1ST AIR CAVALRY DIVISION PAMPHLET

350-1

COMBAT TACTICS AND AIR ASSAULT TECHNIQUES

DEPARTMENT OF THE ARMY
HEADQUARTERS 1ST CAVALRY DIVISION (AIRMOBILE)
APO SAN FRANCISCO 96490

AVDACS

15 May 1967

SUBJECT: Combat Tactics and Air Assault Techniques

TO: All Members of THE FIRST TEAM
1st Air Cavalry Division
APO 96490

1. You are now a member of the most versatile division that any nation has ever placed on the field of battle.

2. Men and machines working together have proven the worth of the Air Assault Concept. But, the success of this division does not rest on just ordinary men or on mere machines. It rests on you—the SKY-TROOPER. Dropping from the sky, swarming over the enemy from clouds of helicopters, slipping through the jungle and wading the rice paddies, the SKYTROOPER has relentlessly pursued the Viet Cong and the North Vietnamese Army. SKYTROOPERS before you have carried the fight to the enemy in areas which he once roamed at will. Now, you are a SKYTROOPER. In your hands rests the future of this conflict and the future of the Air Assault Concept.

3. This pamphlet is written to help all SKYTROOPERS learn about the Air Assault Concept. What you find in these pages represents the key experience gained by nearly two years of combat operations in Vietnam. This experience serves now as a standard guide for training and operational SOPs.

4. This is an unfinished publication because you are still writing it. As your experience grows on the field of battle, you have the responsibility to submit suggestions for changes to this pamphlet. Your suggestions will be welcomed and will be incorporated in this pamphlet for the benefit of the SKYTROOPERS that follow you.

FOR THE COMMANDER:

GEORGE W. CASEY
Colonel, GS
Chief of Staff

HEADQUARTERS 1ST AIR CAVALRY DIVISION
APO San Francisco 96490

PAMPHLET
Number 350-1

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AIR ASSAULT PROCEDURES

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SECTION I: GENERAL

1. Abbreviations:

a. AA - Air Assault

b. AB (AH) - Aviation Battalion (Assault Helicopter)

c. AB (ASH) - Aviation Battalion (Assault Support Helicopter)

d. A/C or Acft - Aircraft

e. ACL - Allowable Cargo Load

f. ACP - Air Control Point

g. ADAO - Assistant Division Aviation Officer

h. AGOF - Air/Ground Operations Frequency

i. AO - Area of Operations

j. ARA - Aerial Rocket Artillery

k. CC - Command & Control Helicopter

l. CCP - Comm Check Point

m. CIDG - Civilian Irregular Defense Group

n. DS - Direct Support

o. FSE - Forward Support Element

p. GO-GO - ACH-47 Armed Chinooks

q. Hel - Helicopter

r. IP - Initial Point

s. LNO - Liaison Officer

t. LP/OP - Listening Posts/Observation Posts

u. LZ - Landing Zone

v. LZRP - Landing Zone Release Point

w. NOTAM - Notice to Airmen

x. PF - Pathfinder (US) or Popular Forces (RVN)

y. Prep - Artillery Preparatory Fires

z. PRP - Pick Up Zone Release Point

aa. PZ - Pick up Zone

bb. QRF - Quick Reaction Force

cc. RP - Release Point

dd. RRF - Ready Reaction Force

ee. TAC - Tactical Air Command

ff. TAOR - Tactical Area of Responsibility

gg. TF - Task Force

hh. UHF - Ultra High Frequency

ii. USAID - US Agency for International Development.

jj. USOM - US Operations Mission

2. Glossary

a. Air Alert - Aircraft on station over an area or predesignated standby point.

b. Ramp Alert - Aircraft at base or forward airstrip ready for takeoff in 15 minutes.

c. Strip Alert - Aircraft at base or forward airstrip ready for takeoff in 5 minutes.

d. Birds - Helicopters

e. Blue Plat - Infantry Platoon of Air Cavalry Troop.

f. Eagle Flight - Heliborne Force in orbit over a selected area.

g. Fire Base - Location of Artillery in Forward area.

h. H-hour - Time of air assault troop landing in an LZ.

i. Laager - The positioning of aircraft in a secure forward area to accomplish a mission more effectively. Armed aircraft are positioned so that weapons may be used in the defense.

j. Orbit Area - Airspace designated as airborne holding area.

k. MEDEVAC - Helicopter medical evacuation.

l. Thunderbolt Plan - A contingency plan that provides for rapid assembly and further air movement of an airmobile unit after arrival in the LZ.

Section II: Planning Phase

1. General.

a. The conduct of air assault operations is divided into five phases:

(1) Planning phase.

(2) Loading phase.

(3) Enroute phase.

(4) Assault phase.

(5) Extraction phase.

b. This pamphlet discusses each phase in the context of an illustrative situation. Like most textbook situations, they are rarely found on the actual battlefield but they do serve as vehicles to make study more interesting and challenge the reader to devise other, or perhaps better, procedures and techniques.

c. Figures 1-13 depict the sequence of events that make up this illustrative situation. Note that this illustration observes the following principles:

(1) An air assault, except in unusual circumstances, is preceded by a tube artillery prep. Normally an ARA prep is part of the fire support. The lift ships are escorted by gunships.

(2) The Battalion CP and the DS Arty Battery are collocated and secured by a force sufficient to prevent loss of the firebase. (Usually a rifle company)

(3) UH-1D flight time is conserved by moving troops as far forward as safely possible using CH-47s, fixed wing AC or ground transport.

(4) Companies are positioned so that they are within range of tube artillery support.

(5) Fire bases are mutually supporting.

d. In this situation, the battalion commander has been given an AO, sufficient UH-1Ds to lift at least one platoon, a DS Artillery Battery, an Engineer platoon, a Pathfinder team, ARA, gunship support, and CH-47 support.

SITUATION

Battalion AO and the LZs selected by the Battalion Commander for insertion of the battalion into the AO.

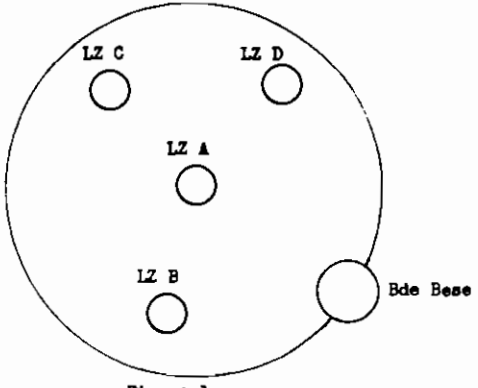


Figure 1

Note: Radius of AO is equivalent to range of 105mm Howitzer. (11,000 meters)

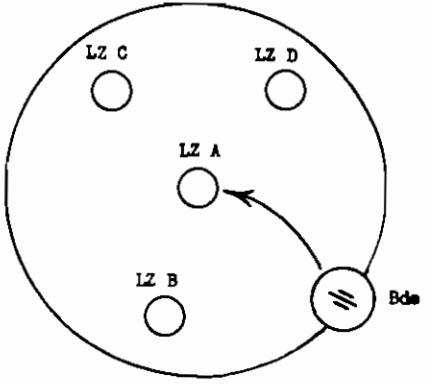


Figure 2

Arty Prep fired on LZ A from the Bde Fire Base

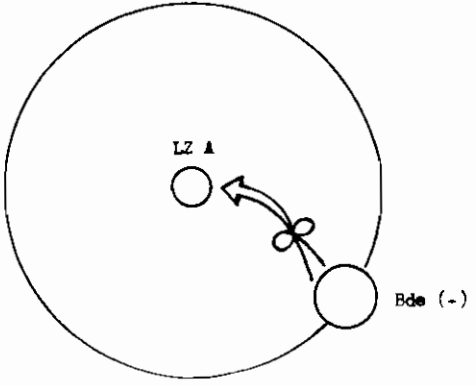


Figure 3

Company A air assaults into LZ A, secures it and remains as CP/fire base security force.

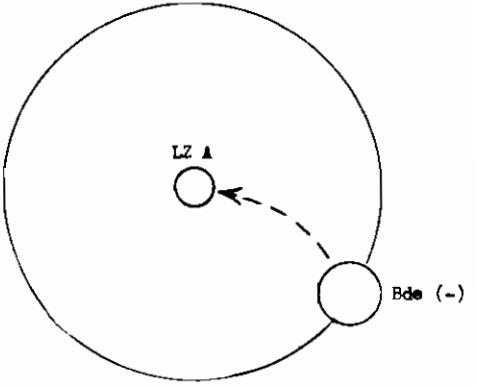


Figure 4

Bn Jump CP moves to LZ A either by UH-1D or CH-47.

DS Arty Battery moves to LZ A by CH-47.

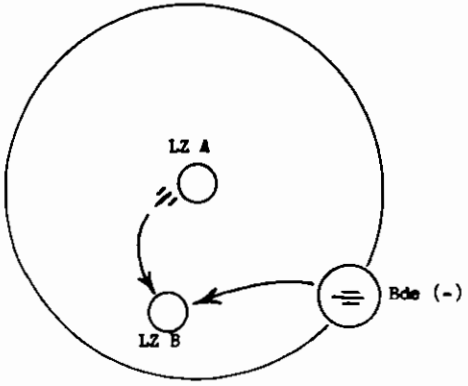


Figure 5

Arty Prep on LZ B is fired from LZ A and the Bde Fire Base.

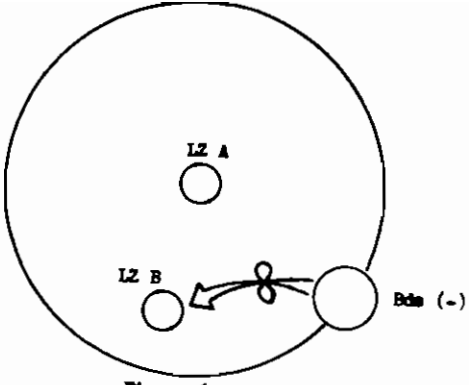


Figure 6

Company B air assaults into LZ B.

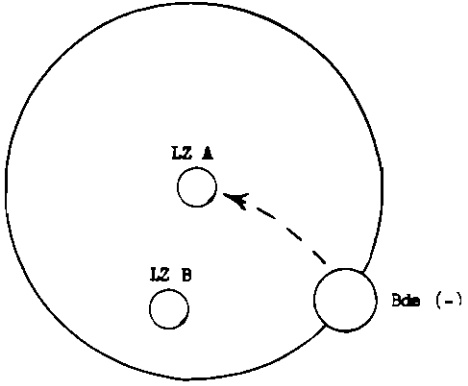


Figure 7

Company C and D moved to LZ A by CH-47.

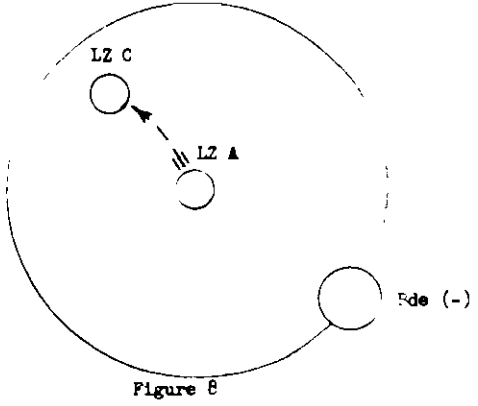


Figure 8

Arty Prep on LZ C is fired from LZ A.

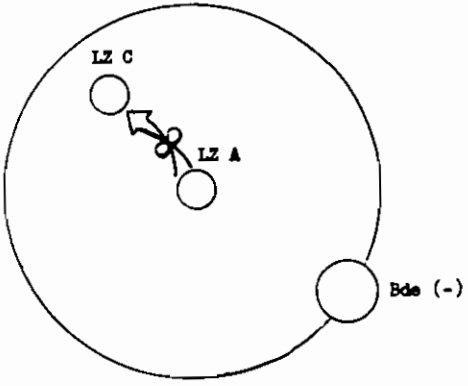


Figure 9

Company C air assaults into LZ C by UH-1D.

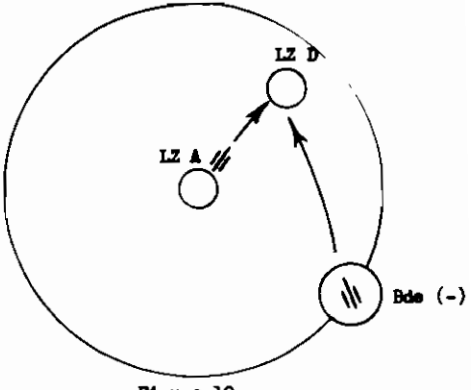


Figure 10

Arty Prep on LZ D is fired from LZ A and Bde Fire Base.

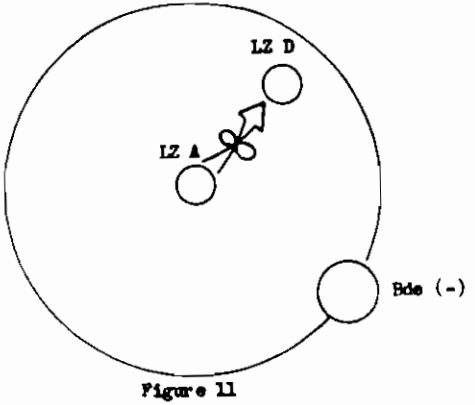


Figure 11

Company D air assaults into LZ D.

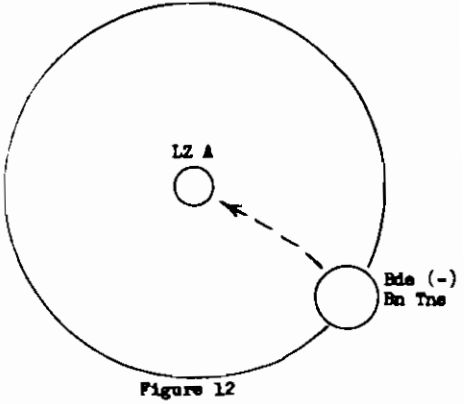


Figure 12

Bn Hq Co (-) closes LZ A. (either UH-1D or CH-47)

Bn Tns remain at Bde Base.

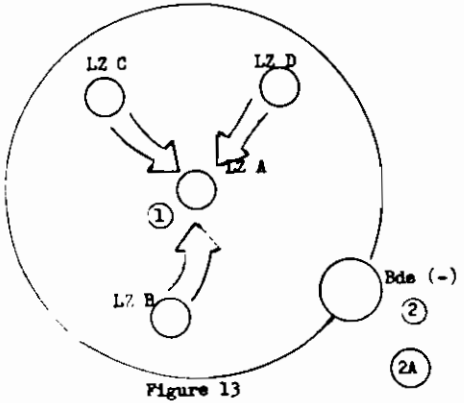


Figure 13

Rifle companies search and destroy orienting on the enemy.

Note: 1. Platoon of Co A is Bn RRF.
2. Bde has a string on one company at Bde base as Bde RRF.
2A. One platoon of that company is either on strip alert or on an eagle flight as RRF for Air Cav troop Blue plat operations in Bde AO.

2. Air Assault TF Commander's Check List. This check list is not exhaustive. It is merely a guide to insure that the major steps are not overlooked.

a. Make a ground tactical plan.

(1) Consider the mission. In this case: Search and Destroy in assigned AO. Implied tasks: Develop a plan to enter the AO, establish a fire base, move battalion (minus trains) into AO and based on available intelligence, develop an initial scheme of maneuver.

(2) Objective(s). Select a CP/Firebase location that provides good artillery coverage, good communications and is defensible. Select company LZs and alternate LZs.

(3) Consider means available.

(a) Organic troops.

(b) Artillery

(c) Air Cav

(d) Special support.

(e) Lift available.

(f) Engineer support.

(g) Medical support and MEDEVAC.

(h) Interpreters

(i) ROK, ARVN, CIDG, PF, RF or other US/Free World Forces.

(h) Fire Support.

(a) TAC Air

(b) Tube Artillery

(c) ARA

(d) GO-GO

(e) Naval Gunfire

(f) B-52

(5) Boundaries and fire control measures.

(6) Air Assault Plan. (Figures 1-13 for the battalion commander.)

(7) Develop a tentative scheme of maneuver for subsequent ground operations. Orient on the enemy. Be flexible.

(8) Always be prepared to reassemble unit for extraction from AO for subsequent deployment elsewhere in the Bn/Bde/Div/Corps/Army AO. (Thunderbolt Plan. See

b. Intelligence Requirements.

(1) Enemy. Check with higher hq, adjacent units, CIDG Camps, government officials, plantation owners, missionarys, ARVN advisors, USAID, USOM, Etc. Learn the history of enemy activity in the AO. Read INTSUMS, area dossiers, and after action reports.

(2) Friendly situation. Know who is in area and what support they may be able to give.

(3) Get aerial photos from higher headquarters or request that they be made.

(4) Maps. Do you have enough maps for each possible patrol?

(5) LZ names and points of origin. Be sure everyone can talk the same map language.

(6) Make a terrain study.

(7) Weather. What is weather history? Get latest forecasts.

(8) Know light data.

(9) Conduct Recon.

(a) Bn CO, S3, Arty LNO and lift flight leader must make recon. DS Arty Battery Commander must make fire base LZ recon.

(b) Company commanders and lead platoon leaders should recon their LZs and alternate LZs.

(c) Engineer, Comm Off should be included if these are problem areas.

(d) Security must be considered also. Don't fly directly over or orbit proposed LZs. Make false recons. False preps and false insertions can support deception.

c. Assault Landing Plan.

(1) Coordinate with lift leaders.

(a) Best approaches. Consider Arty Gun-target lines.

(b) Landing direction. (Be flexible. Winds may change or enemy fires may force direction change.)

(c) Consider LZ size.

(d) Landing formation.

(e) Insure lift leader will be on Battalion Command Frequency and can also talk to ARA on another channel.

(f) Notification to lift leader of final arty round on LZ.

(g) How will LZ be marked? (If a number of preps are fired in an area it is difficult to pick out actual LZ. Arrange for final artillery round to be WP unless WP may start a fire on the LZ. Smoke grenades dropped from CC may be used.)

(2) Company Commander. The basic consideration is to insure that subsequent lifts can reach the LZ. The lead platoon(s) must quickly gain control of the LZ either by fire and/or maneuver and force the enemy away from the LZ preventing the enemy from bringing effective fire on subsequent lifts. Each LZ is different, however, a method frequently employed on a 4-6 ship LZ is as follows:

(a) Lead platoon secures entire LZ. (Platoon leader assigns squad boundaries.) Then pushes out from the LZ far enough to prevent effective enemy fire on the LZ and subsequent lifts.

(b) When the 2d Platoon arrives, lead and 2d platoons divide LZ in half.

(c) When 3d Platoon arrives, LZ is divided into thirds.

(d) Company Commander makes adjustments in boundaries as necessary.

(e) Artillery fires preplanned around LZ and along planned axis of movement away from the LZ.

d. Air Movement Plan.

(1) Coordinate flight routes with lift leader and Arty LO. (Primary-Alternate-Return)

(a) Be sure lifts stay clear of gun-target lines or fires are controlled to permit passage.

(b) Determine ACP and CCP.

(c) Designate phase lines, if necessary.

(d) Determine leg distance and times for all LZs.

(f) Select altitude.

(g) Airspeed. (Use 70 knots in computations unless otherwise announced.)

(h) Select orbit areas for ARA and escort aircraft.

(2) Air movement table (S3, S3 Air, Unit XOs).

(a) How many troops to be lifted?

(b) Number and type of helicopters and ACL.

(c) Call sign of lift unit and lift frequency.

(d) Station time.

(e) Load time.

(f) Take off time.

(g) Destination LZs must be clear in everyone's mind.

(h) Be sure all personnel are aware of any diversionary landing enroute.

(i) H-hour (landing time).

(3) Marshalling Plan

(a) Assy areas.

(b) Unit PZs (Primary-Alternate)

1 Capacity.

2 How many ships go to each one?

3 Pick up formation. (Much time can be saved if birds will land in prescribed formation and loads are spotted accordingly.)

4 Lift leader call sign and frequency?

5 Station time. (Be ready.)

e. Supporting plans.

(1) Downed aircraft procedures.

(2) Rally points.

(3) Escape and evasion instructions.

(4) Eagle flights and RRF plans.

(5) Aircraft lager plans.

(6) Rules of engagement.

(7) Deception plans.

(8) CHR

(9) Civil affairs. Refugee control, captured food.

(10) Reporting SOPs. (Enroute, lift off, touch down, intelligence and contact.)

(11) A/C disposition after assaults.

(12) POW plan. Captured arms and ammo disposition.

(13) PIO.

f. Operational steps.

(1) Warning orders.

(2) LNOs (receive and dispatch).

(3) Attachments and detachments. (Receive and dispatch)

(4) Briefing (time, place, attendees).

(5) Prep of OPORD.

g. Logistics requirements.

(1) Ammo, demo resupply.

(2) Feeding plan.

(3) Water.

(4) MEDEVAC.

(5) Refueling and re-arm points.

3. Liaison officer checklists.

a. Arty LNO Fire Spt Checklist. Arty LNOs execute the duties of the FSC for the AATF. They accomplish necessary liaison and coordination to function for all elements of DIVARTY. In addition, they recommend and coordinate employment of all fire support means available to AATF, to include TAC Air, naval gunfire and RCA aircraft.

(1) Organization for combat.

(a) Artillery Howitzer.

(b) ARA.

(c) Non-divisional arty.

(2) Artillery prep plans.

(3) Communications.

(a) FSC channel.

(b) Artillery command channel.

(c) USAF (coordinated by TACP).

(d) Basic data for aircraft advisory nets.

(4) Ammo resupply (DIVARTY elements).

(5) No fire zones.

(6) Time of opening fire.

(7) Locations of friendly artillery and naval elements.

(8) Fire control measures.

(a) Enroute.

(b) FCLs.

(c) Rules of engagement.

(d) Boundaries.

(e) No fire line.

(9) Commander's nuclear weapons guidance.

(a) Casualties/damage.

(b) Troop safety.

(c) Other limiting requirements.

(10) Photos required.

(11) Aviation requirements.

(a) Lift.

(b) Observation.

(12) Enroute formation(s).

(13) Escort procedures.

(14) ARA.

(a) Flight route.

(b) Laager, re-arm and refuel plan.

(c) Designation of orbit areas.

(15) Prepare ground/air plan message. (See page 33).

b. Aviation Liaison Officer Checklist.

(1) Mission.

(2) Supported AA unit.

(3) Supporting aviation elements (flyables).

(a) UH-1D

(b) CH-47

(c) GS Avn Co.

(d) PF

(e) Gunships

(f) ARA

(g) GO-GO

(4) PZ(s) (time(s), location(s), formation(s), size lift).

(5) Enroute (IP, ACP(s), formation and CCP(s)).

(6) Assault (LZ(s) and formation(s)).

(7) Alternate flight routes.

(8) Air Force Support.

(9) Return mission and subsequent lifts.

(10) Commo

(11) Fire support plan.

(12) Refueling and re-arming.

(13) Aircraft maintenance.

FORMATIONS

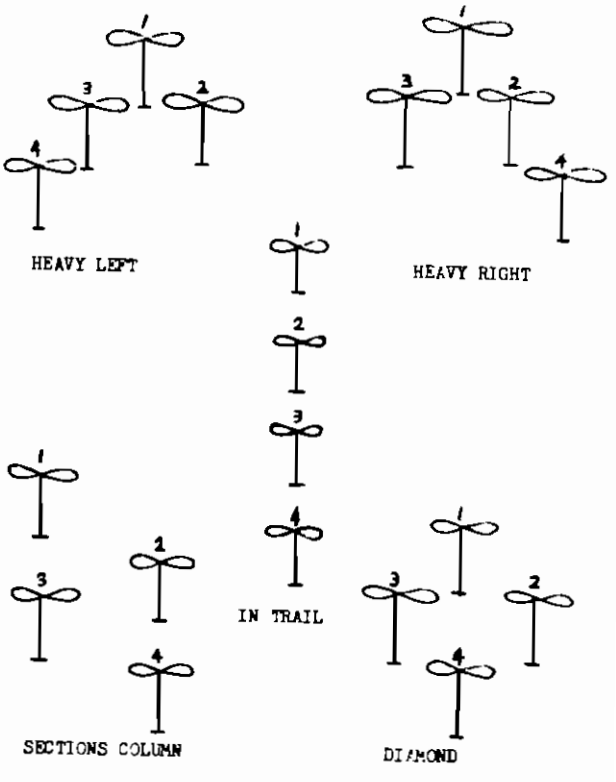


FIGURE 11; p. 31

5. Air Assault Operation Message Format:

a. Abbreviated orders and plans may be transmitted using the Ground-Avn Plan (GAP) format. Items are numbered or lettered to allow the message to be transmitted using a line item key. Only the required information need be given.

b. LNO's will utilize the Ground Avn Plan (GAP) format for assembling the information required by Avn elements involved in the operation.

c. Radio transmissions will be preceded by the phrase: "This is a GAP message." This will be followed by the message text in the following form: "one Alpha-Red one; one Bravo-ACF 6428; one Charlie-071030R, etc."

GAP MESSAGE FORMAT

1. a. AA Unit_____ (Call word, channel, size)
   b. AB (AH)_____

2. a. OBJ_____ b. H-Hour_____

3. a. ARA Plan_____ b. Length of Prep_____
   c. Orbit Area_____

4. a. 105 How Plan___ b. Length of Prep_____
   c. LZ (position area)_____

5. AF Spt: a. Length of Prep_____

6. Cav Plan: _____

7. PZ (Name & Coord)	8. PZ Formation	9. Load Type
a._____	a._____	a._____
b._____	b._____	b._____
c._____	c._____	c._____
d._____	d._____	d._____

10. Acft Requirement
    a._____
    b._____
    c._____
    d._____

11. LZ (Name & Coordinates)
    a._____ b._____
    c._____ d._____
    e._____ f._____

12. LZ Formation
    a._____ b._____
    c._____ d._____
    e._____ f._____

13. Primary Flt Route
    a. IP Time: b. ACP Time:
    c. CCP Time: d. ACP Time:
    e. LRP Time:

14. Alt Flight Route
    a. IP Time: b. ACP Time:
    c. CCP Time: d. ACP Time:
    e. LRP Time:

15. UHF Air Control Channel_____

16. Fire Control (Call Word, Channel)_____

17. PF_____

18. Remarks_____

SECTION III: COMMUNICATIONS PROCEDURES

1. General.

a. All command aircraft in the AA formation will monitor a predesignated UHF net. This net will normally be the appropriate lift Bn/Co UHF Comd Net.

b. Normally, an AGOF (lift freq) will be assigned to each committed Bn size unit by Avn Gp. Avn Gp will assign and/or coordinate all AGOF in the Div AO. A NOTAM will be prepared by Avn Gp for each AA operation. The NOTAM will be published and disseminated by ADAO.

c. The lift comdr will enter either the appropriate supported Bn FM comd net or the AGOF net on arrival of the first hel formation over the CCP enroute to the PZ. (If no CCP exists, enter net 5 minutes from PZ). Freq coordination must be effected prior to reaching the CCP. The AGOF is normally utilized throughout a specific AA operation and any change will be coordinated through the Avn Gp. Lift comdr is responsible for reporting all IP's, ACP's, CCP's, RP's and other necessary info to the AA TF Comdr as required on the AATF Comd frequency.

d. Each comdr will indicate his position in the formation if other than SOP. PF teams will direct landing utilizing the appropriate coordinated FM freq. This freq will not be utilized by either avn or inf units as an Adm net.

2. FM Comm Procedures with PF.

a. All acft within a formation approaching a PZ/LZ will monitor the assigned control frequency with the exception of specific acft that may be designated by the flight leader to monitor other FM frequencies.

b. Flight leaders will initiate comm with the PF LZ/PZ control upon arrival at the CCP or at least 5 minutes out from landing if no CCP is designated.

c. Air traffic control in the vicinity of a PZ/LZ will be conducted by PF only. The assigned AGCP will not be used for administrative or other extraneous radio traffic.

d. PF will establish and maintain comm or direct liaison with supported Inf/Arty comdrs at all times. PF will coordinate w/Inf/Arty comdrs to insure that PZ landing plan conforms with supported unit's tactical loading plan.

3. PZ/LZ Marking Procedures.

a. Day.

(1) Assault LZ's will normally be marked for the initial flight into the area through the use of Arty, ARA or smoke grenades. Succeeding flights may be directed to specific locations within an LZ by reference to panels, colored vests or signal men positioned by PF. Panels used will be thoroughly secured to prevent them from being blown up into rotor blades.

(2) Each AB (AH) plat will display a colored plate on each side of its acft with a number painted in the center to designate the acft's position in the plat formation. Colored identification plates for other than assault lifts will be coordinated by the appropriate LNO for each mission. Colored identification plates will correspond with plat's color codes as follows:

(a) 1st Plat - Yellow

(b) 2d Plat - White

(c) 3d Plat - Green

(d) 4th Plat - Orange

(e) 5th Plat - Purple

(f) 6th Plat - Red

(g) 7th Plat - Blue

(h) 8th Plat - Black

(3) Smoke grenade may be displayed at downwind edge of PZ on request of lift comdr for determining wind direction and velocity prior to landing.

(4) Ground unit commanders are responsible for improvement of LZ/PZs and their police.

b. Night.

(1) A 5-light "TEE" will be displayed for single ship landings (med evac, etc). For formation landings a lighted "TEE" for the lead ship of each plat and individual touchdown lights for other plat aircraft will be displayed.

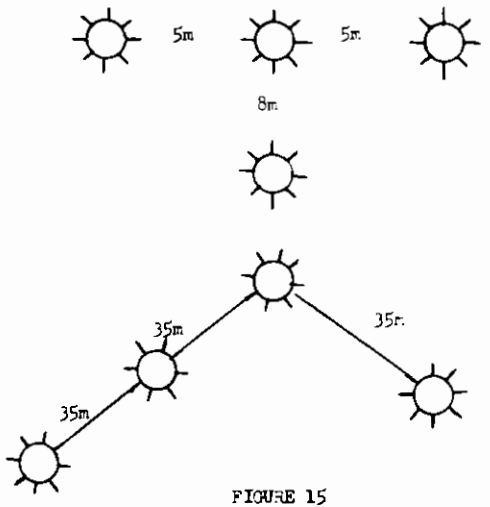


FIGURE 15

(2) Acft or Arty or USAF flares may be used to illuminate LZs for the initial lift into an area until such time as PF lighting is established.

SECTION IV: Loading Phase - That phase of an Air Assault operation that begins after the planning phase and ends when the lift aircraft depart the PZ outbound.

1. Locations of Commenders: During Co size or smaller operations, the Infantry Company Commander will normally be located in the lift commander's aircraft.

2. Loads.

a. UH-1D.

(1) West of An Khe. Normally an ACL of five is planned for the first lift. Subsequent lifts before refueling may be increased to six.

(2) East of An Khe. Normal ACL is six. Subsequent lifts before refueling may be increased to seven or eight.

(3) When short turn around times are the case, consideration should be given to reducing fuel load to 800 pounds. Increased ACL saves flying hours and quicker mission completion. (Coordination matter between lift Bn Comdr and supported unit commander)

b. CH-47A

(1) CH-47A standard load data is based on an overload gross weight of 33,300 pounds. As density altitudes are increased and the aircraft is required to climb to higher altitudes the standard load must be correspondingly reduced.

(2) Movements east of An Khe are restricted to 8,000 pounds. Movements west of An Khe are restricted to 7,000 pounds.

(3) As larger payloads are required, operating range is decreased accordingly.

3. Sling load procedures.

a. Unit to be lifted will provide all essential equipment and personnel for sling loading, to include hookup teams.

b. Loads will be positioned to provide for simultaneous pickup.

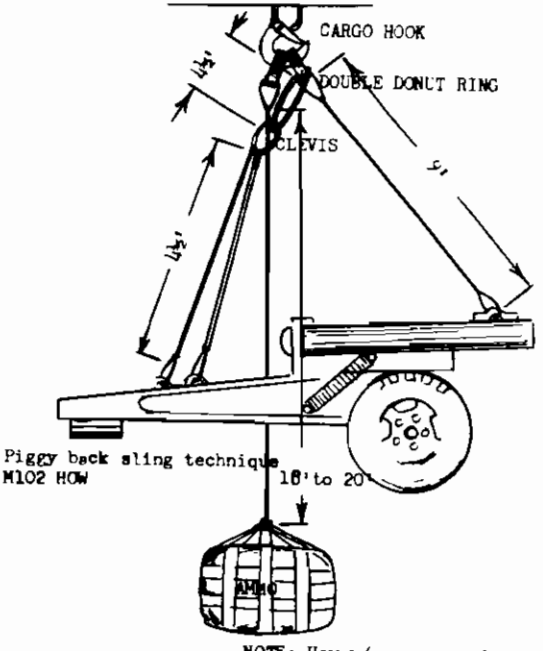
c. Duties of Hookup Teams.

(1) Signal man: Responsible for security of load, guiding the hel by hand and arm signals, maintaining visual contact w/pilot at all times, checking load after hook up for proper security and signaling pilot to take off. His position is 30 to 50 M in front and right of the load as viewed from hel.

(2) Hookup men: Move to load when hel is over the load, momentarily ground hook of cargo hels, hook load to hel, move quickly to hel's right flank.

d. Piggy back techniques.

(1) Positioning of loads. Loads are placed side by side approximately 4 feet apart. The Howitzer and ammo are slung on separate slings. (Slings positioned to prevent fouling.)



Piggy back sling technique
M102 HOW

NOTE: How w/o ammo needs 10' to 15' sling to keep How from striking acft

FIGURE 16

(2) Hookup/Take off.

(a) The hookup is effected in the same manner as a normal sling load with the exception that two donuts must be properly inserted in the cargo hook. (Figure 16)

(b) Care should be exercised to move the upper load directly over the lower load as the lower sling becomes taut and lift off is effected.

(3) Landing/Release

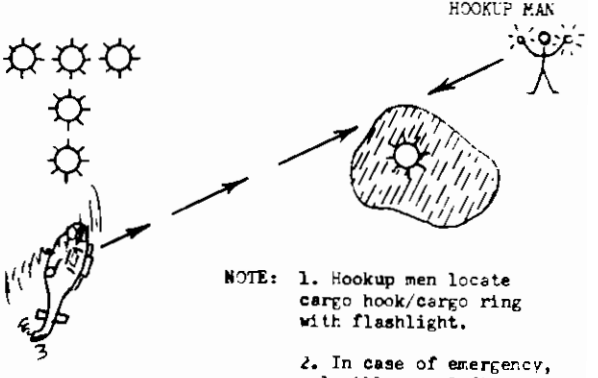
(a) Supported units should place guides upon the exact spot they wish to have the load placed. (The guide is not only the spot marker but is convenient to expedite the movement of the howitzer to the general firing azimuth as the load is lowered.)

(b) As the guide comes into the view of the crew chief over the load, the crew chief directs the future movements until the load is released.

(c) As the lower load (arro) is placed upon the spot previously marked by the guide, the descent should be continued slowly to allow slack in the lower sling; the upper load (howitzer) may then be moved laterally by the helicopter. At the same time, this allows the ground guide to rotate the howitzer to the approximate firing azimuth.

e. Night procedures.

(1) Signal men uses batons; hookup men use flashlights.



NOTE: 1. Hookup men locate cargo hook/cargo ring with flashlight.

2. In case of emergency, nel will move left.

FIGURE 17

(2) Hookup team for each load is mandatory.

(3) Lights as per diagram.

(4) Duties as above, plus Note 1.

f. Special Sling Loads CH-47.

(1) Semi-rigid litter.

(a) The CH-47 rigged with the semi-rigid litter has been utilised to evacuate casualties from remote area of the battlefield.

(b) Escort aircraft are required and join the CH-47 at the laager area, enroute or at the PZ.

(c) The CH-47 hovers over the PZ and lowers the semi-rigid litter to the ground utilising the aircraft organic hoist. The casualty is secured in the litter and hoisted into the cargo hold of the acft.

(d) The usable length of the cable is 125 feet.

(e) The utility hatch is 40 inches square.

(2) Trooper Ladder.

(a) The CH-47 rigged with the trooper ladder has been utilised to position and evacuate combat troops into remote areas of the battlefield.

(b) Escort acft are required and join the CH-47 at the laager area, enroute or at the PZ/LZ.

(c) PZ/LZ should be secured before this technique is utilised because of hover time over a given area.

(d) The trooper ladder may be used from the rear or that side of the CH-47.

ITEM	EQUIPMENT REQUIRED
Carrier, Lt Wpns, M274	5-8' endless slings 1-Large metal clevis/or nylon clevis (CH-47) Nota: One sling attached to each wheel, one sling joining the four wheel slings, the metal clevis attached to the last sling. Last endless sling may be used in place of metal clevis.
Container, A22, Aerial Delivery	1-8' endless sling 1-Large metal clevis/or nylon clevis (CH-47) NOTE: One sling joining lift straps of A22, metal clevis attached to the sling. The sling may be used in place of metal clevis.
Container A22, Carrier	5-12' 5-8' endless slings 1-Large metal clevis/or nylon clevis (CH-47) NOTE: Secure top & bottom of A22 to M274 over the center of the M274. The M274 is prepared as previously described.

¼ Ton truck	2-9' endless slings 1-11' endless sling 1-8' endless sling 1-Large metal clevis/or nylon clevis (CH-47) NOTE: Windshield secured, mirror & spare time removed & secured inside trk, rear seat folded down & secured, 9' slings attached to rear mounting points, 11' slings attached to front mounting points, 8' sling joining 9' & 11' slings, metal clevis attached to 8' sling. The sling may be used in place of the metal clevis.

SECTION V: ENROUTE PHASE

1. General.

a. The enroute phase of an AA opn starts at the IP outbound from the PZ and terminates at the LRP, 3 to 5 miles from the LZ. Escort acft may fly various flight routes and join the AA column at predesignated locations. The progress of all elements of the AA column are coordinated at check points and are reported over a common UHF freq.

b. AF acft will be requested to provide protection against enemy acft. Artillary and AF acft may be utilized on known or suspected enemy positions that may affect the column's progress. Organic acft will conduct route recon, protection against ground fires, and assistance in controlling the AA column.

c. The AA TF Comdr will establish flight routes based on all info available concerning enemy locations, terrain, restructions placed by higher Hqs and acft capabilities. CCP's and ACP's will be designated for movement control of the AA formation. Major diversions of the AA formation to by-pass any significant threat is the responsibility of the AA TF Comdr.

2. Downed Aircraft Procedures.

a. In the event an aircraft makes an emergency landing for any reason, the senior individual aboard will assume command of the entire group, including both ground and aviation personnel. The group will pursue the following courses of action in the priority listed:

(1) Secure the aircraft, if the enemy situation and terrain permit. Specific duties of crew and passengers will be given in unit SOP.

(2) Arrange for pickup of the group in the vicinity of the downed aircraft. Normally the aircraft radio, emergency radio or troop radio will be used to arrange pickup. All SCI's, weapons, ordnance and radios, in that order of priority, will be removed prior to abandoning the aircraft.

b. In the absence of positive coordination by radio the following standard smoke signals will be used:

(1) GREEN, if all is clear, will mark proposed landing site.

(2) RED, if downed crew is under attack, will be thrown to mark friendly perimeter.

(3) WHITE, will be thrown as far as possible in direction of enemy. Rescue aircraft will attempt to suppress enemy fire prior to landing at downed crew site.

(4) YELLOW, if immediate medical evacuation is required, will indicate pickup site.

c. In addition to the standard smoke signal listed above, a downed aircraft crew will indicate the need for assistance by turning the blade perpendicular to the fuselage (OH-13, UH-1's) or displaying opened tunnel covers (CH-47).

d. Night procedures for downed aircraft are generally the same. Aircraft lights, signal flares or "Penguin" type flares will be used to mark position of downed aircraft. In "hot" areas

it may be inadvisable to show any light until rescue aircraft are in the immediate area. Tracer fire is not recommended without positive radio contact.

3. Air delivered chemical supporting fires.

a. Employment of Chemical Agent CS:

(1) Harass, deter, disorganize enemy activities and destroy his will to fight.

(2) Restrict enemy use of trails, bivouac areas, facilities, defensive positions, and prevent occupation of same.

(3) Reconnaissance by CS.

(4) Attack fortified positions.

(5) Reduce casualties when clearing villages where NVA/VC are intermingled with civilians.

(6) Reduce effectiveness of enemy fires during air assaults.

(7) Provide an advantage to our masked troops when involved in close combat with the enemy.

b. Persistent CS fires are cleared through artillery fire support channels to Division (FSCC); non-persistent CS fires are cleared by brigade or separate battalion/squadron commanders. Delivery systems are as shown and units having capability are indicated. Delivery systems may be placed on strip alert when requested.

(1) XM3 CS Grenade (336 Grenades) Dispenser - Div Arty or Aviation Group.

(2) CS Drum Drop - Div Cml0.

(3) M5 GS Disperser - Div Cml0.

c. Employment considerations.

(1) Persistent or Non-Persistent.

(2) Optimum wind: steady 5-7 knots.

(3) Best employment times: normally morning or late afternoon.

(4) Troops must have masks available as well as pilots and crew members operating in the area.

(5) Exploitation is essential. The following are priorities of exploitation:

(a) Immediate infantry follow up attack within two to five minutes either by air or ground movement.

(b) ARA or Gunships and artillery fire within five minutes of agent employment.

d. Large scale Herbicide Operations (crop destruction and defoliation) are effective means of denying food and concealment to the enemy. Requests are submitted through command channels (ATTN: Division Chemical Officer) and must be planned ahead due to normal approval time of 6-9 months.

SECTION VI: ASSAULT PHASE

1. Fire Support.

a. The aslt phase will commence as the AA formation arrives at the LZRP. Preparatory and suppressive fires will be coordinated by the FSC of the AATF and scheduled by type for max effect as directed by the AATF Comdr. Subsequent fire mission will be coordinated by the AATF FSC on a designated FM fire support net. Army acft will report into the Bde FSC as soon as possible. They will then be passed to the appropriate Bn Arty LNO for fire missions. Bn LNO will pass them to the appropriate FO for control of fire support missions after which they will return to the Bn LNO frequency.

b. ARA acft will report post strike damage assessment to FSC under whose control they are operating after each fire mission. When Cav Sqdn acft are conducting fire missions in support of Bde, they will follow procedures outlined for ARA.

c. AF acft on air or strip alert will receive missions thru established AF channels, originating with the forward air controller at Bn or the AF ALO at Bde level. FAC will control strikes against targets as directed by the FSC.

d. The Cav Sqdn may be utilized for route recon, recon of the obj area and screening to the front and flanks of the obj. The decision to execute suppressive or preparation fires during the assault may result from info relayed by the Cav to the AATF Comdr.

e. All firing in a Bn or Bde sector must be cleared through the Bn or Bde fire support coordinator or the channel designated in line 16 of the GAP MESSAGE. This applies to all aircraft or fire support agencies, and in particular to those which are not part of the Bn or Bde task force i.e., Cav ships operating in general support.

f. Final coordination of ARA fires for LZ preparations, once they have been cleared to fire by the appropriate FSC will be coordinated directly between the lift comdr and ARA comdr on the UHF lift freq. This coordination will generally include direction of fire, duration and minor time adjustments. These will follow the basic plan of the AMTF Comdr.

g. Alternate coordination - In event the controlling AATF Comdr and the FSC becomes inoperative, the lift comdr will coordinate with the DS Arty Bn FSC direct, reporting progress and any recommended changes.

2. Battle drills.

a. Purpose. The purpose of Battle Drill is to position Inf trps in the LZ in a posture to provide all around protection and rapid application of fire and maneuver without lengthy oral orders. It consolidates Inf units under the control of their respective comdr, and facilitates their movement from the landing zone to their specific obj or mission.

b. General.

(1) When an element is taken under fire, it will immediately establish a base of fire and a maneuver element. The least engaged element will become the maneuver element.

(2) Predesignated plans are essential to expeditiously move trps toward assigned obj areas after acft depart LZ or enemy resistance is overcome.

c. During night operations, infantry will unload, and wait for acft to depart before moving to predesignated locations.

3. Eagle flights and laager procedures.

a. Mission. To provide the AATF Comdr with an airmobile reserve capable of conducting raids, or delaying, screening, raconnaissance, reinforcing, and blocking missions.

b. The "Eagle Flight" accompanies the AA formation to the obj area. Upon reaching the obj, the AATF Comdr will direct the actions of the "flight". Normally this force remains in a predesignated area if not committed. This area is called the "laager area" for the AATF reserve. Hel(s) will remain with the supported unit in the laager area on call for immediate use. The duration of this avn support will be specified in the TF Opn Order. Security of the laager area is the responsibility of the supported Inf Unit.

c. The "Eagle Flight" is normally the AATF reserve with supporting hel (to include gun ships if available).

d. Coordination between the AATF reserve and the supporting acft must include:

(1) Probable missions.

(2) Sequence of events on receipt of a mission.

(3) Communications - Inf/Avn.

(4) Fire Support Plan to support each mission.

(5) Recovery of force (if applicable).

(6) Diversionary actions.

e. The "Eagle Flights" will be committed on order of the AATF Comdr only.

f. "Eagle Flights" may be employed independent of the AM opn, i.e., raids, search and kill missions and to support Air Cav Troop Blue Team operations.

4. Thunderbolt plans and overlays.

a. A "Thunderbolt Plan" is a contingency plan that provides for rapid assembly and movement of an AA unit with aviation support. Detailed planning and coordination are conducted as soon as possible after arrival in the LZ. The basis of a "Thunderbolt Plan" is the Thunderbolt Overlay (Fig 18) that is submitted to higher headquarters showing as a minimum, the following info:

(1) Data/Time group.

(2) Unit call sign and FM channel.

(3) PZ location.

(4) Desired hel landing formations.

(5) Number of hels required.

(6) Marking of PZ.

(7) Direction of landing.

b. Thunderbolt overlays are consolidated at the next higher headquarters and given to liaison officers from Avn Gp for implementation when the need arises and when so directed by the AATF Comdr.

SAMPLE THUNDERBOLT OVERLAY

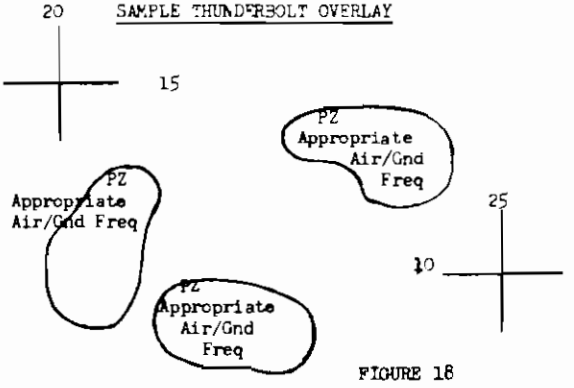


FIGURE 18

LANDING INFORMATION

PZ	AV SPT	FORMATION	PZ MARKING	DIR LAND
A	1 Plat HUID	Hvy Left	Yellow	E to W
B	1 Plat HUID	Hvy Left	White	N to S
C	2 Plat HUID	Hvy Right	Green	E to W
	1 CH-47		Orange White TEE	

UNIT: D 2/5 Cav
TIME: 151430
Call Sign: CUBE
FM: 62.95

SECTION VII: EXTRACTION PHASE

1. Planning process for an extraction is identical to that for an assault. The entire process must be considered.

2. Extractions are normally employed by units of the Div to terminate an operation or a phase of an operation, to reposition sub-elements to fit the comdrs concept of operation, to remove long range patrols, casualties and downed acft from remote areas of the battlefield.

3. All combat support troops will be extracted before the last combat troops are removed from an area of operations. Normally, a platoon size security force is the last element evacuated. This force should remain in its defensive positions to defend the perimeter until their extraction aircraft are in position.

4. All extractions will be supported by TAC air and/or Arty. Suppressive fires (to include CS agent) will be coordinated by the FSC of the AATF Co and scheduled by type for maximum effect as directed by the AATF commander. A concentration should be planned on the extraction site and fired after the last friendly types have departed.

5. Minimum extraction completion time is essential. It is achieved by shortened flight routes, planned type aircraft loads to minimize number of lifts and professional execution of the extraction plan.

6. Because of the ever present possibility that the last elements being extracted may be attacked, a reaction force will be maintained and prepared to reenter the LZ. This can be done by keeping one platoon in orbit or by keeping previously extracted troops on the new LZ by helicopter loads until the extraction from the previous LZ is completed. Occasionally, it is necessary to conduct an extraction from one LZ while conducting an air assault into the next. In that case, the AATF cmdr must set aside sufficient QR Forces to reinforce both LZs.

7. The last element in an extraction should have sufficient radios to operate in the company command net and the battalion command net. If the company commander is leading the initial elements into a new air assault, the last elements at the old LZ must obtain assistance directly from the battalion commander.

8. If the number of ships requested to lift out the last elements is incorrect the error must be on the side of excess seats or ships.

SECTION VIII; INTELLIGENCE

1. Intelligence information must be disseminated by organic collection agencies direct to the person(s) who has the most immediate need and has the capability of reacting. In the majority of cases these are the AATF Comdr and the Bde Commander(s) concerned with current AA opns.

2. Reporting of intelligence information by the organic and attached collection agencies will follow the procedures set forth below unless otherwise directed by the AATF Cmdr.

a. Cav Sqdn and attached collection agencies report all intelligence information direct to Div via telephone or FM D-2 net. Any information of an immediate operational nature will be passed to the Bde most concerned via telephone or Bde FM Op/Intel net.

b. ASTA Plat elements in DS of Bde report all info direct to Bde on the Bde Opn/Intel net. This info is passed to Div G-2 after aviator debriefing.

c. Air Cav elements report all information to Bn or lower size unit on the supported units FM Cmd net and at Bde or higher level on the units FM Op/Intel net.

d. Cav Sqdn LNO TM will provide the Bde Cmdr with a continuous flow of intelligence reports from the Cav Sqdn, depicting not only the enemy situation of immediate interest to the Bde Cmdr, but also the entire enemy situation existing in the Div area.

3. All aviators will be briefed and debriefed by parent units on each mission. Information collected will be forwarded by these units to higher headquarters.

PART II

SECTION I: TACTICAL CONCEPTS AND TECHNIQUES.

1. "Hunter-Killer" operations.

a. The "Hunter-Killer" concept is based on the premise that the bulk of the infantry should be used "to close with the enemy in order to destroy or capture him". Air Cavalry, some infantry, and measured firepower are used to uncover the enemy or cause him to disclose his presence.

b. A "Hunter-Killer" force consists of two components, each carefully tailored to the mission, enemy terrain, and troops available. The "Hunter" element is a highly mobile, swift moving, lightly equipped force whose purpose is to seek out the enemy. The "Killer" is a heavily supported force which remains continually poised and carefully positioned to pounce on and destroy the enemy located by the "Hunters". Within a typical air cavalry brigade organization for combat in a "Hunter-Killer" operation, the "Huntsre" may consist of 1 rifle company (less mortars and 90mm RR), brigade long range reconnaissance patrol and all air cavalry elements attached or supporting. The "Hunters" are principally supported by ARA, TAC Air, and fires by the air cavalry element. Tube artillery should also be available to support the hunters, especially with larger caliber, long range artillery. If possible, "Hunter" operations should include light and medium artillery fire support from existing fire bases. The "Killers" consist of the reaction elements of the brigade. To ensure swift response, the reaction force is collocated with the maximum helicopter lift available whenever possible. When committed, this force is given its

normal supporting artillery and all other available fire support.

c. In "Hunter-Killer" operations, it is desirable that the brigade have only the simple mission of destroying the enemy in a particular area of operations. A planned campaign requiring the "Hunters" to leapfrog is formulated. Frequently, the hunters might employ the techniques of either a zone or area of reconnaissance. Short breaks are given to the hunter force and the force is frequently rotated in order to avoid prolonged exertion and to permit sustained operations. In general, the hunt continues only during that portion of the day in which light conditions will permit the positioning of artillery and the commitment of the killer force if contact is made.

d. While "Hunters" hunt, the killers are poised with aviation support in a central location, ready to respond immediately upon detection of a suitable target. The initial lifts are placed on an appropriate time alert. As the hunt progresses, the killer force carefully monitors its progress (analogous to continuous counteratteck planning). The "Hunter" force constantly feede LZ information to the "Killere". When the "Killere" sre committed, the principle of overwhelming combat power is observed. However, the size of the force committed is dependent on the situation and a measured (but overwhelming) response may be in order.

e. The "Hunter-Killer" concept can be readily executed by a battalion TF. The technique does not lend itself to control above brigade level. Effective control and execution of "Hunter-Killer" operations require close coordination between the forces components. A delineation of responsibilities that has been used effectively in "Hunter-Killer" operations is as indicated:

(1) Brigade responsibilities:

(a) Designate reaction force ("Killer" unit).

(b) Inform "Hunter" unit (normally Air Cavalry Troop or squadron) of reaction force designation and location.

(c) Upon notification of contact, direct commitment reaction force.

(d) Ensure that supporting lift battalion has required airlift for reaction force.

(2) Battalion responsibilities:

(a) Maintain close liaison with Air Cavalry "Hunters" to keep abreast of activities.

(b) Conduct daily aerial recon of the Cavalry troop areas of operation. Recon party should include reaction unit commanders and flight leaders.

(c) Keep reaction force informed of developments in Cavalry Squadron's area of operation.

(d) "War games" the situations that could develop with particular attention to LZs, scheme of maneuver, fire support and CP locations.

(3) Reaction units responsibilities:

(a) Maintain a posture that will permit rapid pick-up by lift ships.

(b) Keep abreast of the Cavalry Squadron's situation.

(c) When reaction force and lift ships can be collocated, at least one platoon of the reaction force should be in a posture that will permit it to be airborne in 5 minutes or less.

(4) Lift battalion responsibilities:

(a) Designate reaction force lift ships.

(b) Ensure "alert" lift ships maintain proper ready-to-launch posture. Be prepared to commit all other available lift ships in support of reaction force.

(5) Air Cavalry Squadron responsibilities:

(a) Inform the battalion having the reaction force mission of future plans.

(b) Keep the brigade informed of developments in squadron area of operations.

(c) Be prepared to guide the reaction force to LZ.

(d) Be prepared to release OPCON of ground elements to reaction battalion.

(e) Be prepared to provide aerial support to reaction battalion.

2. Ready Reaction Force (RRF).

a. In accordance with the basic principle of maintaining a reserve and the ability to influence the action, a RRF is designated as a backup for committed units. Normally a platoon serves as RRF for a company; a company serves as RRF for a battalion; and a battalion is the RRF for division. The platoon and company size RRFs are the most frequently committed.

b. Sufficient lift resources are set aside or positioned to rapidly pick up elements of the RRF and move it to the location required.

c. The RRF must constantly monitor the activities of the unit it serves. RRF leaders make appropriate reconnaissance, develop detailed plans, effect necessary coordination, ensure all subordinate elements fully understand the mission and the plan, and maintain the state of readiness directed by the headquarters appointing the RRF.

d. This measure is also used in the base defense plan. This particular force is called the Quick Reaction Force (QRF). Troops and pilots sleep in tents beside the helicopters and are required to be airborne in 10 min.

e. RRF ground alert status may vary from troops on board the aircraft, with engines at flight idle, to whatever longer period the commander dictates. Normally, a company on RRF keeps one platoon on 15 minute alert and the company (-) on one hour alert. These time ratios vary as the tactical situation changes or as directed by higher headquarters.

3. The Artillery Raid: This is a special tactic unique to airmobile artillery. The raid is the rapid displacement of a four gun battery in an area where the enemy feels safe from artillery fires. Battery position and targets are preselected and firing data is precomputed. Either an air cavalry troop or an equivalent air/ground force is used to provide LZ security for the battery. The insertion, firing and extraction of the battery can be accomplished in about one hour. The keys to a successful artillery raid are close coordination with the lift unit, the security and reconnaissance forces and good target intelligence. This tactic maximizes surprise and shock action and by so doing the division commander can greatly extend his influence through use of organic fire power.

4. LZ considerations.

a. Timing of air assaults.

(1) When planning a combat assault, due consideration should be given to the advisability of being able to complete the insertion and secure the LZ during daylight hours. Experience has indicated a pronounced willingness by the VC/NVA to engage US troops in the late afternoon hours and maintain the contact until evening. Then, using the cover of darkness, they break contact and exfiltrate the immediate battle area. Every effort should be made to place units in the most advantageous combat posture during this period. Air (Combat) assaults, therefore, are most ideally accomplished in a time frame that will allow the complete unit to be inserted, secure and consolidate the LZ proper, and outpost and patrol the area around the LZ as necessary for local security prior to deterioration of light conditions.

(2) The timing becomes especially important in the insertion of troops into an LZ that will be used as a fire base. In this case, sufficient time should be allocated to insert the battery and permit a registration and the adjustment of defensive targets prior to the critical early evening hours.

b. LZ SELECTION.

(1) Except under unusual circumstances, an aerial reconnaissance of the LZ should precede the air assault. It is desirable that the battalion commander, S3, artillery LNO, flight leader and leader of the assault troops perform this reconnaissance. Whenever possible the supporting engineer unit commander should be included in the reconnaissance. The reconnaissance should be accomplished by random passes near the LZ. Deceptive reconnaissance of other areas, to include selection of alternate LZs, should also be performed. Where surprise is critical to success, it may be necessary to limit reconnaissance.

(2) Occasionally it may be expedient to use previously improved LZs, however, it should be kept in mind that the enemy often mines, booby traps or fortifies the old LZs in the hope of catching an air assault force. It is especially important that the flight leader conduct a thorough reconnaissance in order to select the best landing formation and to advise the ground commander on what action to take to improve quickly the LZ for subsequent lifts. The flight leader should be given sufficient time subsequent to the reconnaissance to brief his flight crews.

(3) Touchdown of an entire company is desirable. However, lift resources and LZ characteristics may prevent this size force from landing at one time. The LZ should normally permit simultaneous touchdown of at least one platoon. The following factors are consideration in LZ selection:

(a) Size of force to be inserted.

(b) Maneuver plan.

(c) Proximity to objective.

(d) Safety of lift aircraft.

(4) A four to six ship LZ is most often used and offers the following advantages:

(a) Permits landing of one platoon.

(b) Can normally be rapidly secured.

(c) Permits landing of remainder of company in short period of time.

(d) Less likely to be mined, booby trapped or fortified. There are generally more 4 to 6 ship LZs than the enemy can stake out.

(5) Fire Base LZs: Fire base LZs should be selected jointly by the infantry battalion commander, battery commander and/or the artillery LNO. The LZ should be located so that the artillery will be able to support all maneuver elements. Experience has underscored

the importance of locating it within mutual supporting range of another fire base. Fire bases are prime targets; therefore, the terrain should be readily defendable and sited to provide good communications. Collocation of the fire base and the battalion or brigade CP is normally desirable as an economy of force measure. High ground LZs are desirable, however, excessive elevation may create a weather problem for helicopter operations.

(b) If possible, an area should be set aside for light air drops. A 50 X 100 meter area will suffice. Since CH-47s and UH-1 helicopters will both be operating from the LZ, separate landing areas should be established. Facilities for night resupply should be established and a plan for night resupply made. Pathfinders are normally available to assist in establishing facilities.

(c) The battery commander should be given his choice of ground location consistent with the infantry commanders security considerations. The battery should be provided space for his advance party in the infantry company's assault lift. This will permit early organization of the artillery position and expedite the arrival of the battery.

c. LZ Preps:

(1) Preparations of the LZ and surrounding area by fire support means is probably the most significant factor to ensure a successful landing. Care should be taken to avoid concentrating all preparatory fires directly on the LZ. It has been established that the enemy will not always defend in the immediate vicinity of the LZ but instead will wait some distance away and

move rapidly to the LZ after the prep has been completed. The artillery should be prepared for this contingency with prearranged fires that ring the LZ.

(2) Preparations should be short, violent and intense, using all available fire support. Naval gunfire , tactical air strikes, cannon artillery, and aerial rocket artillery are all desirable. Most preparations are conducted with a five to ten minute preparation by all cannon units capable of hitting the LZ and a one or two minute preparation by an aerial rocket artillery section. Precise timing of the fires to insure continuous fire on the LZ until just before touchdown is the most critical aspect of the LZ prep and is acquired only by careful planning and coordination.

(3) The artillery liaison officer with the infantry battalion is the key man in the machinery of fire support. He coordinates and controls all fires in support of air assault. This position requires complete knowledge of artillery principles and is an extremely important job. During the air assault the artillery liaison officer, riding in the command and control helicopter, directs the fires of cannon artillery for the landing zone preparation. Normally one battery is available, at times there may be as many as three or more. After preparation these fires will be shifted to critical terrain around the LZ to suppress possible enemy fire at helicopters. Prior to the landing of troops on the LZ a preparation by the aerial rocket artillery is normally fired. These fires are followed by fire from the gunships escorting the lift helicopters.

(4) Preparations should be fired on fixed time schedule. Schedules should be varied for each assault to avoid becoming stereotyped. Last minute adjustments must be geared to the location and progress of the flight column of infantry. There must be close coordination and continuous communication with the flight leader of the troop bearing helicopters, who must know how many minutes away from the LZ he is at all times. The ARA must be briefed on the flight route so it can attain the correct position for firing.

d. LZ Construction: Infantry should be used only for minor LZ clearance. Extensive clearance should be performed by engineers secured by infantry. The bulk of the infantry should be assigned other missions. Occasionally B52 or TAC Air strikes will create an opening sufficient to land an infantry/security force and an engineer element. Often this can be expanded into a 4 ship LZ. However, LZs started by this method rarely become large enough to be fire bases because of the extensive clearance that must be accomplished. Infantry and engineers are frequently inserted into LZs on order to initiate the LZ construction sequence. The sequence developed by the division includes 3 phases:

(1) Security elements and engineers arrive at LZ.

(2) Airlifted engineer equipment arrives with initial elements or as soon as possible after initial elements are delivered.

(3) Additional engineer troops and equipment are introduced as needed.

e. LZ Security.

(1) The basic principles of the defense apply. Aggressive patrolling is conducted during the day. Alert ambushes and listening posts are the key to early warning at night. If the enemy attacks, good firing positions, overhead cover, hardened communications, preplanned defensive concentrations, preplanned direct artillery fires, a counterattack plan and provision for an alternate CP are the keys to holding the LZ. If troop resources do not permit accomplishment of all tasks simultaneously, primary consideration must be given to activities which provide early warning. Troops on night ambush, patrols and LPs should be rested in the daytime. Past a certain point of fatigue, it is fatuous to employ worn out troops on night security operations. They become a liability rather than an asset. Normally an infantry company is required to secure one or two artillery batteries and a headquarters CP collocated on a single LZ.

(2) Responsibility for defense of a LZ, fire base or FSE must be clearly delineated. Normally, responsibility for LZ security rests with the senior line officer. Whenever feasible, indigenous forces such as CIDG, regular and/or popular forces should be integrated on the perimeter to ease the requirement for US troops.

(3) The security of a fire base LZ is a critical matter. The loss of the fire base not only means loss of lives and destruction of the guns, but also robs maneuver units of the fire support upon which they depend.

(4) A system of perimeter markers should be devised to facilitate night employment of ARA, GO-GO, TAC Air and gunships. Cans of sand mixed with JP-4 or other fuels are effective. Trip-

flares can be used as igniters. All pilots in the AO should study the LZs with a view toward night reinforcement, resupply or placing fires on the perimeter. An illumination plan, including self-illumination and illumination from other fire bases, should be developed and adjusted in.

(5) Each platoon on the perimeter should be assigned its own artillery defensive concentrations. Whenever possible, defensive targets should be adjusted in.

5. Special tactics and techniques.

a. Ambushes.

(1) The ambush has historically been the most common type of offensive operation conducted by guerrilla forces. The ambush is an attack sprung from a concealed stationary position to harass or destroy enemy reconnaissance and combat patrols, carrying parties, messengers, and troop and motor columns. The results to the enemy upon entering the killing zones will be devastating providing the ambush is properly planned, meticulously prepared and aggressively initiated. Faulty planning or preparation can bring devastation to the ambusher instead of the ambushed. The Viet Cong and the North Vietnamese Army use the ambush with good results; however, it can be just as effective by US Forces.

(2) The first consideration in planning an ambush is to determine the probable routes of enemy movement. Once this has been determined the ambush leader should conduct an aerial reconnaissance as well as a map and photo reconnaissance in order to select the general area for the ambush site.

(3) The ambush plan itself must be kept as simple as possible. There are two basic types of static ambush positions; the single route of approach and the multiple routes of approach. In the single route of approach situation, when it is unknown from which side the enemy will approach, a basic formation is shown in figure 1.

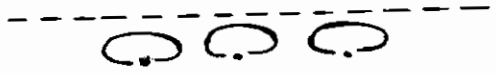


FIGURE 1

(4) In this configuration any size enemy force may be engaged, a small force may be annihilated while a large force will have maximum casualties inflicted upon it before the ambush is withdrawn. During withdrawal, the security elements delay and disorganize the enemy by employing hasty ambushes. Artillery concentrations are planned to seal off the killing zone and to assist in the withdrawal. When the enemy direction of approach is known a basic formation is shown in figure 2.

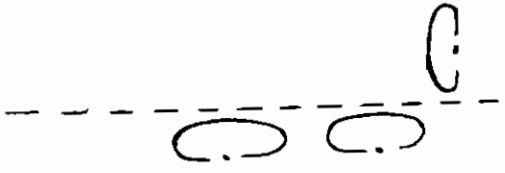


FIGURE 2

(5) When there are multiple routes of approach the basic considerations are to cover each route with a suitable force and to have friendly forces mutually supporting as shown in figure 3.

FIGURE 3

(6) This method of placing units on the ground allows for mutual support, provides for the ability to ambush any size force, and utilizes supporting fire as did the placement in figures 1 and 2.

(7) Naturally the final placement of units on the ground will be governed by the terrain. The placements shown in figures 1 through 3 are a point of departure only.

(8) Consider loading all small arms with tracer ammunition only. Granted, tracers will give the firing position away; however, it allows the soldier to see where his rounds are hitting and thus he can provide more accurate fire. The sight and sound of a large number of tracers has a greater shock effect on the enemy than only the sound of ball ammunition. Liberal use should be made of automatic weapons, to include the M-60 machine gun; M-79 grenade launchers; and claymore mines. The 90mm RR, firing the beehive round, is an effective ambush weapon. Scout dogs have been effective in

detecting enemy movement towards the ambush position, and the starlight scope has also been effective in detecting enemy movement during the hours of darkness.

(9) Every effort must be made to conceal personnel and equipment and to surprise the enemy. Personnel must remain motionless with their safeties off; no preliminary movement which might betray the ambush should be made. Positions must be selected that will provide for mutual support of friendly elements. The ambush leader must position himself where he can best control the action and ensure that strict discipline is being maintained. If the ambush under consideration is worth conducting; it is worth the time and effort to conduct a rehearsal on similar ground. The ambush, and in particular the night ambush, is an effective way to reduce enemy movement and to lower enemy morale.

b. Counter-Ambush Techniques.

(1) The soldier standing in the middle of an ambush KILLING ZONE has only one split second to take positive action. He must instantly fire his weapon and in concert with his comrades, suppress the enemy fires and gain fire superiority.

(2) Survival rests on a mental reflex that, when tripped, releases a blaze of fire from every weapon. These fires must orient on the enemy fires or the suspected points of origin of these fires. As a minimum each rifleman must rip-off one M-16 magazine, each machine gunner must fire the 50-60 rounds he carries in his weapon and each grenadier must deliver as many 40mm grenades of the appropriate type as possible.

(3) Because this immediate action is so critical and because it is the only common denominator in all counter-ambush situations, it is here that emphasis should, and can be most effectively applied.

(4) The code word ARMS can be used to recall the fundamentals of counterambush action:

A R M S

(a) Avoid the killing zone. Elements within that zone move forward out of the area of fire; those behind stop short of it.

(b) Return fire immediately. A large volume of fire is initiated even before the exact location of the ambushing force is determined -- to include simultaneous calls for fires from supporting weapons. Although priority is given to suppressing the enemy's fire, friendly fire is delivered in a 360° arc around the point of contact.

(c) Move selected elements aggressively against the flank or rear of the principal enemy position. The unit leader must constantly be making and modifying contingency plans as his unit moves. Because the enemy force will often be in an "L" or a linear configuration, those elements which have stopped short of the killing zone should be used to initiate the counter-attack, supported by fires delivered from lead elements of the unit. If the unit commander finds this infeasible, he reverses the roles of the lead and tail elements using whatever communication means are at his disposal.

(d) Secure flanks and rear against follow-up attacks from different directions than that of the initial fires. In addition to supporting the maneuver force, the base-of-fire unit directs its fires and surveillance to all quadrants. At least one element of the maneuver force (even if only one man) is positioned to provide that force protection against unexpected attack on its own flank and/or rear.

(5) Naturally the best counter-ambush technique is to avoid being ambushed. Avoid likely ambush sites if possible. Use scout dogs, scout aircraft, suppressive artillery fires marching in front of lead elements and, unless stealth is required, reconnaissance by fire.

(6) Each terrain feature must be evaluated as a potential ambush site and each sub-element, in turn, must be placed mentally, in the killing zone and the best course of action for each situation filed away in the commander's mind.

(7) Once ambushed, it is the first split second that tells the tale. Frequent practice of quick reaction drills will ensure that all personnel will instantly counter the enemy's fires.

c. Controlled Ambush Operations (Rat Hole Technique):

(1) As it becomes increasingly difficult to locate and destroy enemy forces, particularly when the enemy is trying to avoid contact, new tactics must be employed. One that lures the enemy into a trap is desired. Based on the fact that even though the exact course of action cannot be predicted, by using certain initiatives attention can be focused on the options which experience indicates will be most appealing to the enemy commander.

(2) Implementation of this tactic requires the distribution of the brigade task force into four distinct but related functions.

(a) Fire bases are sited to ensure maximum fire support throughout the most critical portions of the brigade AO.

(b) Ambushes, usually of platoon strength are positioned within supporting artillery range in accordance with best intelligence available and detailed analysis of terrain. Maximum deceptive measures are employed to cover the positioning of these fires.

(c) Long range, patrols, fire team in size, are employed to overwatch the principal enemy lines of communications, report all activity and to adjust artillery fire on suitable targets.

(d) Stirring forces consisting of troops, aircraft and artillery are employed to generate the enemy movement and channel it into ambush and/or artillery kill zones.

d. LP/OPs

(1) The employment of small, highly mobile LP/OPs can greatly enhance the intelligence gathering and target acquisition capability of brigades and maneuver battalions.

(2) LP/OPs should be formed from infantry squads selecting men who have demonstrated a proficiency in patrolling skills. LP/OPs may vary in size, but as a general rule, should not consist of more personnel than can be lifted by a single troop carrying helicopter (normally 6 personnel).

(3) During daylight hours, LP/OPs occupy OPs which provide good observation over valley floors, trail junctions, water points and river crossing sites. At night the LP/OPs are employed where they can observe or hear enemy movement.

(4) A 1000 meter radius FCL is established around each LP/OPs location.

(5) The brigade S2 will constantly monitor the progress of the LP/OPs and apprise them of any changes in the enemy situation. The LP/OPs will normally report only at pre-established times unless spot reports are significant enough to warrant breaking radio silence.

(6) LP/OPs can be very effectively used to call in observed artillery fire on enemy personnel moving on trails.

e. Stay-Behind Forces: Stay-behind forces are effective after extractions. Often the enemy will enter a recently abandoned LZ to search for recoverable items. The stay-behind force should be positioned far enough away from the LZ to permit artillery to fire on the supposedly evacuated LZ. The enemy has learned not to immediately occupy the LZ because we frequently fire on the LZ after we leave. Use of these fires will lend credibility to the appearance of a complete extraction and serves to enhance the surprise which the stay-behind force can achieve.

f. Saturation Patrolling. This technique is useful in locating caches and to keep the enemy on the move. It involves a degree of risk and should not be used if large enemy forces are known to be in the AO. It is a relatively quick way to confirm a belief that the enemy is not in a particular area. Part of the higher risk is due to the fire coordination problems created by the proliferation of small friendly elements on the move. It is imperative that each patrol have a radio and stay in contact with its next higher headquarters. Without communications, these patrols become liabilities rather than assets.

g. Movement security:

(1) Proper employment of marching artillery and mortar fires is an important skill the platoon leader or company commander must possess. Whenever there is the possibility of encountering a superior enemy force, artillery rounds should be walked along in front and to the flanks of the column. The leader must know the location of at least one concentration which can be brought in close with minimum adjustment. At halts, it is desirable to fire in a few rounds near the tail of the column. Often VC/NVA guides will follow US units. At halts, both ends of the column should assume an ambush configuration.

(2) Whenever possible, units should move on multiple, mutually supporting axes. When forced by terrain and time factors, to use a single axis, either off or on a trail, the unit should be provided with scout ships and/or gunships. Air cover must be waived off the gun target line periodically in order to maintain marching fires, however, air cover and marching fires could be worked together with no difficulty. Smoke grenades are used to mark friendly locations.

(3) Normally open areas are not crossed without first sending an element to secure the far side. Recon by small arms can effectively be used.

(4) There is no single solution to ensure flank security while moving through heavy jungle. Dispersion and pushing the point element out as far as possible are sound measures. Odd numbered men look left and even numbered men look right. Some men should be appointed to watch the trees for snipers, all personnel should be assigned security responsibilities.

6. Other considerations.

a. Mortars. Because of the dense vegetation and rugged terrain in RVN, the rifle company normally carries only one 81mm and 20-24 rounds of ammunition. The other two mortars are kept at the battalion trains and called forward when the company reaches a static position. Prior to movement, these are extracted to the battalion trains. For a one night stop, the additional mortars are not normally brought in but additional ammunition is. This ammunition is used for H & Is, defensive fires, or extracted in the morning.

b. Recoilless Rifles and the LAW.

(1) 106mm RR: Lifted to high ground w/o carrier, this weapon is effective to overwatch activities below and can effectively assist friendly units in reduction of hardened targets and/or to provide suppressive fires. On low ground, it normally must be employed on its carrier. Use of the weapon on its carrier is infrequent due to the poor road net and also because lift resources are not always available to move the carriers around.

(2) 90mm RR: Normally, it is employed like the 81mm mortar, i.e., brought forward once a static location is reached, however, the 90mm is rarely carried through jungle or across the rugged terrain. Primarily it is valued for defense using the flechette round or for bunker reduction.

(3) The M-72 LAW: The weapon is a substitute for the 90mm recoiless rifle when a unit is on the move.

c. Riot Control Agents (RCA).

(1) RCA can be used to restrict the enemy use of areas and for tunnel search and tunnel denial. CS crystals placed in tunnels and bunkers and sealed by explosives, will deny enemy use for extended periods. RCA may be used to advantage during air assaults to reduce effectiveness of enemy ambush. Because burning CS munitions are non-persistent, exploitation must be prompt. The protective mask must be worn by troops and pilots to gain benefit from agent CS.

(2) Coordination and timing become more important during air assaults while wearing the protective mask due to reduced visibility and voice control.

d. Security Missions.

(1) Fixed Base Security: Security in this environment is a necessity regardless of the mission in which the unit is engaged. Initial location and displacement of facilities such as FSE and artillery units must be closely studied

in order to conserve the maneuver forces required for security missions. Whenever feasible, base areas should be consolidated and collocated with fire bases and CPs to minimize the number of troops tied down in the security role.

(2) Engineer Work Party Security: Security for engineer work parties must be considered in planning all operations. Forces must be allocated to accomplish this mission if maximum utilization of the engineer force is to be realized. It must be recognized that assignment of security missions to the maneuver battalions detracts from their capability to perform offensive missions.

(3) Convoy security:

(a) With the exception of the ground cavalry troops, air assault ground maneuver elements are not equipped with sufficient ground transport to perform this role. Convoy security therefore is not a recommended use of air assault troops. The detsrrent effect of armed helicopters and fixed wing observation aircraft over a convoy is considerable. A fixed wing A/C should be over the convoy at all times and be in communications with it; prepared to bring in artillery, armed helicopters or TAC Air. Armed helicopters should periodically appear over the convoy and check out terrain which the fixed wing A/C cannot. The armed helicopters should laager at secure landing areas along the route to conserve fuel and flight hours. Air cover, plus convoy personnel trained to react quickly to ambush, are the essentials of safe convoy movement. Road sweeps must be employed to discover mines. Vehicles must be sandbagged.

(b) Convoy leaders must have the frequencies and call signs of all agencies along their route which could assist by fire or comm to their assistance.

e. Operations with Indigenous and Allied Forces.

(1) In operations with allied forces it is essential that each unit know where the other is and what operations are being conducted. The most effective means of doing this is by close coordination and continuous liaison through exchange of officers. Exchange of liaison officers and qualified interpreter personnel should be accomplished as a matter of importance. It is often desirable to tailor allied forces by mixing units of one force into units of another force. This builds confidence between allies and provides opportunities for both elements to learn from the other.

(2) Engineers often have a requirement for the use of indigenous labor for route mainten ance and construction of fortifications. Therefore, close coordination between the G5 and the engineer is essential in planning joint operations to ensure that adequate manpower is available and that funds are provided for hiring of indigenous labor.

(3) Extremely close coordination and a spirit of cooperation must characterize relations between division engineer and allied engineer commanders to ensure mutual and continued support in critical areas.

PART III

SECTION I. CHECKLISTS

1. STAND TO (Pre-Dawn)

a. All personal gear rolled and ready to march or airlift.

b. Muster. Be prepared for attack.

c. Perform checks on all equipment

(1) Claymores and trip flares accted for.

(2) Radios working. Check Batteries.

(3) Wpns clean. Basic load complete.

(4) C-rations. Basic load complete.

d. Commo

(1) Frequencies

(2) Call signs

(3) Points of origin

e. Personal Hygiene and Health

(1) Shaving.

(2) Dry socks.

(3) Foot powder, Insect repellant and Malaria pills.

2. STAND TO (Pre-Dusk)

a. Muster. Be prepared for attack.

b. Wpns clean.

c. All gear, except sleeping gear, rolled and stowed - ready for any event.

d. Mosquito nets and insect repellant.

e. Light and noise discipline.

g. Password.

h. Radios protected from rifle and mortar fire.

i. Claymores and tripflares out.

3. WARNING ORDER

a. Ready time.

b. Formation.

c. Mission.

d. Planning Considerations.

(1) Duration of Operation.

(2) Location

e. Logistical Planning

(1) Rations and water.

(2) POL

(3) Ammo

4. OPERATIONS ORDER

Reference: MAP

Task Organization

1. Situation

(a) Enemy.

(b) Friendly.

(c) Attachments and Detachments.

2. Mission.

3. Execution.

(a) Concept of Operations

(b) Maneuver

(c) Fire Spt

4. Admin and Log

5. Cmd and Signal

Time Check

5. SPOT REPORT FORMAT

a. Who

b. What Activity

c. Where

d. When

e. Previously reported (If so, to whom and when.)

f. Action taken

g. List adjacent units that have been notified.

6. FIRE REQUESTS

a. There are only five items that must be covered when you ask for fires:

(1) Call sign. You must identify yourself.

(2) Warning order. Simply say FIRE MISSION.

(3) Target location. This is really important. Look at your map. Estimate the location of the tgt on the map and give its coordinates (for example, GRID 485 584). If the FDC knows your location, you may give them an estimated distance in meters from yourself to the tgt (such as, DISTANCE 2800). In any event, you MUST give DIRECTION (this used to be called azimuth) from yourself to the tgt. Give all information in the clear except your own location.

(4) Nature of tgt. Simply tell what you see: "VC Plat, digging in."

(5) Control. Simply say ADJUST FIRE, meaning that you are able to adjust.

b. That's all there is to it. Here's an example:

Observer to FDC:
Red Leg, This is Snuffy, Fire Mission, Over.

FDC to Observer:
Snuffy, This is Red Leg, Fire Mission, Over.

Observer to FDC:
GRID 485 584 DIRECTION 1800 VC PLAT DIGGING IN, FUZE TIME, ADJUST FIRE, OVER.

FDC to Observer:

Repeate the message, terminates with OUT, and after the fire order is issued transmite:

BATTALION, 2 ROUNDS, TARGET KA 8001, OVER.

Observer to FDC:

BATTALION, 2 ROUNDS, TARGET KA 8001, OUT.

Sometimes it will be a battalion firing in adjustment or just a battery or maybe one mortar tube. This will vary. Write down DA 8001 on your map at the tgt location for future reference.

In a minute or two you'll hear SHOT, OVER. This means your rounds are on the way. You say SHOT, OUT.

When you see or hear your rounds hit you must now adjust them onto your tgt unless you were lucky and got a firet round hit.

First get the rounds on line with the tgt. They are either hitting right or left of the tgt. Estimate this error and tell the FDC Right or Left so many metere.

Next determine if the rounds went long or short. Make a bold change causing the next rounds to bracket the tgt. Say Drop or Add so many meters.

Keep splitting the bracket until you are hiting from 50 to 100 meters from your tgt. (depends on how big the guns are that are firing for you) Then ask for FIRE FOR EFFECT. (Good Bye, VC) Tell the FDC what happened to the tgt. END OF MISSION, EST 6 VC KIA, OVER. That's it. For more info, see FM 6-135, Adjustment of Arty Fire by the Cbt Soldier and TC 6-1, Sep 66, Fld Arty Observation.

7. SHELREP

Item A From (orginator)

B Psn of observer

C Azimuth to flash or sound, along flight path or along groove of shell in mils or degrees.

D Time shelling began

E Time shelling ended

F Area shelled

G Number, size and type of wpn(s) used

H Nature of fire (observed, H & I etc.)

I Number and type of shells

J Time between flash to bang

K Damage

SECTION II. TABLES

1. Wpns Capabilities.

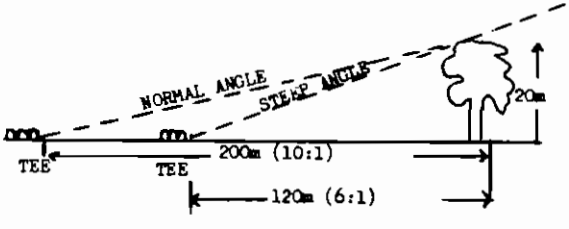
Wpn	Max Eff Range	Max Range	Burst Area
Clay-more	50m	250m	Zone
M60	1100m	[illegible]	Beaten Zone
.45 Pistol	50m	1500m	Point
M-16	460m	2653m	Beaten Zone
M-79	350m	400m	10m
81mm Mort	3650m	3650m	20x25m
M72 LAW	325m	325m	Classified
106mmRR	1100m	7678m	11m (HEPT)
90mmRR	750m	2200m	Unknown
105mmHOW	11,000+m	11,000+m	20x30m
155mmHOW	14,600m	14,600m	30x50m
8" HOW	16,800m	16,800m	30x80m
175mmGun	32,700m	32,700m	35x95m
2.75 Rkt	2,000m	x	20m
82mmMort	3040m	3040m	20x25m
AK-47	400m	x	Beaten Zone
SKS	400m	x	Point
RPD (MG)	800m	x	Beaten Zone

KNOTS	KMPHOUR	KMPMINUTE
65	120	2
70	130	2.1
75	137	2.3
80	147	2.5
85	157	2.6
90	166	2.8
95	175	2.9
100	184	3.1
105	194	3.2
110	203	3.4
115	212	3.5
120	222	3.7

(Night)

a. Night LZ with no control aids on ground other than a landing TEE and a radio.

b. Best TEE to obstacle ratio is 10:1. Max ratio is 6:1.



SECTION III. AIRCRAFT SAFETY

All units will insure that their personnel are aware of the following safety procedures while working in or around aircraft.

1. General.

a. Specific safety rules cannot be prescribed to cover every situation; however, certain rules apply to all air transported operations.

b. Conduct on Airfields/Heliports.

(1) Troops will not enter onto an Airfld/Heliport without first obtaining permission from the Control Tower or other proper authority.

(2) Troops will not assist in any emergency occurring on an airfield/heliport which has emergency crews and vehicles unless told to do so.

(3) Do not leave loose equipment lying on the ground at any landing sites.

(4) Marker panels must be securely tied down.

c. Aircraft Commander (AC)

(1) The AC (aviator) is the final authority on the technical operation and safety of the acft.

(2) All personnel will adhere to instructions issued by the AC at all times when in or around military acft.

d. Smoking. Smoking within 50 ft of any acft is prohibited. Smoking is prohibited in acft under the following conditions:

(1) During all ground operations.

(2) During and immediately after take-off.

(3) During fuel transfer operations.

(4) Immediately before and during landings.

(5) At any time any occupant detects fuel fumes.

(6) When so instructed by the AC.

2. Entering and Exiting.

a. Never approach rotary wing acft from the rear, always from the side or front, except CH-47 which must be approached from the rear.

b. Never approach fixed wing acft from the front, always from the side or rear.

c. When approaching a chopper, while rotor blades are in motion, keep the body in a crouching psn.

d. Keep clear of fixed wing propeller arc.

e. When approaching a formation of acft, use a route that will clear tail rotors or prope.

f. Keep wpns and other gear from coming in contact with airframe or acft antennae.

g. Prior to entering acft, determine who will remain behind if someone must be "bumped".

h. When landing up hill in choppers, DO NOT exit acft up hill into the rotor.

i. Flares will not be fired within an area that could damage acft.

j. Radios will have antennae recessed prior to entering acft.

k. Wpns will be held between the legs muzzle up except in CH-47s when they will be placed on the floor.

l. Normally wpns will be unloaded prior to boarding. On combat assaults, they may be loaded with no round in the chamber and the safety on. If the LZ is likely to be "hot" unit commanders may direct that rounds be chambered as the lift begins final approach. Safeties will be kept on.

m. Mortars, base plates, and bipods will be placed on the floor of the acft.

3. During Flight.

a. Seat belts will be worn at all times.

b. Be careful with radio antennae.

c. Acft loads should be spotted on the LZ in accordance with the planned acft landing formation. Loads should remain stationary until the pilots have decided exactly where they will set down. Personnel running around the LZ distract the pilots.

4. Crash Landing Procedures.

a. Remove emergency exits.

b. Secure loose equipment.

c. Fasten seat belts tightly

d. Lean fwd and grasp ankles.

e. If facing fwd or aft use arms as a headpad.

f. Do not relax position until all motion has stopped.

g. Clear acft in an orderly but rapid manner.

h. Move out to at least 100 ft and lie down.

5. Vehicles.

a. Vehicles will not approach acft without first coordinating with the AC or crew member.

b. Drivers will exercise extreme caution.

c. Max speed around acft is 5 MPH.

d. Except for CH-47s, choppers will never be approached from the rear.

e. Fixed wing acft will always be approached from the side or rear.

f. Radio antennae will always be tied down before driving near acft.

6. Night Operations.

a. Light discipline will be closely observed.

b. Blackout lights will be used near acft.

c. If necesseary, a guide with a flashlight may be used.

d. Flame producing devices will not be

used inside chopper during night operations

f. Firing of small arms, from inside a lift ship, is rarely necessary. Such firing, at night, is particularly hazardous as muzzle flash could cause the pilots to lose their night vision.

15 May 1967 Cav Pam 350-1

(AVDAGT)

FOR THE COMMANDER:

OFFICIAL:

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Colonel, GS
Chief of Staff

DANIEL B. PLYMER
LTC, AGC
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DISTRIBUTION:
A plus
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