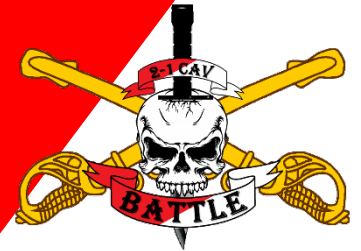


BLACKHAWK TACSOP



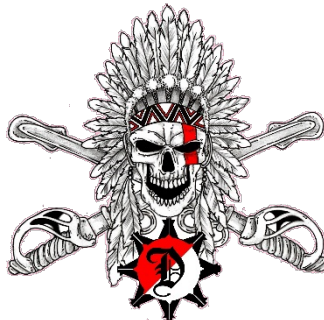
HATCHET TROOP



SECOND SQUADRON,
FIRST U.S. CAVALRY REGIMENT



COMANCHE



VERSION 3.1

Blackhawk Standing Orders

- 1. March to the sound of the guns.** Don't wait for the fight to come to you. Be aggressive- it's a mindset. You are a cavalryman and will attack first with the most risk.
- 2. Seize the initiative and be decisive.** Look for the position of advantage. Make things happen. Don't wait for things to happen to you. Do not leave reconnaissance assets in reserve. Be a Soldier that prevents problems before they occur.
- 3. Take smart risks and use good judgment.** Leverage your experience to seize opportunities with high pay-off outcomes. Don't take unnecessary risks. Know when to cut your losses.
- 4. Understand the commander's intent.** If you don't understand the intent, seek clarification and further guidance. A clear and understood intent enables initiative and mission command.
- 5. Lead and play your position.** In any group, someone is in charge. When in charge, take charge. Know when to follow. Conduct PCCs and PCIs to standard. Keep your higher headquarters informed.
- 6. Training the Big Five.** In order to fight and win in combat, our training objectives should always center on:
 1. Physical Fitness
 2. Marksmanship
 3. Small Unit Drills
 4. Medical Proficiency
 5. Maintenance
- 7. Keep your Soldiers informed. And don't waste their time.** Your Soldiers perform better when they know what's going on and why. Timelines and priorities of work drive action. When planning, refer to the 2-1 CAV Planning Big 8 in the TACSOP (Ops 1).
- 8. Treat people with dignity and respect.** Our teammates deserve this. There is no room for maltreatment, hazing, or prejudice in our formations.
- 9. Tell the Truth. Always.** Integrity in all actions and reports is non-negotiable. Report bad news quickly.
- 10. You are on the Varsity Team- a 2-1 US Cavalryman. Live up to that. And always act like you've been here before.**

RAIDER STANDING ORDERS

Lead

1. It takes courage to enforce standards. Enforce them ruthlessly. This will save lives.
2. You can lock and load 100 times in a row without firing a round. Be as prepared the 101st time.
3. Wars are fought around, amongst, and between populations. Secure the populace in order to use them as your security zone. Instill confidence in them through our adherence to standards and discipline. If the population thinks only of self-preservation, the enemy will win.
4. Execute your simple plan violently. Gain and maintain contact with the enemy to finish them. Our enemy is susceptible to fear and friction.
5. The Principles of Patrolling (Planning, Recon, Security, Control, and Common Sense) apply to everyone. Clearly communicate priorities of work. Informed Soldiers are effective Soldiers.
6. There is only attack and defend. Raiders are either moving to the objective, attacking, or defending only to set conditions to resume the offense.

Shoot

1. Acquire Target; Identify threat of target; and eliminate. Be smart. Use appropriate level of force in close quarters and among noncombatants. Understand the effects of your weapon system.
2. Security 360 degrees; Scan in all directions and dimensions. Overwatch all of your elements.
3. Borelight optics and boresight weapons routinely. Conduct dry fire drills and marksmanship training. Be better with your hands and weapons than the enemy. You can't kill if you can't hit what you are aiming at.
4. Look in depth throughout the Objective and achieve combined effects. Kill the enemy in three dimensions. Converge fires with maneuver.

Move

1. Move at the speed of an ABCT... fight at the speed of an IBCT. Deploy prior to making contact. Maneuver your Infantry to close with and destroy the enemy.
2. Assume you are always watched and the enemy is always reporting. Don't set patterns. In urban environments, never use the same route out. In close quarters... watch the hands; they will kill you.
3. Only maneuver within the area you can secure. Never lose your sector of fire. Move as pairs, teams, squads, sections, or platoons... never as individuals. Secure key terrain... don't neglect micro-terrain.
4. Gain situational awareness as you march to the sound of the guns... may be another unit in contact.
5. Maintain distance between vehicles; ensure dispersion of vehicles/personnel; use the appropriate formation and technique base on the probable line of enemy contact; do not provide an easy target.
6. Honor our wounded and/or fallen in pressing the fight. Focus on the enemy; DO NOT fixate on casualties; do not slow your maneuver.

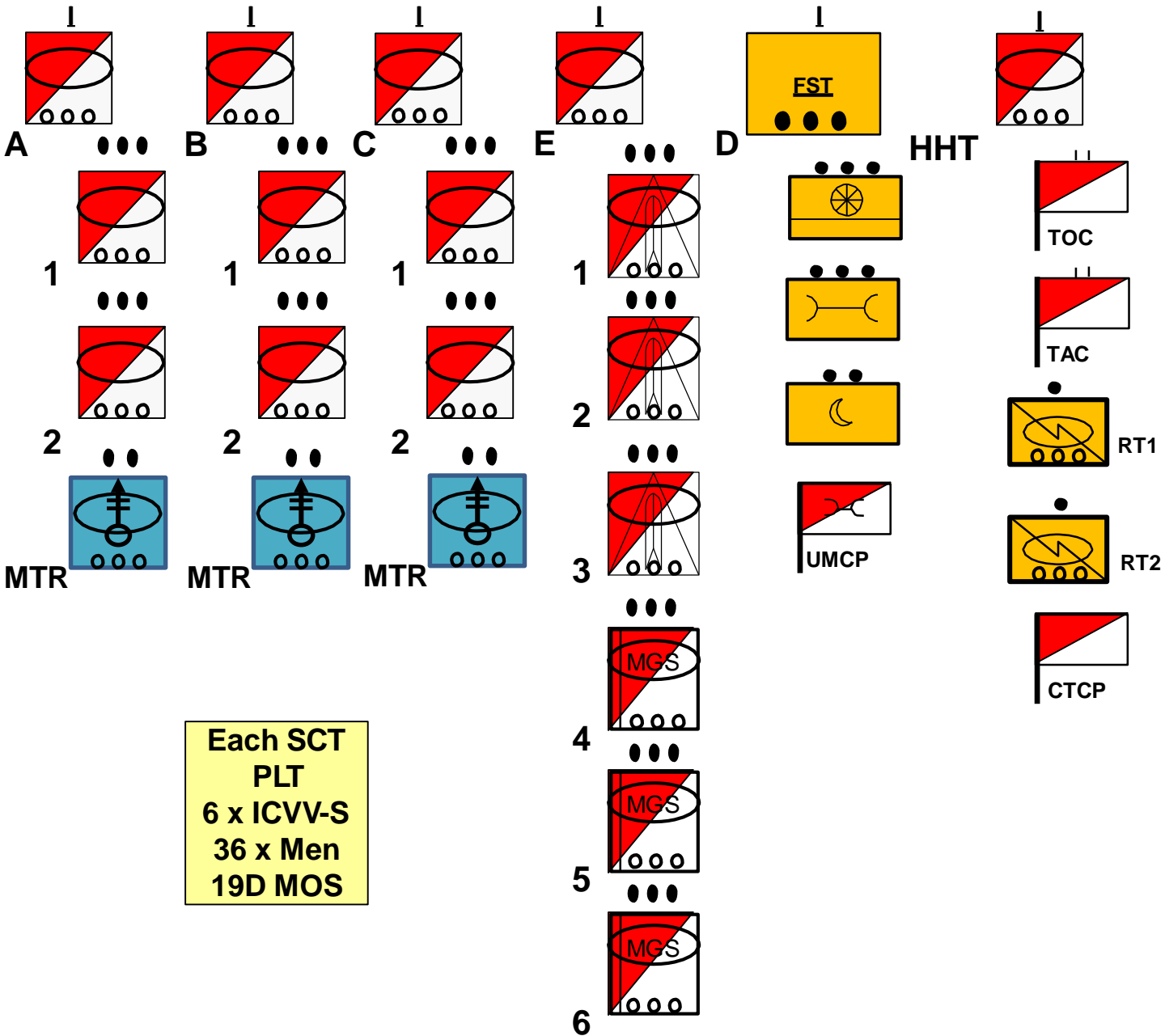
Communicate

1. Ensure communications are maintained at all times; be brief, be clear, be calm, and acknowledge transmissions immediately. Use proper procedures.
2. Get a minute of situational awareness on the net before stepping on someone's transmission.
3. Never leave without an OPORD/patrol brief. Brief down to the lowest level the need to man the radio during contact and send a SITREP; must stay on the net 24/7. Rehearse the PACE plan prior to LD.
4. When you lose communications with your higher HQs, your mission becomes "Establish Comms."

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2-1 CAV Squadron Organization



Reconnaissance Overview

Fundamentals of Recon

1. Ensure continuous reconnaissance.
2. Do not keep reconnaissance assets in reserve.
3. Orient on the reconnaissance objective.
4. Report all information rapidly and accurately.
5. Retain freedom of maneuver.
6. Gain and maintain enemy contact with the smallest element possible.
7. Develop the situation rapidly.

Types of Reconnaissance

1. Zone
2. Area
3. Route

Reconnaissance Techniques

- Reconnaissance push
 - Detailed plan prior to deployment of reconnaissance assets
 - Initially, a detailed ISR plan to support an evolving maneuver COA
 - As reconnaissance yields relevant combat information the COA is refined and completed

- Reconnaissance pull
 - Commander deliberately refrains from committing to a COA prior to deployment of ISR assets
 - Execution of an integrated ISR plan by reconnaissance elements focused on collecting information on enemy strengths and weaknesses that is critical to formulating the future COA
 - ISR assets “pull” maneuver assets to the most tactically advantageous position to make contact at the time and place of their own choosing

Time Available to a CDR is normally the chief reason for preferring one method over the other.

Security Overview

Fundamentals of Security

1. Provide early and accurate warning.
2. Provide reaction time and maneuver space.
3. Orient on the force, area, or facility to be protected.
4. Perform continuous reconnaissance.
5. Maintain enemy contact.

Forms of Security

1. Screen
 - Moving screen
2. Guard
 - Not operated below CAB/SQDN level.
3. Cover
 - Deployed at the BCT level. CAB/SQDN does not have capability to execute independently.
4. Local Security
5. Area Security
 - a. Route Security
 - b. Convoy Security

CRITICAL SECURITY TASKS

- Prevent threat forces from penetrating defensive perimeters
- Establish perimeter if not contiguous with another friendly unit
- Report all CCIR ----If time allows-----
- Recon all terrain in area
- Locate all obstacles and identify bypasses
- Locate mines and IEDs
- Establish and maintain contact with local civilian and military leadership
- Determine media outlets and publications
- Determine regional, local or neighborhood dynamics
- Identify local populous allegiances to factions, religious groups
- Assist in stability or relief operations
- Deny enemy from directly observing friendly activities

Stryker Specifications/Drivers Licensing Requirements

ICVV		
Weight	54,000 lbs	REF: General Dynamic Land Systems Training
Length	7.3 m	
Width	2.8 m	
Height	2.7 m	
Max Grade	60%	
Max Tow	50,000 lbs	
Max Speed	64 mph (103 kph)	
Fuel Capacity	62 gal	
Fuel Consumption Rate @ 40 mph (64 kph)	6.87 mpg (11.06 kpg)	
Max Range	426 mi (686 km)	

Driver's Licensing Requirements

1. Pass Commander's Interview
2. Be medically cleared to drive
3. Complete Squadron 5 day training course
 4. Pass written test
 5. Pass PMCS test
 6. Pass road test

Readiness Conditions

Levels	Preparedness	Security
REDCON 1	<ul style="list-style-type: none"> o Ready to move on order o All personnel alert o All equipment packed o Vehicles loaded, engines running o Fire/Evac/Rollover drills complete o Gunner/TC harness check, dismounts buckled o Weapons secured 	100% weapon systems manned
REDCON 1.5	<ul style="list-style-type: none"> o Same as REDCON 1 except engines are OFF 	100% weapon systems manned
REDCON 2	<ul style="list-style-type: none"> o Ready to move in 15 minutes o All personnel alert o Pull in operations and wire, take down camouflage 	75% weapons systems manned
REDCON 3	<ul style="list-style-type: none"> o Ready to move in 30 minutes o 50% crew/unit stand down for feeding, rest, maintenance 	<ul style="list-style-type: none"> o 50% weapon systems manned o Camo nets up o JCAD's positioned and operational
REDCON 4	<ul style="list-style-type: none"> o Ready to move in 1 hour o 75% of crew/unit stood down 	<ul style="list-style-type: none"> o Minimum weapons system manning o Perimeter patrols

Drills

Fire Drill

VC	Gunner	Driver	Dismounts
Announces "Vehicle Fire"	Announces "Vehicle Fire"	Stops vehicle, pulls fuel shut off, shifts to N, engages parking brake, turns off engine	
Turns on internal fire extinguisher. Turns off Master Power	Secures weapon/SI if time allows	Secures weapon/SI and fire extinguisher if time allows	Secures weapons/SI if time permits
Secures weapon/SI if time permits, exits vehicle	Exits vehicle	Exits vehicle	Exit vehicle
Directs crew to rally point 50 meters behind vehicle	Moves to Rally Point	Moves to Rally Point	Moves to Rally Point
Accounts for crew, supervises security and first aid	Provides security and first aid at rally point	Provides security and first aid at rally point	Provides security and first aid at rally point

Drills

Rollover Drill

VC	Gunner	Driver	Dismounts
Yells "Rollover, Rollover, Rollover"	Yells "Rollover, Rollover, Rollover"	Yells "Rollover, Rollover, Rollover"	Yells "Rollover, Rollover, Rollover"
Drops into vehicle, braces for impact	Pulls VC into vehicle, braces for impact	Keeps hand on steering wheel, braces for impact	Hold onto troop straps, tuck feet into stirrups, brace for impact
After vehicle has stabilized turns off Master Power, accounts for crew, assists in crew exit, provides first aid	After vehicle has stabilized recovers SI, provides first aid, assists crew in exit	After vehicle has stabilized turns off Master Power, provides first aid, assists crew in exit	After vehicle has stabilized recovers SI, provides first aid, assists crew in exit
Exits with weapon	Exits with weapon	Exits with weapon	Exits with weapon
Supervises vehicle recovery	Assists in vehicle recovery	Assists in vehicle recovery	Assists in vehicle recovery

Weapons Control Status and Posture

	Green	Amber	Red
M9	Weapons cleared and on safe; Magazine out of weapon	Magazine in weapon; No round in chamber; weapon on safe	Magazine in weapon; Round chambered; Weapon on safe
M4	Weapon cleared and on safe; Magazine out of weapon	Magazine in weapon; No round in chamber; Weapon on safe	Magazine in weapon; Round chambered; Weapon on safe
M320	Weapon cleared and on safe; Rounds carried	No round in chamber; Weapon on safe; Ammo ready	Round chambered, Weapon on safe
M249	Weapon cleared and bolt forward (not on safe); Ammo carried	Bolt forward; Rounds in tray; No round in chamber (Aircraft loaded)	Weapon charged- open bolt position; Ammo in feed tray; Weapon on safe
M240B	Weapon cleared and bolt forward (not on safe); Ammo carried	Bolt forward; Rounds in tray; No round in chamber (Aircraft loaded)	Weapon charged- open bolt position; Ammo in feed tray; Weapon on safe
M2	Weapon cleared; Ammo stowed	Bolt forward; Rounds in tray; No round in chamber	Weapon charged; Round in chamber; Weapon on safe
MK19	Weapon cleared and on safe; Ammo stowed	Weapons on safe; No round in chamber; Ammo in feed tray	Rounds on face of bolt; Weapon on safe; Charged- open bolt position
TOW	No missile in tube; TOW launcher in stowed position	Missile in tube; TOW launcher in stowed position; System on electrical safe	Missile in tube; TOW launcher raised; System on electrical safe

Weapon Control Status

Weapons Hold- Engage target only in self defense.

Weapons Tight- Engage target only if identified as enemy.

Weapons Free- Engage target if identified as not being friendly.

Clearing Procedures

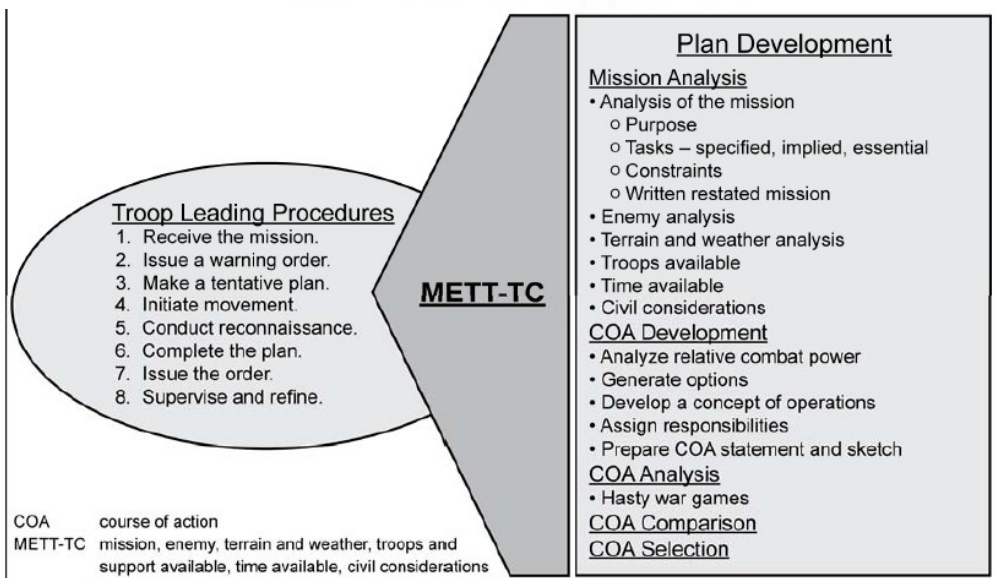
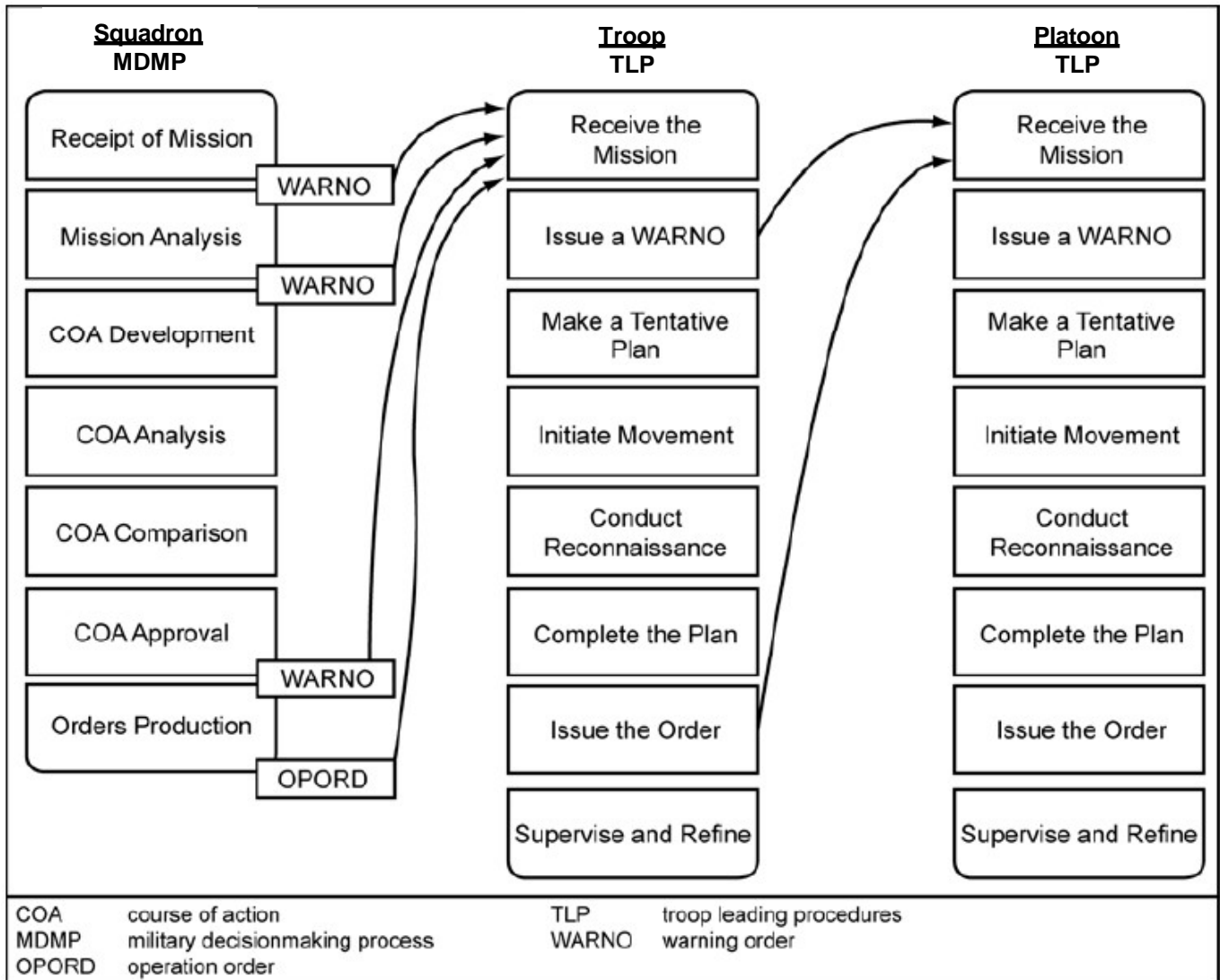
Clearing barrels will be placed at all entrances to CP locations and wherever needed. All personnel will clear their weapons prior to entering an area identified as a weapons green area. Two people will always clear a weapon. Ranking personnel will observe and double check.

- Ensure Weapon is on safe
- Remove magazine/ammo
- Pull charging handle and lock bolt in place
- Physically inspect chamber
- Slide bolt forward

2-1 CAV Planning Big 8

#	CAV Big 8	Essential Elements	#	CAV Big 8	Essential Elements
1	OPORD	<ul style="list-style-type: none"> •Clear, complete, concise 5 paragraphs •Analysis of higher HQ conducted <ul style="list-style-type: none"> •IPB conducted •War-game COA's •Task and Purpose for each Subordinate Unit •All essential and specified tasks identified •Relays commander's intent •WARNO/FRAGO issued 	5	Security	<ul style="list-style-type: none"> •Continuous in all phases of the operation <ul style="list-style-type: none"> •Clearly defined tasks for subordinates •Active/Passive patrols as necessary •REDCON levels established and enforced <ul style="list-style-type: none"> •Air Guard designated •Coordinate for interlocking fires •Alternate hopsets established and jump criteria <ul style="list-style-type: none"> •Alternate AA established and jump criteria
2	Map/ Graphics	<ul style="list-style-type: none"> •Clear and Accurate •Support task and purpose •Reflect scheme of maneuver, fires, CSS •Disseminated to Section Leader level <ul style="list-style-type: none"> •Reflect refinements •Includes Enemy SITTEMP 	6	Recon and Surveillance	<ul style="list-style-type: none"> •Continuous and aggressive •Based on IPB, focused on PIR •Linked to friendly decision points
3	PCC/PCI	<ul style="list-style-type: none"> •Complete to standard <ul style="list-style-type: none"> •PMCS Complete •Prep to fire checks •Test fire conducted (if appropriate) <ul style="list-style-type: none"> •Load plan IAW TACSOP •Class V on hand IAW TACSOP •Commo checks complete on all nets <ul style="list-style-type: none"> •Camo self/vehicles as needed (Situation dependent) •Backbrief complete 	7	Time MGMT	<ul style="list-style-type: none"> •Subordinates given sufficient time to prep •Effective use of WARNO/FRAGO <ul style="list-style-type: none"> •Parallel planning implemented <ul style="list-style-type: none"> •Timeline developed •Timeline strictly enforced
4	Rehearsals	<ul style="list-style-type: none"> •Reinforce CDR's intent •Confirm understanding of scheme of maneuver <ul style="list-style-type: none"> •Confirm understanding of fires •Battle drills/ forms of contact •Conducted as combined arms event <ul style="list-style-type: none"> •Latest EF/FF situation update 	8	Risk MGMT	<ul style="list-style-type: none"> •Included in every OPORD/FRAGO <ul style="list-style-type: none"> •Refined and updated as necessary •Risk levels tracked in CP •ID risk factors and implement mitigation •Review effectiveness in AAR

Troop Leading Procedures



Risk Management Matrix

Risk E - Extremely High H - High M - Moderate L - Low		HAZARD PROBABILITY				
		Frequent	Likely	Occasional	Seldom	Unlikely
S E V E R I T Y	Catastrophic	E	E	H	H	M
	Critical	E	H	H	M	L
	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L

HAZARD PROBABILITY (The likelihood that an event will occur).

Frequent - The event occurs often in a soldier's career or is continuously experienced by all soldiers exposed.

Likely – There is a good possibility that an event will occur several times in a soldier's career and is experienced a lot by the soldiers exposed.

Occasional - The event occurs once in a while, such as once in the career of a soldier, or sporadically to all soldiers exposed.

Seldom – There is a remote possibility that an event will occur in the career of a soldier. For a fleet or inventory, it would be unlikely but can be expected and would occur seldom to all soldiers exposed.

Unlikely -- The possibility that an event would occur to in the career of a soldier is so rare that you can assume that it will not occur. It would most likely not occur within the fleet or inventory and very rarely occurs to all soldiers exposed.

SEVERITY (The expected consequence of an event in terms of degree of injury, property damage or other mission-impairing factors).

Catastrophic – Event results in death or permanent total disability, a systems loss, or major property damage.

Critical – Event results in severe injury. That is, permanent partial disability or temporary total disability in excess of three months for personnel, and major systems damage or significant property damage.

Marginal – Event results in minor injury or lost workday accident for personnel. Minor systems or property damage.

Negligible – Event results in first aid or less required. Minor systems impairment.

RISK LEVELS

E (Extremely High; needs GO approval) – Loss of ability to accomplish mission.

H (High; BCT CDR approval needed) – Significant degradation of mission capabilities in terms of required mission standard.

M (Moderate; SCO approval needed) – Degradation of mission capabilities in terms of required mission standards.

L (Low; TRP CDR approval needed) – Little or no impact on accomplishment of mission.

Naming Conventions and Obstacle Numbering

BDE Numbering and Naming Conventions

Unit	Points	NAI's
1 SBCT	100-199	1000-1199
4-9 IN	200-299	2000-2999
2-23 IN	300-399	3000-3999
1-38 IN	400-499	4000-4999
2-1 CAV	500-599	5000-5999
2-12 FA	600-699	6000-6999
4 BSB	700-799	7000-7999
299 BEB	800-899	8000-8999

*Points include check points, passage points, rally points, release points, logistics release point, link up points, etc.

SQDN Numbering System

Unit	SQDN	Apache	Battle	Comanche
Numbers	500-539	540-559	560-579	580-599

Naming Examples

Phase Lines: Names- Run alphabetically from East to West (Female), North to South (Male)

Routes: Cars (Audi, Aston Martin, Buick, BMW, Chevy, Corvette, Dodge)

Objectives: Animals (Aardvark, Ant, Bear, Bee, Cougar, Chameleon, Dragon, Donkey, Horse)

Areas: States (Alabama, Alaska, California, Colorado, Delaware, Hawaii)

Assembly Areas: Hotels (AmericInn, Best Western, Choice, Drury, Hilton)

LZs: Birds (Albatross, Bluebird, Crow, Duck, Hummingbird)

Obstacle Numbering

1. **Obstacle Numbering System:** The obstacle numbering system will be used to number and record all obstacles. This system consists of twelve characters. The twelve characters will indicate: the unit that directed emplacement of the obstacle; the zone, group and the belt where the obstacle is located; the type of obstacle; obstacle number and the status of the obstacle. The twelve character obstacle numbers are divided into five parts.

Part 1	Part II	Part III	Part IV	Part V
Emplacing Unit Zone Approval Authorization	Zone/Belt/Group	Obstacle Type	Obstacle Number	Obstacle Status
1 Letter, 3 Numbers	Letter, Number, Letter	2 Letters	2 Numbers	Letter

- a. **Part I- Four characters (a letter and three numbers) representing the unit approving the obstacle zone. The letter indicates the type of unit. E is used for either UXO or detected enemy obstacles. The three numbers are the division, separate brigade or regiment number. Obstacles emplaced by units task organized to the SQDN will have the four characters. For example, most obstacles emplaced by the SQDN will be labeled I411 _____.**

Infantry	Enemy or UXO	Recon	Corps	Armor
I	E	R	Z	A

- b. **Part II- A three character alpha numeric group designating (in order): the obstacle zone (letter); obstacle belt in the obstacle zone (number); and obstacle group in the obstacle belt (letter). In the eventuality that no obstacle zones are established (i.e. protective obstacles, UXO, encountered enemy obstacles or situational obstacles) “default zones are established for each HQ in the division. Division assigns default zones for the brigades, brigades assign default belts to maneuver battalions and battalions establish default groups to maneuver companies.**

Zone	Unit/HQ	Zone	Unit/HQ
S	4ID Reserve Obst	W	4BCT
T	4ID DREAR	X	43rd BDE
U	1BCT	Y	4ID Spare
V	2BCT	Z	4ID Spare

Obstacle Numbering

c. Part III- 2 letters, selected from the below list, that best describe the obstacle.

M-Minefield/Munition Field		W- Wire Obstacle	
MB	Block	WA	Double-apron
MC	Chemical	WC	Concertina
MD	Disrupt	WF	Tanglefoot
MF	Fix	WG	General Purpose, barbed tape
MH	Hasty protective	WN	Nonstandard
MN	Nonstandard	WR	Roadblock
MO	Point	WT	Triple-standard
MP	Protective	S- Scatterable Minefield/Munition Field	
MQ	Nuisance	SB	Gator
MS	Standard-pattern	SF	ADAM and RAAM
MT	Turn	SM	MOPMS
MU	Dummy/decoy	SV	Volcano
A-Miscellaneous		SW	Scatterable mines(generic)
AB	Abatis	H-Hand emplaced mines	
AC	Chemical by explosives	HC	Claymore
AD	AT Ditch	HH	Hornet/WAM
AF	Thermobaric or flame	HO	Other
AH	Log Hurdle	HS	SLAM
AL	Log crib or log obstacle	I-Improvised Explosive Devices	
AM	Movable obstacle (car,bus)	ID	Directional, special-purpose explosive hazard
AN	Expedient non-standard obstacle	IO	Omnidirectional, special-purpose explosive hazard
AP	Post obstacle (hedgehog, tetrahedron)	B-Bridge Demolition	
AR	Rubble	BA	Abutment
AT	AT ditch with AT Mines	BC	Abutment and span
AW	Earthwork (berms, parapets, dunes, pits)	BS	Span

Obstacle Numbering

c. Part III cont - 2 letters that best describe the obstacle.

T-Booby Traps		R-Road Crater	
TA	Booby-trapped area	RD	Deliberate
TB	Booby-trapped bodies	RH	Hasty
TE	Booby-trapped equipment	RM	Mined
TM	Booby-trapped material	U-Unexploded Ordnance	
TP	Booby-trapped passage/confined space	UC	Chemical UXO hazard area
TS	Booby-trapped structure	UH	UXO hazard area
TV	Booby-trapped vehicle	UN	Nuclear Hazard area

d. Part IV- 2 numbers from 01-99

e. Part V- The last symbol indicates the status of the obstacle

Letter	Definition
/	Planned Obstacle
-	Obstacle being prepared
+	Prepared obstacle
X	Completed/executed obstacle
=	Breached or has lane
#	Being cleared (fully removed)
?	Unknown status

f. Example

1411	U1C	MB	03	/
1SBCT Zone	Also 1SBCT (U), obstacle belt 1, obstacle group C	Blocking Minefield	Obstacle Number	Planned

Squadron Combined Arms Rehearsal Format

OPERATION BLACKHAWK *****

SXO:

Roll Call (SCO, SXO, S3, S2, BCT S2*, MICO CDR* S6, S4, SQDN FSO, MEDO, Troop Commanders)

Agenda:

Opening Remarks (S3)

Terrain Board Orientation (AS3)

Mission (S3)

Commander's Intent (SCO)

Disposition and Task Org. (S3)

Concept of the Operation (S3)

Scheme of Maneuver and Support, By Phase

Enemy Situation (S2)

Info. Collection Assets Available (S2A)

Concept of the Phase (S3)

Fire Support Plan (FSO)

Scheme of Maneuver (TRP CDRs, FSOs)

Scheme of Support (D TRP, S6, MEDO)

Decision Points (S3)

End of Phase (S3)

EACH PHASE WILL BE BRIEFED IN THE FOLLOWING ORDER:

S2, S3, SQDN FSO, A TRP**, B TRP**, C TRP**, E TRP**, D TRP, S6, MEDO

*If available

**Will vary based on DO, SO1, SO2

Fire Support Rehearsal Format

- 1. SXO- Roll Call, Agenda, Rules, Briefing Sequence and Script**
(Participants: **SCO/SXO, S3/AS3, S2/AS2, TCO's, SQDN FSO and FSNCO, SQDN Targeting Officer and NCO, TRP FSO's/FSNCO's, Mortar Section Sergeants, SQDN ALO, JTAC's, COLT's, FCT's**)
- 2. S3- Terrain Orientation**
- 3. S2- Updated Enemy Situation**
- 4. SQDN FSO- Fire Assets Available**
 - a. Fixed Wing, Rotary Wing, Artillery, Mortars, etc**
 - b. Check in procedures, ammo available, volleys, sorties, minutes smoke, etc**
- 5. Script by Phase**
 - a. S3- Phase of the Operation (Task/Purpose)**
 - b. SQDN FSO- Scheme of Fires**
 1. Priority of Fires (POF) by Troop
 2. Position Area for Artillery (PAA), Azimuth of Fire (AOF), Fire Support Tasks
 3. Decision point to shift
 4. Number of priority targets/FPF's by asset
 5. Target assignment by troop
 6. Fire Support Coordination Measures (NFA's, CFL's, etc)
 7. Necessary reports to BDE FSO
 - c. TRP Commander/FSO- Troop Scheme of Maneuver (Main Effort)**
 - d. TRP FSO- Troop Scheme of Fires (Main Effort)**
 1. Actions to occur
 2. Possible friendly initiatives
 3. Reactions to enemy initiatives
 4. Control measures
 5. Significant events that are to occur in relation to operation
 6. Forward Observer (FO) control option(s) used (decentralized, predesignated, centralized)
 7. POF by PLT/Asset
 8. TTLODAC (Target, trigger, location, observer, delivery system, attack guidance, commo) for each priority target
 9. Necessary reports to SQND FSO
 - e. MTR SEC SGT- Troop Mortar Support (Main Effort)**
 1. Movement Plan
 2. Positioning
 3. AOF
 4. POF
 5. Priority Targets/FPF laid on
 - f. All- Identify friction points and enemy responses**
 - g. Repeat steps c-f by supporting effort**
- 6. Final SCO, SXO, S3, SQDN FSO Guidance**
- 7. SQDN FSO- Announce time of Fire Support FM RXL and confirms target list**
- 8. Recorder identifies issues, whose responsibility to resolve, and a suspense**

Sustainment Rehearsal Agenda

Occurs immediately following the SQDN CAR. Participants will bring SQDN and TRP Execution Matrix/Graphics and LOGSYNCH Matrix.

1. **SXO- Roll Call, Agenda, Rules, Briefing Sequence and Script**
(Participants: SCO/SXO, CSM, S3/AS3, S1/AS1, S2/AS2, S4/AS4, MEDO, HHT CDR, FST CDR, FST XO, TRP 1SG's/XO's, Attachments)
2. **S2- Updated Enemy Situation**
 - a. Threat
 - b. Likely enemy avenues of approach
 - c. Enemy effects on logistic activity
3. **S3-Mission Overview and Critical Decision Points**
4. **S4-Sustainment and Phase overview**
5. **Script by Phase:**
 - a. XO/1SG (HHT, A, B, C)
 1. Slant/Status of Class I, III, V, Maint, Medical
 2. Unit maneuver actions
 3. Locations of CP
 4. TRP LOGSYNCH plan (Class I, III, V, Maint, Medical)
 - b. FST
 1. LOGPAC times
 2. LOGPAC locations
 3. LOGPAC format (standard/rolling)
 4. FTCP/BSA location
 5. FTCP/BSA jump timeline
 - c. S4
 1. Location of key personnel
 2. Locations/Triggers: Class I, III, IV, V, Maintenance
 3. MSR's
 4. C2 and Communications Plan
 5. Priority of support by phase
 - d. SMO
 1. Location UMCP and forward recovery assets
 2. Priority of maintenance/recovery
 - e. MEDO
 1. Location of FAS/MAS/AXP
 2. Non-standard Evac Plan
 3. CL VIII Resupply
 4. CBRN CASEVAC Plan
 5. Adjacent unit FAS/MAS/AXP locations
 6. Priority of medical support
 - f. S-1
 - a. Priority of replacements and reporting
 - b. EPW handling
 - c. COB handling
 - d. KIA evacuation plan
6. **SCO/SXO- Final comments**
7. **Recorder identifies issues, whose responsibility to resolve, and a suspense**

Confirmation Brief/ Attachments Checklist

Confirmation Brief

Used to confirm information on a mission to next higher level Commander

- Used immediately after OPORD brief
- May be verbal or digital, face to face, or via radio/telephone

Consists of:

- Higher Mission and Commander's Intent.
- Assets available.
- Your units link to the main effort and how you will support the mission/intent.
- Specified/Implied tasks.
- Coordination required
- Questions/Concerns

Attachments Checklist

A. Attachment reporting procedures

1. TOC is the center point for link-up
2. POC is Hatchet 6
3. Hatchet 6 briefs attachments
4. Attachments brief Hatchet 6

B. Attachment Relationships

1. Command
 - a. Organic: Listed on the Squadron's MTOE
 - b. Attached: Placed under Squadron control for a temporary time by means of an attachment order
 - c. OPCON: Placed under Squadron control for a limited time to accomplish a specific mission
 - d. TACON: Squadron has responsibility to dictate detailed and local control of movements and maneuvers necessary to accomplish specific missions
2. Support
 - a. Direct: Unit provides priority of support to specific Squadron sub-units but has no command relationship with the sub-units
 - b. General: Unit provides priority of support to the entire Squadron but no specific sub-unit
 - c. Reinforcing: Support relationship specific to artillery units wherein one artillery unit provides support to the General Support Reinforcing unit
 - d. General Support Reinforcing: Unit provides fires support to the Squadron

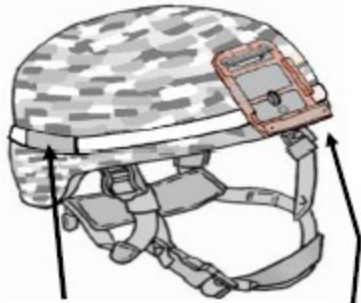
C. Attachment's Checklist

1. Unit
2. Number of personnel in unit
3. Type of equipment in unit and maintenance status
4. Class I, III, and V requirements
5. Exchange frequencies
6. Location of unit and/ or elements
7. Provide working space in TOC for attachment if needed
8. Brief attachments on TOC SOP's
(Commander's updates, shift change briefings, chain of command)
9. Ensure attachments know where to go in case of attack on TOC
10. Ensure attachments understand current plan and operations
11. Notify gaining unit of arrival of attachments and arrange link-up
12. Add unit to tracking charts and update reports

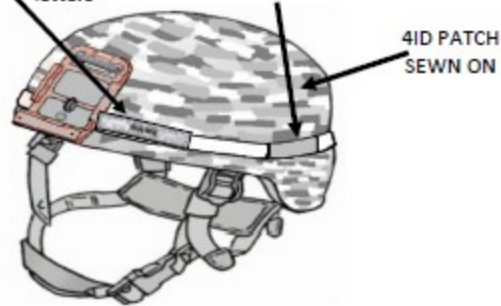
Uniform Standards

Uniform Type	ACU Standard	Additional Equipment
Field	<ul style="list-style-type: none"> •4th ID Unit Patch • No Combat Patch • Subdued or IR Flag • PC • Pens x 2 • Notebook • TACSOP • ID Card • Drivers license (military) • Casualty Feeder Card (pre-filled) •ID tags x 2 (worn around neck and in left breast pocket) • Knee pads (elbow pads carried) • Ear Protection (carried) • Eye Protection (day/night) • Gloves (nomex) 	<ul style="list-style-type: none"> • Can upgrade to Combat
Combat	<ul style="list-style-type: none"> •4th ID Unit Patch • No Combat Patch • Subdued or IR Flag • PC • Pens x 2 • Notebook • TACSOP • ID Card • Drivers license (military) • Casualty Feeder Card (pre-filled) • Knee pads (elbow pads carried) •ID tags x 2 (worn around neck and in left breast pocket) • Ear Protection (carried) • Eye Protection (day/night) • Gloves (nomex) 	<ul style="list-style-type: none"> •ACH with NVG Mount •Body Armor (Groin, collar, tailbone protector removed, no "wolf tail slings per Blackhawk SOP) •NVGs • Weapon •Load Carrying Equipment (does not have to be issued, but must be capable of carrying all magazines, hydration and IFAC) • Hydration system • IFAC (left side of FLC)
Garrison	<ul style="list-style-type: none"> •4th ID Unit Patch • Combat Patch authorized • Colored Flag • PC • Pens x 2 • Notebook •ID tags x 2 (worn around neck and in left breast pocket) • ERB (in left breast pocket) 	<ul style="list-style-type: none"> • Stetson as authorized by CDR

Uniform Standards



- BLOOD TYPE in ALL CAPS letters on right side
- NVD mounting bracket attached
- NAME in ALL CAPS letters on front; offset to allow for NVD mount
- BATTLE ROSTER in ALL CAPS letters



4ID PATCH
SEWN ON

Personal Hydration System (PHS)

NAMETAPE
VELCRO
OR SEWN
ON



Rucksack

NAMETAPE
SEWN ON



Assault Pack

NAMETAPE
SEWN ON



Battle Roster Number Standards:

First Letter of the BRN will be the First initial of your first name
Second Letter of the BRN will be the First initial of your last name
Then the last 4 numbers of your SSN
Example; EP2180

2-1 CAV 7 Day Packing List

WORN	RUCKSACK
FIELD ACU (TOP/BOTTOM)/ACS	WET WEATHER BAG
RIGGERS BELT OR EQUIVELANT	ACU (TOP/BOTTOM)
TAN TSHIRT	5 X TAN TSHIRT
HELMET IAW 4 ID SOP	5 X SOCKS
HEARING PROTECTION	5 x UNDERGARMENTS
EYE PRO (APEL CLEAR AND DARK)	OVER BOOTS
IOTV (FRONT/BACK PLATES ONLY)	HYGEINE KIT W/TOWEL AND WASH CLOTH
FLIC OR MOLLE VEST	PATROL BAG
MAGAZINE POUCHES (7 MAGS)	WATERPROOF BIVY COVER
IFAK	STUFF SACK
CAMELBAK/ CANTEENS	EYE PRO
ID TAGS	GLOVES
ID CARD	EXTRA IOTV PIECES INCL. SIDE PLATES
GLOVES	TAN BOOTS
TAN BOOTS	E-TOOL W/CARRIER
SOCKS	KNEE/ ELBOW PADS
NOTE PAD	*SEASONAL EQUIPMENT AS NEEDED
PEN/PENCIL	1 OCT - 1MARCH
IR US FLAG/ SUBDUED CLOTH	SOFT SHELL COLD WEATHER TOP/ BOTTOM
RED LENS FLASHLIGHT	INTERMEDIATE SLEEPING BAG
ASSAULT PACK OR MED RUCKSACK (ACL	SILK WEIGHT POLYESTER (TOP/BOTTOM)
PATROL CAP	POLYESTER GRID FLEECE (TOP/BOTTOM)
MRE	
PONCHO	
PONCHO LINER	
EXTREME COLD/WET WEATHER (TOP/BOTTOM)	
2 QT CANTEEN WITH COVER/STRAP	
TAN TSHIRT	
SOCKS	
WEAPONS CLEANING KIT	
PROMASK (ATTACHED)	
*SEASONAL EQUIPMENT AS NEEDED	
1 OCT - 1MARCH	
SILK WEIGHT POLYESTER (TOP/BOTTOM)	
POLYESTER GRID FLEECE (TOP/BOTTOM)	
FLEECE CAP	

2-1 CAV 30 Day Packing List

WORN

Field ACU (TOP/BOTTOM)/ACS
RIGGERS BELT OR EQUIVELANT
TAN TSHIRT
HELMET IAW 4 ID SOP
HEARING PROTECTION
EYE PRO (APEL CLEAR AND DARK)
IOTV (FRONT/BACK PLATES ONLY)
FLIC OR MOLLE VEST
MAGAZINE POUCHES (7 MAGS)

IFAK
CAMELBAK/ CANTEENS
ID TAGS
ID CARD
GLOVES
TAN BOOTS
SOCKS
NOTE PAD
PEN/PENCIL
IR US FLAG/ SUBDUED CLOTH
RED LENS FLASHLIGHT

RUCKSACK

WET WEATHER BAG
ACU (TOP/BOTTOM)
5 X TAN TSHIRT
5 X SOCKS
5 x UNDERGARMENTS
OVER BOOTS
HYGEINE KIT W/TOWEL AND WASH CLO
PATROL BAG
WATERPROOF BIVY COVER
STUFF SACK
EYE PRO
GLOVES
EXTRA IOTV PIECES INCL. SIDE PLATES
TAN BOOTS
E-TOOL W/CARRIER
KNEE/ ELBOW PADS

*SEASONAL EQUIPMENT AS NEEDED

WIND, COLD WEATHER, JACKET (NO HOOD)
SOFT SHELL COLD WEATHER TOP/ BOTTOM
INTERMEDIATE SLEEPING BAG
SILK WEIGHT POLYESTER (TOP/BOTTOM)
POLYESTER GRID FLEECE (TOP/BOTTOM)

ASSAULT PACK/MED RUCKSACK (ACU)

ASSAULT PACK OR MED RUCKSACK (ACU ONLY)
PATROL CAP
MRE
PONCHO
PONCHO LINER
EXTREME COLD/WET WEATHER (TOP/BOTTOM)
2 QT CANTEEN WITH COVER/STRAP
TAN TSHIRT
SOCKS
WEAPONS CLEANING KIT
PROMASK (ATTACHED)

*SEASONAL EQUIPMENT AS NEEDED

SILK WEIGHT POLYESTER (TOP/BOTTOM)
POLYESTER GRID FLEECE (TOP/BOTTOM)
BALACLAVA AND GATOR NECK

DUFFEL BAG

SLEEPING MAT
RUNNING SHOES
3 X SS PT SHIRT
2 X LS PT SHIRT
3 X PT SHORTS
IPFU JACKET
IPFU TROUSERS
FLEECE CAP
GLOVES, BLACK
PT BELT
EXTRA T SHIRTS/ SOCKS/ UNDERGARMENTS
5 X SOCKS, WHITE
2 X ACU (TOP/BOTTOM)
PATROL CAP
GLOVES, FLYER
EXTREME COLD WEATHER PARKA, TOP/ BOTTOM
COVERALLS
WASH CLOTH AND TOWEL
EXTRA ACS

PreCombat Checks

Situation/Mission/Concept of the Operation (PL/PSG)

- Ensure that each Trooper comprehends the current mission and situation
 - Ask the Trooper for the platoon and troop mission
 - Ask the Trooper to describe the scheme of maneuver for the platoon
 - Ask the Trooper for enemy situation and actions
 - Have Trooper recite challenge and password
 - Have Trooper give applicable radio frequencies

Safety (PL/PSG)

- Troopers briefed on weapon status (Red, Amber, Green)
- Trooper demonstrates proper clearing procedures
- Hot and cold weather injury prevention brief
- Location of aid stations and care level along mission route
- Risk management

Individual Weapon Checks (Vehicle CDR/Section Sergeant/PL/PSG)

- Weapon clean and passes functions check
- Trooper zeroed and qualified with weapon
- Sight, aiming device zeroed with batteries on hand
- M9 lanyard (if applicable)
- Trooper knows serial #, Section Sergeant has list of serial #'s of all weapons and sensitive items
- Weapons cleaning kit present

Vehicle Commander Checks (PL/PSG)

- Rollover and fire drills complete
- SKL with current SOI
- Radio loaded with necessary frequencies
- Binoculars and night vision devices with batteries
- Backup-weatherproof map with graphics

PreCombat Checks

Personal Equipment Checks (Section SGT/PSG/PL)

- Appropriate uniform (ACU, nomex, etc)
- ACH with name, blood type, and battle roster number
- Casualty feeder card (DA Form 156, 2 ea) w/ appropriate information filled out
- Witness statement (DA Form 155, 2 ea) w/ appropriate information filled out
- Eye protection
- Ear protection
- IOTV
 - SAPI plates
 - Name and rank in appropriate place
 - IFAK properly stocked
 - Hydration system filled with water
 - Ammo pouches with full UBL
- Valid ID card and tags
- Driver's license
- Pen and paper
- Flashlight/penlight/headlamp
- Compass(Section Sergeant)
- Promask with accessories (present on vehicle)
- Eyeglass inserts
- M8 paper
- Tinted optical inserts
- Decon kit
- Canister w/hose
- Microphone
- Nerve agent antidote
- Ruck/Assault bag packed to standard
- Wet/Cold weather gear available as required
- Night Vision system with extra batteries
- Other mission essential items
- All SI tied down

PreCombat Checks

Leader Checks (PL/PSG)

- Copy of current OPORD
- Map with graphics
- Rehearsals complete
- Bridge classification GTA (in TACSOP)
- Route classification GTA (in TACSOP)
- Demolition GTA
- OPORD format
- EPW documents and tags
- Flex cuffs, zip cuffs, etc
- Range cards (2, laminated)
- TACSOP & ROE card

Vehicle Armament (Section Sergeant)

- Sights clean, uncovered and operational
- Crew served weapons clean and functions check complete
- Periscopes and weapons uncovered
- Vision blocks and windows present and clean
- LRAS operational
- Traversing system functional
- Safeties functional
- Ammunition serviceable, clean and properly stowed
- Headspace set
- Machine gun properly mounted with appropriate pins
- Spare barrels clean and serviceable
- Cleaning tools present
- Tripods/Bipods for crew served weapons present
- DAGR present and operational

PreCombat Checks

Vehicle Checks (Section Sergeant):

- Pre-operations PMCS complete
- Vehicle loaded IAW load plan
- Copy of 9-Line MEDEVAC request (in TACSOP and OP handout)
- Required DOS for CL I
- Required CL II on hand
- Required DOS for CL III (P)
- CLS bags/first aid kits complete and available
- Tools and tool kits with components present and secured
- TMs, lube order, operator's manual present
- Vehicles fueled
- Fire extinguishers are present, sealed, and tagged
- No fuel leaks
- All access plates installed
- Fluid levels are correct
- Lights operational, to include blackout drive and blackout markers
- All gauges are functional
- All items in the interior are secured
- All locking devices are functional with safety pins present
- Tires have correct air pressure and serviceable
- Windshield and lights clean
- Mirrors serviceable and clean
- Towbar / Towstrap on hand

PreCombat Checks

Critical Items (Vehicle Commander/Section Sergeant):

- NODs with spare batteries present
- Compass present and functional
- Mine detectors with batteries present
- Demolition kits present
- Dismount OP kit complete with following equipment:

- Appropriate Communications Equipment (complete)
- Spare Batteries
- Map with current graphics (waterproofed)
- Compass
- NVG's
- Binoculars
- DAGR
- M240L w/ PAS-13
- LRAS / TRGR
- VS-17 Panel
- Gunner's restraint

Communications Equipment (Section Sergeant/PSG):

- Radio checks have been established within platoon and with higher headquarters
- Dismount radio functional
- Correct secure fill and HOPSET are loaded and in time
- OE-254's complete
- Vehicle intercom functional
- CVC's functional
- BFT functional
- Updated graphics uploaded, including routes, phase lines, and boundaries
- Ensure the system is accurately tracking your current position
- Touch screen responsive
- Keypad functional
- Conduct FIPR check concurrently with radio checks

RWS Mk 19 Prep to Fire Checks

VEHICLE COMMANDER'S PREFIRE CHECKLIST

	MK19 40-mm Grenade Machine Gun	INITIALS
1.	On fire control unit (FCU) panel power is off.	
2.	GUN ARM/SAFE switch set to SAFE.	
3.	MODE switch in NORMAL position.	
4.	GRENADES switch on FCU panel is in center position.	
5.	MK19 unloaded and cleared.	
6.	MK19 RWS Mount Installation	
a.	Engage azimuth travel lock.	
b.	Engage elevation transport lock in -20 degree position.	
c.	Both elevation and azimuth drive clutch quick releases engaged.	
d.	MK19 is secure in RWS mount with locking pins installed correctly.	
	NOTE: Ensure if not already done, that rubber casing deflector from the soft mount is removed and secure in the weapons accessory bag.	
7.	Function check performed IAW TM 9-1010-230-10.	
8.	Firing solenoid is installed.	
9.	Install Ammunition Box	
a.	Feed throat installed correctly and secure.	
b.	Ammunition box divider in 40-mm slot.	
10.	Weapon in FIRE position.	
11.	Move AUX switch on power distribution panel (PDP) to ON position.	
12.	All hatches are closed. Ensure top of the vehicle is clear of personnel and equipment.	
	NOTE: Commander's BATTLE OVERRIDE (OVRD) should be used only during combat conditions. Personnel injury and equipment damage could result from OVRD use in non-combat situations.	
13.	Press POWER ON/OFF key on FCU once to power up RWS.	
14.	Observe FCU display for faults and ensure correct software is installed.	
15.	Ensure mounted weapon is identified on FCU.	
16.	ARMED LED on FCU is not illuminated.	
17.	Any drift within system eliminated by pressing ZERO switch on gunner's control grip (GCG) to zero reference point.	
18.	Set NO FIRE switch to ARMED.	
19.	Press GUN CHARGE button on FCU once to cock weapon. Ensure weapon is cocked.	
20.	Lift trigger guard on GCG and press palm enable switch and trigger. Ensure bolt is moved forward and firing solenoid actuated.	
21.	Move GUN ARM/SAFE switch to SAFE.	
22.	Ensure system is boresighted.	
23.	Optics are clean (FCU screen and outside sight lenses).	
24.	Ammunition is loaded into ammunition box correctly.	
25.	Verify Proper Operation of RWS	
a.	Correct ammunition types appear for weapon type installed.	
b.	Super elevation changes as range is increased and decreased.	
c.	Thermal sight can be focused	
26.	CBRN system operates.	
27.	Communication check	
a.	Radio checks Conducted	
b.	Admin NET.	
c.	Firing NET.	
d.	Ensure RED, YELLOW, and GREEN flags are onboard.	
	Vehicle Commander's Signature:	

RWS M2 Prep to Fire Checks

<i>VEHICLE COMMANDER'S PREFIRE CHECKLIST</i>		
<i>Caliber .50 M2 HB Machine Gun</i>		<i>INITIALS</i>
1.	Ensure fire control unit (FCU) panel power is off.	
2.	GUN ARM/SAFE switch is set to SAFE.	
3.	MODE switch is in NORMAL position.	
4.	GRENADES switch is in center position on FCU panel.	
5.	.50 cal is unloaded and cleared.	
6.	<i>.50 cal RWS Mount Installation Procedures</i>	
a.	Engage azimuth travel lock.	
b.	Engage elevation transport lock in -20 degree position.	
c.	Both elevation and azimuth drive clutch quick releases engaged.	
d.	.50 cal is secure in RWS mount with locking pins installed correctly.	
e.	Straining screw is finger tight against bottom plate of receiver. Weapon is fastened securely without play.	
7.	<i>Function Check Performed IAW TM 9-1005-213-10</i>	
a.	Headspace and timing of .50 cal adjusted.	
b.	Lock bolt to rear to ensure firing solenoid installed and timed correctly.	
c.	Place weapon in automatic mode.	
8.	Install ammunition box.	
a.	Ammunition box divider is in .50 cal position and divider is in contact with weapon receiver casing.	
b.	Damper and screw off soft mount are stowed in weapon bag.	
	<i>NOTE: Do not place ammunition divider all the way against the receiver. This may cause problems with ammunition feeding.</i>	
9.	Weapon placed in single-shot mode.	
10.	Move AUX switch on power distribution panel (PDP) to ON position.	
11.	All hatches closed. Top of vehicle is clear of personnel and equipment.	
	<i>NOTE: Commander's BATTLE OVERRIDE (OVRD) should be used only during combat conditions. Personnel injury and equipment damage may</i>	
12.	Press POWER ON/OFF key once on FCU to power up RWS.	
13.	Observe FCU display for faults.	
14.	Mounted weapon is identified on FCU.	
15.	Ensure ARMED LED on FCU is not illuminated.	
16.	System drift eliminated by pressing ZERO switch on gunner's control grip (GCG) to zero reference point.	
17.	Set GUN ARM/SAFE switch to FIRE.	
18.	Press GUN CHARGE button on FCU once to cock the weapon. Ensure weapon is cocked.	
19.	Lift trigger guard on GCG and press palm enable switch and trigger. Ensure bolt is moved forward and firing solenoid actuated.	
20.	Move GUN ARM/SAFE switch to SAFE.	
21.	Ensure system is boresighted.	
22.	Optics are clean (FCU screen and outside sight lenses).	
23.	Ammunition is loaded into ammunition box correctly.	
24.	<i>Verify Proper Operation of RWS</i>	
a.	Correct ammunition types appear for weapon type	
b.	Super elevation changes range increased and decreased.	
c.	Thermal sight can be focused	
25.	CBRN system operates.	
26.	Communication Check	
a.	Radio checks conducted.	
(1)	Admin NET.	
(2)	Firing NET.	
b.	RED, YELLOW, and GREEN flags are onboard.	
	Vehicle Commander's Signature:	
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MGS Prep to Fire Checks

<i>PREP TO FIRE CHECKS</i>	
CHECK	
PMCS	
COLLIMATE MBD	
BORESIGHT	
AAC	
AMMO SUBDES	
CONFIRM ZERO DATA	
AIR AND BARO	
FIRING CIRCUIT TEST	
STAB ON	
NULL OUT DRIFT	
WARM UP AUTOLOADER	
ENSURE CANT, XWIN, LEAD, AND ALL OTHER INPUTS SET TO AUTO	
SET BATTLESIGHT RANGES	

ATGM Prep to Fire Checks

<i>PREP TO FIRE CHECKS</i>	
TURN ON ITAS	
TURN ON BATTERY POWER SOURCE	
RAISE MAST	
LOCK MAST	
RUN BIT TEST	
BORESIGHT	
STOW M240 AND CLOSE HATCHES	
LOWER ANTENNAS	

MCV Prep to Fire Checks

WARNING

Ensure both the commander's and ammo bearer's hatches are closed prior to firing.

Failure to ensure hatches are closed prior to firing may result in injury or death to personnel.

1. Check that commander's hatch is locked in closed position.
2. Check that ammo bearer's hatch is locked in closed position.
3. Check that mortar doors are locked in open position.

WARNING

Make certain there are no overhead obstructions that will block the trajectory of the shell when fired and cause premature detonation near friendly troops. Serious injury or death to personnel may result.

If at any point in the full range of traverse or elevation obstructions are found, the mortar is NOT SAFE to fire. (In combat, it may be necessary to fire from that position; traverse and/or elevate mortar until it clears the obstruction.)

Mortar crew must have adequate cover for protection from fragments when firing to ranges of 600 meters or less.

4. Check for mask and overhead clearance.
 - a. To determine mask clearance, position head on cannon and sight along cannon to see if any obstructions (trees, power lines, etc.) are in front of mortar. Check for obstructions over full range of traverse with cannon at 800 mils elevation.
 - b. To determine overhead clearance, position head to sight along cannon (1) to see if any obstructions (trees, power lines, etc.) are in front of mortar. Check for obstructions over full range of traverse with cannon at 1486 mils elevation.

WARNING

Blast Attenuator Device (BAD) must be installed prior to firing. Firing mounted mortar without BAD installed may result in serious injury to personnel.

5. Check that BAD is in place and secure.
6. Check that bronze bushing on folding mechanism is in the locked position.
7. Check that traverse quick release lever is engaged.
8. Check that fluid levels in replenisher and recuperator are at correct levels .
9. If M67 Sight unit is mounted, check that sight unit is firmly attached to mortar and that elevation and deflection knobs are tightened before each firing .

WARNING

Ensure no one is standing in recoil path. Failure to keep clear of mortar recoil path may result in injury to personnel.

10. Secure all equipment before firing and clear mortar recoil path of all equipment.
11. Check that safety selector (6) is positively locked in fire (F) position.
12. Have vehicle commander confirm safety selector (6) is positively locked in fire (F) position.
13. Check PD for proper alignment.
14. Ensure mortar is in battery. If mortar is out of battery, notify Field Maintenance.
15. Ensure retaining ring safety plunger is in locked position.

CAUTION

Antennas MUST be tied down prior to firing the RMS6-L 120MM mortar. Firing mortar without antennas tied down may result in damage to equipment.

16. Ensure antennas are tied down.

MCV Misfire Procedures (1 of 3)

1. When a misfire occurs, the first crew member that notices shouts, MISFIRE!
2. The vehicle commander alerts the FDC of misfire using either voice or digital radio communications.
3. Gunner confirms safety mechanism is set to FIRE position (—F| position is showing) and announces, WEAPON IS ON FIRE.
Note: If the gunner confirms system is on SAFE, the gunner announces, WEAPON IS ON SAFE, and leaves the weapon on SAFE. If the squad leader confirms the system is on SAFE, he announces, WEAPON IS ON SAFE, and he and the gunner exit the vehicle in the opposite direction of fire. They then move to the same location as the rest of the crew, then proceed to step 8.
4. The squad leader confirms the action of the gunner by physically observing that the —F| is showing and announces, WEAPON IS ON FIRE.
5. The gunner secures the rubber mallet and strikes the upper portion of the cannon up to three times with the rubber mallet. If the cartridge fires, the squad leader will call the crew back to the vehicle and the mission will resume. If the cartridge does not fire after striking the cannon with the rubber mallet, the squad leader and gunner will exit the vehicle from the opposite direction of fire and wait for one minute.
6. After one minute, the gunner, assistant gunner, and squad leader return to the vehicle.
7. The gunner checks the barrel for heat using bare hands. Starting at the muzzle, the bare hand is moved close to the barrel, sensing for heat, if heat is not sensed with the hands, the gunner touches the barrel lightly with his fingertips every few inches down to the breech cap. If the barrel is too hot, the crew uses some means (water, snow, or elapsed time) to cool the barrel before attempting to remove the misfire.
8. When the barrel is cool enough to handle, the gunner places the safety mechanism on SAFE (—S| showing) and announces, THE SAFETY MECHANISM IS IN THE SAFE POSITION.
9. The assistant gunner physically confirms that the safety mechanism is on SAFE (—S| showing) and announces, THE SAFETY MECHANISM IS IN THE SAFE POSITION.
10. The squad leader confirms the actions of the gunner and assistant gunner and physically verifies that the safety mechanism is in the SAFE position.
11. Ensuring the cannon is pointed toward the target area, the gunner traverses the mortar using the traversing hand wheel until the cannon is at the 3200 mils position and travel lock is engaged. (The cannon is pointed over the center of the ramp.)
12. The assistant gunner lowers the ramp as directed by the squad leader if not already lowered using the troop ramp control box.
13. If the M67 sight is installed, the gunner locks data on the sight and removes the sight and places it back in the sight box.
14. The assistant gunner removes and stows the blast attenuator device (BAD). The squad leader confirms the actions of the assistant gunner.
15. The gunner and assistant gunner stow their seats in the raised position.
16. The gunner slowly lowers the cannon to its lowest elevation using the elevation hand wheel.
17. The gunner and assistant gunner slowly lower the cannon to the travel position by pushing up on the brass bushing and lowering the folding mechanism.

MCV Misfire Procedures (2 of 3)

18. The assistant gunner inspects extractor catches on the cartridge extractor to ensure they are the latest configuration. There should be a 1/8 inch hole in the face of each catch. The hole indicates that the catch is the latest configuration. The assistant gunner inspects the cartridge extractor and makes sure that the cartridge extractor catches are free of burrs, wear, or rust/corrosion that would impair function. The assistant gunner tests each cartridge extractor catch to ensure free operation, and that each catch will snap positively into its original position.
19. The squad leader confirms the actions of the assistant gunner. If the cartridge extractor fails to meet inspection standards, the squad leader will attempt to retrieve another mission capable cartridge extractor from another squad. If unable to retrieve another mission capable cartridge extractor from another squad, he will proceed to removal of a stuck cartridge in step 32.
20. The assistant gunner attaches the cartridge extractor to the extended artillery cleaning staff assembly ensuring the extractor is securely attached and the cleaning staff assembly sections are fully extended and locked.
21. While keeping head and body away from the front of the cannon, the assistant gunner rotates the artillery cleaning staff assembly to obtain positive control of the extractor head. The assistant gunner must place the extractor in his left palm facing upward. He inserts the cartridge extractor into the cannon and lowers the cartridge extractor slowly (hand to hand) deeper into the cannon until contact is made with the round.
22. The assistant gunner rotates the extractor in either direction until the spring-loaded extractor catches connect into the round. Rotation continues until resistance is felt.

Note: If the round is grasped by the extractor, continue with step 23. If the round is not grasped by the extractor, proceed to removal of a stuck cartridge in step 32.
23. When the assistant gunner has ensured that the cartridge extractor is firmly connected with the round, the round is to be extracted in one steady motion (hand to hand) without stopping.
24. With the gunner's hands held at the ready at the muzzle, the assistant gunner withdraws the cartridge extractor assembly in a steady motion until the extractor appears at the end of the muzzle.
25. The assistant gunner continues to withdraw the round. The gunner grasps the body of the round as it comes out of the barrel. The cartridge extractor and round are moved by the assistant gunner and gunner down the ramp as they proceed to the left or right side of the vehicle.
26. Once the gunner and assistant gunner have cleared the ramp, the ammunition bearer comes forward and stands beside the gunner.
27. With the assistant gunner holding the artillery cleaning staff assembly and the gunner holding the round, the ammunition bearer presses on all four extractor catches at the same time, releasing the round from the cartridge extractor.
28. The gunner inspects the cartridge for cause of misfire. If the primer has been struck by the firing pin, he disposes of the cartridge in accordance with applicable safety regulations and unit SOP.

Note: If no contact or insufficient contact was made with the firing pin, check the safety mechanism function on the cannon. Clean the cannon before attempting to fire the round a second time. If the cartridge does not fire after checking the safety mechanism and swabbing the cannon, repeat the misfire procedure and dispose of the cartridge in accordance with applicable safety regulations and unit SOP.
29. The assistant gunner swabs the barrel and replaces the blast attenuator device. The gunner places the safety mechanism to the FIRE position (—F is showing).
30. The squad leader confirms the actions of the gunner and assistant gunner and verifies that the safety mechanism is in the FIRE position.
31. The gunner places the mortar into action (replacing the M67 sight unit if applicable), and the mission is continued.

MCV Misfire Procedures (3 of 3)

IN THE EVENT OF A STUCK CARTRIDGE

Squad leader verifies safety mechanism is set to SAFE position (with —S|| showing).

32. The gunner loosens the wiper compression clamp and removes the two wiper segments.
33. The ammunition bearer pulls out and turns the cannon retaining ring plunger.
34. The ammunition bearer unscrews and removes the cannon retaining ring using a large spanner wrench and hammer while the gunner secures the cannon to keep it from sliding. The assistant gunner maintains positive control of the artillery cleaning staff.
35. The gunner slowly pushes the cannon forward approximately 3 inches until the breech key clears the cradle assembly keyway.
36. The ammunition bearer unscrews and removes the breech cap using a hammer and removal tool while the gunner holds the upper portion of the cannon.
37. The assistant gunner attempts to push the cartridge out through the base of the cannon (fin first and in one steady motion) while the ammunition bearer places his hands ready to catch the round.
38. The ammunition bearer grasps the round by the fin and body of the round as it comes out of the barrel.
39. Once the ammunition bearer has positive control of the round, the assistant gunner allows the cleaning staff to rest in the bore and moves to the rear of the cannon.
40. The assistant gunner presses on all four of the extractor catches at the same time releasing the round from the cartridge extractor.
41. The ammunition bearer hands the round to the assistant gunner who passes the round to the gunner. The gunner carries the round down the ramp and proceeds to the left or right side of the vehicle. At this point the crew follows steps 28-31.
42. The ammunition bearer replaces the breech cap and cannon retaining ring and engages the cannon retaining ring plunger.
43. The assistant gunner and gunner replace the wiper segments and tighten the wiper compression clamp.
44. The crew places the gun into action and continues the mission.

Note: If the round cannot be pushed out of the cannon, the gunner, assistant gunner, and ammunition bearer—keeping the cannon in a horizontal position—slide the cannon toward the rear of the vehicle and out of the cradle assembly, then walk the barrel down the ramp. The cannon with stuck round is placed a safe distance from the carrier and the unit contacts EOD. The squad leader reports his actions to the chain of command.

MILES ZERO/BORESIGHT PROCEDURES (1 of 2)

STEPS:

1. Check that all sensors associated with the system and the vehicle
2. Check that vehicle registers as the proper type (Stryker, HMMWV, etc.)
3. Boresight (Motorpool)
4. Boresight Range

1. Check Sensors

Proper install of MILES TVS Control module must read correct vehicle type and all sensors and components must be associated with the system. The weapon laser must be associated with the vehicle (M2 and M240), however, MK19 MILES system is independent of the vehicle MILES and will not associate with the vehicle system.

If weapon and vehicle are not associated: Select 'Menu' on the MILES control module. Select 'configure' and 'SAT selection' from the new menu. System will present options for M2 and M240. Select vehicle weapon type and follow prompts on CCM to configure weapon.

2. Check Vehicle Type

Control Module (CCM) will show vehicle type and status (Alive, or killed) will also indicate if weapon is enabled.

If vehicle type is wrong: push menu button on bottom left corner. Select configure from menu. Set the Universal controller device ("god gun") to 'control on' and shoot vehicle sensor. The CCM menu will now include the option to change vehicle type and select appropriate vehicle.

3. Boresight

Prior to boresight procedures, make sure that ammo selection in the Stryker FCU is set to MILES.

.50 Cal boresight: Choose a target between 50 and 75 meters. Using the CCM, press the menu button. Choose 'admin' when menu appears. Select 'turn on SAT red laser". Once visible laser is activated on the MILES, move the RWS sight reticle to visible laser point of aim using the boresight adjustment mode (in the Stryker FCU menu). Weapon is boresighted when RWS reticle matches point of aim. NOTE: BFA may interfere with visible laser. If so, use azimuth and elevation to adjust laser. Operator may need to adjust bracket with azimuth and elevation adjustment does not fix problem.

MK19 boresight: Set the MK19 MILES offset panel (provided in kit) approximately 25m from weapon. Utilize borescope, visible laser, and RWS reticle for initial boresight. To activate red laser, scroll through MILES control panel on weapon and select 'system settings'. Select 'boresight mode' from the next menu. Laser will appear. When borescope laser, visible laser, and RWS reticle are aligned in the center of the boresight panel, weapon is boresighted. NOTE: MK19 MILES does not have azimuth or elevation adjustment, therefore operator may need to reset bracket placement to allow to laser to align with offset panel.

MILES ZERO/BORESIGHT PROCEDURES (2 of 2)

4. Boresight Range

The boresight range utilizes MILES 9 light panels (three rows of three lights per target). The light that illuminates when a MILES laser strikes a target indicates laser point of impact. Each gunner will aim at the center sensor of the 50m target and use instant light feedback to determine necessary adjustments. If zero is inaccurate, use the boresight adjustment procedure to move the RWS reticle to the point of impact. Once zero is confirmed on 50m target, gunners will fire 500m, 1000m, and 1200m targets while repeating RWS/MILES boresight adjustment procedure from above. When all targets have been successfully engaged, utilize an additional vehicle with working MILES to verify weapon system is sending proper kill code to destroy a vehicle. Target vehicle must exceed 1200m from berm.

To fire weapon system without ammo:

.50 CAL: Press the menu button on the CCU and Select 'admin'. Using the UCD ("god gun"), select 'control on' and shoot the vehicle sensor. This will trigger a new menu display on the CCU. Select 'dry fire' on the CCU. Two buttons will appear on the CCU: "M2" (associated weapon system) and "Cancel". CCU will default out of the control mode when not in use for approximately 15 seconds.

MK19: Fire the weapon system as normal. If rounds are completely depleted, use the UCD to reset ammunition.

Pre-fire Checklist:

- Check that sensors and vehicle are properly associated
- Check that cables are plugged into proper ports and not crimped or torn
- Check batteries on laser, CCM and VKC
- Check BIT status on the VKC and CCM
- When miles laser fires, a red light should be visible on back of transmitter use UCD to check if laser is transmitting a "kill" code

Specific Rehearsals

Mission	Rehearsal	PCC/PCI
Search Vehicle	React to IED	Trouble codeword, nearby cover, secure comms with overwatch
	Contraband	Holding area, contraband list
	Personnel Search and Detention	Zip strips, gloves, female search team, language guide, DSP List, ROE
Search Building	Marking Rooms	Wolf Tails (IR chemlights, 9 volt batteries), chalk
	Clearing Rooms	Ram, mirror, grenades (lethal/nonlethal), tac-lights, weapons test fire, IR chemlights, ROE
	Search for Contraband	Metal detector, shovel
TCP	Vehicle Search	See search vehicle
	React to VBIED	Secure comms with overwatch, ROE, NODS, weapons test fire, trouble codeword
	React to Sniper	Weapons test fire, binoculars, map and overlays, comms w/indirect assets, NODS, ROE, suppression/observation plan
	Personnel Search and Detention	Zip Strips, gloves, female search team, detain list, detainee paperwork, blindfolds language guide, DSP List, ROE
	React to Indirect	Binoculars, map and overlays, cover, comms equipment w/ indirect assets
	React to Large Crowd	Pepper spray, loudspeaker, ROE, interpreter or language guide
Patrol Dismounted	React to Sniper	Weapons test fire, binoculars, map, NODS, ROE, suppression plan, comms w/ indirect assets
	CASEVAC	9 Line MEDEVAC, comms, CLS bag, CLS certified personnel, medics briefed on mission, location of nearest MTF
	Personnel Search and Detention	Zip strips, gloves, female search team, language guide, DSP list, ROE
	React to IED	Binoculars, communications, battle drill rehearsals, recovery plan
	React to ambush	Suppression plan, weapons test fire, map ROE, comms w/indirect fire assets
	Building search	See search building
Convoy	React to Obstacle	Obstacle codeword
	React to IED	Binoculars, comms, IED codeword, alternate routes
	React to Ambush	Suppression plan, weapons test fire, map and overlays, comms w/ indirect assets, convoy brief, ROE, CASEVAC
	CASEVAC	9 Line MEDEVAC, comms, CLS bag, CLS certified personnel, medics briefed on mission

Unit Basic Load

All Strykers

- Crew individual weapons
 - 3 x M4s (210 rounds ea)
 - 1x M249 (800 rounds ea)
 - 1x M320 (36 rounds ea)
- Three days Class 1
- Essential vehicle BII (see load plan); hasty and deliberate recovery equipment
- 8 qt 15/40W
- 3 qt TES 295
- 1 qt MIL 5606
- 2 qt 75W-90
- 1-2 gal Anti-freeze
- 2 (8oz) LSAT
- 2 (14oz) GAA

*Material Requirements list

Unit Basic Load

MCVV

- 60 120mm mortars
 - Up to 24 rounds of White Phosphorous
- 1,000 rounds M240
- 1 qt FRH
- 6.5 lb GA
- 4 oz GPL
- 5 gal LAW

ICVV

- RWS mounted M2A1/MK19
- 2,400 rounds .50 CAL ammunition
- 800 rounds M240
- 448 rounds MK19 (1x can in ready box; 1x can strapped behind TC hatch)
- 2 x Javelin missiles with CLU

Unit Basic Load

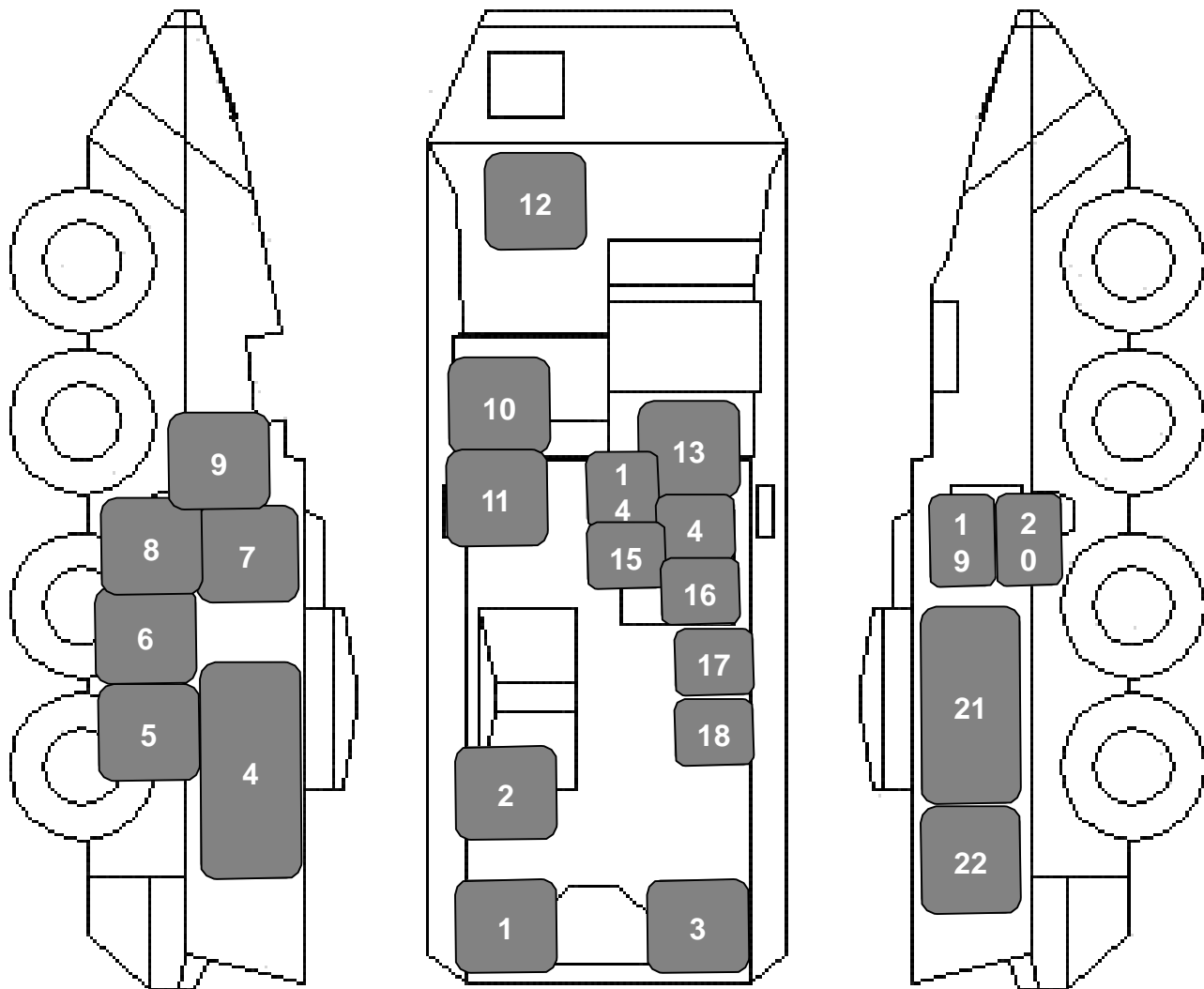
ATVV

- 12 TOWs
- 4 x M4 (210 rds ea)
- 1000 rounds 7.62mm
- 5.56mm(x1 Can)

MGS

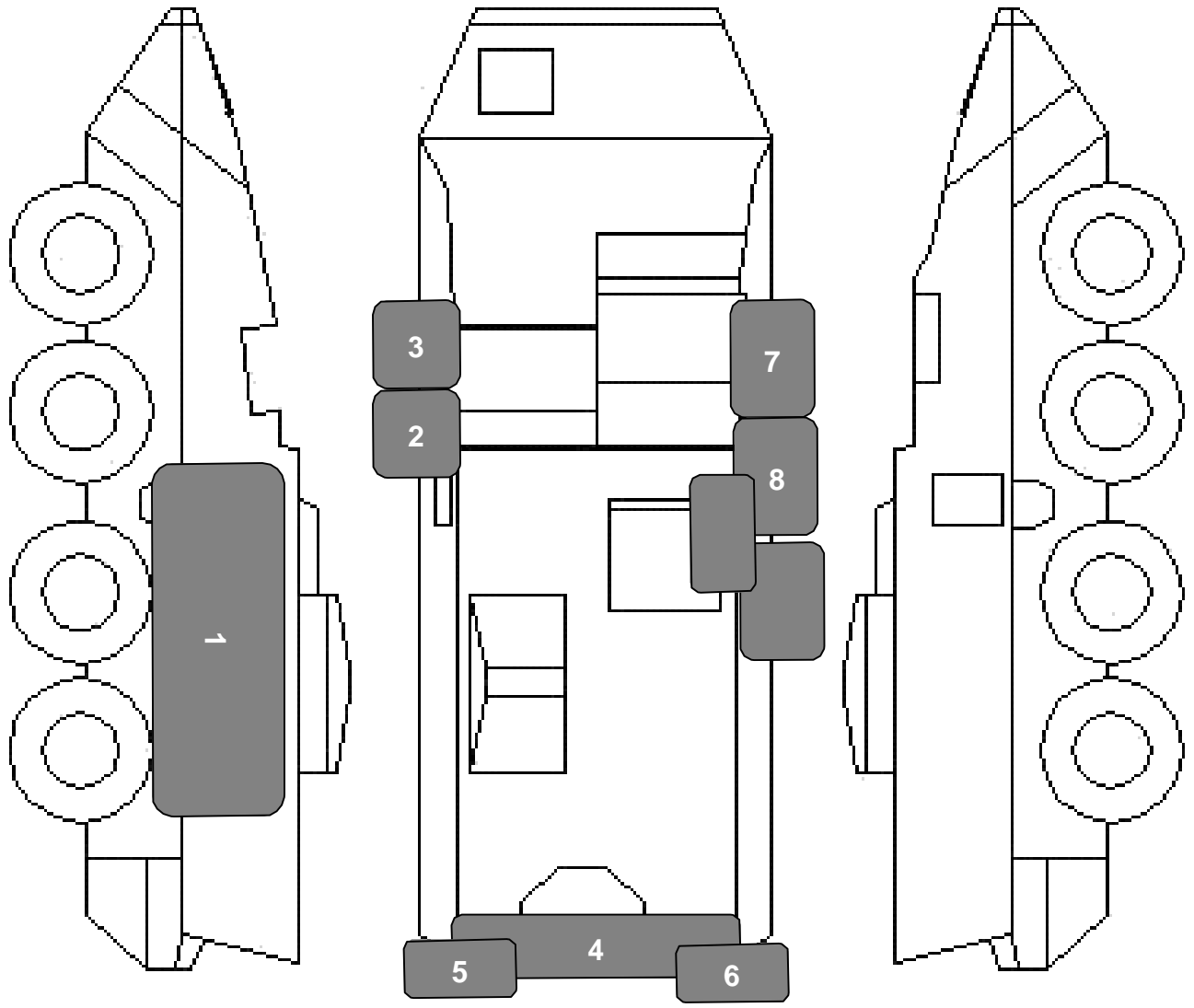
- 105mm (18 rds)
 - 3x HEP -10x Sabot
 - 3x HEAT -2x Canister
- 3x M4 (210 rds ea)
- 400 rounds .50 cal
- 3400 rds 7.62mm
- 5.56mm(x1 Can)

2-1 CAV ICVV-S Load Plan Inside



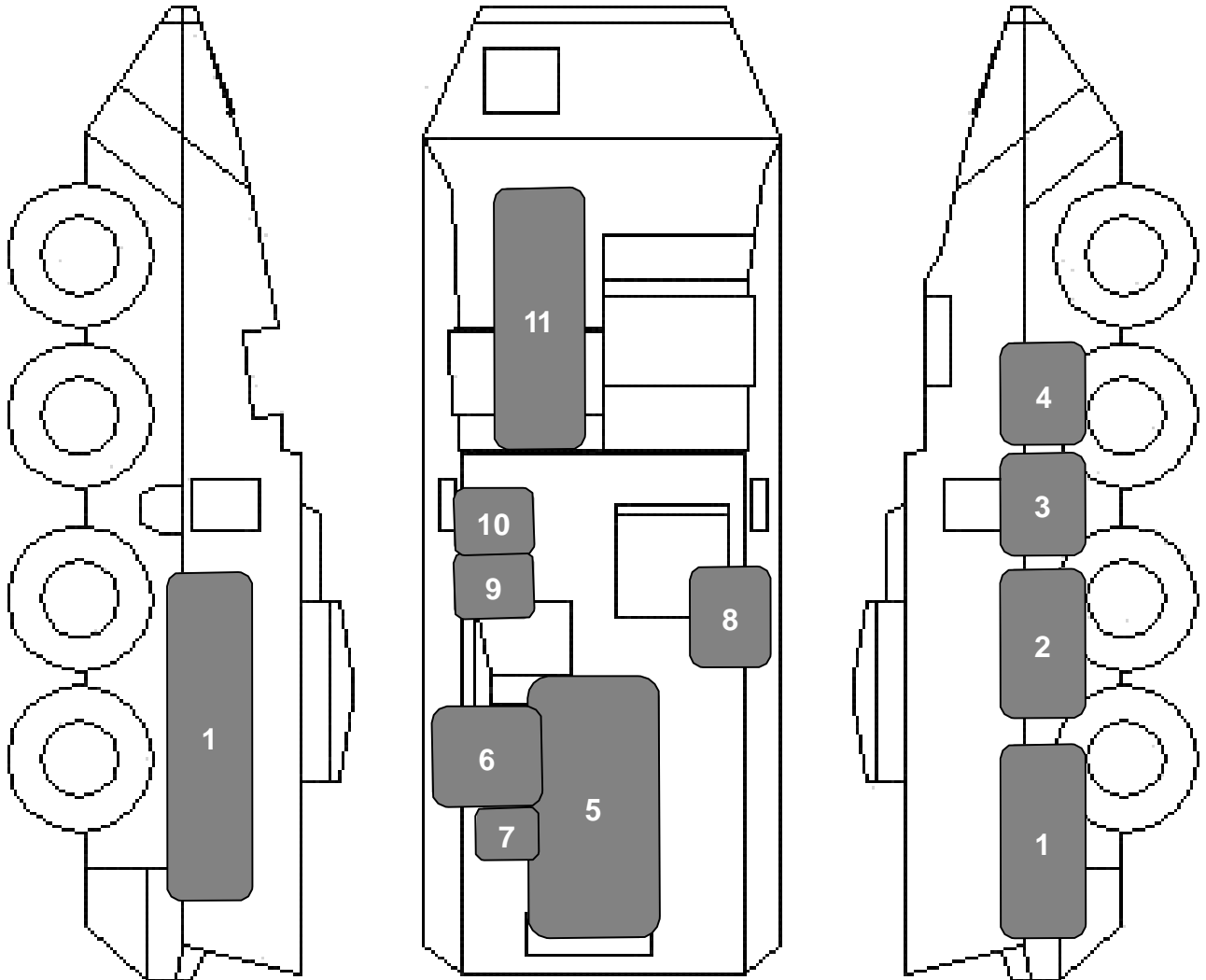
Cargo LOC NO	Cargo Description	Cargo LOC NO	Cargo Description
1	CLS Bag and BH Litter	13	Gunner Assault Pack
2	Dismount Assault Packs	14	.50 CAL Spare Barrel
3	Vehicle Tool Bag	15	240 Spare Barrel and PSS14
4	Javelin	16	LRAS Tripod and Bat Boxes
5	PED 5	17	M240L
6	Anti-Intrusion Kit	18	Dismount Bag
7	TMs in Pamphlet Bag	19	PAS-13
8	Broken down Box MREs	20	SKL/SI Bag
9	Binos	21	2x AT-4s (in mounts)
10	VC Assault Pack	22	Additional BII
11	CLU		
12	Driver Assault Pack		

2-1 CAV MCVV Load Plan Outside



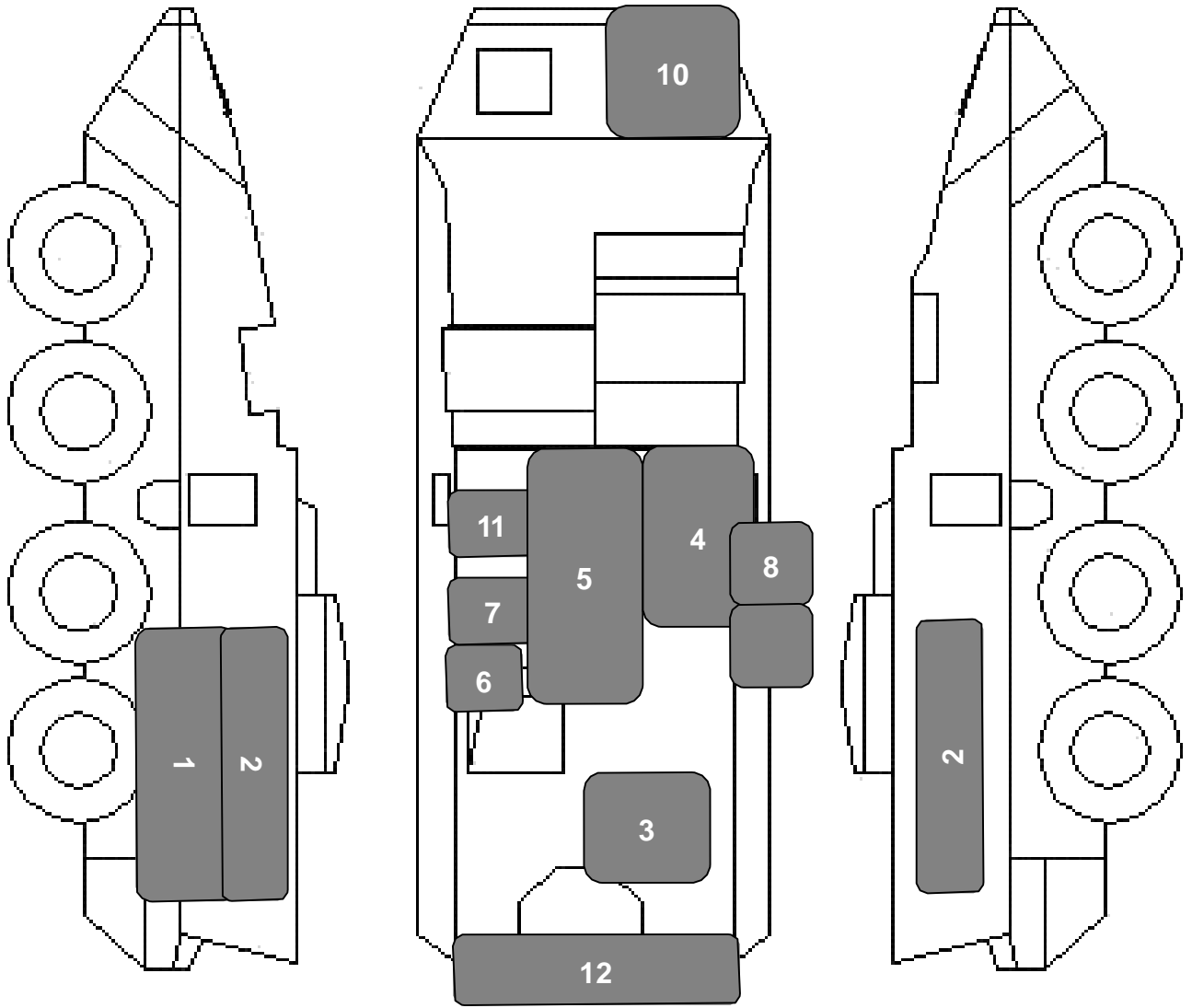
Cargo LOC NO	Cargo Description
1	Rucks
2	Vehicle POL
3	Gun POL
4	Litter
5	2x Water Cans
6	2x Fuel Cans
7	Flex spout; snatch block
8	Jacking plate; FRH pump kit; warning device kit
9	Recovery Kit
10	7.62mm Ammo

2-1 CAV MCVV Load Plan Inside



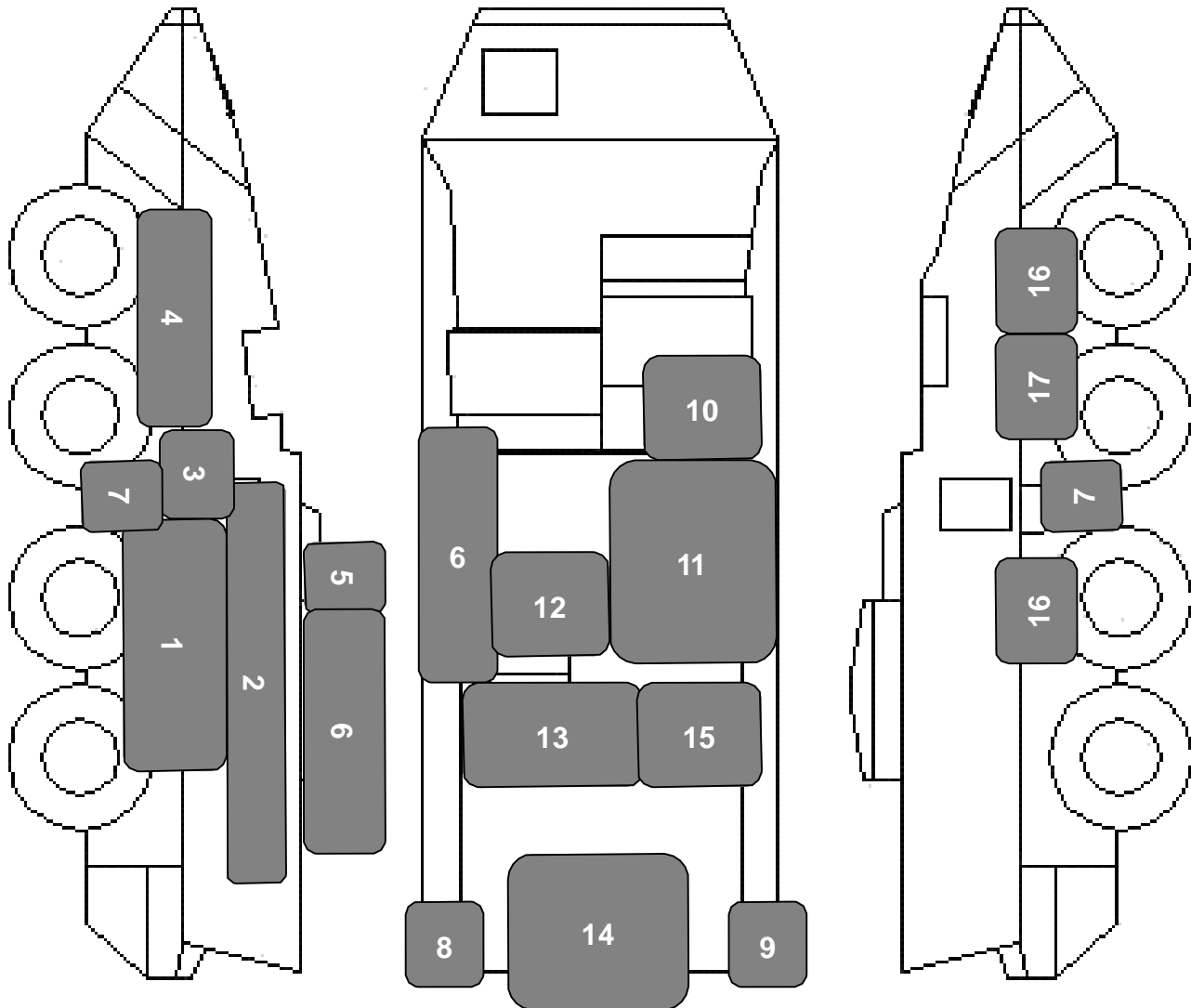
Cargo LOC NO	Cargo Description
1	120mm Ammo
2	Tool Bag
3	Ore Sight; Quadrants
4	TMs; Aiming Circle
5	RSL-6 120mm
6	Gun BII; Cleaning Brushes
7	FRH Gauges
8	Sight Unit
9	Extra Straps
10	Ration Heater
11	Aiming Circle Tripod

2-1 CAV CVV Load Plan



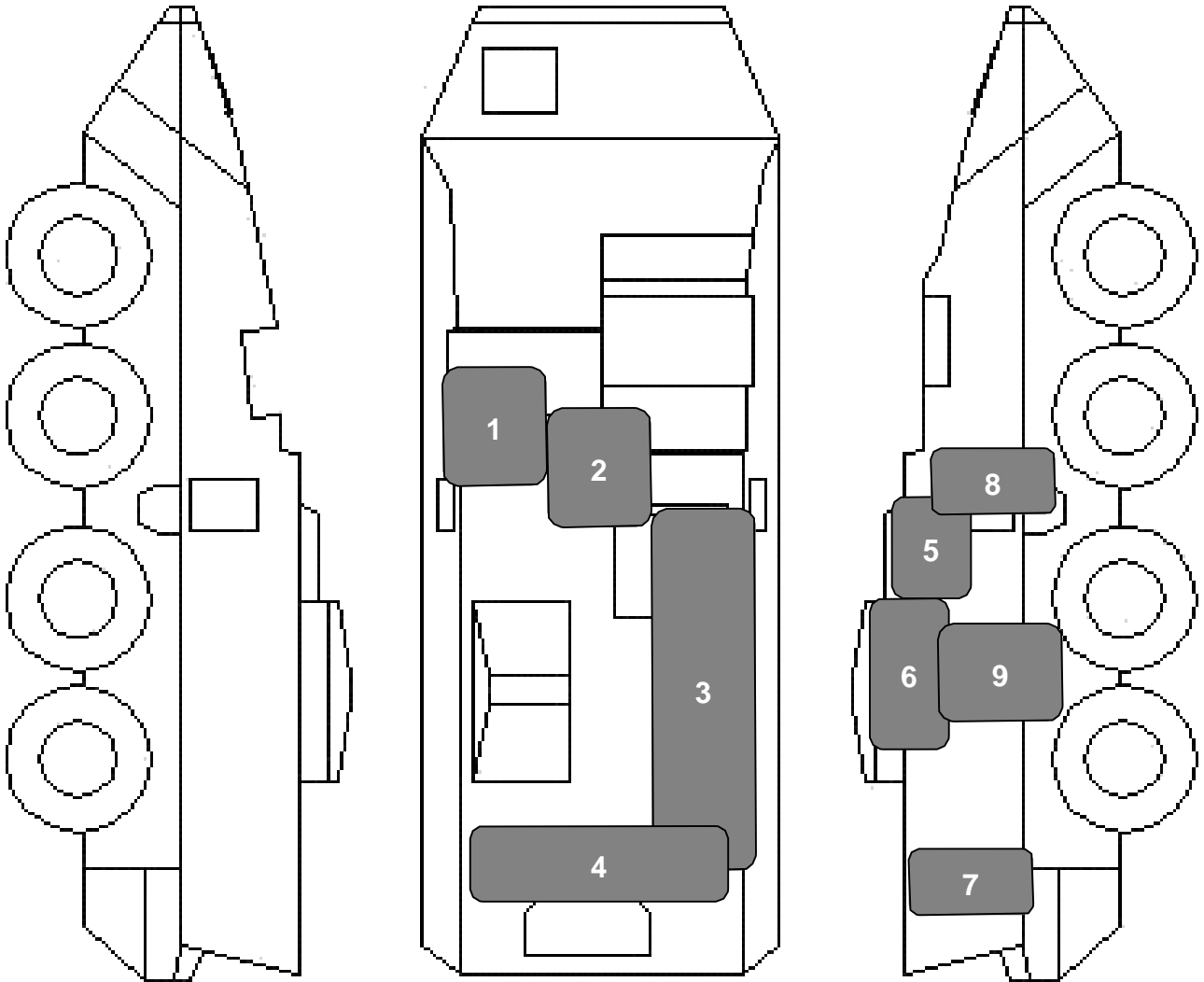
Cargo LOC NO	Cargo Description
1	Vehicle BII
2	QUEM; COM-201
3	Cooler
4	Spare Commo Parts; OE254s
5	Rucks
6	Water Cans
7	MREs; TMs
8	POL
9	Recovery Kit
10	C-Wire
11	Tool Kit
12	QUEM Masts

2-1 CAV MEVV Load Plan Outside



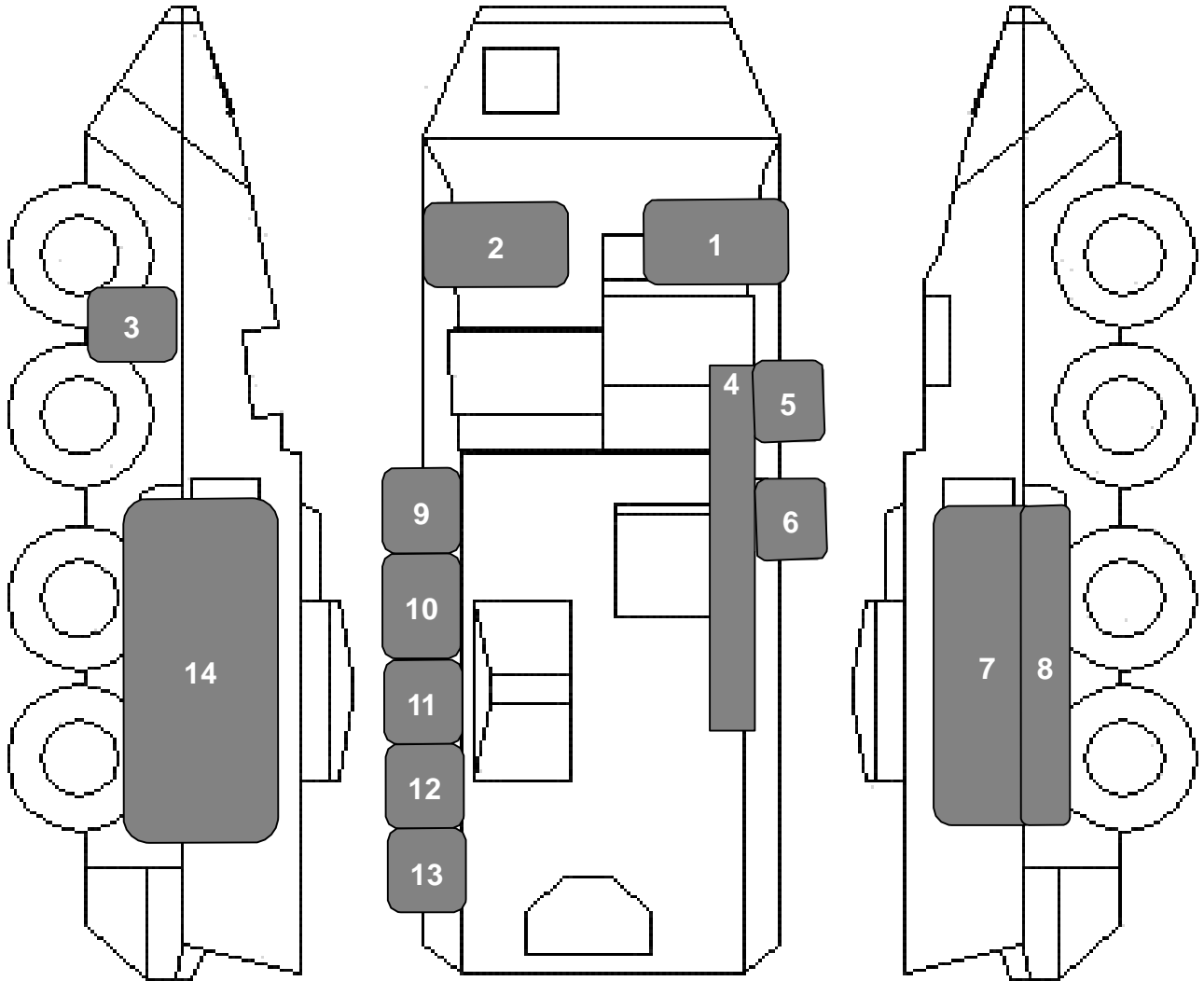
Cargo LOC NO	Cargo Description	Cargo LOC NO	Cargo Description
1	Rucks	10	C-Wire
2	Tow Bar	11	Camo Nets
3	Chock Block	12	POL
4	Pioneer Kit	13	SKED
5	Suction	14	Vehicle BII
6	4x MES Chest	15	KED
7	Tire Chains	16	MREs
8	2x Fuel Cans	17	Tool Bag, Slave Cable, Air Hose, Tire Repair Kit
9	2x Water Cans		

2-1 CAV MEVV Load Plan Inside



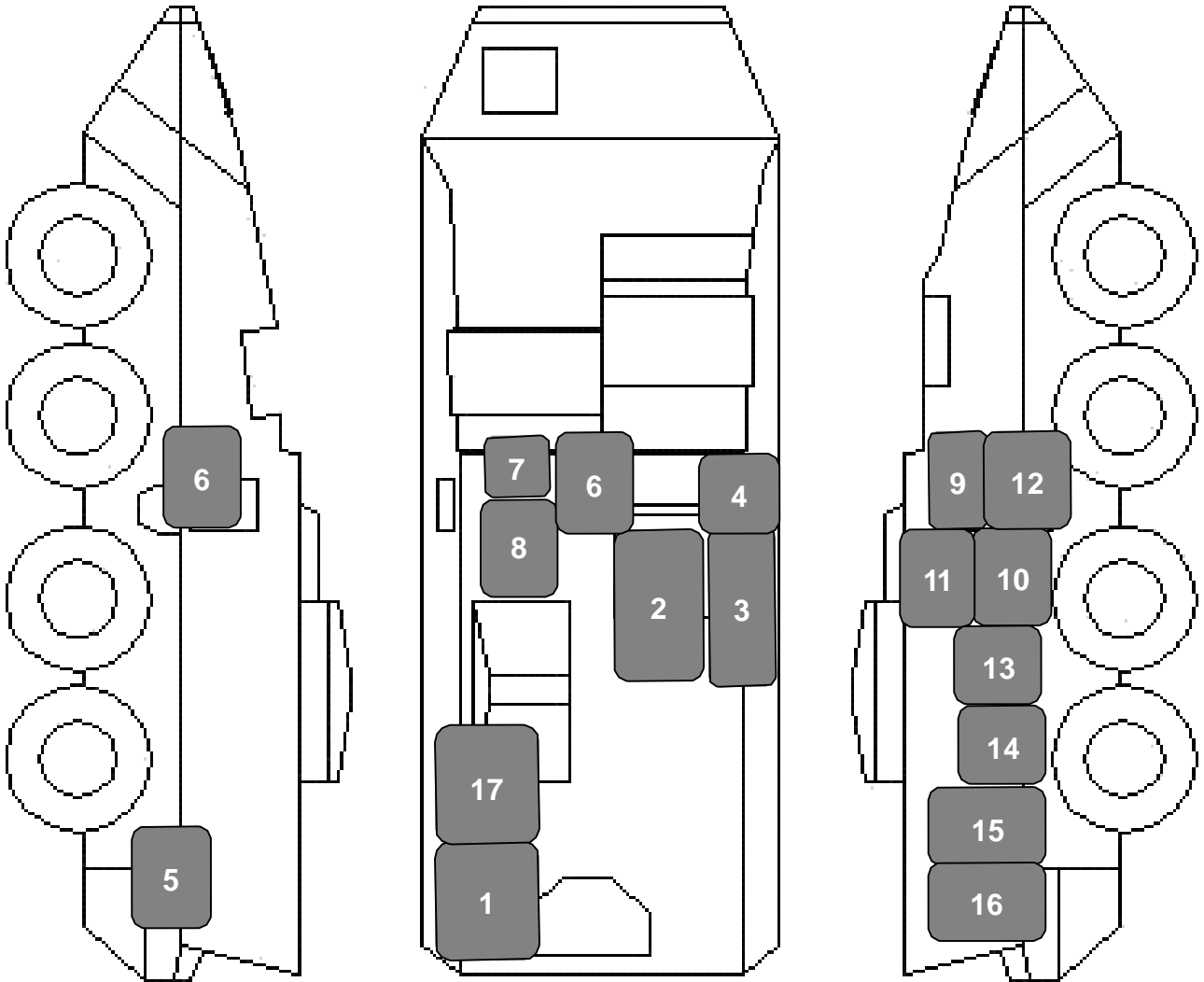
Cargo LOC NO	Cargo Description
1	SI
2	Trauma Bag
3	2x Litters
4	Spine Board
5	Water Heater
6	Radio Mount
7	Fire Extinguisher
8	O2 Tank
9	CBRN System

2-1 CAV MGS Load Plan Outside



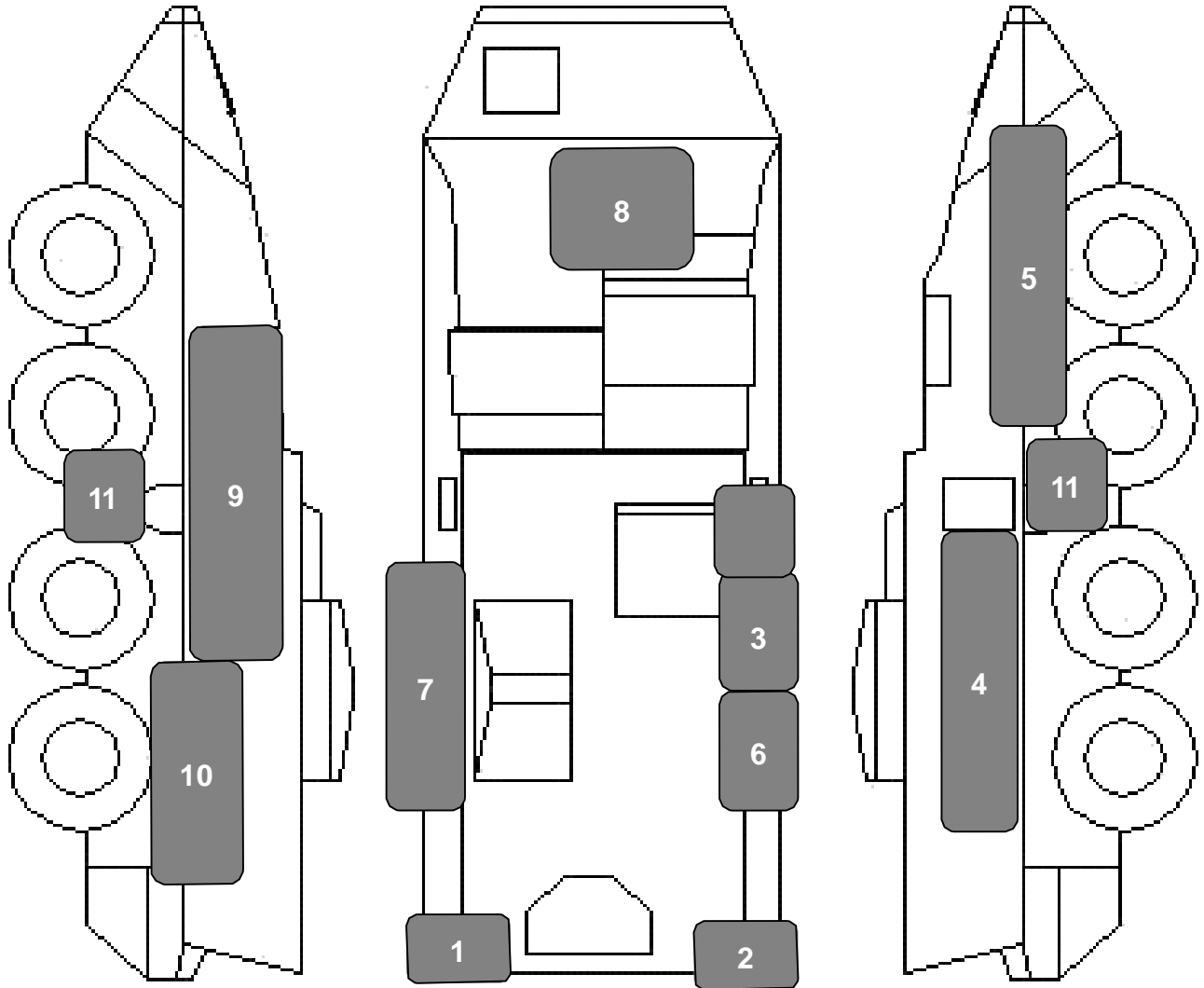
Cargo LOC NO	Cargo Description	Cargo LOC NO	Cargo Description
1	Pioneer Kit	8	Litter
2	Camo Nets	9	2x Water Cans
3	Tire Chains	10	Chock Blocks
4	Tow Bar	11	Bottle Jack
5	2x Fuel Cans	12	Base Plate
6	POL	13	Snatch Rope
7	Boresight Ladder	14	Rucks

2-1 CAV MGS Load Plan Inside



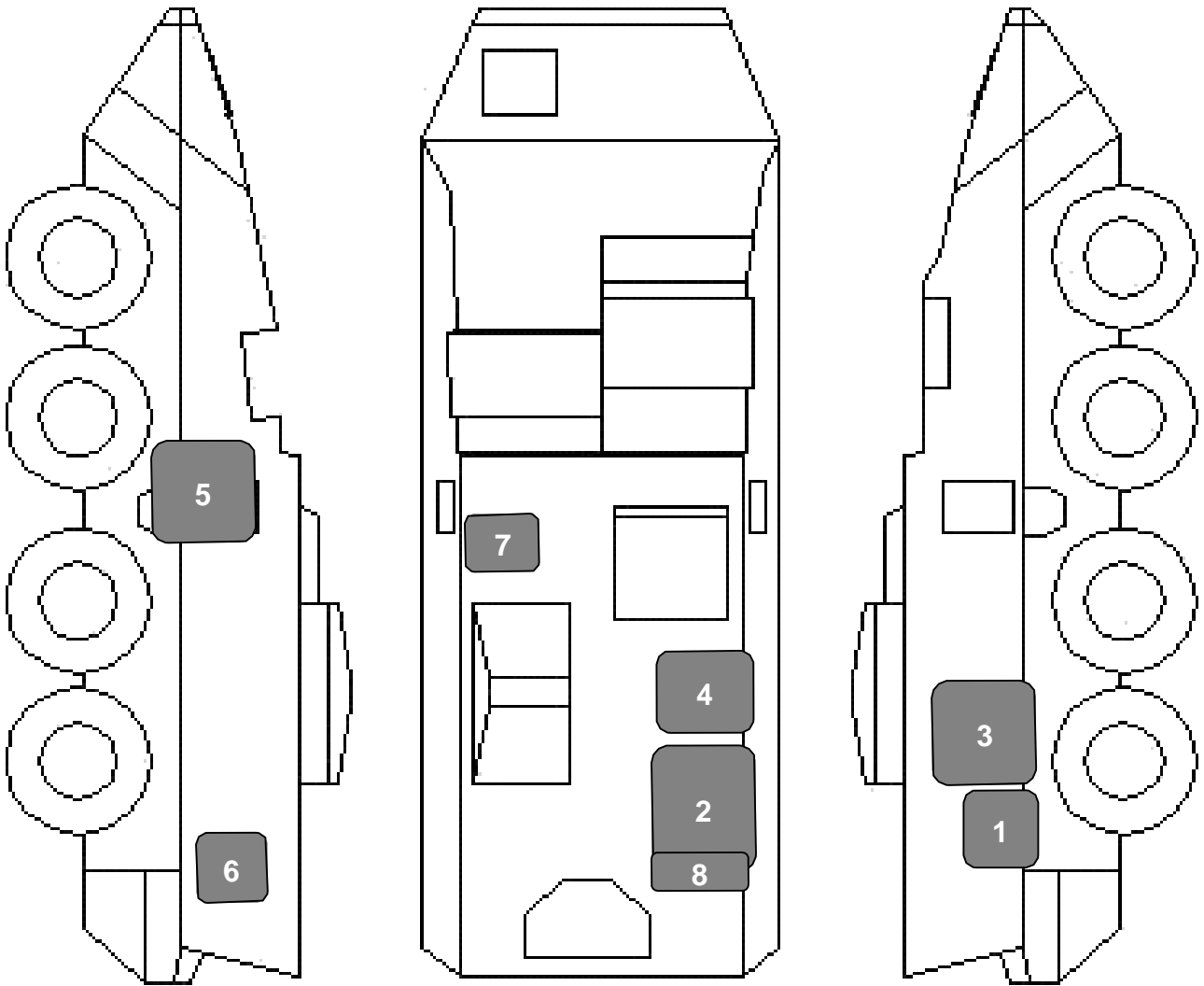
Cargo LOC NO	Cargo Description	Cargo LOC NO	Cargo Description
1	Slave Cable	10	Fuel Transfer Hose
2	Muzzle Boresight Device	11	Bore Brushes; Breach Lifting Kit
3	.50 CAL Boresight Kit	12	Snatch Rope
4	CLS Bag	13	TMs
5	Winterization Kit	14	Tool Bag
6	Smoke Grenades	15	Funnels; Fuel Nozzle
7	Warning Triangles	16	Grease Gun
8	Gunnery Flags	17	.50 CAL Ammo
9	Air Hose		

2-1 CAV ATVV Load Plan Outside



Cargo LOC NO	Cargo Description	Cargo LOC NO	Cargo Description
1	2x Fuel Cans	7	Recovery Kit
2	2x Water Cans	8	Tarp
3	Air Hose	9	Rucks
4	Litter	10	Pioneer Kit
5	Tow Bar	11	Tire Chains
6	POL	12	7.62mm Ammo

2-1 CAV ATVV Load Plan Inside



Cargo LOC NO	Cargo Description
1	Tool Bag
2	Missile Rack
3	Tire Repair Kit
4	Fire Extinguisher
5	Slave/Winch Cables
6	Water Heater
7	Air Hose
8	7.62mm Ammo

Vehicle Marking SOP

1st Number: **TRP**

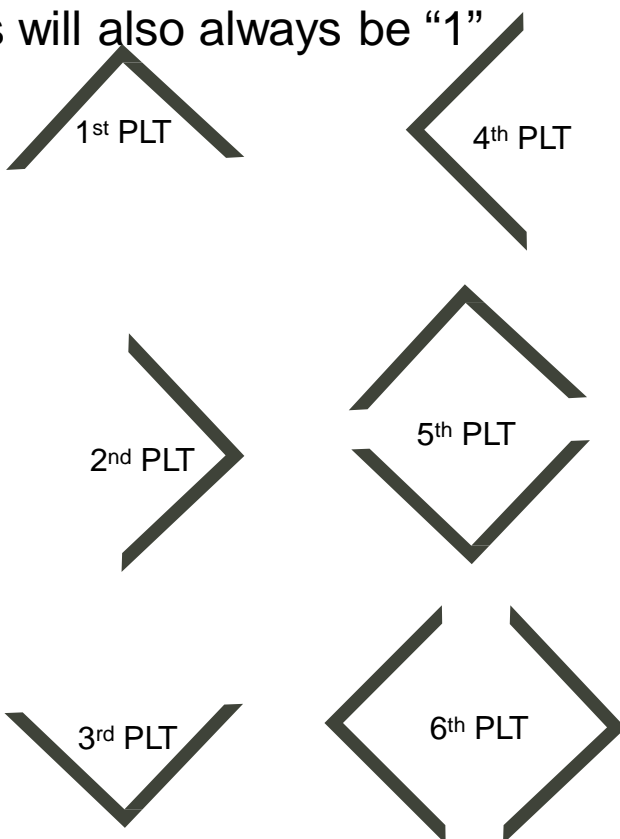
-HHT:	0	(011)
-A:	1	(111)
-B:	2	(211)
-C:	3	(311)
-D:	4	(411)
-E:	5	(511)

2nd Number: **SQDN/BN**

-Will always be "1" for 2-1 CAV

3rd Number: **BDE**

-This will also always be "1"



Example:

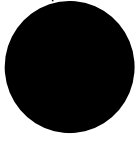


1st PLT, B TRP, 2-1 CAV, 1st BDE

Duffle Bag Marking Scheme

New Style Duffel (Zipper): Print on 5"x8" Card

Platoon Color



LAST NAME, FIRST NAME MI., RANK
LAST 4
TROOP, 2-1 CAV, 1SBCT

A

A or B Bag

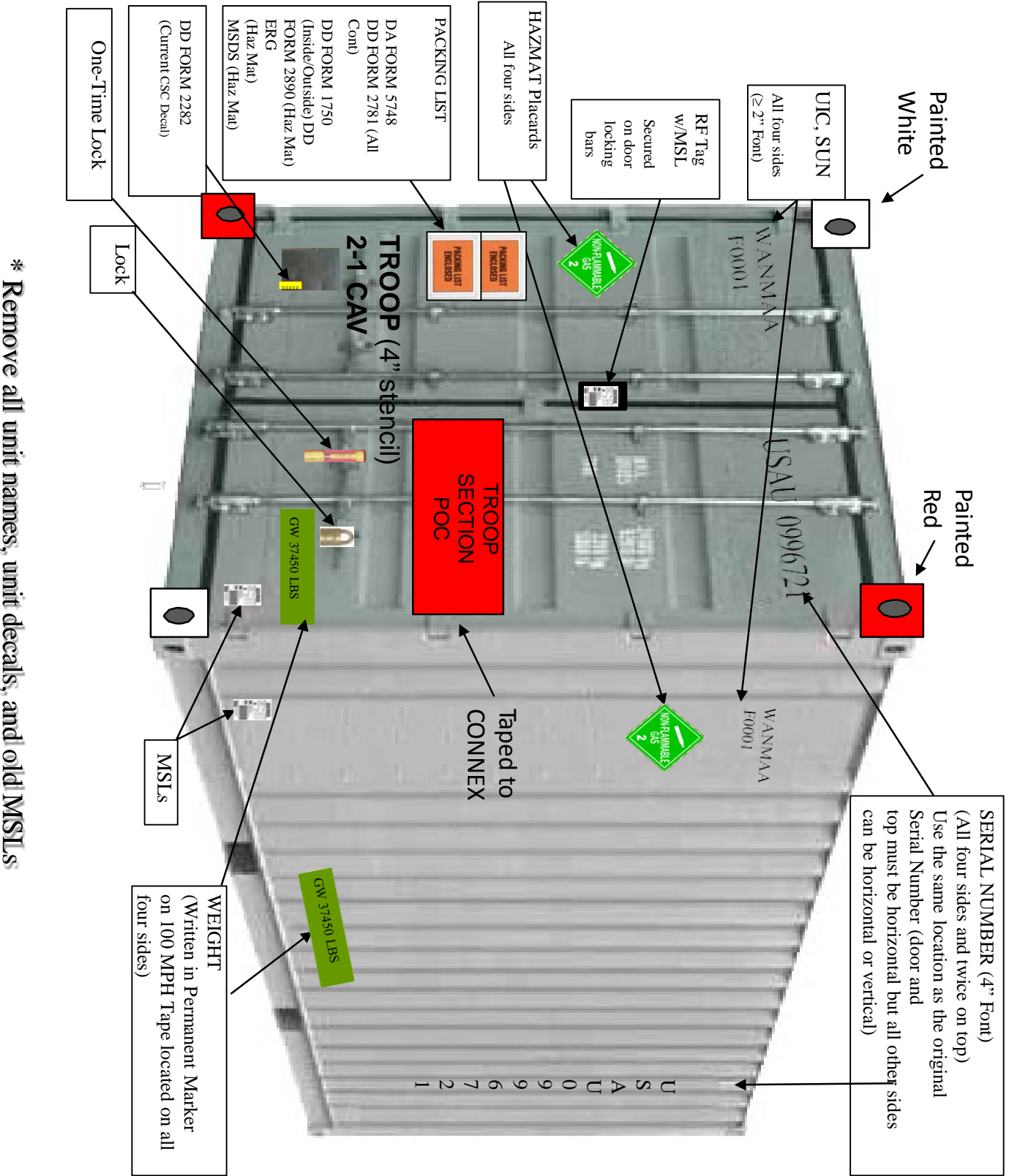
Old Style Duffel (Top Loading): Spray paint bottom tan, use black 1" Stencils



LAST NAME, FIRST NAME MI., RANK
LAST 4
TROOP, 2-1 CAV, 1SBCT

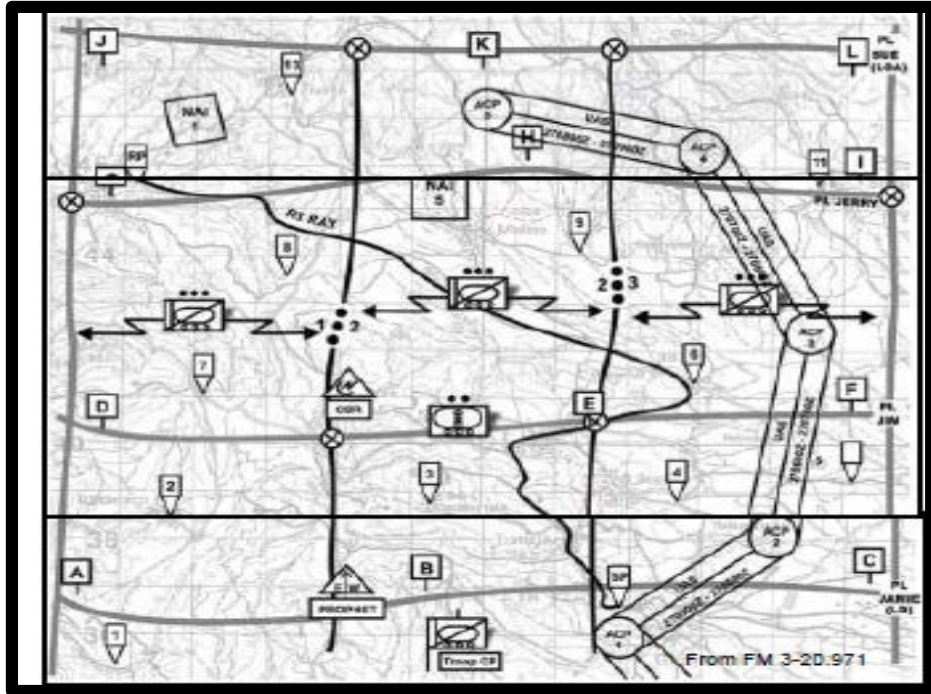
A

CONNEX Marking Scheme



* Remove all unit names, unit decals, and old MSLS

Zone Recon



Checklist:

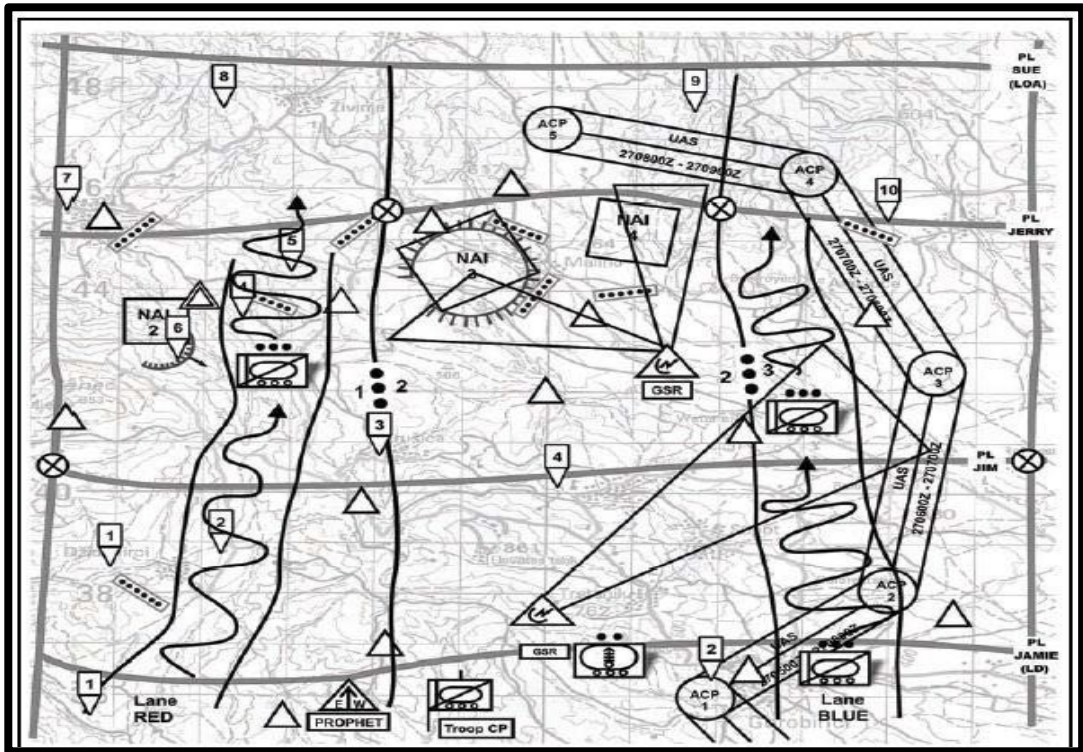
- Conduct TLP's
- Issue Order
- Conduct coordination with adjacent units
- Move to and deploy along LD
- Execute LD
 - Dismount scouts when
 - Detailed recon necessary
 - Gathering humint from populace
 - Stealth is required
 - Threat contacted expected
 - Vehicle movement restricted
 - Time is available
 - Security is primary concern
- ID and report all threat forces within area
- Collect and report terrain info
- Collect and report civilian information
- Adjust reconnaissance tempo
- Conduct reconnaissance handover
- Report reconnaissance information

Zone reconnaissance is a form of reconnaissance that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries (ADRP 3-90). Any unit can perform a zone reconnaissance, though the Cavalry squadron conducts zone reconnaissance in advance of the BCT's combined arms battalions to develop information and intelligence impacting the success of current and future BCT operations. Commanders assign a zone reconnaissance when the enemy situation is vague or when information related to terrain, infrastructure, or society is limited. Commanders require specific information from the zone reconnaissance to develop or refine his course of action before deployment of additional forces into zone. In this regard, the zone reconnaissance may orient on the main body's subsequent area of operation or a specific axis of advance.

Characteristics:

- Lateral Boundaries
- Generally larger than an area recon
- Routes must be reconnoitered

Area Recon



Checklist:

- Conduct TLP's
- Issue Order
- Conduct coordination with adjacent units
- Move to and deploy along LD
- Execute LD
 - Dismount scouts
- ID and report all threat forces within area
- Collect and report terrain info
- Collect and report civilian information
- Adjust reconnaissance tempo
- Conduct reconnaissance handover
- Report reconnaissance information

Characteristics:

- Continuous Boundaries
- Generally smaller than Zone Recon
- Routes need not be reconnoitered

Area reconnaissance is a form of reconnaissance that focuses on obtaining detailed information about the terrain or enemy activity a prescribed area (ADRP 3-90). Area reconnaissance allows for detailed reconnaissance in specific locations that answers PIR and develops the situation to provide options to the commander. The commander assigns an area reconnaissance when information on the enemy situation is limited, when focused reconnaissance in the given area will likely yield specific information related to terrain or decision points, or when more detailed information is required in a designated area. The area targeted for reconnaissance may consist of a future friendly position such as brigade support areas, or position areas for artillery. Commanders may further define the area as an NAI or TAI to focus the unit on a more specific area such as a building, bridge, or key terrain.

Route Classification

Route Types:

Type X – All-weather route, open through year, waterproof surface, never closes except for flooding or snow blockage

Type Y – Limited, all-weather route, non-waterproof surface considerable affected by rain, frost, thaw, or heat, closed up to one day at a time

Type Z – Passable only in fair weather, closes for long periods of time, only upgrades in event of realignment or engineer effort

Curve Calculation:

Radius < 25M = Obstructions
Radius < 45M = Reportable

$$R = (C^2/8M) + (M/2)$$

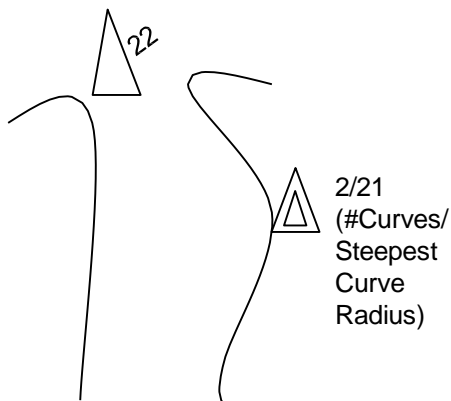
R = radius of the curve.

C = the distance from the centerline of the road to the centerline of the road at the outer extremities of the curve.

M = the perpendicular distance from the center of the tape (where C was measured) to the centerline of the road.

Example: If C is 15 meters and M is fixed at 2 meters, the formula becomes the following:

$$R = (15^2/16) + 2/2 = 15.0625$$



Single Curve

Multiple Curves

Slope Calculation:

> 7% = Obstruction
> 5% = Reportable

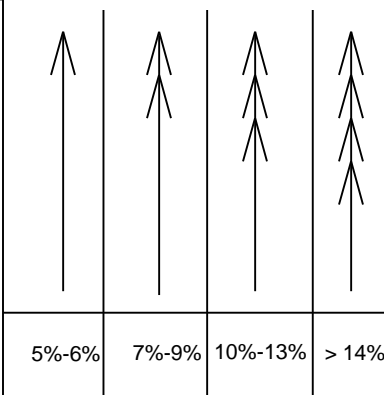
$$\frac{\text{Rise}}{\text{Run}} \times 100 = \% \text{ Slope}$$

Hasty Calculation:

Height (AVG) = 1.75m

Pace (AVG) = 0.75m

Symbols for slope:



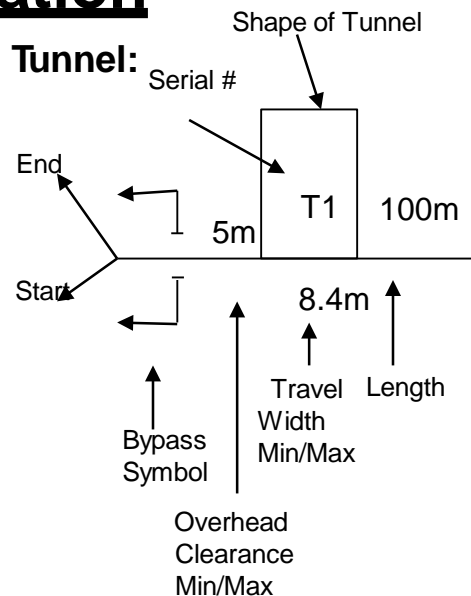
Bypasses:

Easy =

Difficult =

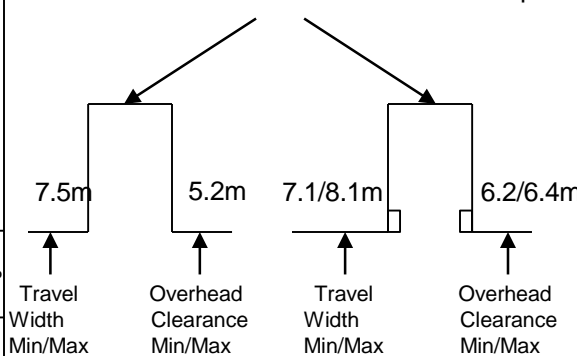
Impossible =

Tunnel:



Underpass:

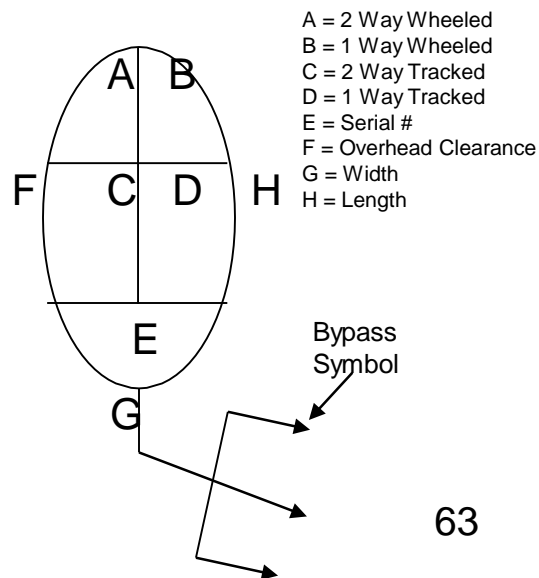
Placed on Location of Underpass



Without Sidewalks

With Sidewalks

Bridges:

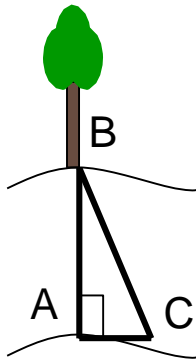


Route Classification

Route Constriction:

	Limited Access	Single Lane	Single Flow	DBL Flow
Wheeled	3.5m	3.5-5.5m	5.5-7.3m	7.3m
All Vehicle	4.0m	4.0-6.0m	6.0-8.0m	8.0m

Ford Length:



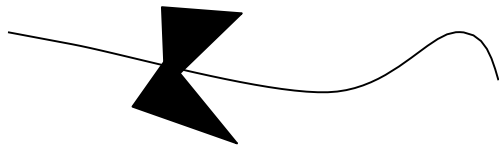
1. Take azimuth from A to B
2. Moving left add 45 moving right subtract 45
3. Move to Azimuth gained from #2 (pointing at same object)
4. Measure A to C
A to C = width of stream

Route Formula:

A/B/C/D/E/F

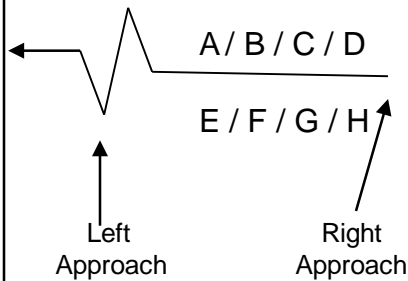
- A – Narrowest Roadway Width (meters)
- B – Route Type (X,Y, Z)
- C – Lowest Load Classification
- D – Lowest Overhead Clearance
- E – (OB) Obstructions, if any
- F – Special Conditions
 - T – Snow Blockage
 - W - Flooding

Width

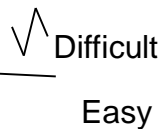


Length

Ford Symbol:



- A – Serial #
- B – Type
 - V - Vehicular
 - P - Pedestrian
- C- Normal Stream velocity (MPS)
- D – Seasonal limitations (X or Y, never Z)
- E – Ford Length (in meters)
- F – Ford Width (in meters)
- G – Nature of Bottom
 - M - Mud
 - G - Gravel
 - C - Clay R
 - Rock S
 - Sand
 - P – Artificial Paved Surface
- H – Normal Depth (in meters)



Name: 2LT Doe, John

Unit: C TRP, 2-1 CAV

DTG: 11700OCT2008

Map: Irvington

Edition: 6

Scale: 1:50,000

Remarks: All Measurements in Meters

Current Calculations:

$$\frac{\text{Distance (in meters)}}{\text{Time (in seconds)}} = \text{m/sec}$$

- Swift = > 1.5 MPS
- Moderate = 1 MPS > 1.5 MPS
- Slow = < 1 MPS

Key Tasks:

- Clear Lateral Routes out to direct fire range
- Secure near and far side of all obstacles
- Ensure the route is trafficable for the largest vehicle in the follow on unit

Route Overlay Example

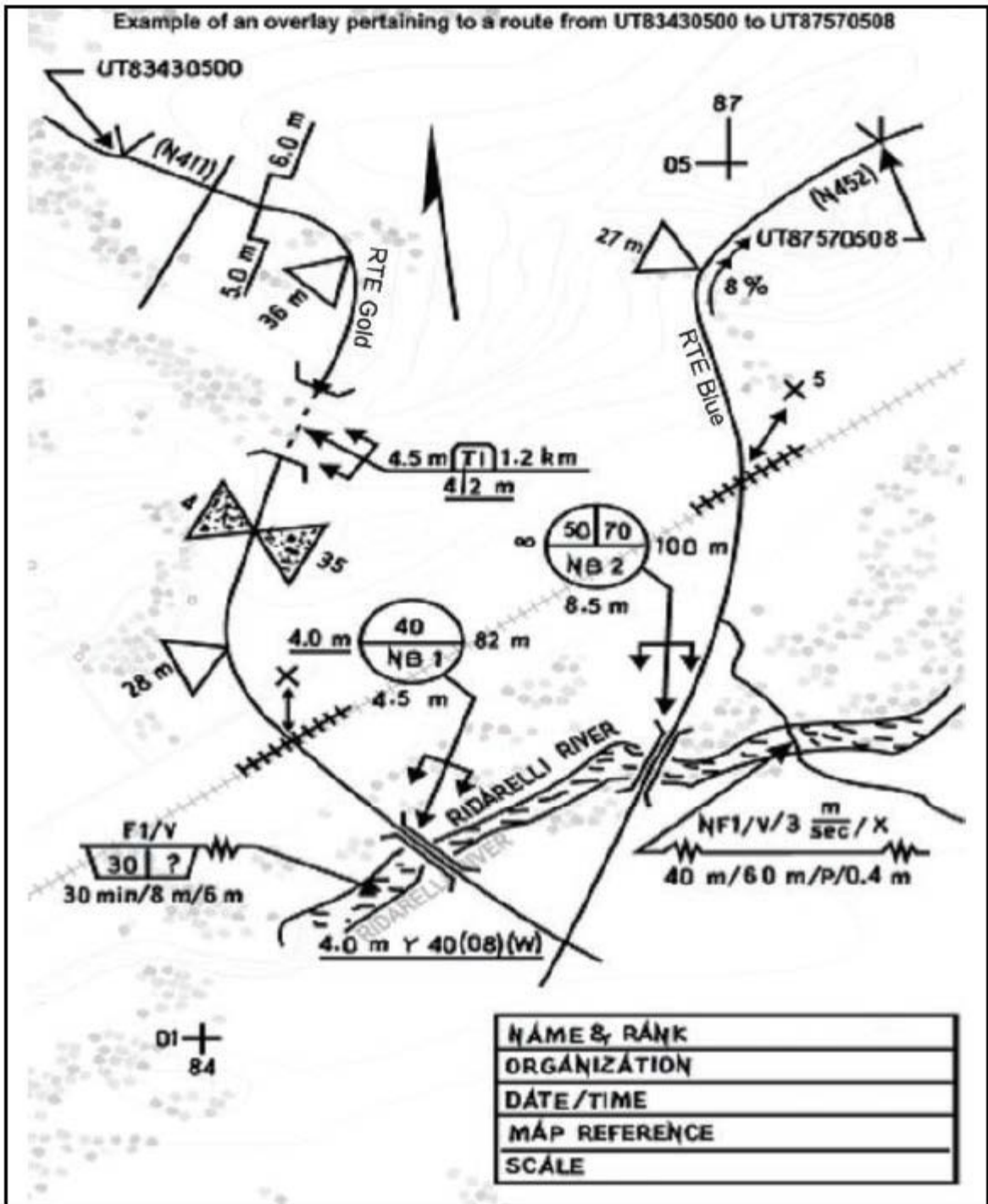


Figure G-3. Route classification overlay

Screen/Hasty Defense

Screen Operation Initial Priorities of Work

- Security
- Observation Plan (OPs redundant & in-depth)
- Indirect/Direct Fire Plan
- Maintenance/Resupply: Establish 2-3 days of supply
- Conduct Generic Rehearsals: withdrawal, direct and indirect fires, reporting, react to contact, UAS

Movement and Maneuver.

- Determine movement to occupy the screen: zone recon, infiltration, or tactical road march.
- Define and publish displacement criteria.
- Rehearse security drills, battle handover, passage of lines, and logistical operations.
- Troops engage and/or destroy enemy reconnaissance elements and conduct battle handover on larger forces as dictated in the operations order.
- Mounted/foot patrols move between OPs periodically to detect dismounted infiltration.

Intelligence.

- Focus organic surveillance and acquisition assets (UAS, LRAS, ground sensors, observers), on the most likely AA
- Request non-organic, higher assets to provide earlier acquisition information (e.g., TUAV, PROPHET, JSTARS, or Guardrail) to cue squadron organic assets.

Friendly Force IR

- Location, size, and orientation of the security area
- Initial location and types of OPs (if applicable)
- Time allocated to establish the security force
- Criteria for ending the screen mission
- Task organization and augmenting
- Intelligence support for screening forces
- Special requirements or constraints
- Information received from higher headquarters
- Critical reconnaissance and security tasks to accomplish
- Force to be screened
- Rear boundary of the screening force
- Possible follow-on missions (Length of operation will be critical in establishing long or short duration dismounted OPs and ambush sites)

Enemy PIR

- Enemy reconnaissance forces
- Any threat activity within NAls
- Location and movement of the threat main body
- Location/disposition of follow on forces
- Civilian population sentiments and needs
- Infrastructure key to threat COAs

Graphics- Each platoon at a minimum must have

- 2-1 graphics (JCR / Analog)
- Squadron/troop boundaries (BH3/BH6 assigns troop boundaries within screen)
- NAls and check points to orient surveillance
- Routes within the AO, with applicable check points
- Battle Handover Line (BHL), Limit of Recon (LOR)

Fires

- Integrate joint effects of indirect and direct fires, attack aviation, CAS, and non-lethal effects.
- Plan targets at chokepoints and on likely approaches (mounted and dismounted).-TAIs
- Scouts/indirect fire assets plan smoke and HE to support the screens' displacement or collapse.
- NFAs over OPs

TARGETS: IAW SOP

Engineer Support- Engineers build OP survivability positions, improve roads and trails for lateral movement, and emplace situational obstacles if time permits.

Sustainment- Establish an RSSA within squadron battlespace if possible. Combat assets may be needed to secure logistical convoys to resupply units that are far forward of Command and Control.

Mission Command: The squadron TAC and main CP will deploy to support C2 due to the extended distances.

Integrate initial and subsequent locations of the main CP.

Ensure continuous line-of-sight systems and beyond line-of-sight access to the 1SBCT network.

Screen/Defensive Priorities of Work

1. Defensive Priorities of Work (12 hrs) * **It is acceptable to occupy a building "H" hour is the time we occupy the designated area. Priorities of work are centralized in order: security, maintenance (refit/rearm), rehearsals, personal hygiene, chow, and rest.**

- Establish security/clear out to 300m around position/locate likely dismounted avenues of approach (H+0 → H+.5hrs)
- Pick/confirm firing positions, eyes on EA (H+0 → H+.5hrs)
- Hide/camouflage vehicles (H+0 → H+.5hrs)
- Establish NFA (H+0 → H+.5hrs)
- Mark Vehicles (H+0 → H+.5hrs)
- Emplace JCAD alarm (H+0 → H+.5hrs)
- Complete range cards (H+.25 hrs)
- Complete PLT sector sketch (H+.5)
- Clear fields of fire (H+1 → H+7)
- Recon alternate and supplementary fighting positions (H+1 → H+7)
- Dig primary positions and emplace overhead cover (H+1 → H+7)
- Dig hasty fighting positions for personnel not in primary positions (H+7 → H+11)
- Emplace obstacles and orientate crew served weapons (M240/ M2) on mounted and dismounted avenues of approach (H+7 → H+11)
- Indirect fire plan complete and disseminated (H+7 → H+11)
- Establish resupply operations (H+7 → H+11)

2. Screen Priorities of Work (2.5hrs)

"H" hour is the time we occupy the designated area.

- 1. Establish security/clear out to 300m around position/locate likely dismounted avenues of approach (H+0 → H+.5hrs)
- 2. Hide/camouflage vehicles (H+0 → H+.5hrs)
- 3. Get observation on NAI's (H+0 → H+.5hrs)
- 4. Complete range cards (H+0 → H+.5hrs)
- 5. Complete platoon sector sketch and terrain sketch (H+1)
- 6. Recon routes and alternate positions/plan for augmentation or RIP (H+1 → H+2)
- 7. Emplace obstacles and weapons (M240/ M2) on dismounted avenues of approach (H+1 → H+2)
- 8. Coordinate with adjacent units (H+1 → H+2)
- 9. Coordinate indirect fires (H+1 → H+2)
- 10. Dig hasty fighting positions (H+1 → H+2)
- 11. Maintenance complete (H+2.5)

Screen/EA Development

a. Identify all Likely Enemy Avenues:

- Recon area to determine likely Avenues of Approach & Key Terrain.
- Evaluate Lateral Routes & Trails.

b. Determine Likely Enemy Scheme:

- Enemy Units' Tasks & Purposes?
- Where will the enemy Fix, Breach, or Envelop?
- Where will individual Vehicles & Units go and what will they do?
- How will the Enemy employ all Eight Forms of Contact?
(Direct, Indirect, Non-hostile, Obstacle, CBRN, Air, Visual, Electronic)

c. Determine Where to Kill the Enemy:

- Identify & Mark TRPs that match the enemy scheme of maneuver.
- Establish EAs around TRPs.
- Develop necessary Direct Fire Planning Measures.

d. Plan and Integrate Obstacles:

- Plan obstacle tasks that produce the desired effect on the enemy.
- Utilize Engineers to create most effective obstacles.

e. Emplace Weapons Systems:

- Ensure screen is set up in depth.
- Determine what & how many weapons systems need to focus fires on each TRP to achieve the desired endstate.
- Select Tentative OPs/ AT positions/MGS BPs (Primary, Alternate, Supplementary).
- Recon OPs/AT positions/ MGS BPs (from Friendly & Enemy perspectives).
- Ensure TRPs, EA, and Obstacles can be covered by Direct Fires.
- Conduct Occupation of OPs/AT positions/ MGS BPs.

f. Plan and Integrate Indirect Fires:

- Determine the purpose of fires and the essential fire support task that supports it.
- Determine where the purpose can best be achieved.
- Establish the observation plan, with redundancy for each target. Observers include the FIST, as well as members of maneuver elements with fire support responsibilities such as PSGs.
- Establish triggers (Observation Plan, and NFAs).
- Obtain accurate target locations.
- Refine target locations to ensure coverage of obstacles.
- Adjust artillery and mortar targets.
- Plan FPF.
- Request Critical Friendly Zones (CFZ) for protection of maneuver elements and NFAs for protection of OPs and forward positions.

g. Conduct an EA Rehearsal:

- Full Dress Rehearsal
- Rehearse Passage of Security Forces, Closure of Lanes, Routes, Actions on Contact, and Triggers

EA Development Cont.

All combat vehicles will, at a minimum have the following

CL IV equipment when preparing to conduct defensive operations:

- 2 x strands of Concertina Wire
- 4 x pickets
- 1 x C-wire gloves

The following equipment will be carried by the Platoon:

- 1 x TRP marking kit
- 2 x pair wire cutters
- 2 x bundle of sandbags
- 2 x picket pounders
- 2 x spool of barbed wire
- 2 x roll engineer tape
- 1 x FM 5-102 (Countermobility)

PRIORITY OF WORK (as dictated by TRP CDR):

- Emplace local security (all leaders).
- Position and assign sectors of fire for each weapon platform (platoon leader).
- Position and assign sectors of fire for the dismounted teams/OPs (platoon leader).
- Position and assign sectors of fire for local security teams (section sergeant).
- Establish command post and wire communications.
- Designate FPLs and FPFs.
- Clear fields of fire and prepare range cards.
- Prepare sector sketches (leaders).
- Dig fighting positions/direct proper assets where to dig and establish priorities.
- Establish communication and coordination with the Troop and adjacent units.
- Coordinate with adjacent units. Review sector sketches.
- Emplace antitank and Claymore mines, then wire and other obstacles.
- Mark or improve marking for TRPs and other fire control measures.
- Improve primary fighting positions and add overhead cover (stage 2).
- Prepare supplementary and then alternate positions (same procedure as the primary position).
- Establish sleep and rest plans.
- Distribute and stockpile ammunition, food, and water.
- Dig trenches to connect positions (if required by dismounts).
- Continue to improve positions—construct revetments, replace camouflage, and add to overhead cover.

Direct Fire Planning

1. Identify probable enemy locations.
2. Determine where to focus combat power
3. Establish a means to distribute fires effectively
4. Establish weapons ready posture and triggers
5. Evaluate the risk of fratricide / establish control measures
6. Assign sectors / directions of fire
7. Rehearse

Terrain Based Fire Control Measures

1. Target Reference Point (TRP)
2. Engagement Area (EA) or Objectives
3. Sector of Fire
4. Direction of Fire
5. Terrain-based quadrant
6. Friendly-based quadrant
7. Maximum Engagement Line (MEL)
8. Restrictive Fire Line (RFL)
9. Final Protective Line (FPL)

Threat Based Fire Control Measures

1. Fire patterns
2. Target array
3. Engagement priorities
4. Weapons ready posture
5. Rules of Engagement (ROE)
6. Weapons safety posture
7. Engagement techniques

Weapons Control Statuses

“Weapons Hold”

Engage only if engaged or ordered to engage.

“Weapons Tight”

Engage only if positively identified as enemy.

“Weapons Free”

Engage any targets not identified as friendly.

Principles of Fire Control

1. Mass the effect of fire
2. Destroy the greatest threat first
3. Avoid target overkill
4. Employ the best weapon for the target
5. Minimize friendly exposure
6. Prevent fratricide
7. Plan for extreme limited visibility conditions
8. Develop contingencies for diminished capabilities

Sniper Planning Factors

References: FM 3-21.10 Sniper Employment

FM 3-21.11 The SBCT Infantry Rifle Company

FM 23-10 Sniper Training

1. Commanders may employ snipers as a three-man team, consisting of a sniper, an observer, and one man who secures the team. The senior man in the team is the observer, the next most senior is the sniper, and the junior man secures the sniper team. The team is capable of providing the company with a full range of sniper support and is equipped with both the M110 7.62-mm sniper rifle (providing antipersonnel fires out to 800 meters), the XM2010 .300 Winchester Magnum Enhanced Sniper Rifle (providing antipersonnel fires out to 1200 meters and the .50-caliber M107 sniper rifle (providing antipersonnel and anti-equipment fires beyond 800 meters). This "arms room" concept allows the sniper team to employ the sniper system that best supports the mission parameters. Additionally, the third member of the sniper team is equipped with an M203/M320 rifle system to provide protection and security for the sniper and his spotter as well as a means to break contact if the team is compromised. The sniper team is employed to support maneuver, to kill essential enemy leadership or command personnel, to disable lightly armored or "thin skinned" vehicles, to enhance force protection, to provide lethal accurate fires in urban operations, and to perform the counter-sniper role. Refer to Appendix C for a detailed discussion of Sniper employment.

a. Sniper teams should be centrally controlled by the commander but may be task-organized to platoons. Once deployed, sniper teams must be able to operate independently, as required. Therefore, they must understand the commander's intent, his concept of the operation, and the purpose for their assigned mission. This understanding allows the sniper teams to exercise responsible initiative within the framework of the commander's intent and to support the commander's concept and achievement of the unit's mission. To ensure clear fields of fire and observation, the teams must be able to choose their own positions once they are on the ground. Sniper teams are effective only in areas that offer good fields of fire and observation.

b. Sniper teams should move to a release point with a security element (squad or platoon) when possible. The sniper team moves on its own after reaching the release point, which allows the team to reach its area of operations faster and more safely than if it went alone from the start point. A security element can also protect the sniper section during operations. When moving with a security element, snipers follow these guidelines:

(1) The leader of the security element leads the sniper team.

(2) Snipers must appear to be an integral part of the security element. Thus, the sniper team should carry the sniper weapon system in line with and close to the body to hide its outline and barrel length and should conceal from view all sniper-unique equipment such as optics and ghillie suits. The team also should maintain proper intervals and positions in the element formation and wear the same uniform as that of element members.

2. SNIPER TEAM LEADER

The sniper team leader is responsible for employing the sniper team and ensures effective sniper support for the Troop/Squadron.

a. Assists the commander in planning the employment of the sniper team.

b. Coordinates with the Troop FSO and FIST.

c. Controls the team during tactical operations.

d. Acts as the primary trainer for the sniper team.

e. He is the primary observer of the sniper team.

Sniper Planning Factors

3. Sniper Team Duration Guidance

The amount of time a sniper team can remain in a position without losing effectiveness due to eye fatigue, muscle strain, or cramps depends mostly on the type of position. A sniper team usually can remain in an expedient position for 6 hours before it must be relieved. It can remain in the belly position or the semi-permanent hide for up to 48 hours before the team must be relieved. Mission duration times average 24 hours. (FM 23-10 provides guidance on sniper position considerations, construction, preparation, and occupation.)

4. Sniper Team Tasks

A. Offensive Operations:

- Destroy enemy snipers.
- Overwatch movement of friendly forces and suppress enemy targets that threaten the moving forces.
- Place precision rifle fire on enemy crew-served weapons teams and into exposed bunker apertures.
- Place precision rifle fire on enemy leaders, armored-vehicle drivers or commanders, forward observers, and other designated personnel.
- Place precision rifle fire on small, isolated, or bypassed enemy forces.
- Place precision rifle fire on enemy forces fleeing or threatening a counterattack.
- Screen a flank.
- Secure key terrain by controlling access to it with precision rifle fires.
- Select positions.
- Gather information about the enemy.
- Secure key terrain, preventing enemy surprise attacks.

B. Defensive Operations:

- Overwatch obstacles and demolitions.
- Perform counter-reconnaissance (destroy enemy reconnaissance elements).
- Engage enemy observation posts, armored-vehicle commanders exposed in turrets, and ATGM teams.
- Damage enemy vehicle optics to degrade movement.
- Suppress enemy crew-served weapons.
- Disrupt enemy follow-on units with long-range rifle fire.

C. Stability Operations:

- Conduct active or passive counter-sniper missions.
- Overwatch a checkpoint.
- Monitor a public gathering.
- Identify critical people in a crowd.
- Reinforce a base camp's security.
- Conduct any offensive or defensive sniper mission.

Sniper Planning Factors

5. Planning Factors for Sniper Teams in Urban Operations

The sniper's value to a unit conducting UOs depends on several factors, including the type of operation, level of conflict, and ROE. Where ROE allow destruction, the snipers may not be needed since other weapon systems have greater destructive effect. But where ROE prohibit collateral damage, snipers might be the commander's most valuable tool. During stability operations in urban terrain, the sniper or marksman can provide greatly enhanced observation of an area or population, and can apply precise firepower within the limits of the ROE more easily than can the Infantry force.

A. Urban Terrain Considerations

1. Position Selection: Snipers should be positioned in buildings of mass- or heavy-clad frame construction that offer long-range fields of fire and all-round observation. The sniper has an advantage because he need not move with, or be positioned with, lead elements. He may occupy a higher position to the rear or flanks and some distance away from the element that he is supporting. By operating far from the other elements, a sniper avoids decisive engagement, but remains close enough to kill distant targets threatening the unit. **Snipers should not be placed in obvious positions, such as church steeples and rooftops, since the enemy often observes these and targets them for destruction.** Indirect fires can generally penetrate rooftops and cause casualties in top floors of buildings. Snipers should not be positioned where there is heavy traffic, because these areas invite enemy observation as well.

2. Multiple Positions: Snipers should operate throughout the AO, moving with and supporting the company teams as necessary. Some teams may operate independently from other forces. They search for targets of opportunity, especially for enemy snipers. Since a single position may not afford adequate observation for the entire team without increasing the risk of detection by the enemy, the team may occupy multiple positions. Separate positions must maintain mutual support. Each team should also establish alternate and supplementary positions.

B. Urban Tasks for Sniper Teams

- The commander may assign the following tasks to snipers.
- Conduct counter-sniper operations.
- Kill targets of opportunity. The sniper team assigns priorities to these targets based on their understanding of the commander's intent, which might include, for example, to engage enemy snipers, leaders, vehicle commanders, radio men, sappers, and machine gun crews, in that order.
- Deny enemy access to certain areas or avenues of approach. In other words, control key terrain.
- Provide fire support for barricades and other obstacles.
- Maintain surveillance of flank and rear avenues of approach (screen).
- Support local counterattacks with precision fire.

Sniper Planning Factors

Sniper Weapon System Capabilities

M110 Semi Automatic Sniper System (SASS)

Caliber:	7.62 mm NATO
Maximum Effective Range:	1000 m
Weight:	16 lbs
Length:	46.75 in.
Action:	Semi-auto
Magazine Capacity:	10/20 rd



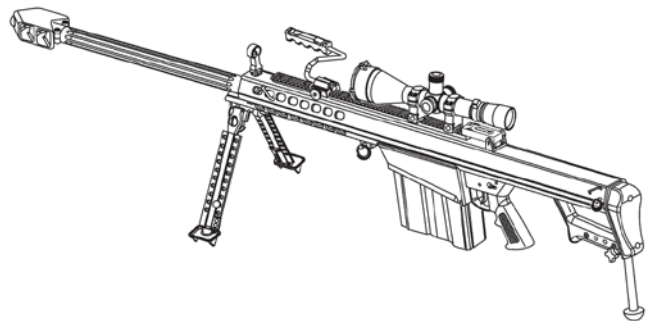
XM 2010 Enhanced Sniper Rifle

Caliber:	.300 Win-Mag
Maximum Effective Range:	1200 m
Weight:	12.1 lbs
Length:	46.5 in.
Action:	Bolt Action
Magazine Capacity:	5 rd



M107 Barret

Caliber:	.50 cal.
Maximum Effective Range:	1830 m
Weight:	28.5 lbs
Length:	57 in.
Action:	Bolt Action
Magazine Capacity:	10 rd



Blackhawk Standards for OP Operations

Maintain local security; noise, light and litter discipline are inherent elements of your security. Ensure OP has critical optics (LRAS3/TRGR/PAS 13).

Minimize your signature when occupying an observation post. Use covered and concealed routes.

Maintain communication with higher. If you lose communication you must move to a location where you can establish communications and implement the loss of comms plan.

Report all information rapidly and accurately.

Maintain constant reconnaissance of all assigned NAIs.

Plan indirect fires to support your withdrawal.

Always submit NFA's for all manned OPs.

Section leaders determine suitability of OP sites based on these criteria:

OP must be able to communicate with Section, and ideally PL/PSG.

OP must allow maximum surveillance of assigned sectors, enemy avenues of approach, and/or NAIs. The dismounted team leader adjusts OP sites accordingly and reports any changes to the platoon leader.

OP must provide adequate cover and concealment for the observers.

OP must have access to concealed routes back to the ORP.

OP locations must not attract attention.

Dead space around the OP must be covered using obstacles/early warning devices.

The parent platform/command post must populate all OPs via FBCB2 IOT allow for the establishment of NFA's.

Ideally, the OP is supported by direct or indirect fires.

PCC/PCI Considerations:

Binoculars / LRAS3 dismount capable (batteries)

Crew Served Weapons (M240L/JAVELIN)

Pyro: Smoke, 1x White Star Cluster

Appropriate Field Gear (Wet/Cold Weather, etc.)

Pad and pen

Portable Radio with required range

Ammunition

Class I (duration dependent)

Night Vision Equipment

Visual Recording Equipment

Rehearsals:

Reporting

Retrograde into and out of direct/indirect contact

SHORT OP- A platoon (2-3 man teams w/ vehicle support) has the capability to man up to 6 OPs for <12 hours

LONG OP- A platoon has the capability to man up to 3 OPs for >12

BLUES:

B: Blend in w/ surrounding area

L: Low to the ground construction

U: Unexpected site

E: Evacuation routes

S: Side of hill, do not silhouette

CWORMS:

C: Compass/GPS (DAGR)

W: Weapon (Crew served, JAV, Personal)

O: Optics (LRAS3/NVG/PAS13/Analog)

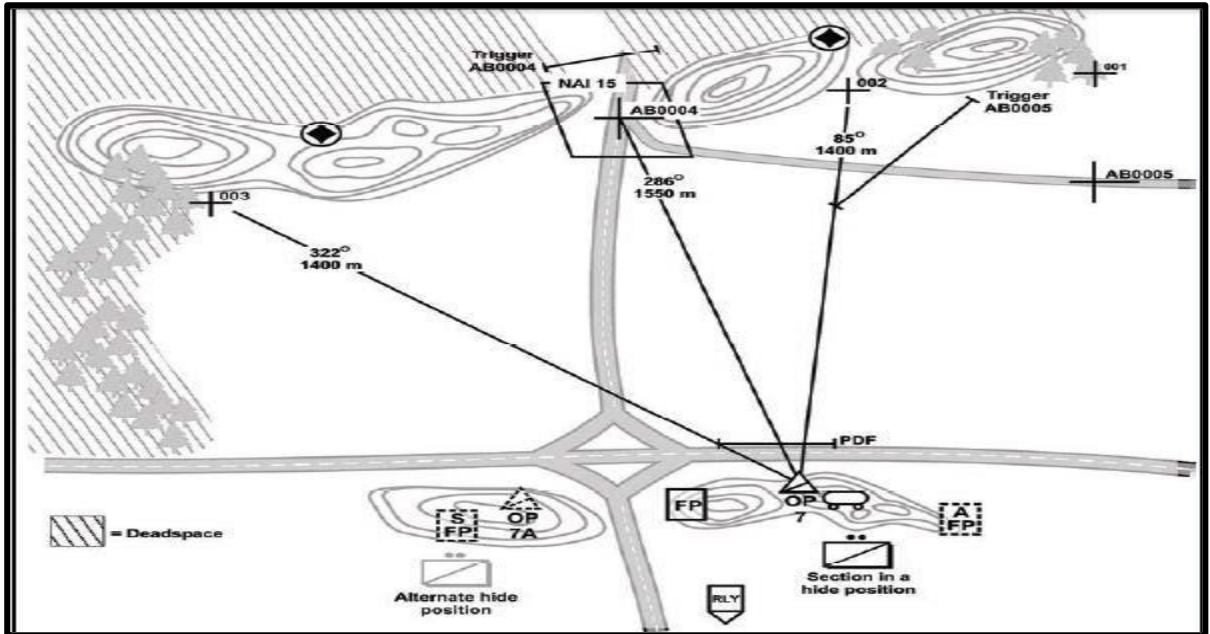
R: Radio (FM/HF/etc.)

M: Map (with appropriate graphics)

S: Seasonal Gear/SOP/Necessary CBRNE

If compromised, the priority for the OP will be to destroy all communications equipment (remove and destroy SKL CIK key, z-out all radios) and any comms information that could hinder friendly operations. Destruction entails complete inability of any force to use the given equipment.

OBSERVATION POST OCCUPATION CARD



1. REMAIN UNDETECTED AND SECURE

- Ensure 360 degree security of OP site
- Camouflage personnel, position, and vehicles
- Identify exfiltration routes in case of compromise
- Strictly enforce noise, light, and movement discipline. (Red lens is visible at a distance.)
- Establish Rest Plan

2. ESTABLISH COMMUNICATIONS

- Confirm radio check in procedures with higher
- Confirm position
- Confirm COMSEC and battery requirements
- Understand how to execute No Communications Plan (Established during OPORD)
- Memorize Squadron frequencies which are constantly monitored

3. KILL WITH FIRES

- Develop IDF targets, call to higher
- Identify trigger lines (Day & Night)
- Report BDA
- Hand off enemy targets to next OP

CALL FOR FIRE = 1Min

GUNS
COMPUTATIONS =
2Min

GUNS LAY ON
TARGET = 2Min

TIME OF FLIGHT =
30Sec

TOTAL = 5:30min

Local/Area Security

Local security is low-level security tasks conducted near a unit to prevent surprise by the enemy. This is an important part of maintaining the initiative. The requirement for maintaining local security is inherent in all missions. The reconnaissance unit may support local security as part of a larger unit or maintain local security independently away from friendly elements. In some cases, as when the unit is part of a CAB or BCT, it maintains its own assembly area and local security within the larger unit's footprint. Local security includes all measures taken to prevent surprise by the enemy, including missions against the unit's location. It involves avoiding detection by the enemy or deceiving the enemy about friendly positions and intentions.

Units that come to a halt during missions dismount to provide local security around their vehicles. This prevents surprise and the loss of Soldiers and equipment to dismounted enemy elements. While dismounted, scouts present as small a target as possible while still observing the area and approaches around their location. They are ready to engage the enemy under favorable conditions such as:

- Employing platoon observation posts.
- Employing patrols to cover perimeter and dead space.
- Establishing threat levels and procedures.
- Enforcing stand-to.
- Enforcing proper communications procedures.
- Employing camouflage.
- Enforcing noise and light discipline.
- Employing sensors for surveillance of the area around the unit.

Area security movement and maneuver

- Troop-Provide accurate and timely intel on terrain and enemy force in area
- Units must conduct offensive reconnaissance to establish presence,
- Make and maintain threat contact with smallest friendly element
- Engagement and disengagement criteria
- Engineer or available assets move with unit most likely to encounter enemy obstacles
- UAV Assets-Confirm/deny enemy template
- COP placement for extended operations (occupied by an augmented platoon)

Intelligence

- Pattern and Red Zone analysis
- ID potential enemy AA-NAI's
- Updated bolo list- 1 per vehicle PROTECTION
- Aviation provides a responsive force capable of reacting to any threat penetration.
- Provide aviation with graphics and NAI matrix

Fires Priority- Main Effort (ME)

Mortars- Organic to Troop

FECC- Moves with BH 3, TRP FIST teams may be thundered to support Squadron FS plan

Sustainment Logistic Assets

- Move to best support maneuver plan based on METT-TC. Confirmed at Log Synch rehearsal.
- Identify key decisions and CCIR

BH 6 moves w/ME, BH3 moves w/SE

TOC- moves IOT maintain comms w/1SBCT

CTCP- Positions to support LOG C2

RETRANS- Positions to maintain comms with 1SBCT

Route Security

Route Security is a specific type of area security mission used to prevent a threat from attacking, destroying, seizing, containing, impeding, or harassing traffic along a specified route or line of communication (LOC).

Route security is defensive in nature but employed aggressively.

INTELLIGENCE

Conduct IPB to identify choke points, bridges, tunnels, critical road junctions, and other built-up areas focusing on the most probable enemy attack method and point obstacle and ambush locations. These determine the essential route area the maneuver forces will secure.

Develop a detailed R&S plan, incorporating modern battlefield techniques to monitor the route such as UAS, forward-look airborne radar, infrared radar, and satellite images.

A daily flight should be conducted over the area by attack-helicopter teams to provide up-to-the-minute intelligence.

Provide intelligence update to company/team leaders before departure.

MOVEMENT AND MANEUVER

One method of conducting route security utilizes route reconnaissance patrols along the route at irregular intervals. This method is used when the entire route cannot be secured using static, mutually supporting positions.

(Economy of Force Method) Another method consists of utilizing static positions (TCPs/COPs) at critical junctions and chokepoints. This method can be combined with the previous one where route recon patrols are conducted between static positions.

FIRES

If COPs are established along the routes, integration of fires from the Troop's organic mortars or Squadron FS assets are critical.

Priority targets shift in conjunction with the troop movement on the route.

Clearance of fires is the responsibility of the maneuver CDR in whose sector the target is located.

SUSTAINMENT

Route security is supported with a logistical/medical package operation out of FOBs.

Routes to each FOB must be annotated on every map.

The priority evacuation method is by ground to the closest FOB if in proximity or air evacuation otherwise.

C2

The squadron designates a QRF to support Route security. Rehearsals include:

- Actions on the objective/obstacle
- Reaction to enemy contact
- Reaction to IED
- Reaction to a near or far ambush

Passage of Lines Checklist

STATIONARY UNIT PROVIDES		PASSING UNIT PROVIDES	
1	Unit designation	1	SOI data-including digital links between ABCS equipment
2	Enemy situation at front	2	Numbers and types of passing vehicles
3	Friendly situation / location of units	3	Passing unit's OBJ and attack plan, PA
4	Unit Mission and Battle Plan	4	Order of march
5	Locations for Passing unit CPs, sensors and FA, EW, ADA, Engineer, Signal and Logistic elements	5	Recognition signal (day/ night)
6	Contact Points, Passage Lanes, Passage Points, Attack positions, o/o AA, RP, TCP	6	Estimated time of arrival of units at each contact point and markings of the first and last vehicles
	Obstacles / Contaminated Area	7	Terrain requirements for passing elements
8	Indirect fires available and target locations		
9	CS and Logistical support to be provided		
10	Decon site location		
11	SOI data-including digital links between ABCS equipment		
12	Near and Far recognition signals		
13	Persons manning contact point/ link up time		
14	Establish common graphic control measures		
15	Use of deception, EW, counter surveillance and smoke		

CONDUCT A PASSAGE OF LINES

STATIONARY UNIT ACTIONS		PASSING UNIT ACTIONS	
1	Meet at contact point with recognition signal	1	Meet at contact point with recognition signal
2	Confirm passing unit's coordinated info	2	Provide changes to previous coordinated info
3	Provide changes to previous coordinated info	3	Confirm stationary unit's coordinated info
4	Ensure passage lane is clear and manned	4	Report to CDR when stationary unit is ready
5	Initiate support	5	Unit moves directly to contact points
6	Assist unimpeded passage with guides	6	Displays recognition signal
7	Report passage completion to BCT TOC	7	Unit moves directly through under control of stationary unit
		8	Unit reports completion of passage to BCT TOC
		9	Collocate TOC with Stationary units TOC if possible

Adjacent Unit Coordination/ Reconnaissance Handover

Adjacent Unit Coordination

Before Mission (NLT 24 hrs out)

- CDR or representative from each unit exchange the following
 - 5W's for their mission
 - Unit graphics to include enemy most probable and most dangerous COA's
 - Frequencies and call signs
 - Near/Far recognition symbols
- CDR briefs subordinate leaders on adjacent unit information
- CDR assigns contact points to subordinate units for adjacent unit

During Mission

- CDR or leader of responsible unit coordinates movement to and execution of contact points
- Coordination must also be conducted for the following situations:
 - Movement into adjacent unit's sector
 - Adjacent unit movement into unit's sector
 - Enemy contact in or near adjacent unit's sector
 - Firing into adjacent unit's sector
 - Enemy movement in or into adjacent unit's sector
 - Any other times deemed necessary

Contact Point Checklist

- Enemy situation (strength, type, location, etc)
- Own unit disposition (task, purpose, front line trace, etc)
- Unit level graphics
- Location of obstacles, IED's, and contaminated areas
- Frequencies and call signs
- Recognition signals
- Tactical support available
- Location of next contact/coordination point

Reconnaissance Handover

Planning

- Coordinate for redundant surveillance to assist in maintaining enemy contact during handover
- Coordinate location and criteria for handover with higher
- Coordinate a communications plan between units
- Coordinate fires, exchange fire support plans, and coordinate fire control measures
- Coordinate target handover
- Coordinate graphic control measures
- Coordinate collocation of CP's
- Coordinate transfer of C2
- Plan for integration of nondigital elements

Preparation

- Find handover criteria in the higher headquarters order
- Establish communications plan between the units
- Establish recognition signals to prevent fratricide
- Understand and exchange information requirements
- Coordinates to all indirect fire grids
- Rehearse

Relief in Place Checklist

A. Link up.

- (1) Units contact each other via FM(P) net to work out exact linkup location (FBCB2 is Alternate).
- (2) Unit leaders at each relieving point identify link up point (rotate to avoid patterning).
- (3) Both units responsible for security during link up.

B. Information Exchange.

- (1) Location of weapon systems by type (sniper rifles, crew served, etc.).
- (2) Last known enemy contact(s) (SALUTE report and form of contact [i.e. Indirect, Direct, Observation or Obstacle/IED]).
- (3) Last known suspicious activity (SALUTE report and form of contact [i.e. Indirect, Direct, Observation or Obstacle/IED]).
- (4) All Friendly unit (to include Local Security Forces and MPs if known) dispositions (location, composition, orientation, scheduled patrols and FM frequencies).
- (5) Known adjacent unit large scale operations.
- (6) UAS and Attack Aviation scheduled windows of support, flight plan, etc.
- (7) Raven / Shadow Operator GO.
- (8) Position Range Card exchange (Terrain orientation, TRPs, sectors of fire, RFLs, obstacles, etc.).
- (9) Unit Fire Plan (Friendly EAs, Fields of fire, Fratricide prevention measures, etc.).
- (10) Unit Obstacle Plan (if any).
- (11) MEDEVAC LZ (location and confirmation TOC has location).
- (12) Any additional Graphic Control Measures created during that shift.

C. Coordinate.

- (1) Sequence of Relief (east to west, north to south, etc.).
- (2) Turnover of OPs (mounted and dismounted).
- (3) Turnover of C2.
- (4) Relieved unit exfil routes.
- (5) Transfer of any Classes of supply or equipment that remain at the position.
- (6) Transfer of any personnel that remain at the position.

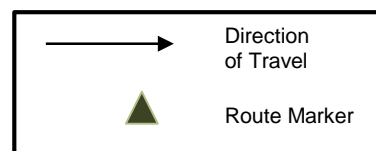
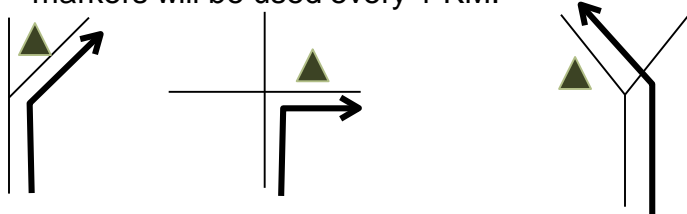
D. Exfil and assumption of mission.

- (1) RIP preferably done during hours of limited visibility.
- (2) Unit begins sequence of relief.
- (3) Relieved unit moves along planned exfil routes to release point.
- (4) Relief is conducted quickly and quietly maintaining the highest level of security.
- (5) Transfer of responsibility for overall security now to relieving unit.
- (6) Relieving unit and relieved unit operate on relieved units net until RIP is complete.
- (7) Relieving unit subordinate positions inform relieving unit leader that all positions are established.
- (8) RIP complete when relieving unit informs SQDN TOC via FM.

Route Marking SOP

Instructions For Use

- Route markers will be placed on the left side of the road.
- Drivers will always keep markers to their left while navigating the route.
- The marking will be facing towards the driver so that the route is marked in only one direction.
- Markers will be placed at all major intersections. When no intersections are present, markers will be used every 1 KM.



Example:



Marking Standard

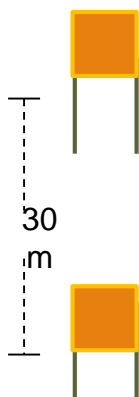
- Engineer stakes will be used to mark the routes.
- White engineer tape will be used at all times, with an IR chemlight attached to the convex side of the stake during night operations.

Passage of Lines Marking SOP

For Passage of Lines Checklist and Stationary/Passing Unit Responsibilities, see page "Tac 1" in Squadron TACSOP.

Day

Far: 2 pickets with a VS-17 panel or orange cone in between them.



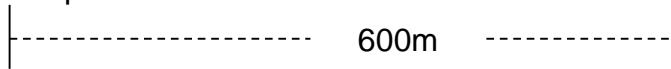
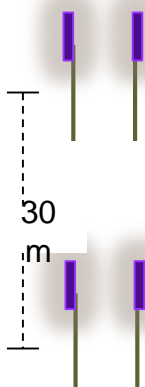
Near: VS-17 panels, orange side towards Passing Unit, attached to the rear of the Strykers closest to the passing lane.



Direction of Movement

Night

Far: 2 pickets with IR chemlights attached at the top.



*Soldier will utilize an IR buzz saw inside the far-side passage point to get the attention of the Passing Unit.



Near: 2 IR chemlights attached to rear antennas of the Strykers closest to the passing lane.



Quartering Party - Troop

COMPOSITION

- 1.XO/1SG -Leader of the quartering party, he is overall responsible for the execution of the mission, selection of the site and establishment of the AA. Times the road march route and ensures that it is trafficable in conjunction with the senior scouts.
- 2.CBRNE specialist (if CBRNE threat exists)-Responsible to ensure that the appropriate chemical defensive techniques are utilized and that the AA is free of contamination prior to dismounted clearing of potential AA. The Quartering Party will SP in MOPP 2. At a designated location determined by the XO/1SG the Quartering Party will stop, upgrade to MOPP 4, and then continue into the AA. Once in the AA, the CBRNE specialist will execute unmasking procedures.
- 3.Mortar section gunner -Responsible to take grids in potential locations for the MCVV after the area has been cleared. Will locate and establish two firing points for the mortar tracks and ensure that they are set on the priority target designated by the commander or XO.
- 4.Senior Scout Section-Each scout platoon will send their senior scout with the quartering party. Their dismounts are responsible for marking of vehicle positions within their platoon.
 - a.1st Platoon Senior Scout: Leads the quartering party team on the road march. Responsible for marking and locating bypasses on the route to the AA. Provides far side security.
 - c.2nd Platoon Senior Scout Provide near side security
 - e.1ST and 2nd Platoon Dismounts: Dismounts are responsible for clearing the AA by conducting a detailed area recon of the site, ensuring that there are no obstacles or booby traps in the AA and marking any that are found. Dismounts will clear the area with a mine detector as well. Once the area is clear the dismounts will mark potential vehicle locations with the appropriate flags or chemlights for their respective platoon. Upon completion of this task one dismount from each platoon will return to the entry point, link up with the XO/1SG and be prepared to guide their respective platoons into position.
- 5.Dismount per vehicle of occupation party-These are the most vital players during the occupation phase. They are responsible for linking up with the platoon representatives at the RP and guiding the vehicles into the proposed vehicle locations.

Site Unsuitable Plan: XO/1SG informs CO that chosen location is unsuitable, and recommends new location. CO confirms.

EQUIPMENT:

- 1.Vehicle marking flags
- 2.Chemlights
- 3.CBRN detection equipment
- 4.Flashlights w/filters
- 5.3xPRC-119 w/ backpack
- 6.Engineer tape and stakes
- 7.Mortar equipment (DAGR, marking sticks, plotting board)
- 8.Mine detection kit
- 9.Map and graphics
- 10.VS-17 panels

PRIORITIES:

- 1.Area reconnaissance of assembly area
- 2.Secure the area
- 3.Organize the area
 - Select and mark unit and vehicle positions
 - Improve and mark routes
 - Mark or remove obstacles
- 4.Perform guide duties
 - Link-up at RP
 - Lead units to positions

Sequence of Events:

- a. Upon arrival at the RP 2nd Platoon elements establish near side security. The HQ elements stand fast at the RP.
- b. 1st Platoon elements clear through the proposed site mounted to establish far side security.
- c. Once far side is set, the CBRNE NCO executes CBRNE recon. If the site is all clear than the quartering party may unmask. If not the decision has to be made whether or not the site should be moved or remain where it is.
- d. Dismounts commence clearing the area once the CBRNE recon is complete and judged clear. Each individual team must ensure that they check the area for booby traps, mines and obstacles. If any are located the engineer tape is to be used to mark them until they can be removed. Once the area is completely clear the dismounts commence marking the locations for their platoons.
- e. HQ vehicle moves to set the CP location and dismount the mortar section sergeant so that he can lay in positions for his guns.
- f. Once positions are marked and platoon representatives are co-located with the XO/1SG at the RP, the XO/1SG calls the main body to let them know that the location is set and ready to be occupied.
- g. The main body rolls through the RP while each guide picks up their platoon and sets vehicles in their initial positions. Platoons call set to the TOC when vehicles are set in their locations. After this the Troop begins Assembly Area procedures as dictated in the priorities of work

Quartering Party - Squadron

1. **Quartering parties have four responsibilities:**
 - a. Conduct Reconnaissance
 - b. Secure the Area
 - c. Organize the Area
 - d. Guide Arriving Units
2. **Conducting Reconnaissance-** An area reconnaissance is performed to determine suitability of the area. Besides assessing terrain and routes, the Squadron Quartering Party conducts CBRN reconnaissance to ensure the selected area is clear and communications reconnaissance to emplace the Squadron TOC and required RETRANS.
3. **Securing the Area-** The quartering party also provides initial security of the area until the main body arrives. Aerial reconnaissance (i.e., UAS) can help the quartering party secure the assembly area by conducting screening missions and surveillance of possible threat avenues of approach.
4. **Organizing the Area-** The SQDN Quartering Party must select and mark unit and vehicle positions, improve and mark routes, and mark or remove obstacles.
5. **Guide Arriving Units-** Guide duties include meeting units at the RP and leading them to positions.
6. **SQDN Quartering Party Composition-** The SQDN Quartering Party will be comprised of the following elements:
 - a. SQDN TAC (+): S3, FSO, OPS SGM, CHEMA, RETRANS
 - b. A TRP Quartering Party (QP)
 - c. B TRP Quartering Party (QP)
 - d. C TRP Quartering Party (QP)
 - e. E TRP Quartering Party (QP)
 - f. Quartering Party from any attached Company/Troop
 - g. 1 x Mortar Section (From supporting operation 1 [SO1])
7. **Scheme of Maneuver**
 - a. **Mission Command:** The SQDN S3 will be the OIC of the SQDN Quartering Party. The OPS SGM will be the NCOIC.
 - b. **OOM:** 1 x QP, SQDN TAC (+), 1 x QP, Mortar Section, 2 x QP
 - c. **MOPP:** The SQDN Quartering Party will SP in MOPP 2. At a designated location determined by the SQDN S3 the SQDN Quartering Party will stop, upgrade to MOPP 4, and then continue into the TAA. Once in the TAA, the SQDN CHEMA will execute unmasking procedures.
 - d. **Area Reconnaissance/Security:** Once the CHEMA confirms the TAA is clear, the SQDN Quartering Party will downgrade to MOPP 0 and will execute area reconnaissance to clear the TAA of enemy elements and identify all obstacles. When complete with clearing the TAA, the SQDN Quartering Party will establish 360 degree security.
 - e. **Communications:** The SQDN TAC(+) will identify the best location for the SQDN TOC and emplace the RETRANS as needed.
 - f. **Emplacement:** The Quartering Parties from the Troops will identify the best locations for their Troop elements. One section from the Platoon will execute link-up with the Troop at the RP when it arrives and guide it into position within the TAA IOT facilitate rapid occupation.

Site Unsuitable Plan: S3 informs SCO that chosen location is unsuitable, and recommends new location. SCO confirms.

Troop Quartering Party Checklist

Quartering Party Checklist		
STEP	ACTION	X
1	Inspect intended assembly area for: Enemy; CBRN Contamination; Mines; Obstacles; Cover; Concealment; Drainage; Ground surface to support vehicles; Adequate entry and exit; Adequate dispersion	
2	Secure Troop Area until unit arrives	
3	Establish and maintain communication	
4	Clear or mark obstacles	
5	Select general location of vehicle positions; mark places	
6	Select cover/concealed route to RP; provide guide to Main Body	
7	Guide Troop into area	
8	Brief Troop Commander	

Assembly Area

Immediate actions.

Establish 100% security

Position vehicles at least 300m from SQDN TOC; at least 25m apart

Reduce to REDCON 2 on Troop short count (XO/1SG Decision)

Establish OPs

Assign sectors of fire, TRPs, trigger lines

Conduct hands-on sensitive items check

Develop range cards and sector sketches

Arrival +30 minutes:

Reduce to REDCON 3 (XO/1SG Decision)

Emplace CBRN alarms if CBRNE threat exists

Coordination with adjacent units complete

PLT Sector Sketch to Troop

Arrival +60

Troop Range cards/sector sketches to Squadron.

Arrival +90 minutes:

Reduce to REDCON 4 (XO/1SG Decision)

Troop fire plan complete.

Priorities of work:

1. Security
2. Weapons/LRAS checks
3. Maintenance
4. Resupply
5. Rest/Hygiene
6. Continual position improvement

Arrival +120 minutes

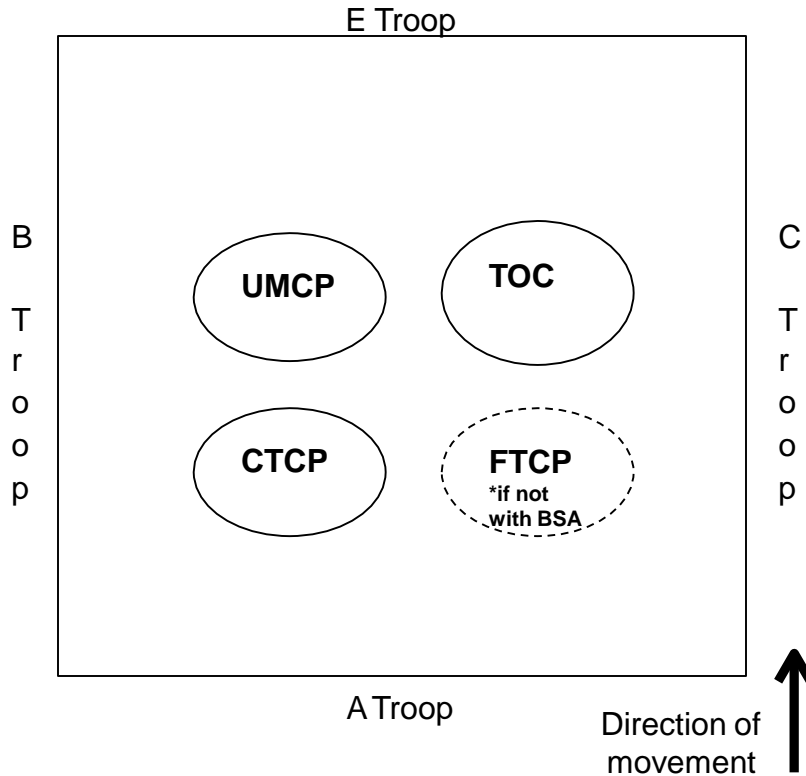
Report troop status to higher HQ.

Implement rest plan.

Establish personal hygiene and field sanitation site, establish field sanitation measures (Cat holes-Field latrines-Plastic bags-Burying procedures for garbage during operational deployments IAW host nation regulations)

Troop defensive plan forwarded to higher headquarters via FBCB2.

Squadron Assembly Area



Intelligence- The S2 completes IPB of the area, identifying enemy avenues of air and ground approach into the new assembly area

Maneuver- The commander or S3 chooses a method for occupation (whole Squadron assembly area or separate subunit assembly areas) and tentative unit locations based on METT-TC.

Fire Support- FS requirements are coordinated with units already positioned near the new assembly area. Support shortfalls between requirements and availability are coordinated with either higher or adjacent units.

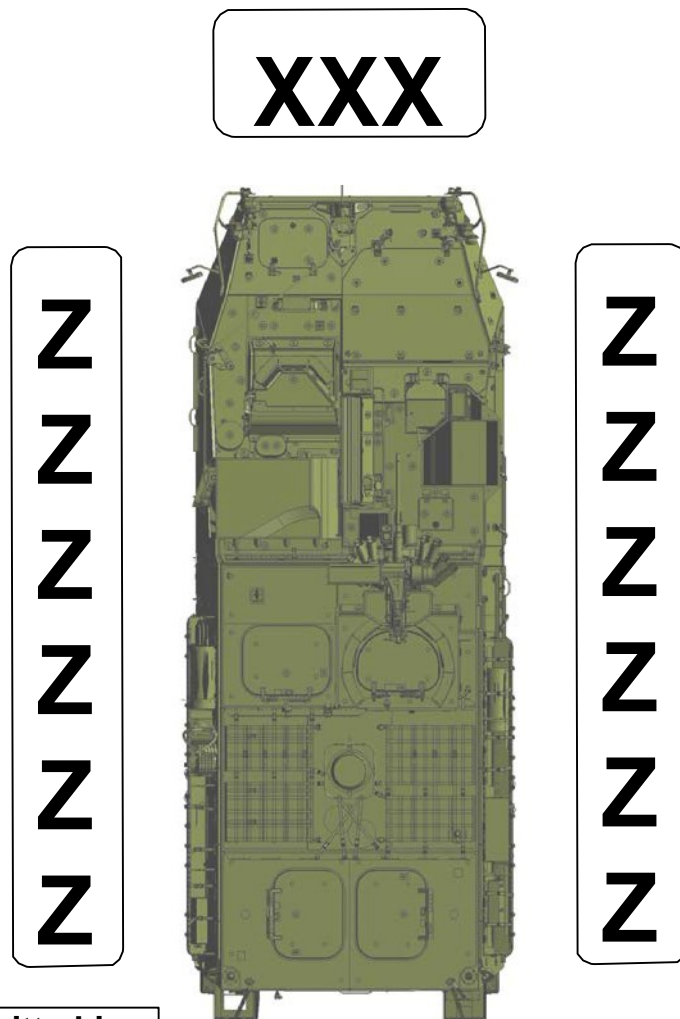
Engineer Support- The squadron is responsible for all mobility and survivability tasks in the assembly area.

Logistics Support- S4 recommends CSS positioning and typically positions the combat trains near the squadron main CP and centered within the AA.

Command and Control- The HHT CDR and OPS SGM mark tentative locations for squadron C2 facilities. Positioning of the Squadron CP should occur early in the AA's occupation to insure correct positioning and facilitate positioning of Troop CPs. The OPS SGM must also determine procedures for entering and exiting the AA and control movement within.

Sleeping Areas

- Troopers will sleep in or on vehicles if possible.
- The only options for sleeping on the ground are next to a vehicle (only on the side, not in front of or behind) or in a tent.
- All sleeping areas on the ground will be marked with white engineer tape and colored chemlights. (No IR Chemlights.)
- Sleeping areas will not be on or next to anything that could be perceived as a route.
- No cots will be set up on top of vehicles.



X= Sleeping NOT permitted in marked location.
Z= Sleeping IS permitted in marked location.

Air Assault Planning

1. Air Assault: Operations in which air assault forces (combat, combat support [CS], and combat service support [CSS]), using the firepower, mobility, and total integration of helicopter assets maneuver on the battlefield under the control of the ground or air maneuver commander to engage and destroy enemy forces or to seize and hold key terrain.

2. The Reverse Planning Sequence: Successful air assault execution is based on a careful analysis of METT-TC and detailed, precise reverse planning. Five basic plans that comprise the reverse planning sequence are developed for each air assault operation.

- (1) The ground tactical plan (GTP).
- (2) The landing plan.
- (3) The air movement plan.
- (4) The loading plan.
- (5) The staging plan.

b. These plans are not developed independently. They are coordinated from the Air Assault Task Force (AATF) through BCT BAE to make best use of available time. The ground tactical plan is normally developed first and is the basis from which the other plans are derived.

3. Deliberate air assault operations require time to plan, brief, and rehearse. The sequence of actions for a deliberate air assault is below.

a. GTP concept is developed between the BCT and BAE prior to Air Mission Coordination Meeting (AMCM). Optimally, the ground unit has issued its OPORD prior to the AMCM with the BAE conducting initial aviation planning and verifying the supportability of the air assault phase of the operation.

b. Initial planning is conducted via telephone, SIPRNET email and CPOF between approval elements and staffs.

c. Initial Planning Conference (IPC) is the first meeting between the AATF staff and CAB. Currently not normally conducted.

d. Air Mission Brief (AMB) is conducted via CPOF, Ventrillo. Participants are selected and, whenever possible, AMB should be conducted face to face with representatives from all involved parties in attendance.

f. PZ Rehearsal: Synchronizes actions that occur on the pickup zone. If conducted, PZ rehearsals occur at the staging area prior to departure. The rehearsal is initiated with static load training and culminates with actions on the PZ.

g. Combined Arms Rehearsal: Currently not normally conducted.

4. Hasty air assault operations may be directed by higher headquarters. Hasty air assaults may be executed in support of urgent time critical requirements such as TSTs, CSAR, DRRF. Air crews may depart the Brigade assembly area with only a PZ for mission information. In such instances mission planning may be accomplished by the executing air crews at the PZ with the supported units. Aircrews exercise best judgment and bring their expertise to the supported units to make this hasty operation successful.

Air Assault Planning

ESTABLISH A LANDING ZONE

Site selection: based on METT-TC, location from OBJ, and size of element being moved.

Size of LZ: Helicopter requires a relatively level landing area; 25m diameter for 1xUH-60 (plus 40m for each additional UH-60 in lift); 35m diameter for 1xCH-47 (plus 55m for each additional UH-60 in lift); 100m for any bird landing in snow/sand (plus 150m per additional).

Surrounding obstacles increase HLZ size by 50m buffer or 5:1 ratio (whichever greater)

Ground slope must be no more than 15 degrees.

Under 7 degrees helicopter should land up slope.

Ground must be firm enough that the helicopter will not become bogged down when loaded. If it is not firm, notify pilot to hover.

Loose debris that can be blown around should be removed.

Obstacles should be removed or marked (anything 18" high, wide or deep or larger).

LZ should be devoid of tall trees, telephone lines, power lines, and similar obstructions.

LZ if at all possible should be secured and pilots notified of enemy activity in the area.

LZ should offer some degree of concealment from enemy observation and direct fire. *The PL and PSG are responsible for ensuring the LZ is properly secured prior to the arrival of aircraft.*

PERFORM A HELICOPTER INSERTION

Platoon leader designates chalk leaders for every helicopter flight.

Platoon HQ maintains radio communications with helicopters, forward operating base, and personnel on the PZ.

Platoon Leader and Platoon Sergeant cross load key personnel and weapons depending on:

- Amount of room on aircraft

- Location of LZs and platoon/section sectors

- Platoon missions

CHALK LEADER'S RESPONSIBILITY:

Make a flight manifest of every member on their chalk with: Rank, Name and SSN #

Fight Manifest: 1 list to crew chief, 1 list to PL for turn in to forward operating base

Bump Cards: 1 on each chalk member and 1 from each chalk member held by chalk leader

Ensure all personnel have ID card and ID Tags

Chalk Leader briefs and executes the following:

- LZ and PZ rendezvous point

- Type of aircraft

- Allowable cargo

- Contingency for downed aircraft

- Timeline to set in PZ posture/load aircraft

- Sequence of loading the aircraft (personnel/equipment)

- Guides the aircraft to designated area

- Prior planning with crew chief

- Leads chalk from PZ posture to the aircraft

- Ensures accountability of all personnel in chalk

- Loads chalk, sits with crew chief and talks to pilots

Air Assault Planning

Establish an HLZ

Inverted Y is composed of VS-17 Panels (day) Chemlights (night).

VS-17 Panels must be anchored by stakes or field expedient means at all corners.

Chemlights must be anchored by stake and 550 cord.

Mark additional landing points with a pair of chemlights or VS-17 panels 5 meters apart, located at the center of planned touchdown point. Aircraft will land 5 meters to the side of the marking. Increase distance to 10m for cargo A/C.

Use a chemlight on a string swung in a circle (buzz saw) for far recognition.

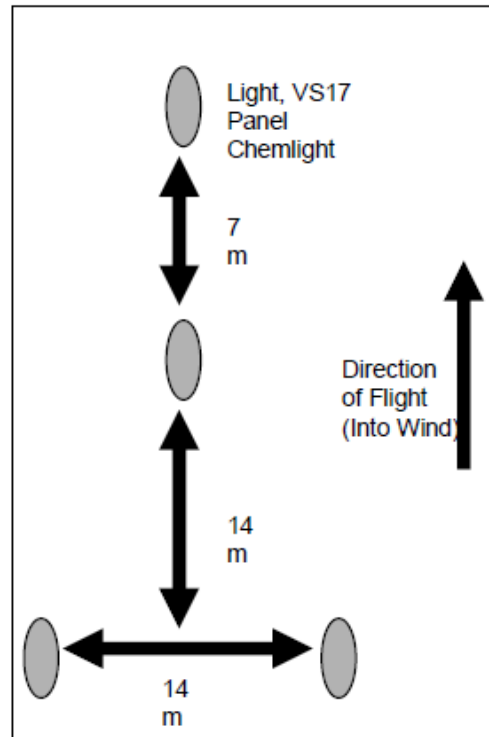
Chemlight color preference in order:

- IR
- Yellow
- Orange
- Red *

* Red chemlights should be used to mark obstacles on the HLZ, but can be used to signal aircraft (pilots see red chemlights as "white" through NVGs).

** Filters on Pilot NVGs do not allow them to see blue or green chemlights.

If sufficient numbers of VS-17 panels are not available, alternate means of LZ/PZ markings are single VS-17 panel (orange side up) or spinning chemlight on string overhead (buzzsaw).



LZ / PZ CONFIGURATION

HLZ Kit, M2. 50 CAL can Must be carried by all Scout ICVVs

IR Strobe: NSN 6230-01-411-8535
10ea Red chemlights
10 ea IR chemlights
10 ea Green chemlights
4 ea 9 volt batteries
10 ea AA batteries
1 ea VS-17 Panel
2 ea 9-line MEDEVAC card
25 feet 550 cord

Hasty Air Mission Checklist

1. MISSION #:
2. SUPPORTED UNIT:
3. SUPPORTING UNIT:
4. TIME REQUIRED:
5. MISSION (AND CONCEPT SKETCH):
6. #/TYPE OF AIRCRAFT:
7. H-HOUR:
8. PICK-UP TIME WITH REHEARSAL TIME BUILT IN:
9. PZ LOCATION (AND SKETCH):
10. PZ FREQUENCY
 - A. UNIT
 - B. AIRCRAFT
11. PZ MARKING (DAY/NIGHT)
12. LANDING HEADING
13. LANDING FORMATION
14. DOOR ENTRY
15. NUMBER OF TROOPS
16. NUMBER/TYPE CARGO LOADS
17. TAKE-OFF DIRECTION
18. TAKE-OFF FORMATION
19. FALSE LZ GRID
20. ROUTE
21. TIME OF FLIGHT
22. LZ GRID (ALT IF REQUIRED)
23. LZ SKETCHES:
24. LZ MARKING (DAY/NIGHT)/LZ FREQ and Call Sign (if Pathfinders are available)
25. ATTACK AVN CONCEPT
26. LZ PREP FIRES
27. LANDING HEADING
28. LANDING FORMATION
29. WEAPONS STATUS
30. DOOR EXIT
31. TAKE-OFF DIRECTION
32. NUMBER OF TURNS REQUIRED
33. ABORT CRITERIA
34. WEATHER CALL
35. BUMP PLAN
36. ABN FREQ
37. CAN/CMD FREQs

AIR MISSION BRIEF FORMAT

Roll Call (Minimum Requirements)

- Air Assault Task Force Commander
- Air Mission Commander
- Ground Force Commander
- Fire Support Officer
- S-2 Representative
- Flight Lead
- S-3 Air, S-4, S-6
- Aviation TF S-3

Agenda

- Task Organization
 - Brief Special Equipment to be carried on A/C
- Timeline
 - H-Hour Based to include proposed W/U and W/D Times
- Situation
 - Weather; Friendly Situation; Enemy Situation; SIGACTs
 - Emphasize ADA Weapon Systems and threats to A/C
- Air Assault TF Mission
 - Brief SQDN Mission and TRP Specific missions as they apply to Air Mission
- Commander's Intent
- Ground Force Scheme of Maneuver
 - Brief Call signs for all ground units
 - Brief EXCHECKs as required
 - Abort Criteria
 - Cherry/ICE Criteria
 - Minimum Force Required
 - Maximum Delay Time
- Concept of Fires
 - Brief firing unit locations; ROZs; active GTLs; de-confliction methods
 - Brief CHERRY/ICE criteria and friendly actions
- Aviation Mission
 - CAB provides LZ/PZ diagrams with imagery
 - Briefs air route and timeline
 - Confirms EXCHECK calls
 - Graphically depict landing formations and whether right/left door exit when applicable
 - Brief templated landing heading
- Service and Support
- CASEVAC/MEDEVAC Plan
- Command and Signal
- Risk Assessment
- Air Assault TF Commander Comments

RAVEN SPECS

System Limitations



Max Alt 10'500 ft
MSL

Min Alt
No Restriction

Max Wind Spd 20
kts

Max Rain
0.25"/hr

Min Temp -29°C

Max Temp 50°C

Softpack
Immersion 2 m
for 2 hrs

Max Sand/Dust 20 kts

Raven Operations OP Packing List

1. AV Complete with EO&IR
2. Repair Tape
3. 6 Snap Screws
4. 3 Propellars
5. 3 Charged AV Batteries
6. 6 5590's Rechargeable GCS Batteries
7. GCS Complete with Omni and Patch Antennae
8. Operator Manual
9. Falcon View Laptop

Airspace Control Measure Request

TAB A: Airspace Control Measure Request (ACMR)

DTG Request Submitted:	
Requested Identifier (Name of Route, etc.)	
Requesting Unit:	
POC:	
Telephone Number:	
Contact Frequency:	
Measure Type (ROA, Route, etc.)	
Minimum Altitude:	
Maximum Altitude:	
Starting DTG:	
Ending DTG:	
System (Raven, Wasp, etc.)	

Grids or ACPs Identifying the Measures: Grids must start at the Top left and continue clockwise until complete.

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Radius of Circle (if defined by single point):

Width of Route (typically 1-2 km):

Comments (Task purpose required in this section.

(i.e. Convoy route recon)

--

OFFICE USE:

Received By:	
Sent to Higher AC2 (DTG):	
Approved by Higher AC2 (DTG):	
Sent back to Requestor (DTG):	
Mission Number:	

The ACMR is designed to ensure dedicated airspace for unit SUAS operations. This form must be submitted to ADAM/BAE in order to synchronize use of airspace. ACMRs must be submitted early in the planning process, with a submission date of at least 72 hours in advance, in order to ensure airspace has been coordinated with higher, adjacent, and subordinate units.

NOTAM REQUEST

DATE SUBMITTED: 13 October 15

RANGE CONTROL LOG:	NOTAM NUMBER: _____
START DATE: 16 November 2015	START TIME: 0900
END DATE: 20 November 2015	END TIME: 2359
DAILY TIME INTERVAL: YES, Excluding weekends	

TRAINING AREA REQUESTED: Range 60	
ACTIVITY: RAVEN OPERATIONS	
TYPE OF AIRCRAFT: RAVEN	NUMBER OF AIRCRAFT: 1
MAX ALTITUDE: 1,000 AGL	CALL SIGN: Blackhawk Raven
REMARKS: RAVEN AIRCRAFT WILL FLY AT A MAXIMUM ALTITUDE OF 7,500 MSL IN Range 60 FROM 16-20 NOV 2015. UNIT WILL NOT OPERATE OVER THE WEEKEND. UNIT WILL MAINTAIN A MINIMUM ALTITUDE OF 6,500 MSL. UNIT WILL MAINTAIN CONTACT WITH RANGE CONTROL AND BAAF AT ALL TIMES IOT COORDINATE WITH OTHER AIRCRAFT. AIRCRAFT WILL BE PROGRAMMED TO RETURN TO LAUNCH POINT SHOULD THE AIRCRAFT EXPERIENCE LOSS OF LINK.	

UNIT: 2-1 CAV, 1 SBCT
REQUESTER: (your name)
PHONE: (your POC information)

BUTTS USE ONLY

The purpose of the above document is for SUAS operations on FT Carson. Ensure you fill out form completely and submit to Range Control scheduling section. The form is due to range control NLT 3 days prior to execution. The above form is pre-filled and serves as an example for how to properly fill out a NOTAM.

Raven Operations Checklist

Pre-mission

1. Perform PCC and PCI on system equipment (replace broken or damaged equipment)
2. Charge all system batteries (AV, GCS and RSTA laptop batteries)
3. Receive mission brief (targets, launch/recovery site, weather, flight restrictions, DDL channel, etc.)
4. Plan and save airspace (ROZ) using the FalconView drawing tool (time permitting)
5. Pack all necessary equipment (enough AV/GCS batteries for mission, spare parts, 50' cable, etc.)
6. Obtain a working radio and set the correct frequencies/channels (get callsigns for all parties)
7. Begin airspace activation procedures (30-60 mins prior to launch time)
8. Setup/Brief RVT use for leadership in vehicle, TOC or HQ area (provide batteries and hot swap procedures, place antenna towards mission area, set channel on hand controller- leave TX OFF)

Mission

1. Site survey and bearings (use available resources to create a site shade and/or to block wind)
 - a) Note your bearings with a compass for your location- N-E-S-W – and mark North on ground.
2. Select a clear AV landing area away from obstacles (note wind direction for landing)
3. Begin Airspace Activation Procedures (5-30 mins before launch time) to get launch code and channel/locator from Brigade Aviation Element.
4. Assemble AV and retrieve and AV logbook (tape wing tips to center wing and/or make skin repair to damaged areas on the AV)
5. Assemble GCS (ensure all GCS cables are not a trip hazard, install hand controller hood, cover hub from direct sunlight, and install laptop shade, use rocks in GCS bag to stabilize the antenna tripod)
6. Ensure clear line of sight from the GCS antenna and to the AV/Mission area
7. Keep Raven Operations checklist, technical manual and field repair kit available (Emergency procedures/props/snap screws/tape, etc.)
8. Start/login to RSTA laptop- standard username: raven PASSWORD: 03SUav07**
9. Open COMM port on SUAS toolbar (complete the operator electronic logbook entries)
10. Select the assigned channel on the AV and put the AV battery in the AV- place the AB facing North
 - a) (Channel/Locator = Channel is for the AB/GCS and locator channel is set in the Beacon Sub-menu-turn locator ON)
 - b) Only use the assigned channel and do NOT change the locator frequency from 216 MHz
11. Get communication with the AV (Radio Menu – Set Channel as AB/Turn TX Power ON/select control box for AV)
12. ON the Laptop: load a UAV origin mission once the AV has GPS lock (map will automatically center on AV)
13. Load DTED to Hub as required
14. Scale/Zoom map in/out to desired level (display or create the ROZ if not displayed)
15. Plan waypoints/rally mode/altitudes for the mission (ensure all waypoints are within the ROZ)
 - a) Ensure RALLY altitude clears all mission area terrain elevations.
16. Plan E-L waypoints to land AV into the wind and will avoid obstacles when landing at L waypoints
17. Ensure additional/spare batteries for AV and GCS are charged and readily available

Establish Urban OP/Gain a Foothold/Cordon & Search

Gain a Foothold

In order to assist a larger unit in securing a foothold a reconnaissance unit can use its weapon sights, including thermals, to conduct long-range reconnaissance. The recon unit can also provide support for infantry assaulting an objective. They can be asked to:

- Attack by fire
- Support by fire
- Attack with the infantry
- Call for and adjust indirect fires

Establish an Urban OP

Inside an urban environment scouts can only clear small area, to consist of no more than three buildings. They reconnoiter buildings to determine suitability for potential OP's. The following principles of building reconnaissance apply

- Surprise
- Speed
- Controlled violent action

•Research has shown that on average only three individuals in ten actually fire their weapons. Each individual Scout must be psychologically prepared for the possibility of close quarter combat.

Cordon and Search

A. Critical Tasks During Execution

(1) Isolate

- Move Rapidly/Covertly to the Objective
- Achieve surprise
- Set Cordons; choose method:
 - a) Inner then Outer
 - b) Outer then Inner,
 - c) Simultaneously
- Improve positions

(2) Secure Personnel on the Objective

- Use interpreter to locate head of household
- Remove all personnel from building and secure them in area that you clear quickly
- Separate males from females and children & search all personnel
- Begin tactical questioning

(3) Clear Building

- Move sequentially
- Mark rooms day and night when clear
- Remove detainees as discovered

(4) Search Building

- Complete detailed search when entire building is clear
- Leaders supervise search teams

(5) Detain Enemy Personnel

- Search and secure detainees at detainee collection point
- Conduct hasty tactical questioning on site
- Mark Detainees with POW tag which describes the 5Ws of the capture and links detainee to contraband
- Ensure detaining soldiers identified to write statements

(6) Document and Remove Evidence

- Take photos of contraband where it is found
- Take photos of detainees with contraband if possible
- Use evidence vouchers when removing evidence

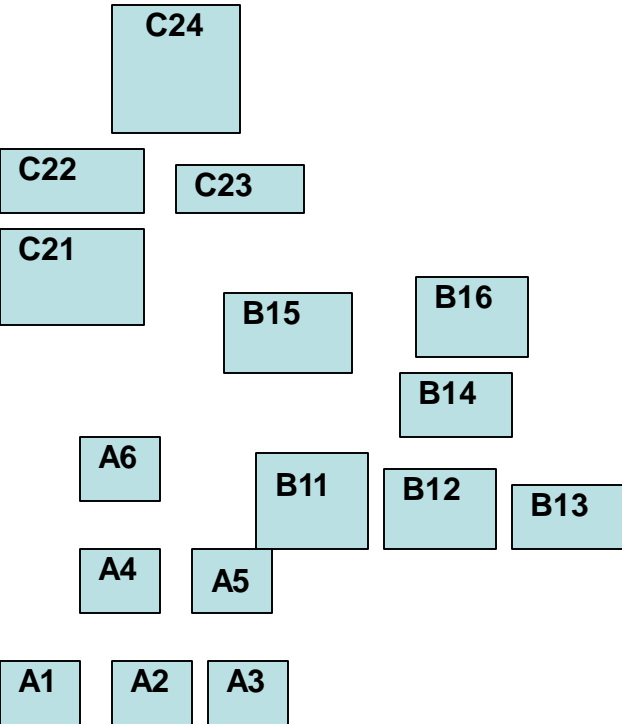
(7) Deliver Command Message

- Brief talking points to all soldiers prior to SP
- Explain purpose of search to villagers with a TPT or use of handbills
- Identify local leaders or heads of household to brief on the purpose of the mission
- Have a plan to control and orient any media

(8) Exfiltrate

- 100% accountability of personnel, equipment, detainees, and evidence prior to movement
- Move sequentially, multiple routes preferred
- Detaining soldiers move with detainees and evidence to BN S-2 or HF to preserve chain of custody

Urban Operations Considerations



PLANNING CHECKLIST:

1. Develop HUMINT collection plan
2. Standardization of imagery products
3. Determine recon and surveillance objectives
4. Plan infil and exfil routes
5. Sync HUMINT, aerial and ground recon plans
6. Coordinate for fire support (Most reactive/collateral damage estimate.)
7. Develop comms and sustainment plan
8. Continue improving urban ops sketch
9. QRF Planning

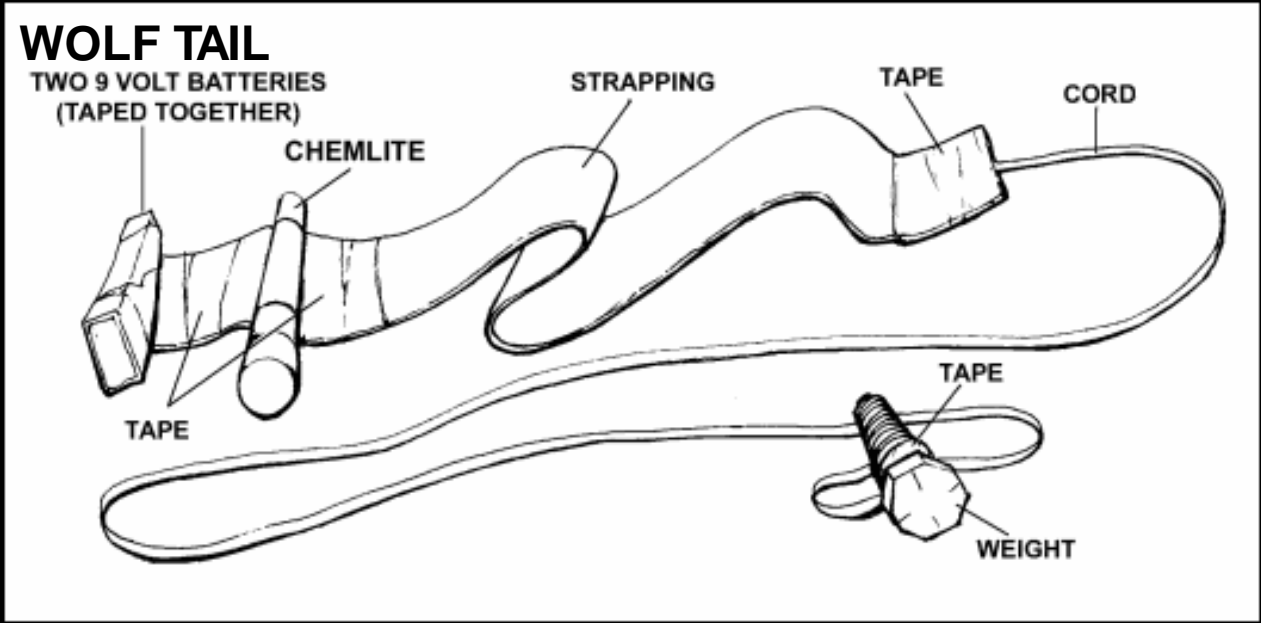
URBAN ISR CONSIDERATIONS:

- Early Deployment of Assets
- Diversity of Assets
- Focus Assets on CCIR
- Integration of Assets
- Flexibility of ISR

Urban Sketch Labeling:

- BLDG. and BLDG. Group Numbering starts at 6 o'clock moving left to right and laterally upwards.
- Numbering BLDG. groups; Area A: BLDGS. 1-9, AREA B: BLDGS. 11-19, AREA C: BLDGS. 21-29 etc.

Occupied buildings will be marked with a wolf tail outside windows on cleared levels.



TCP Checklist

TCP Procedures		TCP Kit	Item	QTY
Recon of Search Area-Minimize Hazards Due to IED's, and Direct Fire	750m of straight road to provide 250m between vehicles	Near Security/Screen Team	Traffic Cones	4
	Maximize stand off from covered/concealed areas		Road Flares	5
	Ideal location is one lane road or divided highway		Strobe Light	1
	Minimize side roads entering TCP area		25m Rolls C-Wire	3
Task Org Screening, Search and C2 Teams	Task Org Screening, Search and C2 Teams		TCP Signs	2
	Address ROE and AOC		Chemlights	24
	Address most wanted personnel and BOLO vehicle list		Personnel Most Wanted List	1
	MEDEVAC Routes		Vehicle Bolo List	1
Rehearsal	Search Procedure		Command Message	1
	AOC		Traffic Cones	2
	MEDEVAC Routes	Search Mirror	2	
	Detainee Procedure	Search Wand	2	
PCC/PCI	See TCP Kit Checklist	Vapor Tracer	2	
Establish Alert Line	Rear vehicles block all traffic	X Spray	2	
	Position warning signs and cone (DAY)	Sworn Statement	10	
	Position warning signs with chemlights and strobe light or road flares (NIGHT)	Evidence Voucher	10	
Establish TCP	Keep traffic blocked	Damage Voucher	10	
	Position warning signs and cones (DAY)	Detainee Form	10	
	Position warning signs with chemlights and strobe light or road flares (NIGHT)	Flex Cuffs	10	
	Emplace concertina serpentine, use chemlights at night to reduce hazard of collision	Zip Strips	25	
	Position screening team vehicle, conduct 10/20m checks and designate sectors of fire	Personnel Most Wanted List	1	
Establish Search	Keep traffic blocked	Vehicle BOLO List	1	
	Position cones	Command Message	1	
	Position command and control vehicle, conduct 10/20m checks and designate sectors of fire	Traffic Cones	3	
Conduct TCP	Patrol leaders confirm sectors of fire	Personnel Most Wanted List	1	
	Patrol leader designates screening team to allow traffic flow	Vehicle BOLO List	1	
Collapse TCP	Patrol leader directs traffic blocked upon ID of BOLO vehicles or personnel	Command Message	1	
	Screening team blocks traffic	Flyers/Handouts	500	
	Collapse TCP exit and move to screening team			
	Collapse search area			
	Search area team moves to alert line and recovers equipment			
	Screening team recovers equipment overwatched C2/Rear Security team			

TCP Operations

ESTABLISHMENT PROCEDURES

1. Establish security.
2. Establish OPs and Overwatch positions.
3. Emplace obstacle barriers
4. Construct the outer perimeter
5. Emplace a minimum of 2 signs (in native language) requiring reduction in speed (150m+ out)
6. Construct vehicle search area
7. Construct safe zone
8. Continue improvement on positions as time and resources permit

OPERATIONS

1. Ensure soldiers know what they are searching for.
2. Ensure soldiers know when to initiate fire in accordance with the ROE:
 - a. If any vehicle ignores signs and does not attempt to reduce speed.
 - b. If any vehicle attempts to increase speed after the turning zone.
 - c. If any vehicle ignores any personnel attempting to signal a stop.
3. Ensure the Reaction Force is rehearsed for all contingencies.
4. Plan for frequent rotation of soldiers between positions.
5. Populate the COP (Common Operating Picture) on FBCB2 once the checkpoint is established.
6. Populate overwatch positions and OPs on FBCB2.
7. Send hourly sitreps via FBCB2 or FM to higher.

VEHICLE SEARCH PROCEDURES

1. Instruct the driver to move to the pre-designated search area
2. Instruct the driver to turn off the vehicle, hand over keys, and exit the vehicle slowly.
3. Other passengers are asked to exit one at a time after the driver.
4. Conduct personnel searches of the driver and passengers.
5. Conduct an exterior search of the vehicle.
6. Once complete, instruct the driver to open all exterior compartments (hood, trunk, doors, glove compartment)
7. Driver will be instructed to close all compartments and reenter the vehicle.
8. The driver will be given his keys and will be escorted out of the check point.

TCP Operations

CANALIZATION ZONE: Uses natural and / or artificial obstacles to canalize the vehicles into the checkpoint; this zone is encompassed from the maximum effective range to the maximum range of your weapons (generally from 300m to 2000m).

TURNING ZONE: Forces vehicles to make a rapid decision (either decelerate and make slow, hard turns or crash into the obstacles). Obstacles must be capable of stopping or slowing a truck (concertina wire, jersey barriers, 55-gallon drums of water / sand).

SEARCH ZONE: Relatively secure area where personnel and vehicles are positively identified and searched. Decisions are made to confiscate weapons and contraband and to detain the vehicle / passengers. Established with a blocking obstacle that denies exit or entry without loss of life or equipment.

-PERSONNEL SEARCH ZONE: Area where personnel are identified, searched, and / or detained. This may include an area to manage searching women and children with a female searcher if available.

-- VEHICLE SEARCH ZONE: Area where vehicles are identified searched and / or detained.

SAFE ZONE: Area where personnel manning the point eat, sleep, and recover in relative security. The Quick Reaction Force (QRF) may be collocated.

TASK ORGANIZATION

HQ ELEMENT: PL / PSG or Senior SL and RTO. In charge of all operations and responsible for communications with higher headquarters and internal units.

SEARCH: Operates the checkpoint and identifies vehicles or pax meeting CCIR Includes:

-TRAFFIC MANAGEMENT TEAMS: Controls movement through the checkpoint

-- PERSONNEL SEARCH TEAM: Searches and controls personnel (2 pax minimum)

- VEHICLE SEARCH TEAM: Searches designated vehicles (2 personnel minimum).

OVERWATCH: Provides security and early warning. May include an LP/OP to observe beyond nearby terrain features.

QRF: Reacts to any assistance calls from the control point; ready at all times to respond.

OTHER TEAMS:

- FEMALE SEARCH TEAM: Should include a female searcher

- DETENTION TEAM: Responsible for all detained personnel

- MEDIA CONTROL TEAM: Deals with any media personnel that may arrive

- RECORDER: Records all pertinent information

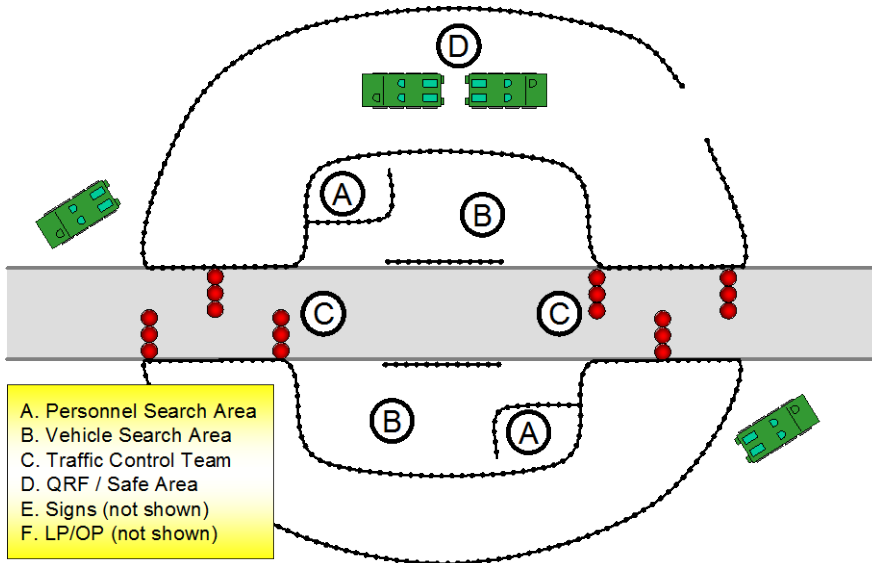
-TRANSLATOR: Responsible for translating and communicating with nationals

-SSE TEAM: Responsible for following procedures in processing all sensitive items

TCP Operations

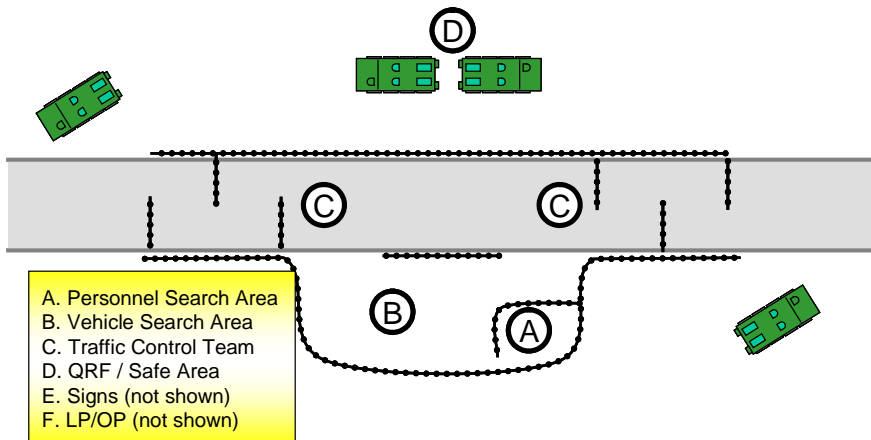
DELIBERATE CHECKPOINT

Deliberate Checkpoints are permanent or semi-permanent. They are typically constructed and employed to protect an operating base or well-established MSRs.



HASTY CHECKPOINT

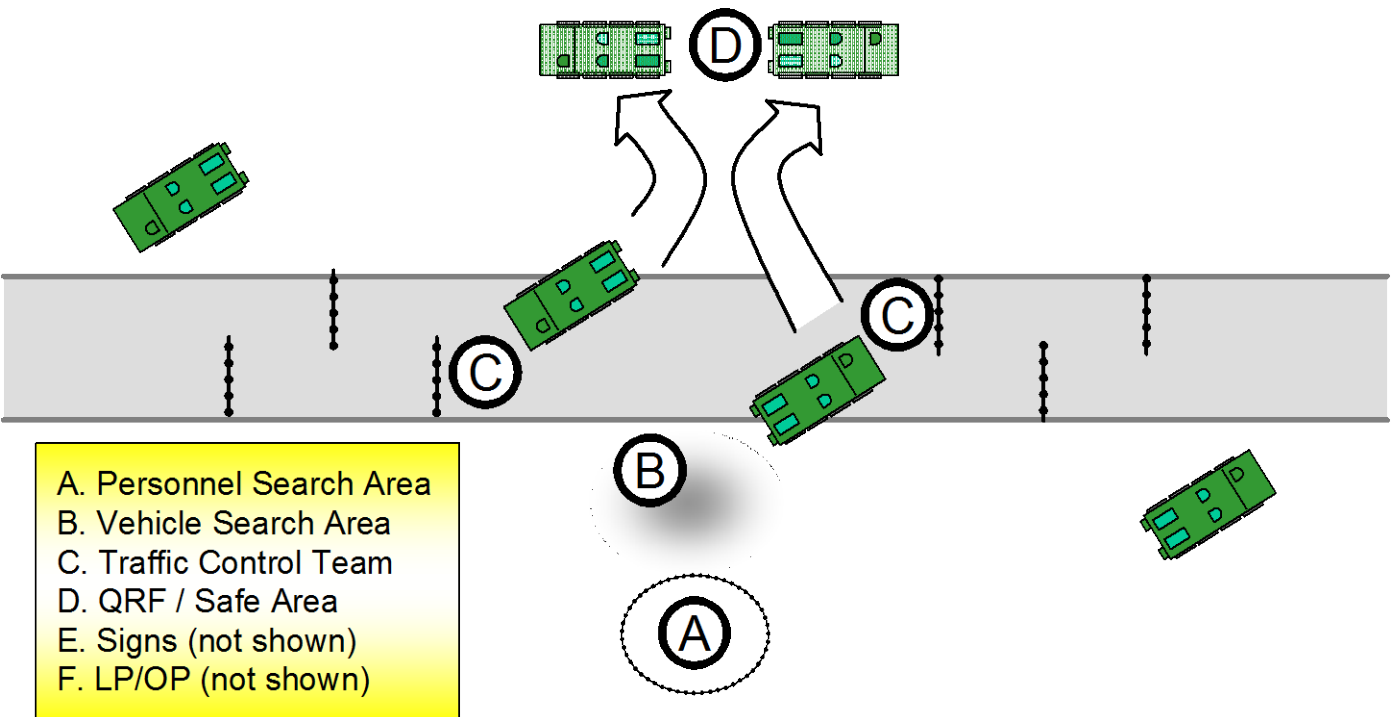
Hasty checkpoints are planned in advance and will be set for a short period of time (generally less than 24 hours). The checkpoint is capable of being constructed by a platoon or section using Class IV UBL from a platoon's Strykers.



TCP Operations

FLYING CHECKPOINT

Flying checkpoints are generally established when specific intelligence indicates that a checkpoint will hinder the enemy's freedom of movement at a specific time and place. They are conducted immediately with little to no planning.



Tactical Site Exploitation (TSE)

Conditions:

- OBJ Secure
- EPW / CIV PAX separated
- Rooms Cleared & Marked
- TSE Team briefed on any remaining safety threats by ground commander

Patrol leader tasks:

- Designate search areas on OBJ
- Determine the length of the TSE (time must be ready to move off OBJ)
- Update Commander and TSE team on assessment

TSE Team leader tasks

- Conducts quick walk-thru of site
- Looks for safety issues and clears possible booby traps
- Assess the need for outside resources
- Manages TSE Teams
- Sketches OBJ and labels search areas
- Establishes evidence collection point for entire OBJ

DO

- Photograph the TSE site before the search and after the search.
- Exit room / building / OBJ upon finding UXO / IED / Booby trap
- Wear gloves when conducting TSE to prevent evidence contamination.
- Keep detailed notes and complete sketch for every floor
- Use voice recorders during all TQ.
- Tag, log, and photograph all items found for evidence.
- Have Local National Security Forces conduct the search when possible.
- Return personal items to individuals through HNF

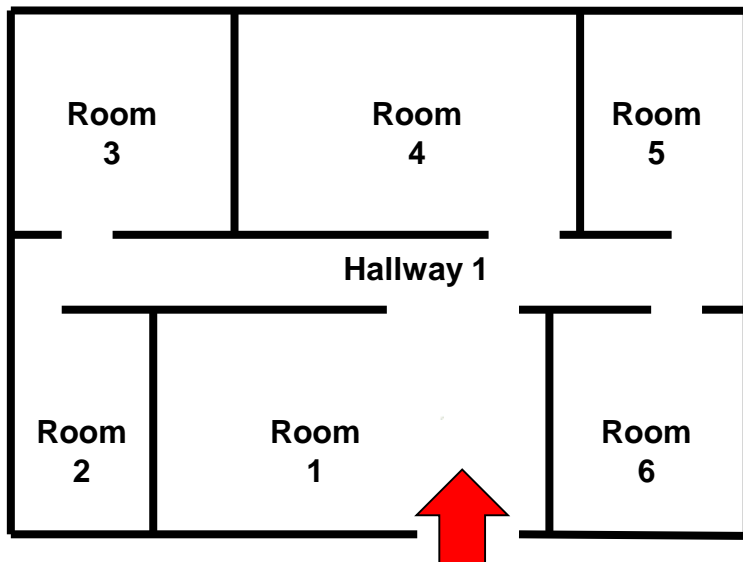
DO NOT

- Destroy property unnecessarily
- Put found items in your pocket. If you forget about the item and try to turn it in after the evidence has been submitted, the item cannot be used.

TSE Kit & Room Numbering

Tactical Site Exploitation Kit

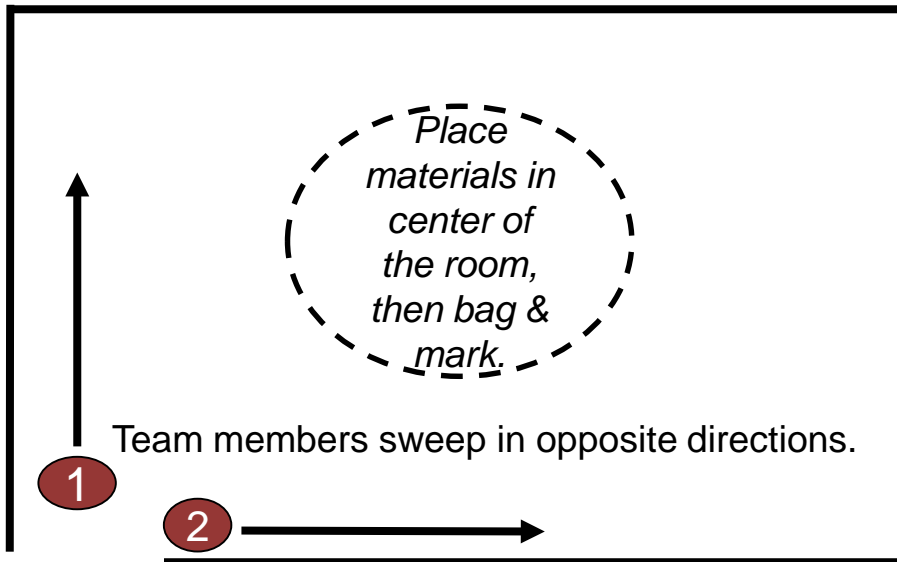
- 8x Pair Latex Gloves
- 3x permanent markers
- 20x Notecards
- 4 x White Chalk
- 30x zip-lock bags
- 20x shoe tags
- 4x Large volume bags (duffle/laundry)
- 2x Sketch pad
- 10x pair of flex cuffs
- 4x Ear muff style ear plugs
- 2x High Powered Flashlight/headlamp
- 4x pair blacked out goggles
- Basic Tool Kit:
 - Phillips & Flat Screwdrivers
 - Adjustable Wrench
 - Allen Keys
 - Measuring Tape
- 2x digital voice recorders
- 1x Digital camera
- 1x Metal Detector
- 1x Biometrics kit (HIIDE)
- 1x Gunpowder residue kit



Main Entry Point

- From the main entry point, all rooms will be numerically marked in a clockwise manner, starting with "Room 1."
- The room will be marked on the entryway door or to the left of the door frame on the wall.

TSE Evidence



COLLECTION OF DIGITAL MEDIA

CD/DVDs:

- Handle with latex gloves in order to protect fingerprints.
- Package CD's/DVD's to prevent damage. DO NOT tape bundles of disks together.

Hardware:

- Take all digital media in spite of apparent functional state.
- Indication of intentional damage by the enemy must be noted in reporting.

Communication Equipment:

- If it is on leave it on; if its off leave it off
- Collect chargers, cables, manuals, and other supporting equipment
- Do not exploit, answer or make calls with any phones or radios
- Record grid and photograph cell phone repeaters(signal boosters). Do not tamper with repeaters in any way.

COLLECTING EVIDENCE (BAG & TAG)

•Capture tags must contain:

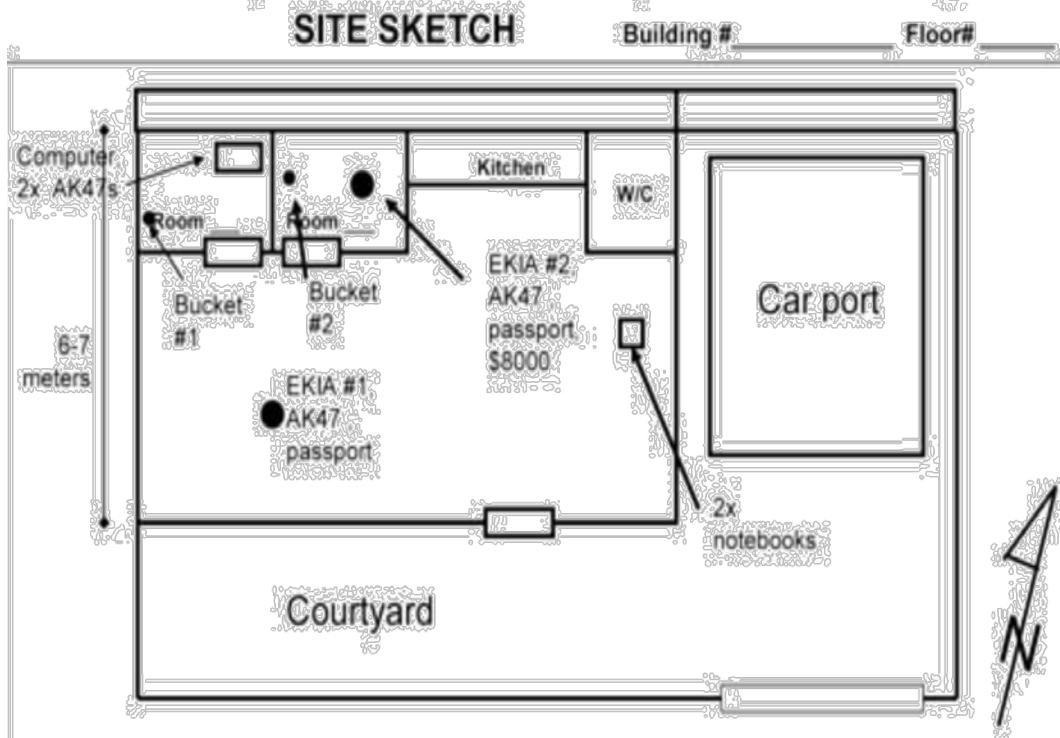
- Time of capture (DTG format)
 - Location (grid)
 - Circumstance of capture
 - Unit
- One (1) capture tag can account for an entire desk, room or zone
- Detainee pocket litter must be bagged & tagged by person and attributed to the owner. One bag per detainee. Use Part C of DD2745.
 - Always use latex gloves or combat gloves at a minimum to prevent contamination of fingerprints. If you contaminated a captured item with your fingerprints notify S2/COIST and annotate which item was contaminated.

TSE Sketch

- Sketch the entire objective with North seeking arrow and Date-Time-Group
- Top of the sketch will have the OBJ name, the building number and floor number
- All Rooms, Courtyards, Hallways, TQ / Collection Rooms, Caches, hidden storage areas, windows and Consolidation Point will clearly labeled
- At the bottom of the sketch in the notes section, the items found in each room will be identified and all corresponding pictures .
- The initial sketch will obviously be hand written but can be replaced by a digital image in the following storyboard or Patrol Debrief.

TSE Example Sketch

Example format of Site Sketch (will be hand written)



Items taken off OBJ

2x Buckets

4x AK-47s

3x notebooks

\$8000 in US cash

Pictures w/explanations:

PICS 1-3 Room _____ PICS 4-6 Room _____ PICS 7 Room _____ PICS 8-10 EKIA _____ and

Equipment found

Target Block Distribution

1. Purpose. This card establishes standard target numbers for the efficient and safe planning and execution of indirect and air delivered supporting fires.

2. Target Number Blocks.

•Within the SBCT the following target number blocks will be used:

SQDN	AU 2000 - AB 2199
A Troop	AU 2200 - AB 2299
B Troop	AU 2300 - AB 2399
C Troop	AU 2400 - AB 2499
E Troop	AU 2500 - AB 2599
SPARE	AU 2600 - AU 2999
SQDN Group Designators	A20S-A29S
SQDN NFA	AUN 200 - AUN 299
SQDN RFA	AUR 200 – AUR 299
SQDN ROZ	AUZ 200 – AUZ 299

3. Target Number Refinement. The primary shooter is responsible for target refinement and target area survey. All targets are numbered in “5s” i.e. AU2000, AU2010, AU2015, and so on. Once a target is established it maybe refined four times. Any change to target location (grid or altitude) results in the addition of one number increment to the original target number. For example, AU2005 becomes AU2006. If the Task or Purpose to the target changes, then a new target number is established in increments of 5, i.e. AU2005 becomes AU2010 or AU2025 or whatever the available target number is. As a target is refined, all previous target numbers associated with that target become null and void. Canceled targets will be deleted from all fires and effects products and will not be executed.

Friendly Weapon Capabilities

Anti-Armor	MIN	MAX
JAVELIN	75m	2500m
ATGM (TOW)	65m	3750m

DIRECT FIRE	RANGE		Platform	Main WPN System	Range
	POINT	AREA			
M9	50m		MGS	HE/ SAB	2000m
M4	500m	600m		CAN	50m-500m
M320	150m	350m	Bradley	25mm	3000m
M249	600m	800m	M1 Tank	HE/ SAB	5000m
M240 B/L	Bipod	600m		CAN	50m-500m
	Tripod	800m			

CCA CAPABILITIES			RADAR	SYSTEM DETECTED	RANGE
WPN	RANGE				
M2		1800m	AN/TPQ-36	Mortars	750m-18km
MK19	1500m	2200m		Artillery	3000m-14.5km
M107	1800m			Rockets	8000m-24km
			AN/TPQ-37	Artillery	3000m-30km
Hellfire	8000m			Rockets	4000m-50km
2.75 Rocket	8000m		LCMR (AN/TPQ-50)	Mortars	500m-10Km
30mm	1500m				

MORTARS	RANGE	MAX ORD	Risk Estimate Distances		
			1/3	2/3	MAX
60mm	3500m	7000 ft AGL	115m	125m	145m
81mm	5800m	10000 ft AGL	170m	195m	195m
120mm	6700m (Stryker Variant)	12000ft AGL	280m	395m	430m
ARTILLERY	RANGE	MAX ORD	Risk Estimate Distances		
			1/3	2/3	MAX
105mm	11.5km [DPICM 14.1km] (RAP 19.5km)	26000 ft AGL	290m	410m	650m
155mm	22.2km (RAP 30km)	35000 ft AGL	325m (360m)	500m (530m)	825m (1045m)
MLRS/HIMARS Rocket	10km-30km		250m		
MLRS/HIMARS Guided Rocket	15km-84km		250m		

Enemy Weapon Capabilities

Movement and Maneuver									
	T-80 U	T-72 B	BMF - 2	BRDM / 9P148D	BTR-80	GAZ-66	URAL375		
Description	Tank - Tracked	Tank - Tracked	IFV - Tracked	Scout Veh - Wheeled	APC - Wheeled	Cargo Truck	Cargo Truck		
Main Weapon	125 mm gun	125 mm gun	30 mm MG	12.7 mm MG	14.5 mm MG				
Main Weapon Range (m) (D/N)	3000 / 2,600	3000 / 2,600	4000 / INA	1,500 / 1,300	2,000 / INA				
Fire on Move	Yes	Yes	Yes	Yes	Yes				
Auxiliary Weapon	12.7 mm MG	12.7 mm MG	AT - 5	AT - 5	7.62 mm MG				
Auxiliary Range (m) (D/N)	1,500 / 1,300	1,500 / 1,300	5,500 / 3,500	4,000	1,000 / 1,000				
Max Speed (km/h)	70 / 48 / 40	60 / 45 / 35	65 / 45 / 35	95 / INA / INA	85 / 60 / 40				
(Road / Off road / Cross Country)									
FCS Acquisition Range (m) (D/N)	5,000 / 2,600	5,000 / 1,300	7,000 / 5,500	> 5,000 / 5,000	2,000 / INA				
# of Dismounts Carried	0	0	7	2	8			18	24
Anti-Tank									
	AT-13	MT-12	2A45		IL-220		Radar		
Description	Man Portable	Towed	Towed	Description	C-F Radar	Straight Flush	ADA Radar	ADA Radar	Dog Ear
Caliber	130 mm	100 mm	125 mm	Detection Range (km) (mortar/artillery/rocket)	30 / 20 / 40	90		90	80
Range (m)	1,500	2,500 / 2,000	3,000 / 3,000	Tracking Range (km)	N/A	28			35
Optics Range (D/N)	INA / 3,200	3,000 / 2,000	4,000 / 3,500						
Indirect Fires									
	YW831	2S12	2S19	G6	BMF-21	URAGAN / 9P140	SMERCH-M / 9A52-2		
Description	APC_Tracked	Towed Mortar	SP Howitzer	SP Howitzer	SP MRL	SP MRL	SP MRL		
Caliber	120 mm	120 mm	152 mm	155 mm	122 mm	220 mm	300 mm		
Range (m)	7,700	7,000	24,700	30,000	20,380	35,000	90,000		
Auxiliary Weapon	12.7 mm Anti Air	None	12.7 mm MG	12.7 mm	None	None	None		
Fire on Move		No		1,000 / INA					
Max Speed (km/h) (Road/Off road/CC)	65 / 40 / INA	87 / 35 / INA	60 / 25 / INA	85 / 30 / INA	75 / 35 / INA	65 / INA / INA	60 / 35 / INA		
FCS Acquisition Range (D/N)	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
# of Dismounts Carried	4	N/A	0	0	0	0	0		
Misc		Towed by GAZ66	11th DTG	84th DTG					

Enemy Weapon Capabilities

		Air Defense					
Description	SA-18 D	ZSU-23	ZU-23	256	SA-6		
Caliber	Mean Portable 70 mm	SP AA Gun 23 mm	Towed AA Gun 23 mm	SP AA Gun 30 mm	SP SAM		
Range (m) (Distance / Altitude)	6,000 / 3,500	2,500 / 1,500	2,500 / 1,500	4,000 / 10,000	25,000 / 14,000		
Auxiliary Weapon	None	None	None	SA-19 GRISON	None		
Auxiliary Range (m) Distance / Altitude	N/A	N/A	N/A	INA / 6,000	N/A		
Fire on Move	N/A		N/A				
FCS Acquisition Range (D/N)	N/A	20,000	2,500	20,000	240,000		
Misc	Passive IR Homing		LOS - Mechanical Optics	Associated with Hot Shot Radar	Associated w/ Straight Flush Radar		
Engineer							
Description	IMR-2M	MTK-2	UMZ - D	IRM	BAT-2	PMZ-4	
Dig Capability (m ³ /hr) (1.1 - 1.3 m deep)	Clearer/Digger 10-12	Tracked Mine Clearer	Mine/layer	Tracked Recon Vehicle / Mine Detector	Tracked Route Clearance Veh	Towed Mine Layer	
Lane Cleared (m) (L/W)	N/A	90 / 6	N/A	None	Endless / 4.2	None	
Minefield Layed (m) (L/D)	N/A	N/A	1,200 / 120	None	None	1,400	
# of Dismounts Carried	None	0	0	4	8	0	
Weapons	None	None	None	7.62 mm MG	None	None	
Misc		MCLC - UZP-77 Line Charge		IRM identifies obstacles for follow on E assets.	Designed for BZ OPS	Straight line pattern dispersal	
						MCLC - UZP- 83 Line Charge	

CFF – Adjust Fire Missions

Adjust Fire Mission (Grid Method)

- 1) Observer: “_____this is _____, Adjust Fire, **Over**”
(FDC Call Sign) (Observer Call Sign)
- 2) “Grid _____, Altitude _____, Direction _____ **Over**”
(Minimum 6-digits) (meters) (Mils*)
- 3) Target Description: “_____ **Over**”
(Target Description, Size, Activity)

Adjust Fire Mission (Polar Plot Method)

- 1) Observer: “_____this is _____, Adjust Fire Polar, **Over**”
(FDC Call Sign) (Observer Call Sign)
- 2) “Direction _____” in mils
(observer to target line – nearest 10 mils)
“Distance _____” in meters (to nearest 100m)
“Up/Down _____” in meters (to nearest 5m)
(Note: Difference in target altitude is with respect to observer, not given if less than a **35m elevation difference between the observer and target**. For polar missions, the FDC must know the observer’s location.), **Over**”
- 3) Target Description: “_____ **Over**”
(Target Description, Size, Activity)

Adjust Fire Mission (Shift From Known Point Method)

- 1) Observer: “_____this is _____, Adjust Fire,
(FDC Call Sign) (Observer Call Sign)
Shift from _____, **Over**”
(Identify known point, for example, target AA7733)
- 2) “Direction _____” in mils
(OTL – nearest 10 mils)
“Left/Right _____” in meters (Lateral shift to nearest 10m)
“Add/Drop _____” in meters (Range shift to nearest 100m)
“Up/Down _____” in meters (Vertical shift to nearest 5m)
(Note: Difference in target altitude is with respect to observer, not given if less than a **35m elevation difference between the observer and target**. For shift from a known point mission, the location of the known point must be known to both the observer and the FDC.) **“Over”**
- 3) Target Description: “_____ **Over**”
(Target Description, Size, Activity)

Adjust Fire Optional Data

Method of Engagement (optional):

(Danger Close, Mark, High Angle, Ammo / Fuse Type)

Method of Fire and Control (optional):

(At My Command, Time on Target, Request Splash, Request TOF, Request Ordinate Altitude Information) **“Over”**

**Degrees to mils: 1 degree = 17.78 mils. Multiply target direction in degrees by 17.78. Ex 113
Azimuth=257 257 x 17.78 = 4548 mils*

CFE – Immediate Suppression/Illum

Immediate Suppression/Smoke

Observer: “_____this is _____, Immediate Suppression/Smoke _____, **Over**”
(FDC Call Sign) (Observer Call Sign) (Target # / 8-digit Grid)

Adjust Fire Mission (Illumination)

- 1) Observer: “_____this is _____, Adjust Fire, **Over**”
(FDC Call Sign) (Observer Call Sign)
- 2) Target Location: “Grid _____, Altitude _____, Direction _____, **Over**”
(Minimum 6-digits) (meters) (Mils*)
- 3) Target Description: “Vehicle Noises, Suspected Tanks, Illumination, **Over**”
(Target Description, Size, Activity)

Adjust Fire Mission (Coordinated Illumination)

- 1) Observer: “_____this is _____, Adjust Fire, **Over**”
(FDC Call Sign) (Observer Call Sign)
- 2) Target Location: “Grid _____, Altitude _____, Direction _____, **Over**”
(Minimum 6-digits) (meters) (Mils*)
- 3) Target Description: “Vehicle Noises, Suspected Tanks, Illumination, **Over**”
(Target Description, Size, Activity)

Adjust Illumination as necessary

- 4) Observer: “Coordinated Illumination, **Over**”
- 5) Observer: “Adjust Fire, **Over**”
- 6) Target Location: “Grid _____, Altitude _____, Direction _____, **Over**”
- 7) Target Description: “_____, **Over**”

The Observer transmits “**Illumination Mark**” when the illumination has best lit the target. He then adjusts the HE and fires for effect as in a normal mission.

**Degrees to mils: 1 degree = 17.78 mils. Multiply target direction in degrees by 17.78. Ex
Azimuth=257 257 x 17.78 = 4548 mils*

CCA Format

CCA Check- In (Aircrew)

Aircraft provides

- Aircraft type,
- Ammunitions,
- Station time
- Location
- Requests task and purpose

Example: "Apache Red 1 , this is Paladin 11, checking on with 2 x AH64E, with 150 rounds 30mm, 8 Hellfire missiles, and 64 PD rockets. I have 90 minutes station time, approaching from your South, requesting task and purpose. "

CCA Check –In (Ground Unit)

Ground Element provides:

- Unit composition
- Location and Front Line Trace
- Mission of ground unit
- Vehicle markings (as appropriate)
- Provides task and purpose
- Gives aircraft formation guidance
- Gives recon priority
- Gives engagement priority

Format

1. Observer / Warning Order

_____ this is _____, Fire Mission, **Over.**"
(FDC's Call Sign) (Observer's Call Sign)

2. Friendly Location / Marking

My Position _____, marked by _____.
(Grid, TRP) (Strobe, Beacon, VS-17)

3. Target Location

Target Location _____
(Bearing[magnetic], and range [meters], TRP, Grid, etc).

4. Target Description / Mark

_, marked by _____ (Target Description)
(IR Pointer, Tracer, etc.)

5. Remarks (Threats, Danger Close Clearance, Restriction, At My Command, Etc.) **Over.**"

Note: Clearance – Transmission of the 5-Line CCA Brief **IS** clearance to fire (unless Danger Close). Example:

"Paladin 11, this is Apache Red 1, I am a 4 vehicle Stryker platoon arrayed on line at EC 021 648, travelling north. Conducting a zone recon from PL Exxon to PL Hasbro. (or use grid designators if no common graphics) My vehicles are marked with VS17 panels orange side out. Requesting that you conduct reconnaissance 3KM north of my position to identify enemy recon and anti-armor assets. Request that you take up a dynamic hold pattern just south of my FLT (or provide AABF location) and move northward with the platoon. Your priority for engagement is enemy Armor or lightly armored vehicles from 1KM – 3KM north of my position. We will engage all enemy dismounts or lightly armored trucks within 1KM. Request visual and target handoff of any targets to our North within 1km.

CAS Procedures

Close Air Support 9-Line Briefing

Do not transmit line numbers. Units of measure are standard unless briefed. Lines 4, 6, and restrictions are mandatory readback (*). JTAC may request additional readback.

JTAC: " _____, this is _____ "
(Aircraft Call Sign) (JTAC Call Sign)

"Type _____ (1, 2, or 3) Control"

1. IP/BP: " _____ "

2. Heading: " _____ "

(Degrees Magnetic, IP/BP-to-Target)

Offset: " _____ "
(Left / Right, when required)

3. Distance: " _____ "
(IP-to-target in nautical miles, BP-to-target in meters)

4*. Target Elevation: " _____ "
(In feet MSL)

5. Target Description: " _____ "

6*. Target Location: " _____ "
(Lat/Long or grid to include map datum or offsets or visual)

7. Type Mark: " _____ " Code: " _____ "
(WP, Laser, IR, Beacon) (Actual Laser Code)

8. Location of Friendlies: " _____ "
(From target, cardinal direction and distance in meters)

Position marked by: " _____ "

9. "Egress: _____ "

Remarks (as appropriate): " _____ "

(Restrictions*, Ordnance delivery, threats, final attack heading, hazards, ACAs, weather, target information, SEAD, LTL/GTL [degrees magnetic], night vision, danger close [with commander's initials])

Time on Target: " _____ " or

Time to Target: " _____ "

"Standby _____ plus _____, ready, ready, HACK"
(minutes) (seconds)

Note: When identifying position coordinates for joint operations, include map data. Grid coordinates must include 100,000 meter grid identification. 116

Reporting Requirements for Patrols in a COIN Environment

TASK- Each patrol report in accordance with the reporting/intelligence checklists

PURPOSE- Provide timely contact and intelligence reports

Reporting Requirements

Initial enemy contact.

Any information that answers a Priority Intelligence Requirements (PIR) or Information Requirement (IR).

As specified in the R&S plan.

Withdrawal or location change of platoon size or larger enemy units.

Enemy use of CBRN weapons and change to enemy MOPP status.

Parachute or heliborne operations behind friendly lines.

Appearance of any nuclear capable weapons.

New or unusual vehicles, weapons, weapon effects or enemy aircraft.

Location of enemy command and control elements, ADA and mobility enhancing equipment.

Capture of EPWs or discovery of enemy documents of intelligence value.

Intelligence Reporting

All Troop/CO/TM/Battery level units are required to maintain secure FM communication on the Squadron O/I net.

Forward all reports over the Squadron O/I net IAW report formats.

Focus on current PIR.

Elements should avoid making assessments or analyzing the enemy actions. Report the facts then continue the mission.

Questions to answer on every patrol:

Friendly Information

Unit designation, size and composition of patrolling unit.

Mission (Who, What, When, Where, Why)

Time of departure and time of return

Terrain.

Significant changes to maps (i.e. Road damage, new construction).

Mobility and usability for military vehicles.

OAKOC

Availability of power, water, sewage.

Enemy

Types and sizes of units encountered.

Locations and DTG enemy was sighted.

Type of weapons, vehicles, and equipment used.

What they were doing.

Indicators of morale, health, and attitude.

Civilian Activity

Reactions to friendly forces.

Changes in routine/habits.

Unrest/Gatherings uncommon to the AO or demonstrations.

Significant encounters with civilian or nation military personnel.

Who are they? Where are they from?

Religion/Occupation/Political Affiliation.

What information they can provide.

Time and location of meeting.

Answers to Commanders PIRs.

Commanders assessment.

Recommendations on focus of future patrols.

Debriefing should occur NLT 1/2 hrs after return from patrol.

The S2/COIST section is responsible for providing an officer or NCO to debrief the patrol.

Tactical Questioning Guidance

BLUF: Tactical questioning (TQ) is the process of identifying, sorting, and exploiting all individuals on target. At this point in tactical site exploitation (TSE), the objective is secured, the search is ongoing, and potential detainees or persons of interest are identified, sorted, and segregated.

TQ DO's and DON'Ts

- DO ASK DIRECT QUESTIONS**

- IN ORDER TO CONDUCT TQ, THE DETAINEE MUST BE AT OR NEAR TO THE POINT OF CAPTURE**

- DO NOT use interrogation approaches in an attempt to gain information from detainees. Only trained and certified interrogators may conduct interrogations.**

- **DO** understand and respect local customs. (For example: Know whether it is appropriate for male Soldiers to speak to women or female Soldiers to speak to men.)

- When security conditions permit, **DO** position a weapon in the least intimidating position.

- DO NOT** attempt to force or scare information from noncombatants

- DO NOT** attempt to task someone to go seek out information

- DO NOT** pay money or compensation for information

- DO NOT** ask leading questions (questions constructed to require a yes/no answer rather than an explanation; ask questions that do not guide an individual to an answer)

BDE Commo Card

HHC 1SBCT

1SBCT CMD	199	RAIDER
1SBCT O/I	200	
1SBCT A/L	201	
1SBCT FS-V	202	
1SBCT FS-D	203	
1SBCT RTS1	204	
1SBCT RTS2	205	
HHC 1SBCT	206	RENEGADE
RADAR/1SBCT	207	

1-38 IN

1-38 IN CMD	147	ROCK
HHC/1-38 CMD	151	HERO
SCT/HHC/1-38	152	GHOST
A/1-38 CMD	156	ATTACK
B/1-38 CMD	161	BAYONET
C/1-38 CMD	166	CHAOS
I/4BSB CMD	171	IRONHAWK

299 BEB

299BEB CMD	174	PIONEER
HHC/299 CMD	178	HEADHUNTER
CBRN/HHC/299	179	STALKER
A/299 CMD	181	SAPPER
B/299 CMD	185	BEAST
C/299 CMD	189	REAPER
D/299 CMD	192	SENTINALS
E/FSC/299 CMD	196	ATLAS

2-12 FA

2-12 FA CMD	100	VIKING
HHB/2-12 CMD	106	HAVOC
A/2-12 CMD	109	ASSAULT
B/2-12 CMD	115	BERZERKER
C/2-12 CMD	121	CHOSEN
F/4BSB CMD	127	FOXHOUND

CMD NETS / SC ALTERNATES

1SBCT CMD	199	33.000 MHZ
2-12 FA CMD	100	31.100 MHZ
1-38 IN CMD	147	37.050 MHZ
2-1 CAV CMD	262	39.650 MHZ
HHC 1BCT	206	50.300 MHZ
4-9 IN CMD	208	42.150 MHZ
2-23 IN CMD	235	44.900 MHZ
4BSB CMD	131	47.150 MHZ
299BEB CMD	174	48.400 MHZ

EMERG. FREQS

RANGE CTRL/	PRI	30.300MHz
MEDEVAC	ALT	40.500MHz

4-9 IN

4-9 IN CMD	208	MANCHU
HHC/4-9 CMD	212	HOTEL
SCT/HHC/4-9	213	PHANTOM
A/4-9 CMD	217	ABLE
B/4-9 CMD	222	BAKER
C/4-9 CMD	227	CHARLIE
FSC 4-9 CMD	232	GOLF

2-23 IN

2-23 IN CMD	235	TOMAHAWK
HHC/2-23 CMD	239	HAWKEYE
SCT/HHC/2-23	240	STALKER
A/2-23 CMD	244	AZTEC
B/2-23 CMD	249	BRAVE
C/2-23 CMD	254	CRAZYHORSE
FSC 2-23 CMD	259	HELLRAISER

4BSB

4BSB CMD	131	PACKHORSE
HHC/4BSB CMD	134	TITAN
A/4BSB CMD	135	AVENGER
B/4BSB CMD	139	BULLDOG
C/4BSB CMD	143	GUARDIAN

SQDN Commo Card

"BLACKHAWK"	
POSITION	CALL SIGN
SCO	6
CSM	7
SXO	5
S1	1
S1 NCOIC	1N
S2	2
S2 NCOIC	2N
S3	3
S3 SGM	37
S3 ASSISTANT	3A
S3 OPS NCO	3N
S3 LNO	39
S4 OIC	4
S4 NCOIC	4N
S6	9
S6 NCOIC	9N
S6 RETRANS	TORCH 1
S6 RETRANS	TORCH 2
CHAPLAIN	SHEPARD
FSO	30
SMO	8
SMT	8T
SMS	8N
TAC	OSCAR
TDC	X-RAY
CTCP	YANKEE
UMCP	WHISKEY
FTCP	ZULU
MEDO	TALON
MAS	TALON MIKE
FAS	TALON FOX
TRP CP's	X-RAY

FM	FM
2-1 CAV CMD	262
2-1 CAV RTS	263
2-1 CAV A/L	264
2-1 CAV O/I	265
HHT/2-1 CAV	266
FDJ/FIRES VOICE	267
FDJ/FIRES DIGITAL	268
A/2-1 CAV CMD	269
FIRES/A/2-1	270
1/A/2-1 CAV	271
2/A/2-1 CAV	272
B/2-1 CAV CMD	273
FIRES/B/2-1	274
1/B/2-1 CAV	275
2/B/2-1 CAV	276
C/2-1 CAV CMD	277
FIRES/C/2-1	278
1/C/2-1 CAV	279
2/C/2-1 CAV	280
D/485B CMD	281
1/D/485B	282
2/D/485B	283
3/D/485B	284
E/2-1 CAV CMD	285
FIRES/E/2-1	286
1/E/2-1 CAV	287
2/E/2-1 CAV	288
3/E/2-1 CAV	289
4/E/2-1 CAV	290
5/E/2-1 CAV	291
6/E/2-1 CAV	292

INDIVIDUAL	
PL	PL
1	
2	A SECTION LDR
3	B SECTION LDR
4	PSG
A	ASSISTANT
D	DRIVER
E	DISMOUNT
G	GUNNER
N	NCO

BDE HF Comms Card			
Bumper #	Station Name	Notes	
HQ66	21CAVCDR	2-1 CAV CDR	
HQ63	21CAVTAC	2-1 CAV TAC	
HQ32	21CAVTDC	2-1 CAV TDC	
1-38 SCOUTS	138SCT	138 SCOUTS	
1-38 SPARE	138SPR	138 SPARE	
1-38 CDR	138CDR	138 CDR	
1-38 TOC	138TOC	138 TOC	
2-12 SPARE	212SPR	212 SPARE	
2-12 TAC	212TAC	212 TAC	
2-12 TOC	212TOC	212 TOC	
2-23 SPARE	223SPR	223 SPARE	
2-23 TAC	223TAC	223 TAC	
2-23 TOC	223TOC	223 TOC	
4-9 SPARE	49SPR	49 SPARE	
4-9 TAC	49TAC	49 TAC	
4-9 TOC	49TOC	49 TOC	
BDE BAE	BDEBAE	BDEALOC	
BDE CDR	BDECDR	BDEDR	
BDE FIRES	BDEFIRES	BDEFIRES	
BDE S3	BDEES3	BDEES3	
BDE SPO	BDESP0	BDESPC	
BDE SPARE	BDESPARE	BDESPARE	
BDE TAC	BDETAC	BDETAC	
BDE TOC	BDETOC	BDETAC	
BSBLE	BSBLE	BSBTAC	
BSB TAC	BSBTAC	BSBTAC	
BSB TOC	BSBTAC	BSBTAC	
212ABTRV	BTRVA	212ABTRV	
212BBTRV	BTRVB	212BBTRV	
212CBTRV	BTRVC	212CBTRV	
CCO1299	CCO1	CCO 299	
CCO2299	CCO2	CCO 299	
DCO1299	DCO1	DCO 299	
DCO2299	DCO2	DCO 299	

Blackhawk HF Comms Card	
Bumper #	Station Name
HQ66	21CAVCDR
HQ63	21CAVTAC
HQ32	21CAVTDC
HQ73	21CAVFIRES
A66	21CAVATRPDCDR
A65	21CAVATRPXO
A11	21CAVATRPRED1
A14	21CAVATRPRED4
A16	21CAVATRPRED6
A21	21CAVATRPWH1
A24	21CAVATRPWH4
A26	21CAVATRPWH6
B66	21CAVATRPXO
B65	21CAVATRPXO
B11	21CAVATRPRED1
B14	21CAVATRPRED4
B16	21CAVATRPRED6
B21	21CAVATRPWH1
B24	21CAVATRPWH4
B26	21CAVATRPWH6
C66	21CAVATRPDCDR
C65	21CAVATRPXO
C11	21CAVATRPRED1
C14	21CAVATRPRED4
C16	21CAVATRPRED6
C21	21CAVATRPWH1
C24	21CAVATRPWH4
C26	21CAVATRPWH6
E66	21CAVATRPDCDR

NCS* (Net Control Station)	
NET ID	NET CONTROL STATION
262	S3
264	CTCP
265	S2
266	HHT
269	A TRP
273	B TRP
277	C TRP
281	D TRP
285	E TRP

2-1 CAV SQDN JCR ROLE NAMES

ROLE NAMES	CALL SIGN
HATCHET TROOP- STAFF	
CDR-2SQ1CAV-1BCT4ID	HQ66
XO-2SQ1CAV-1BCT4ID	HQ5
S3-2SQ1CAV-1BCT4ID	HQ63
CSM-2SQ1CAV-1BCT4ID	HQ7
S1-2SQ1CAV-1BCT4ID	HQ12
S2-2SQ1CAV-1BCT4ID	HQ2
S3-2SQ1CAV-1BCT4ID	HQ63
S3NCO-2SQ1CAV-1BCT4ID	HQ37
S4-2SQ1CAV-1BCT4ID	HQ4
S6NCO-2SQ1CAV-1BCT4ID	HQ95
TACP-2SQ1CAV-1BCT4ID	HQ71
TOC-2SQ1CAV-1BCT4ID	JCR TOC KIT
CPP-2SQ1CAV-1BCT4ID	HQ32
HATCHET TROOP	
CDR-HHT-2SQ1CAV-1BCT4ID	HHT6
1SG-HHT-2SQ1CAV-1BCT4ID	HHT7
CP-HHT-2SQ1CAV-1BCT4ID	HQ12
SUP-HHT-2SQ1CAV-1BCT4ID	HHT40
PA-MED-2SQ1CAV-1BCT4ID	FAS1
AMB1-MED-2SQ1CAV-1BCT4ID	FAS2
AMB2-MED-2SQ1CAV-1BCT4ID	AMB1A
AMB3-MED-2SQ1CAV-1BCT4ID	AMB1B
AMB4-MED-2SQ1CAV-1BCT4ID	AMB1C
PL-MED-2SQ1CAV-1BCT4ID	MAS1
TRMT-MED-2SQ1CAV-1BCT4ID	MAS2
RTNS1-2SQ1CAV-1BCT4ID	HQ91
RTNS2-2SQ1CAV-1BCT4ID	HQ92
RTNS3-2SQ1CAV-1BCT4ID	HQ93

DAKOTA TROOP	
ROLE NAMES	CALL SIGN
CDR-D-4BSB-1BCT4ID	D66
1SG-D-4BSB-1BCT4ID	D67
FSCOPS-D-4BSB-1BCT4ID	FTCP-CP
SUP-D-4BSB-1BCT4ID	UMCP
LOG4-DIST-D-4BSB-1BCT4ID	D47
LOG5-DIST-D-4BSB-1BCT4ID	D45
LOG6-DIST-D-4BSB-1BCT4ID	D42
LOG7-DIST-D-4BSB-1BCT4ID	D41
OPS-DIST-D-4BSB-1BCT4ID	D65
PL-DIST-D-4BSB-1BCT4ID	D40
PSG-DIST-D-4BSB-1BCT4ID	D46
CNTM1-MNTCTL-D-4BSB-1BCT4ID	D886
CNTM2-MNTCTL-D-4BSB-1BCT4ID	D887
FMCH-MNTCTL-D-4BSB-1BCT4ID	D87
GMO-MNTCTL-D-4BSB-1BCT4ID	D82
MCS-MNTCTL-D-4BSB-1BCT4ID	D90
WKR1-MNTCTL-D-4BSB-1BCT4ID	D883
WKR2-MNTCTL-D-4BSB-1BCT4ID	D884
WKR3-MNTCTL-D-4BSB-1BCT4ID	D885

ROLE NAMES	CALL SIGN
APACHE TROOP- HQ PLT	
CDR-A-2SQ1CAV-1BCT4ID	A66
1SG-A-2SQ1CAV-1BCT4ID	A67
XO-A-2SQ1CAV-1BCT4ID	A65
FIST-A-2SQ1CAV-1BCT4ID	HHB92
SUP-A-2SQ1CAV-1BCT4ID	A40
MTRSQD1-A-2SQ1CAV-1BCT4ID	A52
MTRSQD2-A-2SQ1CAV-1BCT4ID	A53
MTRSEC-A-2SQ1CAV-1BCT4ID	A54
APACHE TROOP- 1ST PLT	
PL-1-A-2SQ1CAV-1BCT4ID	A11
SCT1-1-A-2SQ1CAV-1BCT4ID	A12
SCT4-1-A-2SQ1CAV-1BCT4ID	A13
PSG-1-A-2SQ1CAV-1BCT4ID	A14
SCT3-1-A-2SQ1CAV-1BCT4ID	A15
SCT2-1-A-2SQ1CAV-1BCT4ID	A16
APACHE TROOP- 2ND PLT	
PL-2-A-2SQ1CAV-1BCT4ID	A21
SCT1-2-A-2SQ1CAV-1BCT4ID	A22
SCT3-2-A-2SQ1CAV-1BCT4ID	A23
PSG-2-A-2SQ1CAV-1BCT4ID	A24
SCT2-2-A-2SQ1CAV-1BCT4ID	A25
SCT4-2-A-2SQ1CAV-1BCT4ID	A26

ROLE NAMES	CALL SIGN
BATTLE TROOP- HQ PLT	
CDR-B-2SQ1CAV-1BCT4ID	B66
1SG-B-2SQ1CAV-1BCT4ID	B67
XO-B-2SQ1CAV-1BCT4ID	B65
FIST-B-2SQ1CAV-1BCT4ID	HHB93
SUP-B-2SQ1CAV-1BCT4ID	B40
MTRSQD1-B-2SQ1CAV-1BCT4ID	B52
MTRSQD2-B-2SQ1CAV-1BCT4ID	B53
MTRSEC-B-2SQ1CAV-1BCT4ID	B54
BATTLE TROOP- 1ST PLT	
PL-1-B-2SQ1CAV-1BCT4ID	B11
SCT1-1-B-2SQ1CAV-1BCT4ID	B12
SCT2-1-B-2SQ1CAV-1BCT4ID	B13
PSG-1-B-2SQ1CAV-1BCT4ID	B14
SCT3-1-B-2SQ1CAV-1BCT4ID	B15
SCT4-1-B-2SQ1CAV-1BCT4ID	B16
BATTLE TROOP- 2ND PLT	
PL-2-B-2SQ1CAV-1BCT4ID	B21
SCT1-2-B-2SQ1CAV-1BCT4ID	B22
SCT3-2-B-2SQ1CAV-1BCT4ID	B23
PSG-2-B-2SQ1CAV-1BCT4ID	B24
SCT2-2-B-2SQ1CAV-1BCT4ID	B25
SCT4-2-B-2SQ1CAV-1BCT4ID	B26

2-1 CAV SQDN JCR ROLE NAMES

ROLE NAMES	CALL SIGN
COMANCHE TROOP- HQ PLT	
CDR-C-2SQ1CAV-1BCT4ID	C66
1SG-C-2SQ1CAV-1BCT4ID	C67
XO-C-2SQ1CAV-1BCT4ID	C65
FIST-C-2SQ1CAV-1BCT4ID	HHB94
SUP-C-2SQ1CAV-1BCT4ID	C40
MTRSQD1-C-2SQ1CAV-1BCT4ID	C52
MTRSQD2-C-2SQ1CAV-1BCT4ID	C53
MTRSEC-C-2SQ1CAV-1BCT4ID	C54
COMANCHE TROOP- 1ST PLT	
PL-1-C-2SQ1CAV-1BCT4ID	C11
SCT1-1-C-2SQ1CAV-1BCT4ID	C12
SCT2-1-C-2SQ1CAV-1BCT4ID	C13
PSG-1-C-2SQ1CAV-1BCT4ID	C14
SCT3-1-C-2SQ1CAV-1BCT4ID	C15
SCT4-1-C-2SQ1CAV-1BCT4ID	C16
COMANCHE TROOP- 2ND PLT	
PL-2-C-2SQ1CAV-1BCT4ID	C21
SCT1-2-C-2SQ1CAV-1BCT4ID	C22
SCT3-2-C-2SQ1CAV-1BCT4ID	C23
PSG-2-C-2SQ1CAV-1BCT4ID	C24
SCT2-2-C-2SQ1CAV-1BCT4ID	C25
SCT4-2-C-2SQ1CAV-1BCT4ID	C26

ROLE NAMES	CALL SIGN
EAGLE TROOP- HQ PLT	
CDR-E-2SQ1CAV-1BCT4ID	E66
1SG-E-2SQ1CAV-1BCT4ID	E77
XO-E-2SQ1CAV-1BCT4ID	E5
OPS-E-2SQ1CAV-1BCT4ID	E3
SUP-E-2SQ1CAV-1BCT4ID	E4
EAGLE TROOP- 1ST PLT	
ATPL-1-E-2SQ1CAV-1BCT4ID	E11
MGSSL-1-E-2SQ1CAV-1BCT4ID	E12
MGSICCV-1-E-2SQ1CAV-1BCT4ID	E13
ATPSG-1-E-2SQ1CAV-1BCT4ID	E14
EAGLE TROOP- 2ND PLT	
ATPL-2-E-2SQ1CAV-1BCT4ID	E21
MGSSL-2-E-2SQ1CAV-1BCT4ID	E22
MGSICCV-2-E-2SQ1CAV-1BCT4ID	E23
ATPSG-2-E-2SQ1CAV-1BCT4ID	E24
EAGLE TROOP- 3RD PLT	
ATPL-3-E-2SQ1CAV-1BCT4ID	E31
MGSSL-3-E-2SQ1CAV-1BCT4ID	E32
MGSICCV-3-E-2SQ1CAV-1BCT4ID	E33
ATPSG-3-E-2SQ1CAV-1BCT4ID	E34
EAGLE TROOP- 4TH PLT	
MGSPL-4-E-2SQ1CAV-1BCT4ID	E41
ATSL-4-E-2SQ1CAV-1BCT4ID	E42
MGSPSG-4-E-2SQ1CAV-1BCT4ID	E44
EAGLE TROOP- 5TH PLT	
MGSPL-5-E-2SQ1CAV-1BCT4ID	E51
ATSL-5-E-2SQ1CAV-1BCT4ID	E52
MGSPSG-5-E-2SQ1CAV-1BCT4ID	E54
EAGLE TROOP- 6TH PLT	
MGSPL-6-E-2SQ1CAV-1BCT4ID	E61
ATSL-6-E-2SQ1CAV-1BCT4ID	E62
MGSPSG-6-E-2SQ1CAV-1BCT4ID	E64

Loading COMSEC

(RADIO)

- Turn on radio.
 - Turn function switch to load.
 - Make sure mode is FH and COMSEC is CT. Channel is set on 2.
 - Connect fill cable when SKL tells you.
 - Follow instructions for sending a LOADSET (include time on SKL).
 - When prompted by SKL push the load button on the radio.
 - Disconnect fill cable.
- * After radio is done being filled check time using DAGR.*

(SKL)

- Power on SKL.
- Log into SKL.
- Open core LIB.
- Click EQS Tab.
- Highlight LOADSET short title (IH5).
- Click load in the top right corner.
- Click ICOM.
- Click include time.
- Click OK connect SKL to radio fill port.
- Click next.
- Click send.
- Press load on the radio.
- Re-load equipment (NO).
- Click OK.
- Click close or done (if applicable).

(PROPER SKL SHUT DOWN PROCEDURES)

- File
- Save Database
- File
- Exit
- Session
- Logout
- Select "X" on dialogue box
- Wait for green LED light to diminish on top of SKL
- Hold power button for 3-5 seconds
- Allow count down to finish

Deleting COMSEC Key from SKL

Power on the SKL.

- Log on to CORELIB using YOUR login information.
- Select the plus sign on the short title of the key you wish to delete.
- Select the plus sign on the edition of the key you wish to delete.
- Select the segment number of the key you wish to delete.
- Select File.
- Select Delete Segment.
- Select Yes.
- Select File.
- Select Save Database.
- Database will take a few seconds to save.
- Select File.
- Select Exit.
- Select Session.
- Select Log Out.
- Wait until the LED light on the top of the SKL extinguishes.
- Power off the SKL.**

Black Operational GUV Keys Entry Using the SKL.

- 1.Connect the DAGR fill cable (NSN 5995-01-521-3185) to DAGR J1. Connect the opposite end of the cable to the SKL cable.(Provided with SKL)
- 2.Turn DAGR to Power on.
- 3.Select Menu twice to access the main menu on the DAGR.
- 4.Select Receiver Setup, and then select Crypto Fill.
- 5.Ensure that the DAGR is configured to receive the key in DS-102. (Enter on CV Loading Interface to change to "DS-102")
- 6.On the SKL, highlight BLACK key to be loaded into the DAGR. The Black Operational key is USKAD 103040.
- 7.On the SKL, press File => Transmit=>Load.
- 8.On the SKL display, select the following settings:
 - A.Protocol = DS-102
 - B.Activate Mode = DS-102
- 9.Select OK.
- 10.Verify short title and select OK.
- 11.Displays should read "Operation Successful" on SKL and "Valid CV Loaded" on DAGR.
- 12.On the SKL, highlight the second Black Operational key to be loaded into the DAGR. The Black Operational key is USKAD 102040.
- 13.On the SKL, press File => Transmit=>Load
- 14.On the SKL display, select the following settings:
 - A.Protocol = DS-102
 - B.Activate Mode = DS-102.

DAGR KEY LOADING INSTRUCTIONS USING SKL

Black Operational GUV Keys continued

15. Select OK.
16. Verify short title and select OK.
17. Displays should read "Operation Successful" on SKL and "Valid CV Loaded" on DAGR.
18. Press Enter on DAGR; CV Status should say "Collecting SV Information".
19. After SV collection completes, DAGR screen should read "Waiting for SV Info".

Red Operational GUV Key Entry Using the SKL.

1. Connect the DAGR fill cable (NSN 5995-01-521-3185) to DAGR J1. Connect the opposite end of the cable to the SKL cable. (Provided with SKL)
2. Turn DAGR to PWR on.
3. Select Menu twice to access the main menu.
4. Select Receiver Setup, and then select Crypto Fill.
5. Ensure that the DAGR is configured to receive the key in DS-102.
6. On the SKL, highlight red key to be loaded into the DAGR. The Red Operational key is USKAD 101040.
7. On the SKL, press File => Transmit=>Load.
8. On the SKL display, select the following settings:
 - A. Protocol = DS-102
 - B. Activate Mode = DS-102
9. Select OK.
10. Verify short title and select OK.
11. Displays should read "Operation Successful" on SKL and "Have Today's CV Key" on DAGR.

LRAS3 KEY LOADING INSTRUCTIONS USING DAGR

DAGR must be loaded with black keys before loading LRAS3. To perform the mission planning function, the DAGR receiver must be programmed to the desired datum and local time offset (from Zulu time).

A. Power the DAGR on.

B. Push the key to acknowledge any message pop-ups. Press and hold the POS/PAGE button to access the Present Position page.

C. Select the desired map datum.

(1) From the Present Position page, push ENTER key.

(2) Using the UP or DOWN arrow, highlight Select Datum, and then push ENTER key

(3) Scroll using the UP or DOWN arrow to select the datum corresponding to the geographical map being used, then push ENTER key.

(4) The display returns to the Present Position page with the datum change made.

D. Select the desired local time offset.

(1) From the Present Position page, push ENTER key to highlight a field.

(2) Using DOWN arrow, scroll down to the TIME field, and push ENTER key.

(3) Using DOWN arrow, highlight Select Time Zone, and then push ENTER key.

(4) Scroll using UP or DOWN keys to select the Zulu Time offset corresponding to the local time, push ENTER key, and then momentarily PWR/QUIT.

(5) The display returns to the Present Position page with the local time offset change made.

E. The DAGR mission planning configuration is completed.

Once the DAGR receiver has been correctly configured, the DAGR mission set-up can be transferred to the LRAS3.

A. Power up the LRAS3 sight system. NOTE: Do not connect the DAGR to the LRAS3 sight until the LRAS3 has completed its power-up cycle.

B. After the LRAS3 sight display indicates that the system is operational and power-up BIT has been completed, connect the J2 connector of the DAGR receiver to the upper DAGR/PLGR connector (J4) of the LRAS3 sight using the DAGR-DAGR (PLGR-PLGR) cable.

C. Power the DAGR on.

D. On the DAGR, push MENU key twice. The Receiver Status display is shown.

E. Use the UP or DOWN keys to scroll to SYSTEM, and press ENTER then scroll to FUNCTION SET and press ENTER to view the status of the DAGR.

F. If in the Advanced function set, proceed with the next step. If already in Basic proceed to step j.

G. Push the UP or DOWN arrow to highlight BASIC.

H. Press ENTER. A changing profiles message appears.

I. Push the key to acknowledge. The display returns to the Receiver Status display.

J. Push the ENTER key to acknowledge, and, if necessary, push the ENTER key to acknowledge other message pop-ups. The display shows the Present Position page.

K. Push MENU twice to access the Main menu.

L. Highlight COMMUNICATIONS, and then push ENTER.

M. Highlight DATA TRANSFER, and then push ENTER. The Data Transfer page is displayed.

N. On the Data Transfer page of the DAGR, push ENTER to highlight a field.

O. Use UP or DOWN to highlight the COM Port field.

P. Push ENTER, then highlight COM Port 1 and push the ENTER.

Q. Use UP or DOWN to highlight the Mode field and select DAGR

R. Push ENTER, and then scroll to Data to Transfer Field.

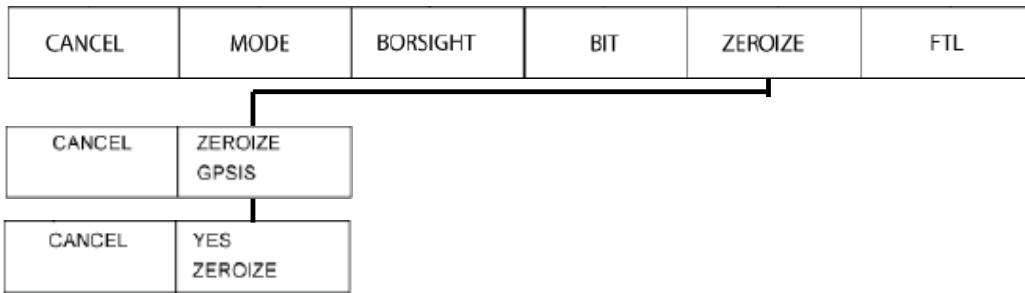
S. Press ENTER

T. Scroll to desired field. Depending on the data to be sent, use the UP or DOWN key to select either:

Setup Data – For Local Time Offset & Datum Transfer (Mission Planning), or
SV/POS/Time Data – For SV Data, Position and Timing Transfer and push the key.

LRAS3 KEY LOADING INSTRUCTIONS USING SKL

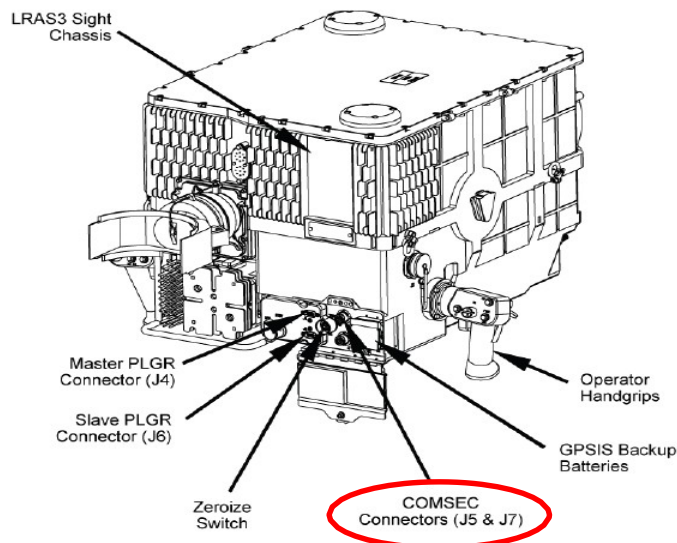
a. Power up the LRAS3, insure BIT has completed, and zeroize GPSIS through main menu.



NOTE: The sight must have a clear view of the sky and it will take at least 12 minutes for the sight to acquire satellites and download the daily key and current satellite almanac.

NOTE: If the LRAS3 has been powered up for an extended period (>12 min) prior to keying, the LRAS3 may transition directly to PPS operation, as it will have already downloaded the daily key

- b. Turn on SKL.
 - c. Double click CoreLib.
 - d. Go to LAUNCH.
 - e. Select LAUNCH UAS.
 - f. Log in (standard windows user/password method).
 - g. Select OK.
 - h. Select KEYS tab (should happen automatically).
 - i. Expand the appropriate key short title to show segments.
 - j. Expand the appropriate key short title to show segments (101040, 102040 and 103040)
- (Ensure the commo NCO loads these specific segments into the SKL)



- k. Select "File" from the upper left hand corner of the screen.
- l. Select "Transmit" from the "File" menu.
- m. Select "Load Selected Keys" from the "Transmit" menu.
- n. Put checkmarks next to 101040, 102040 and 103040. Then select "OK".
- o. Select LOAD button in top right corner.
- p. On Key Load Settings Under PROTOCOL select DS102 from dropdown menu.
- q. On Key Load Settings Under "ACTIVATE MODE" select KYK-13.
- r. Select OK.
- s. SKL displays "ready to send" Press OK.
- t. "Press INITIATE button...." Displays on SKL screen.
- u. Connect to LRAS3 J5.
- v. "OPERATION SUCCESSFUL" select OK.
- w. Connect to J7. (Repeat step "h" through "t")
- x. LRAS3 "NO CRYPTO KEY" should now be replaced with "DOWNLOAD SAT KEY".

z. After sights have acquired the key, the LRAS3 will remove the "DOWNLOAD SAT KEY" message and transition to PPS mode automatically.

NOTE: Ensure that the proper key description parameters (Short Title, Edition, Segment, etc.) were entered into the SKL when the key was loaded into the SKL

NOTE: Ensure that only valid and current keys are loaded into the LRAS3 system. Outdated keys can be successfully loaded into the LRAS3 system. The "BAD KEY" message should replace the "No CRYPTO KEY" message if outdated or invalid keys are loaded into the LRAS3 sight

LOADING CRYPTO INTO AN/PED-1 (LLDR)

NOTE: Loading Crypto is to be performed only upon direction from the unit COMSEC officer.

1. To load Crypto data, follow the steps below:
 - a. Ensure the LLDR power is off.
 - b. Verify that the GPS back-up battery is installed (WP 0017, GPS Backup Battery - Remove, Install) in the TLM in order for the system to retain the COMSEC fill device data after the system is turned off.
 - c. Power up the COMSEC fill device and command the COMSEC fill device to send crypto code using DS-102.
 - d. Connect the COMSEC fill device via its own interfacing cable to the CRYPTO connector on the top of the TLM. Ensure the connections are tight.
 - e. Turn the IMAGER SELECT switch on the TLM to STBY position. If Day Mode only is to be used, select "DAY".
 - f. Press the ACTION button to accept the BIT status. The GPS may take up to 22 minutes to complete data download. For complete location data, the TLM needs to be outdoors and clear of obstructions in order to acquire satellites.
 - g. Verify that the Crypto Key code has been loaded into the TLM GPS subsystem. Press the ACTION button and using cursor select SYSTEM INFO (Figure 7) for a displayed message "GPS Crypto Key Loaded" as shown in Figure 7. The response time for the indication may take up to 45 seconds. If the load is unsuccessful, ensure the LLDR power is off, and repeat steps 1 through 6. If necessary select another key in step 5 above.
 - h. If Crypto data is loaded successfully, turn the COMSEC fill device off and disconnect the COMSEC fill device from the TLM.

2. Verify GPS location information in Sensor Location box by map or external GPS device.

WARNING: The GPS memory contains critical information that if obtained by the enemy could be detrimental to performance of mission and cost lives. This information must be zeroized before enemy capture and any time the equipment leaves your possession.
3. To remove Crypto code from the TLM after mission completion, select ZEROIZE CRYPTO KEY in the SYSTEM INFO screen, and press ACTION. Verify GPS Crypto Code has been removed by viewing SYSTEM INFO menu for a "GPS Crypto Key Zeroize Successful" message as shown in Figure 8.
4. Select SAVE SETTINGS and press ACTION.
5. Exit SYSTEM INFO by highlighting EXIT and press ACTION.
6. Return to the Main Menu by highlighting QUIT and press ACTION.

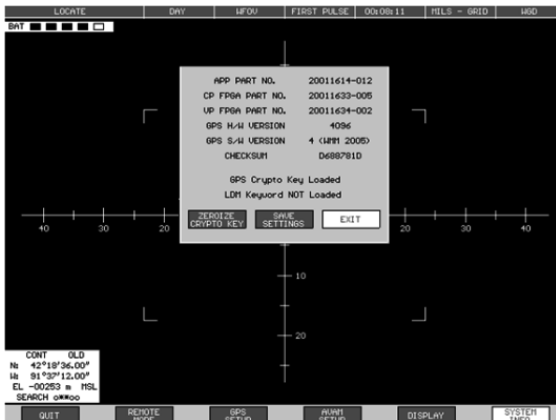


Figure 7. GPS Crypto Key Loaded.



Figure 8. GPS Crypto Key Zeroize Successful.

COMSEC Compromise

REACT TO JAMMING "MARLEY"

EVENT/ACTION	RESPONSIBILITY	STATUS
Attention in the TOC: JAMMING	BH9/BH9N/BTL CPT	
Guidons call to all stations using codeword "MARLEY" to initiate shift to alternate NET ID, identified in coordinating instructions of OPRD. Send JCR message with corresponding codeword and alternate NET ID to Troop CPs.	BTL CPT	
If jamming is resolved by NET ID change, verify NET ID change with all substations on the affected NET.	BH9/BH9N/BTL CPT/NCO	
If jamming persists, switch to alternate means of communication IAW operation PACE plan. Contact all substations on alternate means, instruct change to alternate means of communication.		

REACT TO COMSEC COMPROMISE "BANDIT"

EVENT/ACTION	RESPONSIBILITY	STATU
Attention in the TOC: BANDIT	S	
Initiate Julian date shift: DTG	BH9/BH9N/BTL CPT	
Guidons call to all stations using codeword "BANDIT 1" to initiate Julian date shift to +5 or codeword "BANDIT 2" to initiate Julian date shift -4. Send JCR message with corresponding codeword to Troop CPs.	BH9/9N BTL CPT/NCO	
Notify BDE HQs . Verify Julian date change and time of change with all substations on all SQDN NETS.		
NCS maintains separate radio on old Julian date to collect any missing stations	BH9/9N BTL CPT/NCO	
Guidons call to all stations to implement SINCGARSS TEK changeover at this time. Maintain an alternate form of communication with BH X-Ray via JCR, HF, TACSAT.	BTL CPT/NCO BTL CPT/NCO	
Notify BDE headquarters. Verify key change and time of change with all substations on all SQDN nets.		
At effective time, NCS conducts net call using new COMSEC TEK.	BH9/BH9N/BTL CPT BTL CPT	
NCS maintains separate radio on old NET ID to collect any missing stations	BTL CPT/NCO	
Annotate any element that did not answer net call on the new key. NCS uses proper radio procedures to bring all lost stations into the NET.	RTO	
Await further actions required from BDE S6	BTL CPT/NCO	

JCR/BFT OPERATION STEPS

BFT/JCR START UP PROCEDURES

1. Turn DAGR on (Hold Power Button)
2. Power on Transceiver (Toggle Switch On)
3. Turn function knob on KGV-72 to "Run"
4. Turn on CPU (Toggle Switch On)
5. Power on Display Screen (Hold Power Button)
6. Allow Start Up
7. Enter Password (**1982!Nappa**) on Display screen to login
8. Select "Secret" on dialogue box
9. **DO NOT** PERFORM VIRUS SCAN – Select No
10. Select "OPS"
11. Allow OPS to start up
12. ONCE MAP COMES UP CLICK ON "AUTO CENTER"

BFT JCR SHUT DOWN PROCEDURES

1. Select "ADMIN"
2. Select "EXIT OPS"
3. Choose "YES"
4. Cancel Time out
5. Select "OFFLINE"
6. Click "Start" and Select FBCB2
7. Select EXIT OPS
7. Click Start and Select LOG OFF
8. Click Start and Select SHUT DOWN
9. Allow Display to completely shut off
10. Turn off DAGR (Hold Power Button)
11. Turn KGV-72 function knob to OFF
12. Turn Transceiver off (Toggle switch to OFF)
13. Turn off CPU (Toggle switch to OFF)

----- Creating Message Folders -----

Select "Message Management Envelope"
Select "Saved Folder" in left folder pane
Select "New Folder" button
Enter Folder Name in Folder/File Name text box
Select "OK" button

----- Creating Address Groups -----

Select "Message Management Envelope"
Select "Address Groups" in left folder pane
Select "Add Group" button
Enter Name of new Group in Group Name text box
Select "OK" button
Highlight Newly Created Group
Select "Add Addressee" button
Select Desired Role(s) from the Selected Platform dialog box
Select "Apply" button (repeat steps 8 and 9 to add more addressees to specified group)
Select "Close" button
Select "Close" button

JCR/BFT OPERATION STEPS

----- Message Default Setting -----

Select "Message Management Envelope"
Select "New Message Folder" in left folder pane
Select "Desired Message" in Message Type pane
Select "Set Default Message Addressing" Button
Select "Message Settings" Tab
Set Desired Precedence and Acknowledgements
Select "Message Addressees" Tab (do not delete existing threaded addresses)
Select the appropriate "Addresses" button
Select Desired Role(s) from the Selected Platform dialog box
Select "OK" Button
Select "OK" Button
Select "Close" Button

----- Quick Send Setup-----

Select "Message Management Envelope"
Select "Quick Send" in left folder pane
Select appropriate "Radio Button" in the Quick Send Button Select pane
Select "Desired Message File" from saved messages in the Message Type pane
Type in "Desired Button Label" (four characters maximum)
Type in "Desired Balloon Label"
Select "Apply Button"
Select "Close Button"

-----Creating PFF Folders-----

Select "Start" button
Select "FBCB2"
Select "PFF Management"
Highlight "My_ Documents" Folder in the Destination side
of the Dialog Box (right side)
Select "New Folder" button,
Type in Desired Folder name
Select "OK" button

PFF File Extension
.odt = Text type file
.ods = Spreadsheet type file
.odp = Presentation type file

----- Saving an Attachment From a Field Order-----

Open FIPR, Highlight Order, Display msg
Select cancel
Highlight the Field Order, in Field Order Management Tool Dialog Box
Select Attachments button
Select Display
Save as in (proper folder and file name)
Determine if "keep displayed", Select Close
Select Cancel, Select Close (Close FIPR)

-----Creating/Editing Named Locations on the MAP-----

1. Select Map button
2. Select Center On Button
3. Select Location Tab
4. Select Edit Locations Button
5. Enter Group Name, Location Name, Fill Location
6. Select Apply

Repeat steps 5 and 6 to add additional locations.

JCR/BFT OPERATION STEPS

-----Creating an Overlay-----

- Select OVLY button
- Select OVLY Type from drop down
- Select Symbols Tab
- Select 2525B Tab
- Select Search Button
- In Search field key in name of graphic symbol to search for, boundaries, phase line, etc.
- Select Search button
- Highlight leftmost entry, type or subtype field of graphic listed
- Select OK button
- Select Add Button, create graphic by entering grids coordinates, selecting Add after each grid is entered, or using Named button, or free draw by clicking on map.
- Select Ok when done adding graphic
- Select Edit button
- Edit graphic accordingly using the Attributes and Labels Tab selecting Apply after each entry is entered
- Select Close button when done
- Repeat steps five through fourteen to add additional graphics
- Select Overlay tab
- Select Save As button, save in appropriate folder with filename
- Check Keep Displayed radio button to keep overlay displayed

EDITING AN OVLY

- Select message Envelope button
- Select Saved Message folder
- Select Folder where Overlay is saved
- Select Overlay to edit
- Select Edit button
- Repeat steps three through seventeen above

Setting SA Data Filters

1. Select OPS (Bottom left of screen)
2. Select ADMIN (Right of screen)
3. Select SA tab
4. Select the FRIENDLY tab. (The following options will appear.)
 - STALE – Click the drop down arrow and select **2 hrs**
 - OLD – Click the drop down arrow and select **3 hrs**
 - PURGE – Click the drop down arrow and select **4 hrs**
5. Select APPLY
6. Select the OBSERVED tab. (The following options will appear.)
 - STALE – Click the drop down arrow and select **2 hrs**
 - OLD – Click the drop down arrow and select **3 hrs**
 - PURGE – Click the drop down arrow and select **8 hrs**
5. Select APPLY
6. Select the AIR tab (The following options will appear.)
 - STALE – Click the drop down arrow and select **3 mins**
 - OLD – Click the drop down arrow and select **4 mins**
 - PURGE – Click the drop down arrow and select **8 mins**
5. Select APPLY
6. Select CLOSE

SMDL PROCEDURES

Make a Message Exportable

- Select **START**.
- Select **FBCB2**.
- Select **Mission Data Load**.
- Select **Message Manager**.
- Select the **File** you wish to transfer on the LEFT screen.
- Select **New Group** on the RIGHT screen.
- Name** the new group.
- Select **OK**.
- Select the **group** you just created on the RIGHT screen.
- Select the **Make Exportable** button.
- Select **Close**.

Change a Saved Message to a Mission

- Select **START**.
- Select **FBCB2**.
- Select **Mission Data Load**.
- Select **Mission Data Loader**.
- Under the **Create/Edit** tab, select the **plus sign** on **Message**.
- Select the **File** you wish to transfer on the LEFT screen.
- Select **New Mission** on the RIGHT screen.
- Enter the **Mission Name**.
- Select **Save**.
- Select **Close**.
- Highlight the **mission** you just created on the RIGHT screen.
- Select **ADD File**.
- Select **Close**.

Write a mission to the SMDL

- Insert the SMDL into either a USB port or where the keyboard plugs into the display.
- Select **START**.
- Select **FBCB2**.
- Select **Mission Data Load**.
- Select **Mission Data Loader**.
- Select the **Write To** tab.
- Click on the drop down arrow and select **SecureMdlDevice**.
- Enter the password.
- Select **OK**.
- Select the **Mission** you wish to transfer on the LEFT screen.
- Select **Write**.
- Check mark **JCR**.
- Select **OK**.
- Select **OK**.
- Select **Close**.

Copy a Mission From a SMDL

- Insert the SMDL into either a USB port or where the keyboard plus into the display.
- Select **START**.
- Select **FBCB2**.
- Select **Mission Data Load**.
- Select **Mission Data Loader**.
- Select the **Copy From** tab.
- Click the drop down arrow and select **SecureMdlDevice**.
- Enter the password.
- Select **OK**.
- Select the **Mission** you wish to transfer on the RIGHT screen.
- Select **Extract**.
- Select **OK**.

Install a mission to OPS

- Select the **Install** tab.
- Select the **Mission** you wish to install.
- Select the **Install Mission** button.
- Select **OK**.
- Select **Close**.
- You will receive a message in your **FIPR** saying that you have installed a mission.

RETRANS OPERATIONS SETUP/

PRC-150 OPERATION STEPS

Same Net RETRANS Steps

1. Find the highest elevation in the area.
2. Ensure you have a AN/VRC 92E/F.
3. Ensure both VAA are connected.
4. Put top radio in FREQ of NET want to RETRANS.
5. Put the bottom radio in the same FREQ as top radio.
6. Move the radio Mode to RX/TX.
7. Place B-Radio (Top Radio) into RX Mode; place A-Radio (Bottom Radio) Into TX (to change press “data” key followed by “7/Change key until RX or TX is displayed.
8. Disconnect both Hand Microphones.
9. Connect “Dog Bone” cable to Top and Bottom radio Auto fill ports.

HOW TO PLACE A CALL ON HF RADIO USING 3G ALE

1. Ensure function knob is turned to “PT”
2. Radio should automatically start scanning
3. Press the 1 “Call” Button
4. Press ENTER on “AUTOMATIC” for type of call to be placed
5. Press ENTER on “INDIVIDUAL” to find the station name you want to call
6. Use up/down arrows to find the station name you wish to call
7. Press ENTER on the station name of your choice.
8. Allow Radio to search for the best channel to talk on
9. Once it beeps 3-5 loud beeps you are connected.
10. Use the push to talk button on the Hand Mic and conduct radio check with the station you are trying to reach.
11. If your radio does not have a RPA loaded into it turn it in to your COMMO representative so he/she can turn it into S6 to be programmed.

HF Antenna Priority:

Vehicle Mounted NVIS

Ground NVIS

Vehicle Whip

Ground Whip

Dipole

AN/PRC -117F Integrated Wave form OP Card

Pre-Programming Requirements

V6.0.1.5 AN/PRC-117F IW firmware or later must be installed on all IW net radios
 IW SAT Access Authorization (SAA) with SATID and SERVICE Number
 ANDVT, KG84, and VINSON COMSEC: once loaded, the IW SERVICE automatically sets radio:
 COMSEC type, data rate, and other voice/date mode configurations

(IW) Key Load and Programming Steps

LOAD ANDVT COMSEC	Place radio in [LD] STORE FILL in ANDVT Compartment TEK01.
LOAD VINSON COMSEC	Place radio in [LD] STORE FILL in VINSON Compartment TEK01.
LOAD KG-84 COMSEC	Place radio in [LD] STORE FILL in KG-84 Compartment TEK01.
LOAD IW OW KEY	Place radio in [LD] STORE KEY in SATELLITE Compartment TSK01.

PGM [IW] NET	Press [PGM/S] select IW [<][ENT] select NETS [ENT] select 0 IWNWET0 [ENT] select YES [ENT]
SAT ID #	Select SATID[^]{v} [ENT]
SERVICES	Press [>] SRV NUM 00000 blinks. Type (5-digit) SRV NUM [ENT]
ADD A SERVICE * Up to 15 services per net	Press [^] until 00000 appears. [>] 00000 blinks. Type (5-digit)SRV NUM [ENT].
AUTO CONNECT ** (1) SRV NUM can be set as autoconn	Scroll SERVICES [^]{v} [<] Y or N blinks select {^}{v} [ENT] [ENT] SAVES.
IW NET PGM COMPLETE *** other settings	[PRE +/-] to exit programming mode.

*** Default IW NET menu and SATID parameters are typical and should be modified only as required:

TX CAPABILITY FULL	RANGING ACTIVITY		EPOCH GROUND/MARITIM E	TSEC OW ENCRYPTED
KEY POS (0,1,2,3) TSK01	PWR 10W	VAU PWR 50W	NAME IWNET0	PCFG [0 IWCFG0

Changing default SATID DOWNLINKS	[PGM/8] IW[ENT] SATIDTABLE [ENT] EDIT [ENT] select SATID (1 of 32) [^] [v] [ENT] select DOWNLINK [<][ENT] [ENT] select (1 of 10) DL FREQ and modify as required [ENT]. [PRE+] to exit programming.
----------------------------------	--

AN/PRC -117F Integrated Wave form OP Card

CONNECTINT TO AN IW SERVICE

Calculate your assigned IW SATELLITE azimuth and angle.			
Connect both antenna RF GAIN EXTENDERS to SATCOM Antenna.			
Point Antenna with an unobstructed view toward the SATELLITE.			
Connect RF cable to Antenna and manpack (J8) UHF port, or 50 W system (J7) SAT PORT.			
Rotate radio function switch to [CT]. Press [MODE/3] Select IW [v] [ENT]	ACQUIRING 4 SEC	RANGING	CONNECTED
*3 quick BEEPS heard when CONNECTED			

CHANGING IW SERVICES

Press [CALL/1] select CONNECT [ENT] Select SERVICE [^][v][ENT] connects Note: Only programmed services are displayed. Use NET radio OPTIONS to add services.	SERVICE #	NET/UNIT
---	-----------	----------

RADIO OPTIONS

Press [OPT/7]	COMSEC DAT/VOC NET TIME POWER VIEW	Changing common IW net parameters while connected. Note: VIEW includes IW MSG LOG and current 90W) KEY LOCATION.
---------------	---	---

IW CO-SITE MITIGATION GUIDANCE- Numerous manpacks operating in close proximity.

Isolate antennas and adjust power as needed based on the chart below.

Power Output Setting	Recommend Antenna Separation
20 W	50 ft (~15 meters)
15 W	40 ft (~12 meters)
10 W	30 ft (~9 meters)
8 W	15 ft (~4.5 meters)

Avoid in-line (one behind the other) SATCOM antenna placement.

Utilize all SATCOM antenna gain extension elements.

Use low-loss RF isolation cable when length/distance is longer than 50 feet.

If available, use the AN/VRC-103 amplified system, which includes a SATCOM Co-site filter.

DAMA SATCOM

Programming for the AN/PRC-117F, 25 kHz “Army Combat Net Radio” Network Service

Turn radio ON to CT, wait until it fully initializes. Follow menu trail to enter data as directed. Any item not covered is left at the default setting. > = ENT (ENTER). Do not skip any steps.

1. Set DAMA Home Channel:

Press PGM (8) then > DAMA > PRESETS > NETS > 0 DAMANET0 > CHAN > enter the three digit channel code. Press PRE +/- key once and return back to starting screen.

2. Set DAMA Terminal Base Address (TBA):

Press PGM (8) then > DAMA > PRESETS > NETS > 0 DAMANET0 > ADDR > BASE_ADDRESS > Set radios terminal base address, a five digit number. Press PRE +/- key once and return back to starting screen.

3. Set DAMA Guard List Address:

Press PGM (8) then > DAMA > PRESETS > NETS > 0 DAMANET0 > ADDR > GUARD_LIST > Set the network address using ADD menu. Network address is usually in range of 50000 – 65535. Press PRE +/- key once and return back to starting screen.

4. Set DAMA Key Locations to SATELLITE TSK 01:

Press PGM (8) then > DAMA > PRESETS > NETS > 0 DAMANET0 > TRANSEC > OW ENCRYPTION > ON > Set KEY LOCATION 0, 1, 2 and 3 to TSK 01 – all four. Press PRE +/- key once and return back to starting screen.

5. Set COMSEC Mode and TEK:

Press PGM (8) then > DAMA > PRESETS > PORT_CONFIG > 0 DAMACFG0 > COMSEC > CRYPTO MODE > ANDVT > TEK 01, press ENT. Press PRE +/- key once and return back to starting screen.

6. Set DAMA Configuration Code:

Press PGM (8) then > DAMA > PRESETS > PORT_CONFIG > 0 DAMACFG0 > CONFIG_CODE > 25 kHz PORT CONFIG CODE > enter 060 and press ENT. Press PRE +/- key once and return back to starting screen.

7. Set DAMA Destination Preset Address:

Press PGM (8) then > DAMA > PRESETS > DESTINATIONS > 0 DAMADEST00 > 25K_AC > ADD > program the guard list address as already entered in guard list for step 3. Press ENT to set. Press PRE +/- key once and return back to starting screen.

8. Set DAMA Destination Preset Name:

Press PGM (8) then > DAMA > PRESETS > DESTINATIONS > 00 DAMADEST00 > NAME > enter name of NETWORK – C2NET, FIRES etc. Press ENT to set. Press PRE +/- key once and return back to starting screen.

9. Load ANDVT TEK to radio with FILL Device:

Rotate radio function switch to LD, connect fill device and load designated TEK to ANDVT TEK 01. Disconnect fill device and return function switch back to CT. See next page.

10. Load DAMA EOW TSK to radio with Fill Device:

Rotate radio function switch to LD, connect fill device and load designated TSK (C559X) to SATELLITE TSK 01. Disconnect fill device and return function switch back to CT.

11. Setup SATCOM Antenna:

Position SATCOM antenna on the correct magnetic azimuth and elevation angle. Connect coax to J8 jack on radio.

12. Put RADIO in DAMA Mode:

Press MODE button (3), scroll to DAMA and press ENT. Radio will configure DAMA and begin to acquire. Wait for radio to display it is NET CONNECTED. Do not proceed if NET CONNECTED cannot be achieved or observed. Watch for the following: ACQUIRING – Radio is looking for DAMA signal. Seeing this too long is a problem.

FRAMELOCK ACHIEVED – Antenna and Coax are pulling in DAMA signal. If not seen check steps 1, 11, and 12.

MINIMUM PRECEDENCE AND FRAME FORMAT – DAMA EOW TSK is correct and has decrypted information from the DAMA channel.

RANGING AND RANGING COMPLETE – If radio is stuck in ranging, cycle with PGM > YES > CLR and watch it start over again.

Stuck in ACQUIRING – First check steps 11, 1, 2, 3, 4, and 10. Skip steps 11 and 1 if frame lock has been observed.

13. Make a DAMA Call to the Network Address:

Press Circular arrow key until service IDLE is displayed. Press CALL button (1), Select PLACE A CALL. Select DAMA Destination 00, Precedence ROUTINE, Duration Indefinite 0000. What for RCCOW transmission. Upon RX/TX service message, listen on the handset and make a call to your NCS with “Call sign this is Call sign to your NCS.

Service State – stuck in PENDING or QUEUED – check steps 3 and 7 for a correct single 1 of 1 network address in 50000 – 65535 range.

14. Information Request Received:

Note code and press enter on 00000 to acknowledge seeing code. Troubleshoot programming by the following. Start at step 12 after fixing problem.

88 or 89 – Check step 6 – set to 060

82 – Check steps 3 and 7 for a correct single 1 of 1 network address in 50000 – 65535 range.

15. Maintain radio watch with service state of ACTIVE:

Keep radio display on service state screen and watch that it remains ACTIVE. Perform step 13 if service goes to PENDING or IDLE. Perform step 12 if radio goes to RANGING with a DAMA mode cycle of PGM > YES > CLR. Respond to all radio calls quickly.

Task: Provide Retrans FM Communications.

Purpose: FM Retrans will allow the SQDN to talk over FM communication assets while operating in the AOR

Nets being Retrans'd:

- SQDN CMD 415
- SQDN A/L 417
- SQDN O/I 418
- BPT Retrans SQDN Fires 420

Means to communicate with Retrans:

- Primary:** JCR FIPR to role names;
- RTNS1-2SQ1CAV-1BCT4ID
- RTNS2-2SQ1CAV-1BCT4ID
- RTNS3-2SQ1CAV-1BCT4ID

Alternate: NET ID 416 FH/CT

Contingency: 39.650 MHZ SC/PT

Location: _____ **Alternate:** _____

Code words to move:

Back to Last Location: Black Jack

Alternate Location: Ace

Back to TOC: Dealer

Execute Contingency: Casino

Priorities of Work:

- | | |
|-------------------------|------------------------|
| _____ Est. Retrans | _____ Security |
| _____ Emplace Obstacles | _____ Camouflage |
| _____ Emplace LP/OP | _____ Dig Hasty Pos |
| _____ Draw Range Cards | _____ Dig Fighting Pos |
| _____ DrawSectorSketch | |
| _____ CleanWeapons | |

- | | | |
|--------------------------|----------------------------|--------------------------|
| _____ NVG's | <u>Equipment:</u> | _____ Map |
| _____ Binos | | _____ MRE's |
| _____ Fuel | | _____ MOPP Gear |
| _____ Oil | | _____ QUEAMs |
| _____ Hydraulic Fluid | | _____ Chem Lights |
| _____ Water | | _____ Batteries |
| _____ Concertina Wire | | _____ Retrans Cable |
| _____ Signal Panel | | (Dog Bone) |
| _____ Compass | | _____ Spare Connectors |
| _____ Protractor | | _____ COMSEC* |
| _____ CLS Bag | | _____ Individual Soldier |
| _____ Basic Load of Ammo | _____ Equipment | |
| | _____ Retrans Box of Spare | |

Chain of Command: Parts

S6 OIC, Section Chief, Retrans TM Chief,

*** Attach Mission Command Product, ECOA Product and outline Approved Routes on MAP**

Retrans Team # _____

Phase: _____ **OPORD:** _____

Enemy

Situation: _____

Attachments/Detachments: _____

Mission: _____

Scheme of Maneuver: _____

Tasks to Subordinate units: _____

Security Plan: _____

Movement Annex

The Retrans team will link up with _____ At _____ (grid) NIT

Report to _____ You will SP NIT _____ and cross the LD NIT

Movement formation will be _____

Order of March _____

RP _____

Estimated time of arrival _____

Report Crossing all phase lines and check points.

Possible critical points along the route are:

Coordinating Instructions: _____

Sustainment Command Posts

FIELD TRAINS COMMAND POST (FTCP)

The field trains command post, under the command of the FST commander, conducts all logistics operations (with the exception of medical) for the reconnaissance squadron. The FTCP is normally collocated with the brigade support battalion (BSB) in the brigade support area (BSA). The Field Trains consists of the FST commander, FST 1SG, FST XO, general supply section, ammunition section, fuel section, field feeding section, and S1 representative. Approximately 33 Soldiers man the FTCP based off MTOE numbers, but it is recommended that the FST also have at least one generator mechanic and operations NCO to assist operations.

The Field Trains executes squadron support operations. The FST XO provides the interface with the FST CDR, BSB, and the CTCP on all squadron logistics operations. Key tasks include:

- Organize all classes of supply, personnel, and mail going forward into logistics packages (LOGPAC) under the direct control of the Distro Platoon Leader.

- Dispatch LOGPACs.

- Maintain the FST Command Post

- Coordinate logistical support with squadron, BSB and the SPO

The primary C2 systems found in the FTCP are FM and JCR-LOG. The FST monitors the command net and the A/L net. It maintains communications with the BSB.

COMBAT TRAINS COMMAND POST (CTCP)

The combat trains command post under the command of the HHT commander provides forward logistics operations, including medical, for the reconnaissance squadron. The CTCP is normally located within the Squadron's Area of Operations. The Combat Trains consists of the HHT commander, HHT 1SG, HHT XO, the Squadron S4 OIC, S1 OIC, Unit Maintenance Collection Point (consisting of FST Field Maintenance and Maintenance Control sections), emergency resupply from distro platoon, and Main Aid Station.

The squadron S4 is responsible for planning and integrating logistics into the plan at the CTCP. The HHT Commander is responsible for movement and security of the CTCP. Key tasks include:

- Plan all aspects of Squadron Sustainment Operations.

- Provide forward medical and maintenance support

- Maintain the COP.

- Coordinate personnel service support.

The primary C2 systems found in the CTCP are FM, JCR-LOG, BCS3 and VSAT. The CTCP monitors the command net and the A/L net.

ADMIN and LOGISTICS OPERATIONS CENTER (ALOC) (Stability Ops)

The ALOC, under the direction of the FST commander is responsible for all logistics planning and execution. The flow of information moves from the troop 1SGs and CTCP to the ALOC to the FST for execution. The S4 section receives requests (Yellow 1 format attached), analyzes consumption trends and determines troop needs based on mission and availability. PASR (personnel accounting and strength reporting) is handled at the ALOC through the S1 section which is co-located. The FST CP is also co-located in the ALOC as the operations portion of the ALOC. The S4 facilitates all logistical planning in order to effectively push LOGPAC to the intended units. The FST commander coordinates with the S4 in order to most efficiently resource the logistical needs of the unit and to tailor requirements to capabilities and timelines.

Maintenance/4-Line Maintenance Report

5988E Schedule/Flow:

Units will conduct PMCS prior to the arrival of the LOGPAC and faults will be verified by the field maintenance team. If the unit executes a service station resupply, then the FMT should be located at the assembly area. If the unit executes a tailgate resupply, then the FMT should move with the LOGPAC to ensure 5988's are verified before sending them back to the UMCP. LOGPAC will bring fresh 5988Es daily and conduct exchange, returning verified 5988Es to the UMCP for update and to obtain parts if necessary.

5988E flow is as follows:

Operator → Supervisor → XO → FMT → XO → 1SG → LRP → UMCP

Dispatch Procedure:

Dispatches will expire in 7 days or IAW guidelines from higher headquarters. LOGPAC will pick up 5988Es with QA/QC sheet verified by field maintenance team. Dispatches will be returned with the LOGPAC at a designated exchange point and time. Field maintenance teams will conduct all Stryker QA/QC in the field.

Conditions for Evacuation:

If the field maintenance team cannot repair the vehicle/equipment in 2-3 hours, it will be evacuated to the UMCP. The UMCP under the guidance of the Maintenance Control Section will have 24-48 hours to repair the vehicle/equipment or it will be evacuated from the UMCP to BSA. Evacuation method will be either like vehicle recovery to UMCP or via M984 Wrecker called forward depending on the current tactical situation.

Recovery Plan:

During offensive and defensive operations: The primary method is self recovery. At a minimum, the unit should always self recover to a Maintenance Control Point. If this is not possible, then the unit should provide a link up point for the M984 Wrecker away from the front line of troops to avoid unnecessary risk to a Squadron asset. The preferred method will be for the field maintenance team and troop XO to set up a maintenance collection point (MCP) for coordination of pick up with a M984 Wrecker from the UMCP. Depending on the tactical situation troop might have to utilize like vehicle recovery and self evacuate the vehicle/equipment back to the UMCP.

EXAMPLE: (This is sent via JCR to the UMCP)

Line 1	A. Admin # B. Type of Equipment (Be Specific)	A. A11 B. XM1256
Line 2	Fault Description	Mainframe INOP
Line 3	A: Nomenclature B: NSN with quantity	A. Turret, com B. 01-546-8571, 1 each
Line 4	Grid to MCP or link up point	GA 1733 8420

Stryker Recovery

Tow a STRYKER using two piece extended length tow bar.

- Prepare disabled vehicle for tow.
- Remove tow bar leg assemblies from stowed location
- Attach tow bar to front towing lugs on disabled vehicle
- Position tow vehicle for towing
- Install towing pintle on towing vehicle
- Connect tow bar to towing vehicle.
- Secure towing vehicle
- Connect air lines and inter-vehicular electrical cable to towing vehicle.
- Connect air lines and inter-vehicular electrical cable to disabled vehicle.
- Start engine on towing vehicle.
- Open brake control valve lever on disabled vehicle.**
- Check disabled vehicle air pressure gauges to ensure air pressure is building correctly.
- Close and secure all open hatches except front service hatch on disabled vehicle.
- Recheck all towing equipment and connections for security.
- Conduct check of all signal lights on both the towing and disabled vehicles.
- Disengage transfer case from drive train on disabled vehicle.**
- Remove wheel chocks from disabled vehicle.
- Conduct check of towed vehicle braking system.
- Tow disabled vehicle to desired location.

UMCP

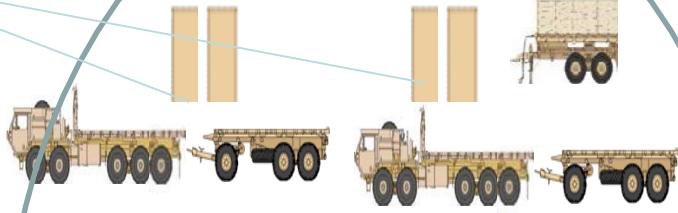
Crew Served

POL

Stryker Bench Stock



Broken Stryker



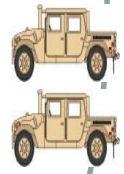
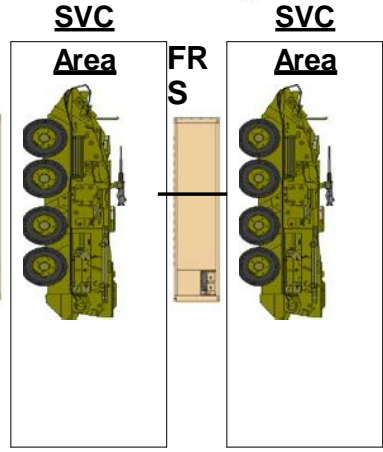
Crew Served



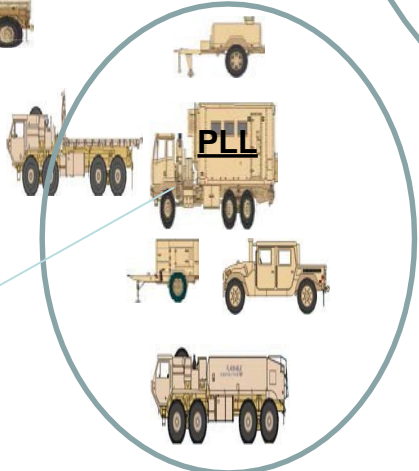
GT



FRS



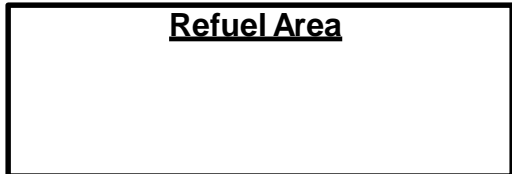
Crew Served



SMO
SMT
MCS



GT



Crew Served



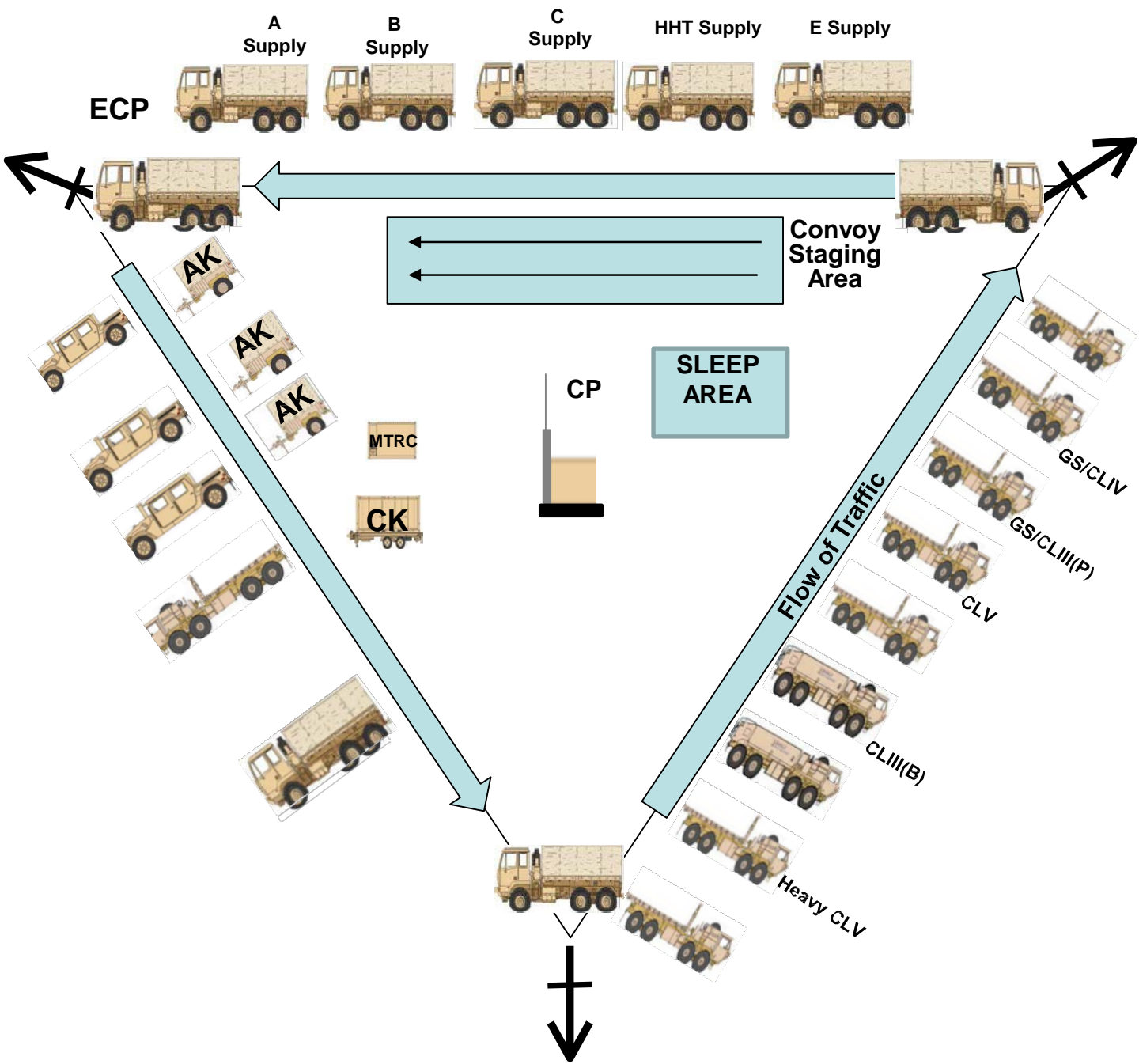
GT

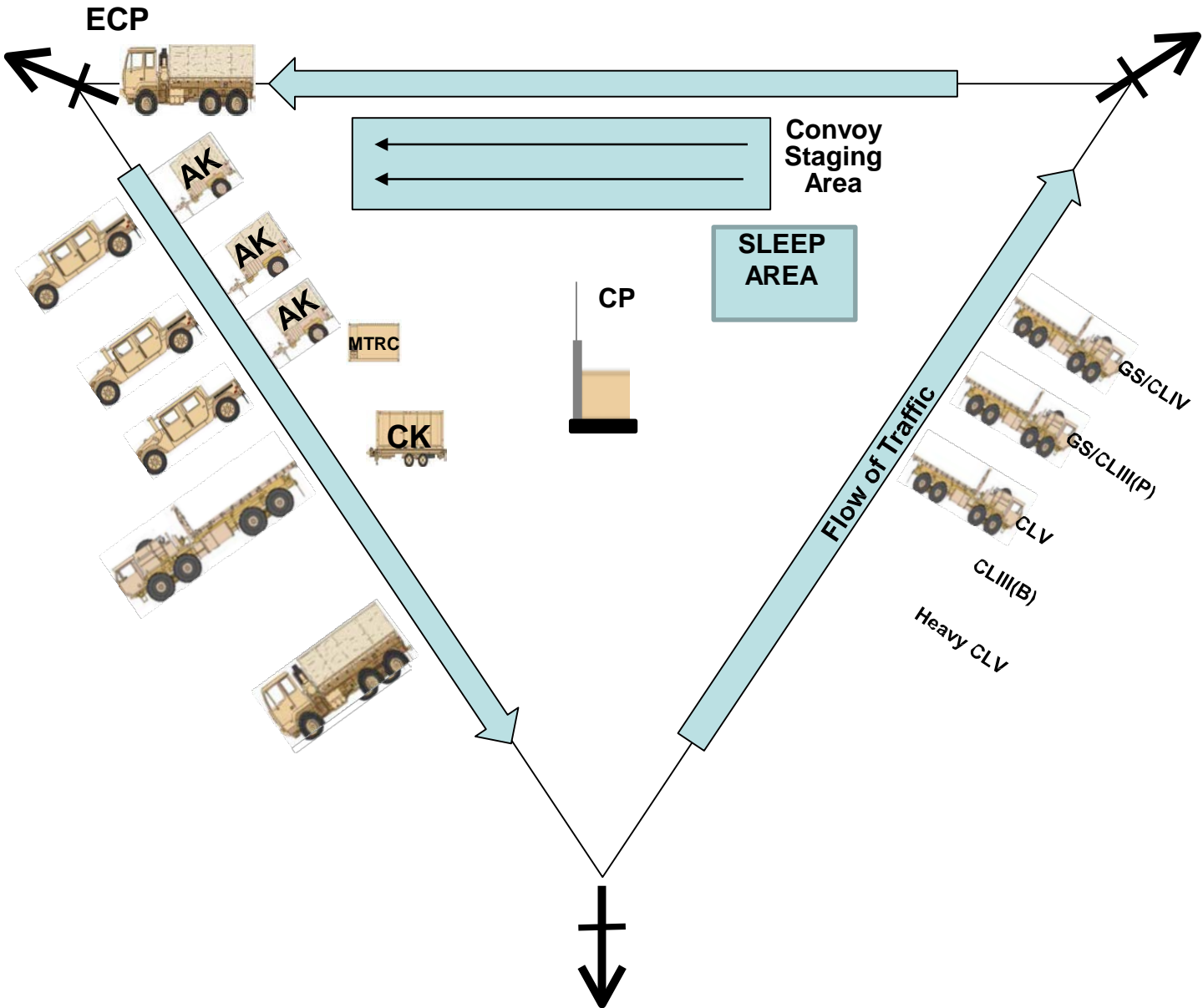


Broken Stryker



ECP





Convoy Checklist

For Review by Convoy Commanders

Vehicle Inspections	Status	Command and Control	Status
Current vehicle dispatch		Designate Assistant Convoy Commander	
Check fuel/fluid levels		Assign A&L, EPW, Recovery teams	
Recovery assets (Towbars/chains)		Identify Medic, OC, Safety locations	
Fire Extinguishers (x1 per vehicle)		Conduct Rehearsal/ROC drill	
Turn signals and lights serviceable/functional		Conduct PCCs/PCIs (Water, Ammo, Proper PPE, ID card/tags, Licenses)	
Gunner restraints		Conduct Convoy Brief (IAW Smart Card format)	
Cargo secured			
VS-17 Panel(s)			

Communications	Status
Radio check (1x radio per vic & 2 in CC vic)	
Call signs & Frequencies	
Smart Card	
9-line MEDEVAC Smart Card	
9-line UXO Smart Card	
Contact Report, SITREP, BDA Smart Card	

Accountability	Status
Personnel Accountability	
SI Inventory (Weapons, NVGs, Sights, Radios)	

Convoy Commander:

Asst Convoy Commander:

CONVOY BRIEF SMART CARD

1) SITUATION	3) EXECUTION			
<p style="text-align: center;"><u>Area of Operations</u></p> <hr/> <p style="text-align: center;"><u>Friendly Forces</u></p> <p>Task Organization:</p> <p>Units in AO/along RTE:</p> <p>Support Units:</p>	<p style="text-align: center;"><u>Commander's Intent</u></p> <hr/> <p style="text-align: center;"><u>Route</u></p> <p>Primary:</p> <p>Alternate:</p> <p>Phase Lines:</p> <p>Checkpoints:</p> <p>Start & Release Point(s):</p> <p>Destination:</p> <p>Identified Hazards/Obstacles:</p>	<p style="text-align: center;"><u>Movement</u></p> <p>Number of Vehicles:</p> <p>Number of PAX:</p> <p>Order of Movement:</p> <p>Formation:</p> <p>Convoy Speed:</p> <p>Vehicle Intervals:</p>		
<p style="text-align: center;"><u>Enemy Situation</u></p> <p>SIGACTS (last 48 hrs):</p> <p>Threats:</p> <p>Capabilities:</p>	<p style="text-align: center;"><u>Timeline</u></p> <p>PMCS Time:</p> <p>Radio Check Time:</p> <p>Rehearsal Time:</p> <p>PCC/PCI Time:</p> <p>Load Time:</p> <p>SP Time:</p> <p>Arrival Time:</p>	<p style="text-align: center;"><u>Safety/Emergency Measures</u></p> <p>Sectors of Fire:</p> <p>Accident Plan:</p> <p>Breakdown Plan:</p> <p>Recovery Plan:</p> <p>Separation from Convoy:</p> <p>Vehicle Rollover:</p>		
2) MISSION				
<p style="text-align: center;"><u>Mission Statement (Who, What, When, Where, Why)</u></p>	<p style="text-align: center;"><u>Battle Drills</u></p> <p>React to contact/Maintain movement:</p> <p>Convoy forced to stop:</p> <p>Casualty Evacuation/Recovery:</p> <p>Break contact:</p> <p>React to IED:</p>	<p style="text-align: center;"><u>Actions at Danger Areas</u></p> <p>Known intersections:</p> <p>Bridges:</p> <p>Large open areas:</p> <p>Sharp incline/decline:</p> <p>Roadblocks:</p>		
4) SUSTAINMENT				
<p>Rations & Water Levels:</p> <p>Resupply Plan:</p> <p>Refuel Plan:</p> <p>Self-Recovery Assets:</p> <p>Cargo (CL of Supply/Vehicles):</p> <p>Method of MEDEVAC/CASEVAC:</p> <p>MEDEVAC Freq:</p> <p>HLZ Location:</p> <p>Convoy Medical Personnel/Location:</p>	<p style="text-align: center;">5) COMMAND & SIGNAL</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Chain of Command:</p> <p>Location of Key Leaders:</p> <p>Call signs:</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Radio Frequencies:</p> <p>Prearranged Signals (Vehicle Lights/ Hand & Arm Signals):</p> </td> </tr> </table>		<p>Chain of Command:</p> <p>Location of Key Leaders:</p> <p>Call signs:</p>	<p>Radio Frequencies:</p> <p>Prearranged Signals (Vehicle Lights/ Hand & Arm Signals):</p>
<p>Chain of Command:</p> <p>Location of Key Leaders:</p> <p>Call signs:</p>	<p>Radio Frequencies:</p> <p>Prearranged Signals (Vehicle Lights/ Hand & Arm Signals):</p>			

LOGPAC SOP

Overview: Each morning following stand-to the S4 OIC will hold a update brief (LOGSYNCH) meeting via SQDN A/L with the line TRP XOs, S1 OIC, FST XO, SMO, and distro platoon leader. The S4 will brief the tactical update, route status, future operations, and status of all classes of supply at the SQDN and BDE level. The S1 OIC will brief the personnel status, specifically the status of replacements, WIA, and/or KIA. The FST XO and SMO will brief the current and projected FST combat power, maintenance issues, CLI load times, and current operations. The distro platoon leader will brief his CONOP for the day's LOGPAC and confirm with the line TRP XOs the linkup location and time. The line TRP XOs will brief any changes to PERSTAR and LOGSTAT and any maintenance issues by bumper # or weapon type and admin #.

Prepare and upload supplies: Following coordination with the FST, unit supply SGTs will pick up their supplies for the day's LOGPAC.

- Class I: Food is located with the field feeding team (FFT). Water blivets or bottled water is located with the FFT with resupply pushes from the BSA.
- Class II, III(P), IV, VI, and IX: Supply SGTs will pick up all of these supplies at the BSB Service and Support Area (SSA).
- Class III(B): The FST will attach one fueler as part of each Troop's LOGPAC (if available).
- Class V: Will be drawn from the BDE ATHP before any SQDN reserves are exhausted.

Coordinate personnel actions:

- Mail and administrative paperwork: Supply SGTs will pick up mail and administrative paperwork from the S1 section.
- Personnel replacements: Supply SGTs will transport replacements and their gear on the supply trucks as part of LOGPAC.

Tactical road march: The LOGPAC convoy will be a tactical road march led by the distro platoon leader. In addition to the distro platoon leader, the convoy will consist of the unit supply SGTs and any fuelers, ammo trucks, and escort vehicles. The fuel and ammo vehicles will follow the supply SGT of the unit to receive the supplies first.

Return of LOGPAC to LRP: Generally, unit 1SGs have two hours to return their LOGPAC elements to the FTCP, however the timeline is METT-TC dependent and will be briefed at all LRP meetings. 1SG will be prepared to laterally transfer LOGPAC between units, especially fuelers. The SQDN S4 will publish the plan for the distribution of fuel and ammo.

Backhaul: Supply SGTs will normally backhaul the following items.

- Excess Class I and trash
- Broken equipment for repair or exchange
- Vehicle and equipment 5988Es
- Casualties
- Mail
- Administrative paperwork for PAC
- Used sling load gear

LOGPAC Checklist

1. HHT and D TRP actions prior to departing

- Check w/ PLL for any CL IX parts that need to be picked up.
- Check w/ commo for any radios that have been fixed or parts that need to be picked up.
- Ensure support is aware of any CL IV requested by units.
- Ensure CL III package that was requested is on the LOGPAC.
- Ensure DFAC has proper headcount. Make adjustment for any changes.
- Ensure ration breakdown is correct (milk, mermite, utensils, coffee).
- Ensure your water buffalo is hooked up and topped off.
- Line up in order (HHT, A, B, C). Ensure the fuelers know who to follow.

- △ Ensure you are using the proper lighting. Service drive will only be used during training events, outside of the training area. In a tactical environment, use stoplights during the day and blackout drive with chem lights on the backs of all vehicles at night.

2. Line TRP actions before leaving unit assembly area

- Troop FMT's ensure 5988's are verified prior to LOGPAC arrival
- Ensure you have collected all 5988's; check w/ PSGs.
- Check w/ PSGs and mechanics for any POL package products they might need on the next LOGPAC.
- Check with your TOC for any CL IV requirements.
- Check with commo for anything they need to turn in.
- Check for any changes in headcount.
- Ensure PLTs filled water cans.
- Ensure all trash is bagged and tied.
- Ensure all utensils and mermite are collected.
- Give 5988E's to NCOIC or OIC at LRP.

3. Actions at the LRP

- Next LOGPAC location and time.
- Exchange LOG reports.
- Exchange 5988's
- Verify requests on LOG reports w/ 1SGs.
- Verify 1SGs know about attachments and include in headcount.
- Discuss any class of supply problems.
- Verify turn-around time for LOGPAC (2 hour SQDN standard).
- Verify personnel status .
- Discuss with 1SGs if religious support is needed within next 24 hours.
- Address any specific medical problems that occur in the troops.
- If combat operation is to occur, conduct rehearsal of CSS portion or operation at LRP 30 minutes prior to LOGPAC.
- Discuss any other logistical issues that occur within squadron.

4. Actions upon returning

- Return all mermite, juice jugs, and utensils to DFAC or CK.
- Ensure all trash bags are tied and thrown on trash truck or dumpster.
- Give any changes in headcount to DFAC.
- Give commo any radios.
- Inform support of any classes of supply requirements for next LOGPAC.
- Ask DFAC if they need any water before convoy leaves to resupply.
- Issue new 5988's if applicable

LOGPAC Convoy PCIs

General

- Weapons and Ammunition
 - Complete Basic Load
 - Weapons clean and functions checks
 - Weapons zeroed / sights zeroed
 - Ancillary equipment tied down
- Maps and Graphics
 - All operational graphics in each vehicle
- Uniforms and Equipment
- Soldier understanding of mission and individual responsibilities
- Soldiers with pen and paper
- Communications and SKL, to include operating frequencies in area
 - Mounted and Dismounted Commo (batteries, handsets)
 - Internal Commo
 - CVCs operational
 - Short and Long Range Commo Checks
 - MEDEVAC Freq (if not SQDN)
- Binoculars
- Rations and water (3 DOS)
- Pyro, Smoke, VS-17 Panels
 - Make sure on hand
 - Knowledge of signals
- CLS Bag in every vehicle
- Knowledge of air units in area
- Locations of contact prior 48 hours
- Waypoints entered into BFT/JCR
 - AXP
 - CCP
 - Routes (Primary and Alternate)
- NVDs
 - Operational
 - Spare Batteries
 - Rhino mounts mounted
 - Optics on weapons (Day/Night)
- Test Fire
- Deficiencies noted in earlier inspection
- Rehearsals

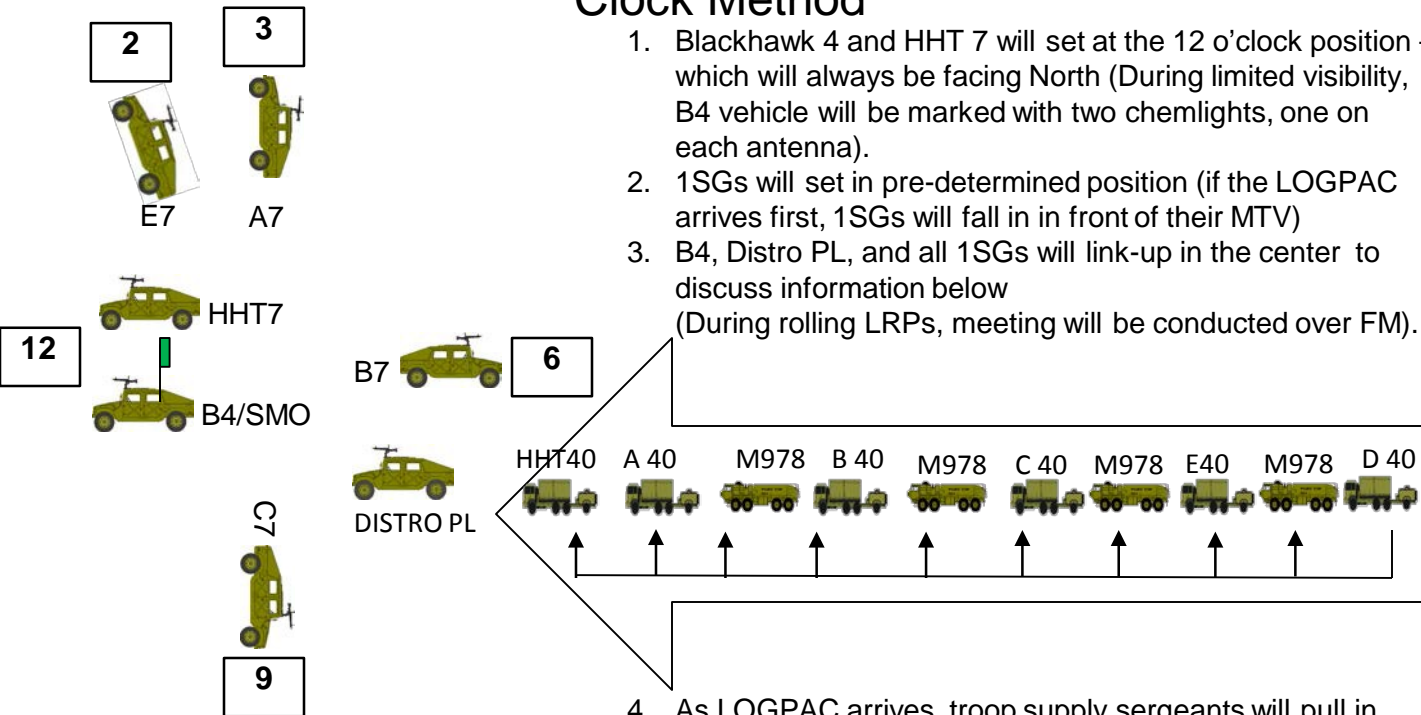
LOGPACs

- Fuel / fluid levels topped off
- Crew Served Weapons operational and test-fired
- NVGs with batteries
- Before movement PMCS and 5988Es completed
- Vehicles dispatched
- Drivers licensed
- Soldiers with dog tags and I.D. cards
- VS-17 panels / LZ markings
- Class I basic load (MRE's + Water)
- Communication check of all available systems
- Tow bars inspected
- Cargo secured
- Flashlights w/ extra batteries and bulb
- Maps with graphics / strip maps
- Emergency call signs and frequencies posted in each windshield
- MEDEVAC 9-line format posted in each windshield
- Commo cards posted in each windshield
- Windows and mirrors cleaned
- Turrets functional
- Crew served weapons properly mounted
- All soldiers attended convoy brief
- Convoy order and execution matrix
- Map with current graphics
- Strip map with extra copies
- Sensitive items / personnel list
- Medic/CLS in convoy
- Risk assessment signed by the commander BFT/JCR (programmed with appropriate mission information and route waypoints)
- Vehicle and personnel manifest
- CREW present and functional
- LRP link-up frequencies + call signs
- Supply Sergeant/Attachment capabilities/ number of weapons systems and personnel
- Supply Sergeant/Attachment rehearsals including actions on contact
- LOGPAC + Supply Sergeants/Attachments fulfill Orange 1 Request

LRP/LOGPAC Link-Up

Clock Method

1. Blackhawk 4 and HHT 7 will set at the 12 o'clock position – which will always be facing North (During limited visibility, B4 vehicle will be marked with two chemlights, one on each antenna).
2. 1SGs will set in pre-determined position (if the LOGPAC arrives first, 1SGs will fall in in front of their MTV)
3. B4, Distro PL, and all 1SGs will link-up in the center to discuss information below (During rolling LRPs, meeting will be conducted over FM).



4. As LOGPAC arrives, troop supply sergeants will pull in behind their 1SGs vehicle.
5. At the conclusion of the meeting, 1SGs will escort their supply sergeants to the troop AA.

Any attachments will co-locate with the troop that they are attached to.

The purpose of the LRP meeting is quickly communicate any sustainment issues prior to the LOGPAC arriving at the LRP.

Roll Call:

B4, Maintenance Representative, DISTRO PL/PSG, D 5/7, HHT5/7, A5/7, B5/7, C5/7, E5/7 (Attachment) 5/7

DISTRO PL:

- Brief any changes to sustainment nodes (BSA, FLEs, CTCP, FTCP, MAS, FAS)
- Review ammo distribution and any issues or changes
- Brief what each troop is receiving for LOGPAC
- Brief link-up time and location for returning the CLP

B4:

- Brief changes to LOGSYNCH matrix and upcoming critical events (distribute updated LOGSYNCH matrix if applicable)
- Receive S2 products from troops and distribute SQDN S2 products to troops
- Changes to medical support (location of SAS; medic support for operations)

Maintenance Representative:

- Exchange 5988E & dispatches
- Discuss critical parts and POL on LOGPAC
- Discuss maintenance issues if applicable

LRP Timeline

Rolling: 2 minutes

Modified: 10 minutes











Static: 30 minutes

Troop 5/7: (Order of brief: HHT, A, B, C, D, E, attachments)

- Backbrief DISTRO PL and BH4
- Personnel forecasts for next 24 hours (deploy and redeploy)
- Special supply requests next 24/48/72 Hrs

Fuel Consumption Smart Card

CLIII(B) - Line Troop Platforms

MGS		ATGM		MCV		MEV		M1083 (FMTV)	
Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L
53gal	63gal	62gal	62gal	62gal	62gal	56gal			
200.63 liters	238.481 liters	234.696 liters	234.696 liters	234.696 liters	212L				
Range mi/km	Range mi/km	Range mi/km	Range mi/km	Range mi/km	Range mi/km	Range (miles)			
300mi 482km	300mi 482km	330mi 531km	330mi 531km	330mi 531km	300 482km				
CLIII(B) - Wheeled Vehicles									
M1097/1152/1156		M1120 (LHS)		M1075 (PLS)		M978 (Fueler)		M984 (WRKR)	
Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L	Fuel Capacity gal/L
25gal	155gal	186gal	155gal	155gal	155gal	155gal	155gal	155gal	155gal
95L	587L	704L	587L	587L	587L	587L	587L	587L	587L
Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)	Range (miles)
250	300	300	300	300	300	300	300	300	300

Generator Fuel Consumption average

gallons per hr = .08433 x Kw of generator

BASIC CONVERSIONS

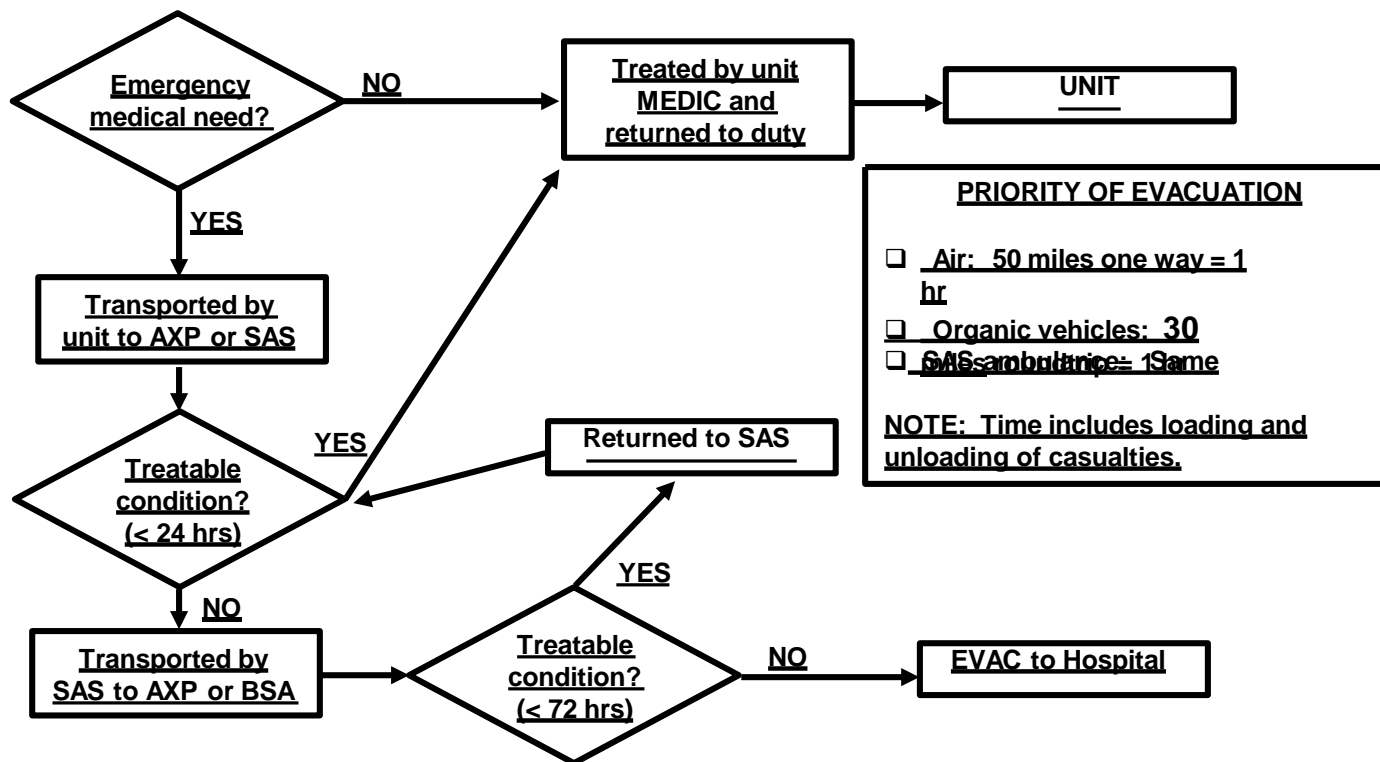
MPG = L / 100 Km

1gal = 3.78541 L

1mi = 1.60934 Km

CASUALTY FLOW

Dust-off MEDEVAC may occur at any level based on METT-TC. If injuries allow casualty will retain ACH and protective mask. All Weapons and other equipment remain with the unit. All units will designate primary and alternate vehicles for casualty evacuation.



MEDICAL EVACUATION SUPPORT CHECKLIST

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Location of: <ul style="list-style-type: none"> <input type="checkbox"/> Troop CCP <input type="checkbox"/> SAS <input type="checkbox"/> AXP <input type="checkbox"/> Other Level 1 Medical Assets <input type="checkbox"/> C MED (Level 2) <input type="checkbox"/> Evacuation routes <ul style="list-style-type: none"> <input type="checkbox"/> Primary and alternate <input type="checkbox"/> Traffic ability (condition, obstacles, overhangs) <input type="checkbox"/> Security <input type="checkbox"/> Strip maps <input type="checkbox"/> Overlays <input type="checkbox"/> LZs designated for air ambulances <input type="checkbox"/> Type of litter (NATO standard, SKED) <input type="checkbox"/> Evacuation assets available (requested/prepositioned) <input type="checkbox"/> Ground ambulance <input type="checkbox"/> Non-medical transportation vehicle | <ul style="list-style-type: none"> <input type="checkbox"/> Aircraft (UH-60A/CH-47) <input type="checkbox"/> Mass casualty plan (resourced/rehearsed/coordinated). <input type="checkbox"/> Litter bearers <input type="checkbox"/> Combat lifesavers <input type="checkbox"/> Vehicles <input type="checkbox"/> Class VIII (medical supplies) <ul style="list-style-type: none"> <input type="checkbox"/> Class VIII resupply (prepackaged) <input type="checkbox"/> Combat Life Saver <input type="checkbox"/> Combat medic <input type="checkbox"/> SAS <input type="checkbox"/> Communications (Call sign/frequency) <input type="checkbox"/> Battery/Battalion command ANL net <input type="checkbox"/> FSB & FSMC command net <input type="checkbox"/> CBRN casualty plan <input type="checkbox"/> Location of decontamination site <input type="checkbox"/> Personnel augmentation <input type="checkbox"/> Enemy personnel casualty plan |
|--|--|

MEDEVAC/CASEVAC Procedures

- a. **Point of injury** – Self/Buddy-Aid and CLS treatment. (Platoon Medic if available)
- b. Unit on site establish and utilize casualty collection points (CCP).
- c. Senior Line medic render aid and collect casualties at the unit CCP and perform triage using the DIME method:
 - 1. **Immediate** – condition demands immediate treatment to save life, limb, or eyesight.
 - 2. **Delayed** – less risk of loss of life, limb, or eyesight.
 - 3. **Minimal** – can be treated by self or buddy-aid.
 - 4. **Expectant** – critically injured that only prolonged treatment can increase life expectancy.
- d. All sensitive items will be left with the unit personnel minus the protective mask.
- e. First medic to treat each casualty will initiate a DD 1380 Field Medical Card or Tactical Combat Casualty Care (TC3) Card.
- f. MEDEVAC method and request is determined and sent by senior combat medic, 1SG, or senior personnel on ground.
- g. Methods of HLZ marking
 - 1. Day- Smoke or VS-17 Panel
 - 2. Night- IR Strobe or chem-lights
- h. 1SG will evacuate casualty to the nearest Squadron Aid Station (SAS, MAS, FAS) or Medical Treatment Facility (MTF).
- i. At the SAS/MTF, litter bearers download casualties, conduct litter exchange and Class VIII re-supply for ambulances.
- j. Treatment NCO at triage area will organize casualties using DIME and the following colored stakes or chem-lights:
 - 1. **Immediate** – RED
 - 2. **Delayed** – YELLOW
 - 3. **Minimal** – WHITE
 - 4. **Expectant** – BLUE
- k. From the triage area, casualties will be moved into the SAS for treatment by litter bearers.
- l. Litter bearers will move treated casualties from the triage area into the SAS.
- m. Air MEDEVAC assets provide evacuation from the SAS, AXP or nearest HLZ.
- n. Evacuation Priorities.
 - 1. **Urgent** – Two hours or less
 - 2. **Priority** – Four hours or less
 - 3. **Routine** – Within 24 hours (convenience)
- o. MED PL and/or S-1 representative records patient information and disposition as casualty is moved to evacuation area. They will also send casualty reports to the SQDN TOC and Brigade Surgeon section during lulls in the battle. The S-1 rep. will utilize the same casualty tracker and can also assist in logging patients (Patient's name, SSN, company, time in, disposition, and time evacuated).
- p. The Chaplain will be on hand to perform religious rites.
- q. The aid station will direct air MEDEVAC.
- r. The MED PL will track the battle/casualties throughout and allocate additional evacuation assets as required.

Combat Lifesaver Bag

NSN	DESC	QTY	U/I
4240-01-568-3219	STRAP CUTTER COMBAT	1	EA
6510-00-201-1755	BANDAGE MUSLIN	3	EA
6510-00-786-3736	PAD ISOPROPYL ALCOH	6/200	PG
6510-00-926-8884	ADHESIVE TAPE SURGICAL	1 / 4	PG
6510-01-492-2275	BANDAGE KIT ELASTIC	2	EA
6510-01-503-2117	BANDAGE GAUZE	2	EA
6510-01-532-6656	BANDAGE KIT ELASTIC	1	KT
6510-01-562-3325	BANDAGE GAUZE IMPREG	2	EA
6510-01-573-0300	DRESSING CHEST SEAL	2	EA
6515-00-935-7138	SCISSORS	1	EA
6515-01-449-1016	SHIELD EYE SURGICAL	1 / 12	EA
6515-01-494-1951	SPLINT UNIVERSAL	1	EA
6515-01-521-7976	TOURNIQUET COMBAT	2	EA
6515-01-525-1975	GLOVE PATIENT EXAM	4	EA
6515-01-529-1187	NASAL TRUMPET	1	EA
6515-01-540-7226	LEASH SHEARS TRAUMA	2	EA
6515-01-541-0635	NEEDLE DECOMPRESS	2	EA
6515-01-574-8111	BAG TC3 COMBAT	1	EA
6532-01-524-6932	BLANKET SURVIVAL	1	EA
6532-01-525-4062	BLANKET HEATING	1 / 8	PG
7520-00-312-6124	MARKER TUBE	2 / 12	PG
6510-00-935-5823	BANDAGE ELASTIC	1 / 10	PG

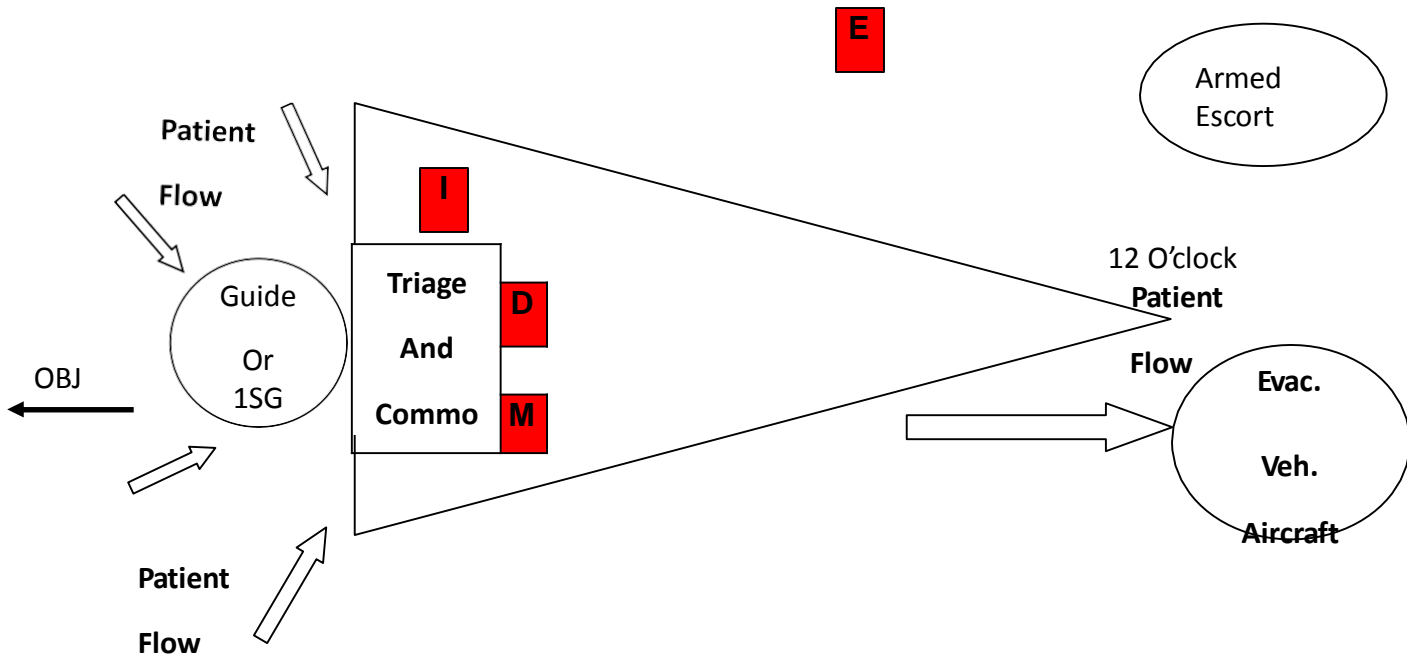
IFAK

NSN	NOMENCLATURE	QTY
6515-01-521-7976	Tourniquet, Combat Application	1
6510-01-492-2275	Bandage Kit, Elastic	1
510-01-503-2117	Bandage GA4-1/2"100's	1
6510-00-926-8883	Adhesive Tape Surg 2"6's	1
6515-01-180-0467	Airway, Nasopharyngeal, 28Fr, 12s	1
6515-01-519-9161	Glove, Patient Exam 100's	4
6510-01-562-3325	Dressing, Combat Gauze	1

CASUALTY COLLECTION POINT

I: Immediate
D: Delayed
M: Immediate
E: Expectant

CCP Setup



MARKING VEHICLES CONTAINING CASUALTIES

Day

KIA: Red Flag

URGENT: Yellow Flag

PRIORITY: Green Flag

Night

KIA: IR Chemlights

URGENT: Red Chemlights

PRIORITY: Green Chemlights

Clean Casualty

Flag with white X (lumination tape at night)

Dirty Casualty

Flag with white O (lumination tape at night)

MASCAL

Task Organization MASCAL

HHT

Medical Platoon

Triage Team

Med PSG and two medic
CLS x 3 from HHT

Trauma Teams

PA and Tx medic x 3 Tx
SL and Tx medic x 3

MEDEVAC Team

FAS 2 crew
MAS 3 crew

Aid & Litter Section

HHT 1SG

12 x A&L bearers from CTCP and/or UMCP/FTCP (A&L team consists of 4 personnel)

Decontamination Team

CBRN NCO
Decon team IAW CBRN SOP
Evac medic x 1 (from Triage Team)

Mortuary Affairs Team

S4 NCO

Casualty Tracking Team

S1 NCO and S1 personnel x 1

- I. SITUATION. Whenever the number of casualties arriving to the Squadron Aid Station exceeds our organic medical capabilities a mass casualty (MASCAL) situation exists. MASCALs demand assets outside of the medical platoon be employed in order to process, treat and evacuate casualties to higher levels of care.
 - a. Triage classifications.
 - 1) Immediate. High chance of survival if life-saving surgery or medical treatment is performed.
 - 2) Delayed. Requires surgery or medical care, but general condition permits a delay in treatment without unduly endangering life, limb or eye-sight.
 - 3) Minimal. Minor injury or illness that can be effectively treated by non-medical personnel.
 - 4) Expectant. Wounds so extensive that even if optimal surgical or medical treatment is performed survival would be unlikely.
 - b. MASCAL criteria.
 - 1) Immediate = 3 or more.
 - 2) Immediate = 1-2 and Delayed = 4 or more.
 - 3) Immediate = 0 and Delayed = 8 or more.
 - 4) Any situation in which the Squadron PA determines MASCAL must be initiated.

MASCAL

a) The battle captain at the TOC will alert the SAS of incoming patients. If the battle captain knows the number and types of patients and the MASCAL criteria are met then he will initiate the MASCAL. If number and types of patients are unknown, then the medical PSG / PA will assess the patients after transport arrives and contact the TOC to initiate the MASCAL if necessary.

- i) "CLEAN MASCAL" = MASCAL without CBRN contaminated casualties.
- ii) "DIRTY MASCAL" = MASCAL with CBRN contaminated casualties or vehicles.

b) MASCAL is initiated by the battle captain. He will alert the TOC, SCO, XO, S3 and HHT commander. A net call will be made. The battle captain will notify higher levels of medical care of MASCAL and impending MEDEVAC.

c) After being alerted, MASCAL personnel will assemble at the SAS. All medical platoon personnel will report to the PA inside the SAS. All HHT and D Co personnel identified as CLS, A&L, CBRN, Security, Mortuary Affairs and Casualty Trackers will report to Med PSG in front of the SAS entrance.

- i) HHT 1SG will be the A&L section leader.
- ii) The CBRN NCO will be the Decontamination TL.
- iii) An HHT NCO will be the Security TL.
- iv) The S4 NCO will be the Mortuary Affairs TL.
- v) The S1 NCO will be the Casualty Tracking TL.
- vi) The Med PSG will be the Triage TL.
- vii) The med PLT Evac TL will be the MEDEVAC TL.
- viii) The PA and PROFIS / med PLT treatment SL will be Trauma TLs.

Casualty Arrival and Triage

a) MEDEVAC / CASEVAC platforms will stop and unload casualties at the drop-off site, a pre-designated location adjacent to the SAS. The HHT 1SG will direct A&L teams to move casualties to the Triage area, unless they need CBRN decontamination. If so, CBRN personnel will apply decon measures and the CBRN NCO will clear them to be moved to the Triage area. A medic from the triage area will assess and treat casualties during decontamination. If CBRN decontamination is not needed the Decon Team will move to the Triage area to assist in treatment of casualties.

b) The Triage area will be located in front of the SAS and run by the Med PSG. He will quickly assess casualties, assign them a triage classification and then direct A&L teams to move them to a site within the triage area for a particular triage classification. Triage classification marking system is as follows.

- i) Immediate = RED sign / chemlight
- ii) Delayed = YELLOW sign / chemlight
- iii) Minimal = GREEN sign / chemlight
- iv) Expectant = BLUE sign / chemlight

c) The Med PSG will determine which casualty goes into the SAS next, with A&L teams actually moving them inside. The priority of effort for treatment is based on triage classification: first immediate, then delayed, then expectant and last will be minimal.

d) The Security team is responsible for securing the SAS and MEDEVAC HLZ. Generally, this entails three 2-men teams with one team located at the entrance/Triage area of the SAS, one team at the exit/MEDEVAC area of the SAS and one team at the HLZ. Security is also responsible for crowd control and preventing non-essential personnel from entering the treatment areas and SAS itself.

e) The Chaplain will be available to casualties during the MASCAL. He will be located where he feels he can best provide services.

MASCAL

Trauma Management

- a) A&L teams will carry a casualty into the SAS and be told where to place the person. There will be two trauma tables within the SAS: the PA and three medics will run one trauma table, while the PROFIS physician or Treatment SL will run the other. Life-saving interventions will be performed and the casualty will be moved outside the SAS to the MEDEVAC area.
- b) Inside the SAS, the Med PL and S1 NCO will work in concert to identify casualties, log their status and then track which higher level of care they are MEDEVACed to using the SAS MASCAL TRACKER BOARD. The Med PL will have direct communications with MEDEVAC assets and keep the trauma teams and MEDEVAC team apprised of their estimated time of arrival. The Med PL will also keep the TOC battle captain informed of the situation. The S1 NCO has an assistant who can move in between the SAS, MEDEVAC area and Mortuary Affairs area to facilitate casualty tracking.
- c) If despite the best efforts of trauma teams a casualty becomes deceased, the PA or PROFIS physician will declare death, sign the death certificate, and an A&L team will move the person and his personal effects to the Mortuary Affairs area.
- d) The Mortuary Affairs area will be a pre-designated site where the S4 NCO and his team will be located. The Mortuary Affairs team will process the casualty and personal effects.

MEDEVAC

- a) The MEDEVAC area will be a pre-designated area outside and behind the SAS run by the Evac TL where treated casualties will be monitored until MEDEVAC platforms arrive to transport them to higher levels of care. The Med PSG will keep the HHC 1SG informed of when A&L teams are required to move to the MEDEVAC area to assist in its operation.
- b) The MEDEVAC TL will oversee their care with one medic and three CLS personnel. The MEDEVAC TL will assess casualties, identify which MEDEVAC category they are and then direct which area within the MEDEVAC area they are to be placed. MEDEVAC categories roughly align with triage classifications.
 - i) Urgent = Immediate. Evacuate within 2 hours to save life, limb or eye sight.
 - ii) Priority = Delayed. Evacuate within 4 hours.
 - iii) Routine = Minimal. Evacuate within 24 hours.
- c) Understanding how long it takes to move casualties to the HLZ or AXP, the MEDEVAC TL will initiate movement of casualties at the appropriate time, load casualties onto platforms and conduct a handover of the casualties with the receiving medical personnel..
- d) While the MEDEVAC SL is away from the MEDEVAC area the medic left behind will oversee the care of any remaining casualties. Other personnel from the med PLT will assist as the situation permits.

b. Tasks to Maneuver Units.

- 1) Staff.
 - a) TOC battle captain.
 - i) Inform SAS of incoming casualties.
 - ii) Make initial contact with levels of higher medical care of impending MEDEVAC.
 - b) S1.
 - i) Provide an NCO and 1 assistant to SAS to track casualty status and site of evacuation.
 - ii) Provide casualty report to SCO.
 - c) S4.
 - i) Provide an NCO and 3 assistants to run Mortuary Affairs area.
 - ii) Establish and mark Mortuary Affairs area within 50 meters of SAS.

- d) Chaplain. Be available at SAS for religious services.

MASCAL

- 2) HHT.
 - a) HHT Commander overall C2 of MASCAL.
 - b) HHT 1SG act as A&L section leader.
 - c) Provide CBRN NCO and team to run Decon area for incoming casualties. CBRN team B/P to assist in triage operations.
 - d) Provide an NCO and 6 personnel to be Security Team.
 - e) Provide 3 CLS trained personnel to assist in Triage area.
- 3) D TRP.
 - b) Provide 3 CLS trained personnel to assist in MEDEVAC area.
 - c) Provide 12 A&L bearers to assist in MASCAL.
- 4) Medical Platoon.
 - a) Designate and mark Casualty Drop-off Site, Triage area, MEDEVAC area, MEDEVAC HLZ/AXP.
 - b) Mark all medical personnel with Red Cross patch on left shoulder.
 - c) PA / PROFIS.
 - i) B/P to contact TOC in order to initiate MASCAL.
 - ii) Secure controlled medications from SAS safe for trauma interventions.
 - iii) Direct and coordinate trauma teams.
 - iv) Declare death and sign death certificates.
 - d) Med PL.
 - i) Track casualty status and evacuation site in conjunction with S1.
 - ii) Establish contact with MEDEVAC assets to affect casualty transport to higher levels of care.
 - iii) Keep TOC updated on MASCAL status.
 - e) Med PSG.
 - i) B/P to contact TOC in order to initiate MASCAL.
 - ii) Prepare MASCAL kit for use in Triage area.
 - iii) Run Triage area, to include identifying casualty triage classification, directing medic and CLS care of casualties and directing movement of casualties into SAS.
 - iv) Coordinate with HHC 1SG to shift A&L teams to MEDEVAC area to support movement of casualties to MEDEVAC HLZ/AXP.
 - f) Treatment SL.
 - i) Stock and prepare trauma bays.
 - ii) Direct trauma team management of patients.
 - g) Evac TL.
 - i) Prepare MASCAL kit for use in MEDEVAC area.
 - ii) Run MEDEVAC area, to include identifying casualty MEDEVAC category and directing medic and CLS care of casualties.
 - ii) Move casualties to MEDEVAC HLZ/AXP and perform handoff with receiving medical personnel on evacuation platform.

IV. SERVICE SUPPORT.

a. Materials.

- 1) Chemlights. 40 each red, yellow, green and blue.
- 2) Litters. 10 each minimum.
- 3) Loudspeaker with batteries. 1 each.
- 4) MASCAL Chest. 4 each with the following contents: 1 x marking kit and 8 x MASCAL pack (individual treatment pack addressing hemorrhage, tension pneumothorax/chest wounds, airway, hypothermia and IV/IO).

- b. Services. Chaplin on site if needed.

MEDICAL & CASUALTY RESPONSE PLANNING

Airframe	Litter	Ambulatory	Normal configuration
C-130 Hercules	74	92	
C-17A	36	54	
UH-60 BLACKHAWK	6	7	4 Litter, 1 Ambulatory
UH-60A BLACKHAWK	3	4	4 Litter, 1 Ambulatory
CH-47 Chinook	24	31	
CH-46 Sea Knight	15	25	
CH-53 Sea Stallion	24	55	
V22 Osprey	12	24	

Normal Conditions

Road Type	Vehicles under 1 ¼ Ton	Vehicles over 1 ¼ Ton	Stryker Vehicles	Multi-Vehicle Operations
Improved Roads	35mph	25mph	25mph	20mph
Unimproved Trails	25mph	20mph	20mph	15mph
Cross-Country	15mph	15mph	15mph	10mph

Limited Visibility Conditions

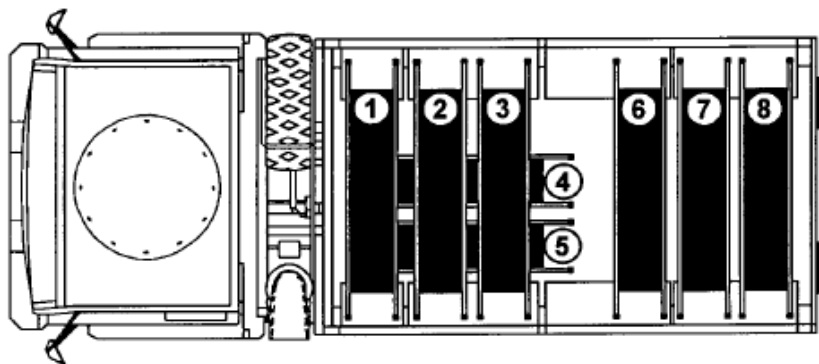
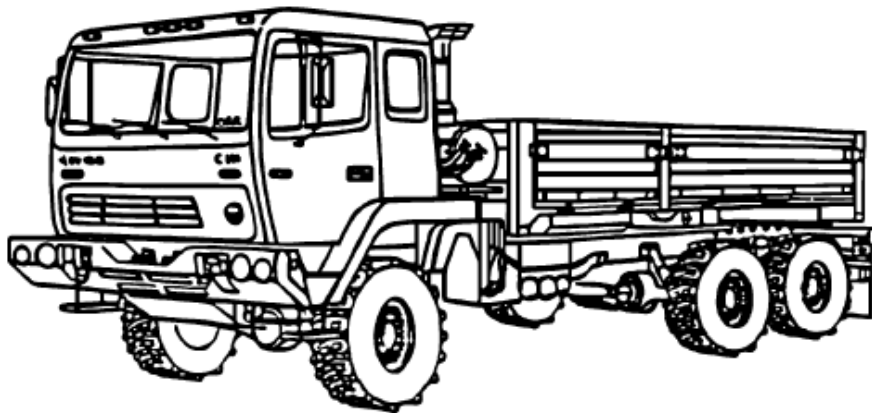
Road Type	Vehicles under 1 ¼ Ton	Vehicles over 1 ¼ Ton	Stryker Vehicles	Multi-Vehicle Operations
Improved Roads	25mph	20mph	20mph	15mph
Unimproved Trails	20mph	15mph	15mph	10mph
Cross-Country	10mph	10mph	10mph	5mph

Vehicle	Litter	Ambulatory
M998 Truck (Two Man)	5	
M998 Truck (Four Man)	3	4
M996 Truck, balance Am	2	6
M997 Truck, balance Am	4	8
M1133, Stryker MEV	4	6
M1078 Truck, Cargo		
M1081 Truck, Cargo,	7	12
M1085 Truck, Cargo,	12	22
M1093 Truck, Cargo	8	14

Ground Evac Non-Standard Vehicles

- **M-1083, 5-ton
Medium Tactical
Vehicle**

- 8 litter
- 14 ambulatory



Litters can be secured to vehicles with engineer tape.

MEVVs can maneuver without escort if necessary.

Patient Decon SOP

PREPARE PATIENT DECONTAMINATION CHLORINE SOLUTIONS

Two concentrations of the chlorine solution are required.

A 5% solution is required to decontaminate:

Gloves, Aprons, Litters, Scissors, the Patient's Hood, other non-skin contact surfaces

Another 0.5% solution is required to decontaminate:

The patient's mask, skin and splints, and to irrigate the patient's wounds

Solution preparation.

Use calcium hypochlorite (HTH) granules (supplied in 6 ounce jars in the patient decontamination MES) or sodium hypochlorite (household bleach).

Prepare the required concentrations as shown in the table below.

HTH ounces	HTH MRE spoonfuls	Household bleach	Percent in 5 gallons of water
6	5*	2 quarts	0.5
46	35	**	5

* Use the plastic spoon supplied in your MRE to measure. The amount of HTH to be used is a heaping spoonful.

** **DO NOT** dilute in water. Household bleach is a 5% solution.

DECONTAMINATE A CHEMICAL AGENT LITTER PATIENT

- STEP 1. Decontaminate the patient's mask and hood.
- STEP 2. Remove gross contamination.
- STEP 3. Remove the patient's gear and personal effects.
- STEP 4. Remove the patient's uniform.
- STEP 5. Transfer the patient to a decontamination litter.
- STEP 6. Decontaminate the patient's skin.
- STEP 7. Transfer the patient across the shuffle pit.

DECONTAMINATE A CHEMICAL AGENT AMBULATORY CASUALTY

- STEP 1. Remove LBE.
- STEP 2. Decontaminate the patient's mask and hood.
- STEP 3. Remove the FMC.
- STEP 4. Remove all gross contamination.
- STEP 5. Remove over-garment.
- STEP 6. Check patient for contamination.
- STEP 7. Decontaminate the patient's skin.
- STEP 8. Remove bandages and tourniquets.
- STEP 9. Proceed through the shuffle pit to the treatment area.

NOTE: *For persistent nerve agent exposure:*

Do not remove mask until in protective shelter (agent is volatile).

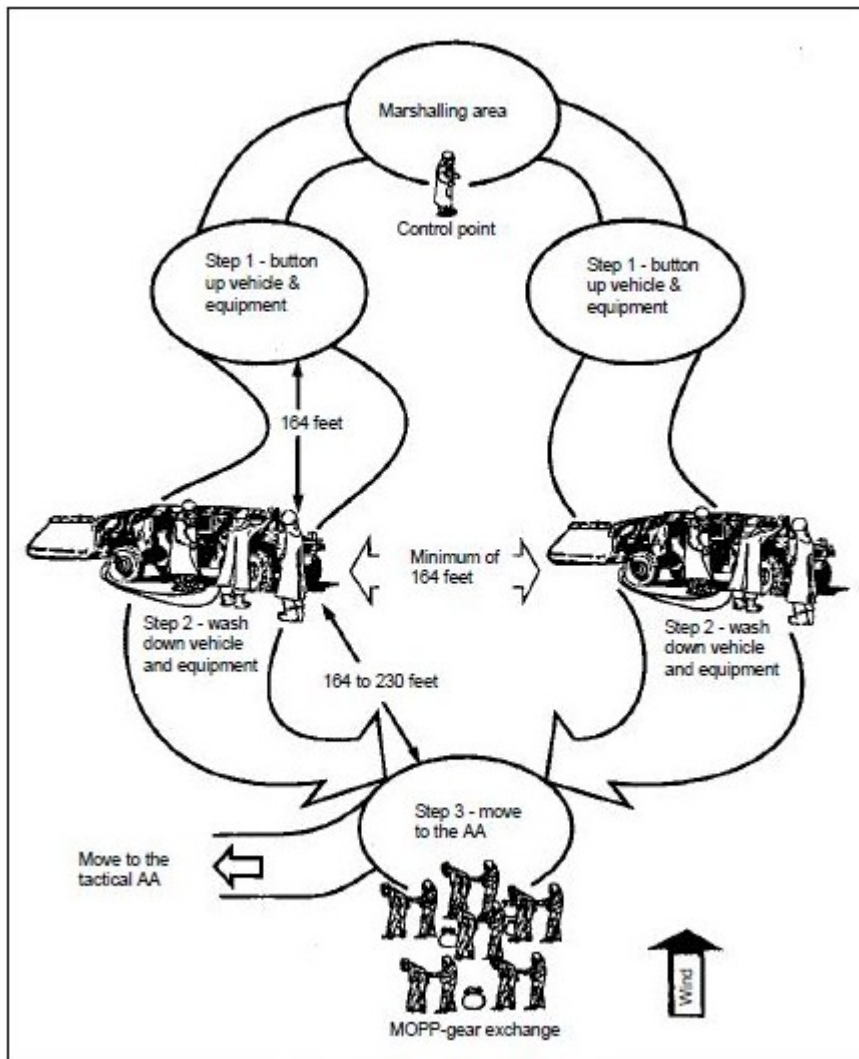
Do not remove dressings, just reinforce and cover with red trash bags.

Immediate Decon SOP

Immediate Decontamination: Minimizes casualties and limits the spread or transfer of contamination.

1. There are four immediate decontamination techniques:
 - A. **Skin Decon:** Use the M291 SDK/RSDL within 1 minute of contamination of the exposed skin. Flushing the eyes with water is also a critical immediate decon. Action and should occur ASAP following contamination.
 - B. **Personal wipe down:** The personal wipe down technique is most effective when done within 15 minutes of being contaminated.
 1. Using M295 IEDK, wipe down the mask, hood, gloves, and other essential gear.
 2. Use the M295 IEDK, an M291 SDK pad, a stick, or any stiff device to remove the gross contamination from the protective over-garment.
 - C. **Operator wipe down:** Decontaminate other mission-essential surfaces of the equipment before continuing the mission. Operators wipe down is most effective when done within 15 minutes of contamination.
 1. Decontaminate the surfaces that must be touched on the exterior of the vehicle or the equipment with the M100 SDS. If the M100 SDS is unavailable, scrub the surfaces with super tropical bleach (STB) to decontaminate the equipment.
 - D. **Spot Decon:** Aircrews and aircraft ground support crews can use spot decontamination as an immediate measure to remove contamination from critical locations. Spot decontamination is performed to limit the spread of contamination on aircraft that requires servicing between sorties.

Vehicle Decon SOP



Steps	Equipment	Procedures
0. Assemble vehicles. Unit is tactically dispersed. Personnel at the control point direct movement.	Watch	Personnel at the control point supervise preparing vehicles and directing movement out of the AA.
1. Prepare vehicles.	None	Individual/crew closes all access doors, hatches, windows, and other openings. Remove camouflage and cover muzzles. If required, crews (less drivers) move to the MOPP-gear-exchange area. Move to the wash area on order.
2. Perform washdown.	Delivery system (such as the M12 and M17, 65-gallon-per-minute [GPM] pump, fire-fighting equipment, and so forth) that delivers hot, soapy water at 80 to 120 psi. Also sufficient water, fuel, and detergent for vehicles.	Soldiers/personnel wash equipment from top to bottom. Decon crew wears a toxicological apron, protective (TAP) or wet-weather gear over MOPP gear.
3. Move out to the next position.	None	Vehicles move to the MOPP-gear-exchange area (if required) or the next battle position.

Thorough Personnel Decon SOP

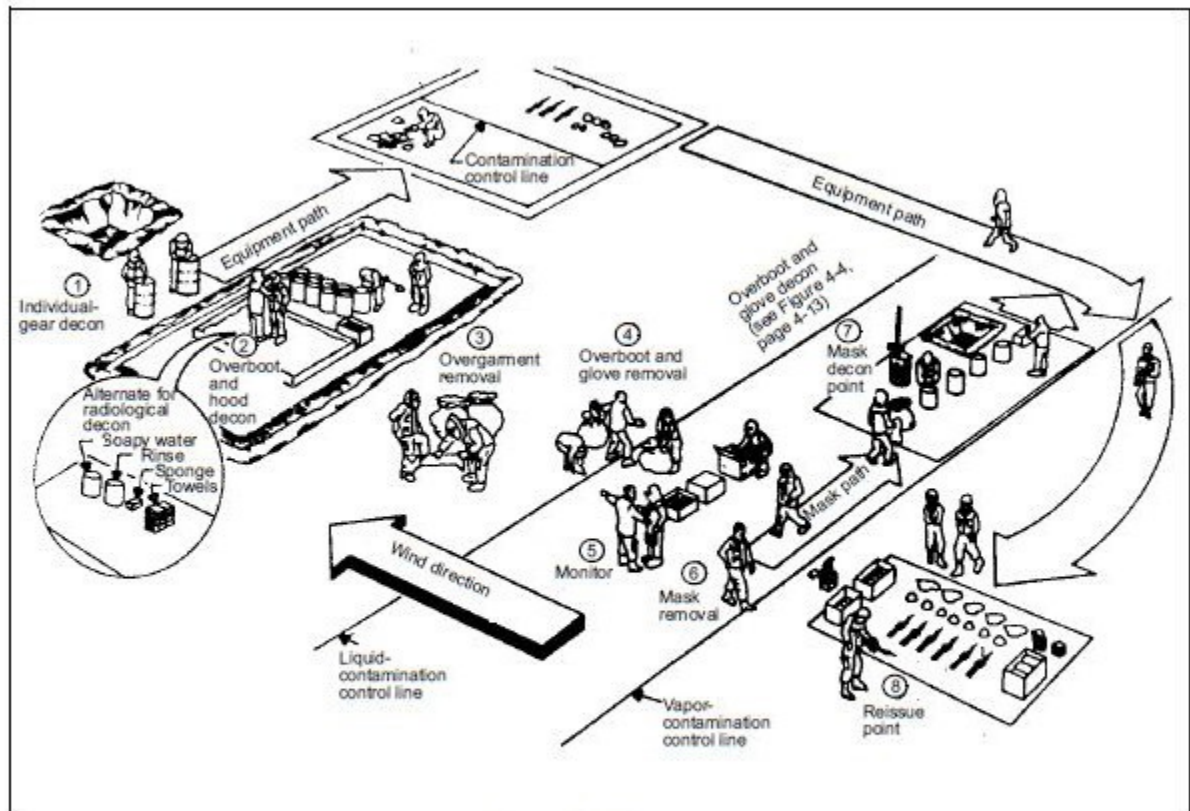


Figure 4-3. DTD Layout

Unmasking Procedures

Note. Before conducting unmasking procedures, make every effort to confirm the absence of chemical contamination. JCAD, an M256 chemical agent detector kit, and M8/M9 detector paper should be used along with a visual check of the area.

Note. The senior person present selects one or two soldiers to unmask after permission is received from higher headquarters.

Reference: Reference: FM 3-11.4

Conduct unmasking procedures using an M256A1 detector kit.

- a. Conduct unmasking procedures in the shade.
- b. Use an M256A1 detector kit to test for chemical agents. Use M8 detector paper to check for possible liquid contamination. Continue unmasking procedures only if both tests are negative.
- c. Direct the selected soldiers to unmask for 5 minutes and don, seal, and clear their masks.
- d. Observe the soldiers for 10 minutes for chemical agent symptoms.
- e. Direct all soldiers to unmask if no symptoms appear.
- f. Check the soldiers for delayed symptoms. Have first aid treatment available.
- g. Complete steps 1a through 1f in sequence.

Conduct unmasking procedures without using an M256A1 detector kit.

- a. Conduct unmasking procedures in the shade.
- b. Use M8 detector paper to check for possible liquid contamination. Continue unmasking procedures only if the test is negative.
- c. Direct the selected soldiers to take a deep breath, break the seals of their masks (keeping their eyes open) for 15 seconds, and seal and clear their masks.
- d. Observe the soldiers for 10 minutes for chemical agent symptoms.
- e. Direct the soldiers to break the seals of their masks if no symptoms appear, take two or three breaths, and seal and clear their masks.
- f. Observe the soldiers for 10 minutes for symptoms.
- g. If no symptoms appear, direct the soldiers to unmask for 5 minutes and don, seal, and clear their masks.
- h. Observe the soldiers for 10 minutes for symptoms.
- i. If no symptoms appear, direct all soldiers to unmask.
- j. Check the soldiers for delayed symptoms. Have first aid treatment available.
- k. Complete steps 2a through 2j in sequence.

Report the absence of contamination in your area and the successful completion of unmasking procedures to higher headquarters.

EVAC EPW SOP

1. **Priority of evacuation/medical care will always be conducted according to TRIAGE regardless of origin.**
2. Evacuation categories:
 - A.URGENT:** Evacuated as soon as possible and within a maximum of 2 hours in order to save life, limb, or eyesight.
 - B.URGENT SURGICAL:** Must receive far forward surgical intervention to save life and stabilize for further evacuation.
 - C. PRIORITY:** Sick or wounded requiring prompt medical care within a maximum of 4 hours.
 - D.ROUTINE:** Sick or wounded requiring prompt medical care within a maximum of 24 hours. Psychiatric patients should be placed in this category.
 - E.CONVENIENCE:** Patient for whom evacuation by medical vehicle is a matter of medical convenience rather than necessity.
3. Primary means of evacuation for urgent and urgent surgical is through Air CASEVAC.
4. In the event of air CASEVAC is unavailable, troops are responsible for evacuating casualties to the nearest, highest level of care using ground MEDEVAC assets first, then non-standard CASEVAC as necessary.

EPW CASUALTIES

1. EPWs will be evacuated through medical channels with the same priorities as U.S. patients, with the following considerations:
 - A.EPWs Will remain under armed guard at all times during evacuation. Guards for EPW's being evacuated through medical channels will be provided by appropriate non-medical units.
 - B.When possible EPWs will not be evacuated in the same vehicle as US or allied patients. When possible, EPWs will be transported directly to the EPW cage and a medic will be sent to begin treatment.
 - C.EPWs will be searched prior to evacuation and prior to admission to any MTF. While in a U.S. MTF they will be searched daily.
 - D.Immediately upon admitting an EPW to the MTF the treatment platoon must notify the SQDN TOC. The SQDN TOC will then immediately notify the CI/EPW team operating in the SAS.
2. Reporting of EPW casualties: EPW casualties will be reported through the SQDN TOC immediately.

SQDN 5-DAY RECOVERY SOP

Blackhawk Recovery SOP		
	GO	NO GO
Day 0 (Day of Return)		
• 100% personnel accountability		
• 100% sensitive items (by SN) accountability (wipe down before turn-in)		
• Top off all vehicles with fuel		
• Offload all vehicle secondary loads		
• Z-out all COMSEC equipment		
• Secure all individual TA -50		
• Remove all mud and trash from vehicles		
• After Actions PMCS		
• Collect and secure all CL V (conduct shakedown)		
• Submit sensitive items and closure reports to SQDN S-3		
• Clear all Ranges and TAs		
Day 1-4		
• Wash/PMCS vehicles and trailers (interior and exterior)		
• Clean and inventory BII		
• Identify all deadlines		
• Verify all NMC faults and order any 02 parts or open job orders		
• Inventory TA50 and identify DX items (1st line supervisor inspect)		
• Close out all dispatches and turn -in logbooks (after washrack)		
• Lube vehicles and trailers IAW LO		
• Clean and PMCS weapons (CLP on weapons after Day 5 inspection)		
• Clean and PMCS NVGs		
• Clean and PMCS commo equipment		
• Clean and PMCS protective masks		
• Clean and inventory SKOs		
• Clean and inventory CLS bags and WALKs (replenish class VIII)		
• Clean and service tents		
• Clean and service generators		
• Clean and turn-in all TSC equipment		
• Return CL IV to Class IV Yard		
• Prepare and conduct FTX performance counseling		

SQDN 5-DAY RECOVERY SOP

Day 1-4 (cont.)		
• Turn-in unserviceable equipment to supply		
• Submit any field loss statements		
• Submit any statement of charges /FLIPL		
• Update shortage annexes		
• Primary and sub -hand receipt holders resign hand receipts		
• Award submissions complete		
• AARs submitted to S 3 (Issue, Discussion, Recommendation)		
Day 5 (Inspections)		
• Vehicles in motor pool with BII layout (5988s present)		
• TA-50 layout		
• Arms room		
• Common areas		
• Storage areas		
<p>Notes: These tasks describe the minimum requirements for recovery operations for the SQDN. The Day 0 and Day 5 tasks are time specific and will be conducted on those dates. The other tasks, from Day 1 to Day 4, are required tasks but Troops may plan to conduct these activities in any order they choose so long as the tasks are accomplished. In addition, the SQDN treats the recovery phase of operation as part of the operation itself.</p>		

Reports

Green 1 – INTSUM

PURPOSE: Provide the S-2s with intelligence summaries covering the previous 12 hours of enemy activity.

SUBMITTED BY: Higher to lower.

SUBMIT WHEN: As Necessary

Method: Primary: CPoF

Alternate: BDE O&I

Tertiary: FBCB2 Free Text

FORMAT

Line 1: Issuing Unit

Line 2: Time of Issue

Line 3: Summary of Activity

Line 4: Enemy Strength & Disposition

Line 5: Enemy Frontline Trace

Line 6: Most Likely COA

Line 7: Enemy Weaknesses

Line 8: Current PIR/IR

Green 2 – Sensitive Items Report

PURPOSE: To report sensitive equipment is present

SUBMITTED BY: Participating unit to higher

SUBMIT WHEN: 0600 and 1800

Method: FM

FORMAT

Line 1: DTG of loss

Line 2: Approximate Location of Loss

Line 3: Missing Item Serial #

Line 4: Name, Rank, SSN of Individual Responsible

Line 5: Actions Taken to Recover Item

Green 3 – Splash Report

PURPOSE: To report a downed or missing aircraft

SUBMITTED BY: From discovering unit to higher

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Call sign

Line 2: Aircraft data (type and status)

Line 3: Pilot Status

Reports

Green 4 – Patrol Report

PURPOSE: To report information obtained from a patrol

SUBMITTED BY: Participating unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Designation of patrol (To, from, map used)

Line 3: Size and composition of patrol

Line 4: Task

Line 5: Time of departure

Line 6: Time of return

Line 7: Terrain

Line 8: Threat

Line 9: Any map corrections

Line 10: Miscellaneous information

Line 11: Results of encounters with the threat

Line 12: Conditions of the patrol (Dead, wounded, etc)

Line 13: Conclusions and recommendations

Reports

Green 6 – EPW/Captured Material Report

PURPOSE: To report information on captured EPW's and captured material

SUBMITTED BY: Participating unit to higher

SUBMIT WHEN: As Necessary.

Method: FM

FORMAT (EPW)

Line 1: Reporting Unit

Line 2: DTG of capture

Line 3: Location of capture

Line 4: Capturing unit

Line 5: Circumstances of capture

FORMAT (Material)

Line 1: Reporting Unit

Line 2: Item captured

Line 3: Type of document/equipment

Line 4: DTG of capture

Line 5: Location of capture

Line 6: Capturing unit

Line 7: Circumstances of capture

Line 8: Conclusions/recommendations

Green 7 – Request for Information

PURPOSE: To request information from higher

SUBMITTED BY: Participating unit to higher

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

LINE 1 – DTG

LINE 2 – Unit Making Request

LINE 3 – Desired Information (Specific Order or Request)

LINE 4 – Requestor's Priority (ONE, TWO, THREE, or FOUR)

LINE 5 – DTG Information Required

LINE 6 – DTG of Latest Time for Intelligence/Information Value

LINE 7 – Narrative

Reports

BLUE 1 – SALT/SPOT REPORT

PURPOSE: To report a single event/battlefield encounter

SUBMITTED BY: TRP CP to higher

SUBMIT WHEN: As Necessary.

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: DTG

Line 3: Size (Tanks/Infantry Carriers/Dismount Squads/Specify Other)

Line 4: Activity

Line 5: Location

Line 6: Unit

Line 7: Time

Line 8: Equipment

Line 9: Action your unit is taking

BLUE 2 – SITREP

PURPOSE: To report any changes to the tactical situation and status

SUBMITTED BY: Reporting unit to higher

SUBMITTED WHEN: As of 0430 NLT 0500, As of 1630 NLT 1700

Method: FM

FORMAT

LINE 1: Reporting Unit

LINE 2: DTG

LINE 3: Brief summary of threat activity, casualties inflicted, and prisoners captured

LINE 4: Friendly locations (encoded)

LINE 5: SLANT

LINE 6: Defensive obstacles

LINE 7: Personnel Strength

LINE 8: Class III and V on hand

LINE 9: Operations next 12hrs/24hrs

LINE 10: Commander's remarks:

Reports

BLUE 3 – Combat Power Slant

PURPOSE: To provide the Brigade Commander with a quick overall status of the combat power of the BCT and to brief the command group on combat readiness

SUBMITTED BY: Reporting unit to next higher HQ.

SUBMIT WHEN: As Necessary

Method: FM

FORMAT:

CAV Platoon Slant

ICVV	Dismount Teams	Javelin Teams	Sent over the Net:
6	3	2	6/3/2

CAV Line Troop Slant

ICVV	Dismount Teams	Javelin Teams	MCVV	Attachments	Sent over the Net:
14	6	4	2	x	14/6/4/2/x

CAV Weapons Troop Slant

ATGM	MGS	ICVV	Attachments	Sent over the Net:
9	12	5	x	9/12/5/x

BLUE 4 – Report Bridge, Overpass, Tunnel, Culvert

PURPOSE: To report a bridge, overpass, culvert, underpass, or tunnel

SUBMITTED BY: Discovering unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Type and location

Line 3: Overall length

Line 4: Width of roadway

Line 5: Height restrictions

Line 6: Length and number of spans

Line 7: Computed classification

Line 8: Bypass locations/conditions

Line 9: Action your unit is taking

Reports

BLUE 5 – Report for Ford, Ferry, or Other Crossing

PURPOSE: To report a ford, ferry, or other crossing

SUBMITTED BY: Discovering unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Type and location

Line 3: Overall length

Line 4: Current speed (meters/second)

Line 5: Maximum depth in meters

Line 6: Bottom material and condition

Line 7: Capacity classification of any existing ferry equipment

Line 8: Slope of entry bank

Line 9: Slope of exit bank **Line**

10: Necessary comments

BLUE 7- Route Reconnaissance Report

PURPOSE: To send a route reconnaissance report

SUBMITTED BY: Discovering unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: From location

Line 3: To location

Line 4: Type of route (Highway, Road, Trail, Cross-country)

Line 5: Route classification (all squadron vehicles, tracked vehicles only, CFV only, etc)

Line 6: Seasonal limitations of route (X,Y, Z)

Line 7: Rate of movement along route (Fast, Slow)

Line 8: Location and type of critical points (Curves, slopes, width restrictions, overhead clearance)

Line 9: Additional comments

Reports

BLUE 9 – Obstacle Report

PURPOSE: To report an obstacle

SUBMITTED BY: Discovering unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Type of obstacle or obstruction

Line 3: Location

(Large obstacles send end/turn points)

Line 4: Dimensions and orientation

Line 5: Composition

Line 6: Enemy weapons

influencing obstacle

Line 7: Observer's actions

BLUE 10 – Bypass Report

PURPOSE: To report a bypass

SUBMITTED BY: CO CP TO NEXT HIGHER HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Length/width/surface type/grade

Line 3: Coordinates

(from and to locations)

Line 4: Seasonal/weather limitations.

Line 5: Bypass markings

Line 6: Observer's actions

Reports

BLUE 11 – Stand-to Report

PURPOSE: To report completion of stand-to

SUBMITTED BY: Any unit that has completed stand-to to their next higher unit

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Time stand-to completed

Line 3: Weapons on hand/functional

Line 4: Sensitive/accountable items on hand

Line 5: Vehicles/radios on hand and functional

Line 6: On hand/functional status of other equipment

UXO/IED Report

PURPOSE: To report the discover of a UXO/IED

SUBMITTED BY: Discovering unit to higher

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: DTG Discovered

Line 2: Reporting activity (UIC / Unit Designation), Location

Line 3: Contact Method (Radio Freq / Call Sign or Telephone Number)

Line 4: Type of IED / Ordnance: (Dropped, Projected, Placed or Thrown), Description

Line 5: CBRN Contamination: Yes/No (If Yes, report type of agent if known / identified)

Line 6: Target / Resource Threatened (Is it a critical asset?)

Line 7: Impact on Mission

Line 8: Protective Measures Taken

Line 9: Recommended Priority: (Immediate, Indirect, Minor, or No Threat)

Reports

Yellow 1 – LOGSTAT

PURPOSE: To report information logistic status of reporting unit

SUBMITTED BY: Participating unit to next higher logistic support

SUBMIT WHEN: 0500 and 1700 daily; as necessary

Method: FM

FORMAT

Line 1: DTG of report

Line 2: Unit/Support Element

Line 3: Location (10 digit grid to CP)

Line 4: Headcount (O/E)

Line 5: MREs (3DOS /OH) cases

Line 6: Water (CAP / OH) gallons

Line 7: Fuel (CAP / OH) gallons

Line 8: Ammo UBL Report

a.) 5.56 (ABL / OH)

b.) 7.62 (ABL / OH)

c.) .50cal (ABL / OH)

d.) 40mm (ABL / OH)

e.) Javelin (ABL / OH)

f.) Smoke/Grenades (ABL / OH)

g.) TOW missiles (ABL/OH)

h.) 105mm (ABL/OH)

i.) AT-4 (ABL/OH)

j.) Grenades (ABL/OH)

Line 9: Class IX Requests

Line 10: Class VIII Critical Requests

Line 11: Class IX NMC Items

Line 12: CLIII(P) Requests

Line 13: Special Requests (CLII & IV)

Green: >90%

Amber: >70%

Red: >40%

Black: <40%

Winchester: 0%

Notes:

Additional CLV DODICs may be requested on LINE 8 by successive lettering following (j.) with nomenclature, ABL and OH quantities.

D FST – separate the number of rations by meal in sub-lines beneath LINE 5. Additionally, differentiate between the FST's internal 3DOS meal requirement, and the OH rations for distribution to line TRPs.

Reports

Yellow 1A – Battle Loss Report

PURPOSE: To report the loss of or damage to a piece of equipment.

SUBMITTED BY: Involved unit to higher

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Unit

Line 2 : UIC

Line 3: DODAAC

Line 4: BCT

Line 5: Type of Equipment

Line 6: Serial Number

Line 7: Registration Number

Line 8: Bumper Number

Line 9: Nomenclature

Line 10: LIN and NSN

Line 11: Date of Incident

Line 12: Date Reported

Line 13: Description of Incident

Yellow 3 – POL Status Report

PURPOSE: To report POL on hand.

SUBMITTED BY: Involved unit to higher

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

GREEN: 90% or more of the required quantity on hand.

AMBER: 80% to 89% on hand.

RED: 60% to 79% on hand.

BLACK: 59% or less on hand.

Reports

RED 1 – Personnel Report

PURPOSE: Provide a daily personnel status to the brigade commander

SUBMITTED BY: Involved unit to higher

SUBMIT WHEN: As Necessary

Method: CPOF, VOIP, FM

FORMAT

Line 1: Report as of DTG.

Line 2: Unit

Line number 3-5 will be reported:

AUTH/ASGD/PDY/REMARKS

Line 3: Officer

Line 4: Warrant

Line 5: Enlisted

Line 6: Unit personnel status:

(Green, Amber, Red, Black)

Line 7: Personnel redeploying in next 24, 48, 72 hours

RED 2 – Personnel Battle Loss Report

PURPOSE: To send a personnel battle loss report

SUBMITTED BY: Involved unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Reporting Unit

Line 2: Battle Roster number

Line 3: DTG of incident

Line 4: Location of incident

Line 5: Type of casualties

Alpha: KIA, hostile action

Bravo: KIA, non-hostile action

Charlie: Body recovered

Delta: Body not recovered

Echo: Body identified

Foxtrot: Body not identified

Golf: Missing in action

Hotel: Captured

India: WIA, slight, hostile action

Juliet: WIA, serious, hostile action

Kilo: WIA, slight, non-hostile action

Lima: WIA, serious, non-hostile action

Mike: Accident

Line 6: Location to which casualties are evacuated

Line 7: Duty Position

Reports

RED 3 – Medical Evacuation Request

See 9-Line MEDEVAC

RED 9 – Accident Report

PURPOSE: Provides timely information to the commander on accidents that occur within the unit.

SUBMITTED BY: Involved unit to next higher HQ

SUBMIT WHEN: As Necessary

Method: FM

FORMAT

Line 1: Description of Accident:

Line 2: Location of Accident:

Line 3: DTG of Accident:

Line 4: DTG of Discovery:

Line 5: Cause of accident:

Line 6: Name of Witnesses:

Line 7: Name or BR# of injured, names of civilians involved (Claims Card Issued)

Line 8: Bumper number and Nomenclature of equipment involved, type of civilian vehicles:

Line 9: POC

9 LINE MEDEVAC

Line 1: Grid/ Location	
Line 2: Call Sign/ Frequency	
Line 3: Patients by Precedence	
A-Urgent	A=
B- Urgent Surgical	B=
C- Priority	C=
D- Routine	D=
E- Convenience	E=
Line 4: Special Equipment Needed	
A- None	A=
B- Hoist	B=
C- Extraction Equipment	C=
D- Ventilator	D=
Line 5: Patients by Type	
L-Litter	L=
A- Ambulatory	A=
E- Escort (May be required for Female/ Minor)	E=
Line 6: Landing Zone Security	
N- No Enemy	N=
P- Possible Enemy	P=
E- Enemy in Area	E=
X- Area Under Fire (Armed Escort Required)	X=
Line 7: Method of Marking Pick-up Site	
A- Panels	A=
B- Pyro	B=
C- Smoke	C=
D- None	D=
E- Other	E=
Line 8: Patients by Nationality	
A- US Military	A=
B- US Civilian	B=
C- Non-US Military	C=
D- Non-US Civilian	D=
E- EPW	E=
Line 9: CBRN Contamination (Wartime)	
C- Chemical	C=
B- Biological	B=
R- Radiological	R=
N- Nuclear	N=
Line 9: Terrain Description (Peacetime)	
Addition Information	
M- Mechanism of Injury	M=
I- Injury/ Illness	I=
S- Signs/ Symptoms/ Vitals	S=
T- Treatment	T=

STANDARD RANGE CARD

For use of this form see FM 7-8. The proponent agency is TRADOC

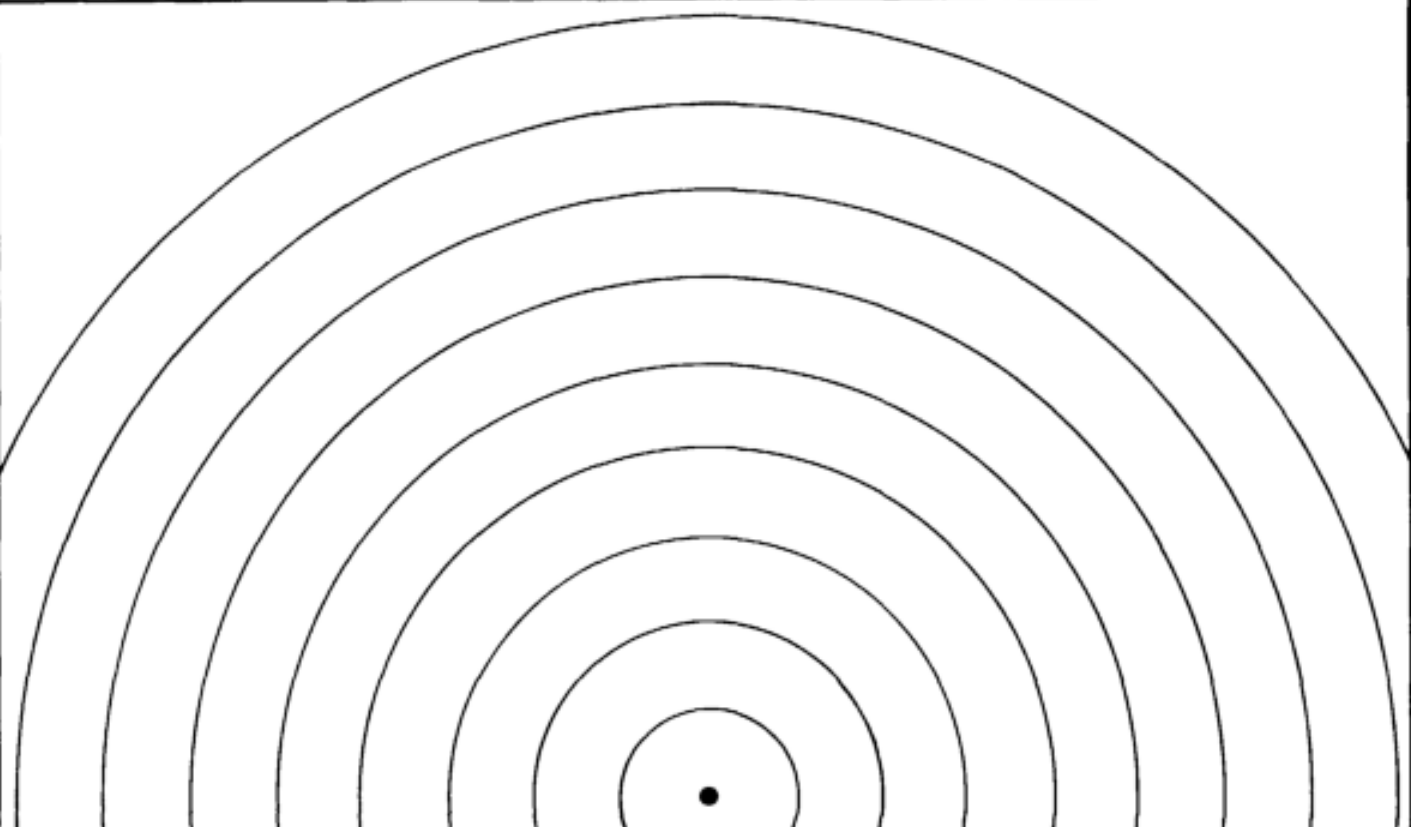
SQD _____

PLT _____

CO _____

May be used for all types of direct fire weapons.

MAGNETIC
NORTH



DATA SECTION

POSITION IDENTIFICATION

DATE

WEAPON

EACH CIRCLE EQUALS _____
METERS

NO.	DIRECTION/ DEFLECTION	ELEVATION	RANGE	AMMO	DESCRIPTION
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REMARKS:

Julian Date Calendar

Julian Date Calendar (Regular Year)												
Day/ Mo	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	01	32	60	91	21	52	82	13	44	74	05	35
2	02	33	62	92	22	53	83	14	45	75	06	36
3	03	34	63	93	23	54	84	15	46	76	07	37
4	04	35	63	94	24	55	85	16	47	77	08	38
5	05	36	64	95	25	56	86	17	48	78	09	39
6	06	37	65	96	26	57	87	18	49	79	10	40
7	07	38	66	97	27	58	88	19	50	80	11	41
8	08	39	67	98	28	59	89	20	51	81	12	42
9	09	40	68	99	29	60	90	21	52	82	13	43
10	10	41	69	00	30	62	91	22	53	83	14	44
11	11	42	70	01	31	63	92	23	54	84	15	45
12	12	43	71	02	32	63	93	24	55	85	16	46
13	13	44	72	03	33	64	94	25	56	86	17	47
14	14	45	73	04	34	65	95	26	57	87	18	48
15	15	46	74	05	35	66	96	27	58	88	19	49
16	16	47	75	06	36	67	97	28	59	89	20	50
17	17	48	76	07	37	68	98	29	60	90	21	51
18	18	49	77	08	38	69	99	30	62	91	22	52
19	19	50	78	09	39	70	00	31	63	92	23	53
20	20	51	79	10	40	71	01	32	63	93	24	54
21	21	52	80	11	41	72	02	33	64	94	25	55
22	22	53	81	12	42	73	03	34	65	95	26	56
23	23	54	82	13	43	74	04	35	66	96	27	57
24	24	55	83	14	44	75	05	36	67	97	28	58
25	25	56	84	15	45	76	06	37	68	98	29	59
26	26	57	85	16	46	77	07	38	69	99	30	60
27	27	58	86	17	47	78	08	39	70	00	31	62
28	28	59	87	18	48	79	09	40	71	01	32	63
29	29		88	19	49	80	10	41	72	02	33	63
30	30		89	20	50	81	11	42	73	03	34	64
31	31		90		51		12	43		04		65

Julian Date Calendar (Leap Year)												
Day/ Mo	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	01	32	61	92	22	53	83	14	45	75	06	36
2	02	33	62	93	23	54	84	15	46	76	07	37
3	03	34	63	94	24	55	85	16	47	77	08	38
4	04	35	64	95	25	56	86	17	48	78	09	39
5	05	36	65	96	26	57	87	18	49	79	10	40
6	06	37	66	97	27	58	88	19	50	80	11	41
7	07	38	67	98	28	59	89	20	51	81	12	42
8	08	39	68	99	29	60	90	21	52	82	13	43
9	09	40	69	00	30	61	91	22	53	83	14	44
10	10	41	70	01	31	62	92	23	54	84	15	45
11	11	42	71	02	32	63	93	24	55	85	16	46
12	12	43	72	03	33	64	94	25	56	86	17	47
13	13	44	73	04	34	65	95	26	57	87	18	48
14	14	45	74	05	35	66	96	27	58	88	19	49
15	15	46	75	06	36	67	97	28	59	89	20	50
16	16	47	76	07	37	68	98	29	60	90	21	51
17	17	48	77	08	38	69	99	30	61	91	22	52
18	18	49	78	09	39	70	00	31	62	92	23	53
19	19	50	79	10	40	71	01	32	63	93	24	54
20	20	51	80	11	41	72	02	33	64	94	25	55
21	21	52	81	12	42	73	03	34	65	95	26	56
22	22	53	82	13	43	74	04	35	66	96	27	57
23	23	54	83	14	44	75	05	36	67	97	28	58
24	24	55	84	15	45	76	06	37	68	98	29	59
25	25	56	85	16	46	77	07	38	69	99	30	60
26	26	57	86	17	47	78	08	39	70	00	31	61
27	27	58	87	18	48	79	09	40	71	01	32	62
28	28	59	88	19	49	80	10	41	72	02	33	63
29	29	60	89	20	50	81	11	42	73	03	34	64
30	30		90	21	51	82	12	43	74	04	35	65
31	31		91		52		13	44		05		66