.

(5) *Sticks 3 and 4—STAND UP.* Jumpers on the main floor stand up and stow their seats. Jumpers on the auxiliary floor stand up, stow their seats, and move to the stairway at the forward end of the aircraft.

(6) *Sticks 3 and 4—HOOK UP.* Jumpers on the main floor hook up on the inboard anchor line cable, and close up to a position even with the forward end of the jump doors. Jumpers on the auxiliary floor descend the stairway one stick at a time, hook up to the appropriate inboard anchor line cables, and close up toward the jump doors. At this point, there will be 28 parachutists hooked up on each of the four cables (fig. 74).

(7) *CHECK STATIC LINES.* Personnel

AUXILIARY FLOOR



MAIN FLOOR

Figure 73. Seating arrangement, C-124.