



**INSERT – INFANTRY**  
**(English)**

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## PART 8 – ARM INSERT

### TAM 807 – INFANTRY

#### 807.01 – COMMAND

##### 1. Battle Procedure

Step 1	The commander (comd) receives a warning order (Wng O)
Step 2	Upon receipt of a Wng O, the comd conducts a quick map study and time estimate
Step 3	The comd receives orders from the higher comd: <ul style="list-style-type: none"><li>- seeks clarification as req</li><li>- coord with staff</li></ul>
Step 4	The comd conducts a msn analysis: <ul style="list-style-type: none"><li>- ident the higher (two up) comd's intent and immediate superior's concept of ops</li><li>- ident assigned and implied tasks</li><li>- ident limitations which may relate to:<ul style="list-style-type: none"><li>- time</li><li>- space</li><li>- resources</li><li>- the way the msn will be executed</li><li>- if applicable, political restrictions</li><li>- if applicable, the open fire policy and/or rules of engagement (ROE)</li></ul></li><li>- continuously determines if the sit has changed sufficiently to warrant a review of the estimate</li><li>- ident essential tasks and produces a restated msn</li></ul>
Step 5	The comd issues the initial Wng O immediately or as soon as possible, stating as a min: <ul style="list-style-type: none"><li>- the probable task</li></ul>

	<ul style="list-style-type: none"> <li>- the loc and time of orders</li> <li>- the degree of warning or earliest time of mov of the main body (e.g., no move before . . . )</li> <li>- any restrictions on recce</li> <li>- any special admin instructions affecting the resting or feeding of troops, regrouping, issue of ammo, need for special eqpt, moves to assy areas, etc.</li> <li>- acknowledgement</li> </ul>
Step 6	The comd makes a detailed time estimate, leaving two-thirds of the available time for subordinates to conduct their own battle procedure
Step 7	The comd conducts a map study and prep an outline plan
Step 8	<p>The comd prep a recce plan:</p> <ul style="list-style-type: none"> <li>- ident questions to be answered at each loc and en rte</li> <li>- views the ground from the en's perspective, secur permitting</li> <li>- considers: <ul style="list-style-type: none"> <li>- the threat</li> <li>- time available</li> <li>- number of locs to be visited</li> <li>- rtes available</li> <li>- necessity for a protection party</li> </ul> </li> </ul>
Step 9	The recce party conducts the recce IAW the plan, but adjustments may be made as nec
Step 10	The comd completes the remainder of the estimate
Step 11	The comd issues a supplementary Wng O, confirming info in the initial Wng O and adding new info as nec
Step 12	<p>The comd completes the plan and prep and issues orders:</p> <ul style="list-style-type: none"> <li>- issues orders at the time stated in the Wng O</li> </ul>

	<ul style="list-style-type: none"> <li>- ensures orders are given at a loc that reduces travel time and, if possible, allows obsn of the zone/sector and promotes op secur</li> <li>- enhances presentation of orders through the use of visual aids (e.g., terrain models and diagrams), time permitting</li> <li>- ensures key personnel (pers) attend orders group (O Gp) and are seated logically</li> <li>- introduces newly attached comds</li> <li>- uses the proper format for orders</li> <li>- christens the ground</li> <li>- if the orders are complex, holds a short talk-through of the task execution at the start of the orders 'EXECUTION' paragraph (Concept Of Operations)</li> <li>- ident the higher comd's intent</li> <li>- clearly states msn and tasks of subordinates IAW msn analysis</li> <li>- ensures there is no repetition of instructions unless it is vital to clarify a task</li> <li>- confirms subordinate comds understand their instructions</li> <li>- issues all supporting documentation nec to coord the task</li> <li>- ensures subordinate comds perform lateral coord before leaving</li> </ul>
Step 13	The comd coord the activities and requirements of subordinates, including rehearsals if time and sit permit
Step 14	The comd supervises the depl, taking appropriate and timely action to rectify any problems
Step 15	Msn is executed IAW orders

## 2. Time Estimate

Critical Questions	<ol style="list-style-type: none"> <li>1. By what time must the msn be accomplished?</li> <li>2. How much time is available to complete the msn?</li> <li>3. What must be done at all levels in the time available?</li> <li>4. What tasks can be done simultaneously?</li> <li>5. How fast is the sit changing?</li> <li>6. Can I afford to do complete battle procedure, or do I streamline?</li> <li>7. How long do you have assets? (1/3, 2/3 principles?)</li> </ol>
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SERIAL	ACTIVITY	TIME REQUIRED	TIME (HOURS)
(a)	(b)	(c)	(d)
1	Obj to be captured by . . .		
2	Time spent to capture obj		
3	Move from line of departure (LD) to aslt posn		
4	H hour is at . . .		
5	Move from forming up place to LD		
6	Move from assy area to forming up place		
7	Move from assy area at . . .		
8	Sect comds give orders and complete prep		
9	Sect comds complete their battle procedures and prep their orders		
10	Pl comd gives his orders		
11	Pl comd's O Gp begins		



<b>SERIAL</b>	<b>ACTIVITY</b>	<b>TIME REQUIRED</b>	<b>TIME (HOURS)</b>
<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>
12	Pl comd completes his tactical estimate and prep his orders		
13	Pl comd moves to pl RV		
14	Pl comd makes a recce		
15	Pl comd makes a time estimate, a map study and a recce plan		
16	Cbt tm/coy comd's O Gp ends		

**FIGURE 8-1 EXAMPLE OF A TIME ESTIMATE FOR A PLATOON ATTACK**

## **807.02 - OFFENSIVE OPERATIONS**

### **1. Hasty Attack**

<b>PLATOON COMMANDER</b>		
Adv and Hasty Atk	Adv	<ul style="list-style-type: none"> <li>- Maintain the direction of adv</li> <li>- Proper use of ground features</li> <li>- Maintain secur through:               <ul style="list-style-type: none"> <li>- depl of scouts</li> <li>- depl of pl support (sp) wpns (over watch)</li> </ul> </li> <li>- use of proper fmns</li> <li>- timely passage of info to sect comd/wpns det comd</li> </ul>
	Battle Drill 1 - Reaction to sect coming under effective en fire	<ul style="list-style-type: none"> <li>- Move to a vantage point to observe the en and send contact report</li> <li>- Conduct quick recce and liaison with leading sect comd</li> </ul>

		<ul style="list-style-type: none"> <li>- Conduct cbt estimate (COPPED)</li> <li>- Info pl 2IC of RV and loc of O Gp</li> <li>- Info lead sect comd of loc/RV for O Gp</li> <li>- Send SITREP to coy comd</li> <li>- Give orders</li> <li>- Info pl 2IC of orders</li> <li>- Request fire msn (sp)</li> </ul>
	Battle Drill 2 - The Hasty Atk	<ul style="list-style-type: none"> <li>- Control pl from RV to aslt posn</li> <li>- Ensure pl formed up in proper aslt fmn</li> <li>- Maintain initiative and motivation</li> <li>- Ensure effective fire sp</li> <li>- Control fire and mov of the aslt gp</li> <li>- Amend fire sp as req</li> <li>- Give limit of exploitation</li> </ul>
	Battle Drill 3 - Consolidation	<ul style="list-style-type: none"> <li>- Indicate the consolidation posn</li> <li>- Give arcs of fire to sects and sp wps</li> <li>- Send SITREP to coy comd</li> </ul>

2. **Radio Orders**, see TAM 109

<b>PLATOON 21C</b>		
Adv and Hasty Atk	Taking the lead	<ul style="list-style-type: none"> <li>- Obtain all relevant info from previous pl 2IC (lead pl)</li> <li>- Supervise routine of the fol:</li> <li>- implement Wng O</li> <li>- wpn and eqpt checks</li> <li>- ammo distribution</li> </ul>
	On the move	<ul style="list-style-type: none"> <li>- Check fmnns and spacing of rear sects</li> </ul>

		<ul style="list-style-type: none"> <li>– Supervise depl at halts</li> </ul>
	<p>Battle Drill 1 - Reaction to sect coming under effective en fire</p>	<ul style="list-style-type: none"> <li>– Supervise depl and concealment of rear sects</li> <li>– Dispatch sect comds to RV for O Gp and bring pl to pl RV</li> </ul>
		<ul style="list-style-type: none"> <li>– Make sure he is briefed by pl comd and wpn det is briefed</li> </ul>
	<p>Battle Drill 2 - The Hasty Atk</p>	<ul style="list-style-type: none"> <li>– Assist in forming up aslt fmn and maint initiative-comd fire base as req (if joins aslt gp) – move in rear gp</li> <li>– Ensure spacing, speed, fmns are acted upon</li> <li>– Flank protection</li> <li>– Controls depth on aslt</li> <li>– Prep to assume command at all times</li> </ul>
	<p>Battle Drill 3 - Consolidation</p>	<ul style="list-style-type: none"> <li>– Move up quickly on success</li> <li>– Pass ammo and cas rep to CSM</li> <li>– Redistribute ammo, organize pl HQ and wpn det</li> <li>– Arrange cas evac</li> <li>– Brief guards for PW evac (coy collection pt)</li> </ul>

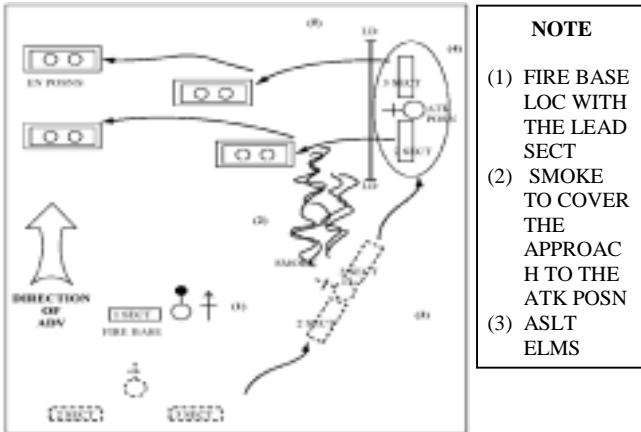
**SECTION COMMANDER**

Adv and Hasty Atk	<p>Battle Drill 1 - Prep for battle</p>	<ul style="list-style-type: none"> <li>– Wng O</li> <li>– Prep for battle</li> <li>– Inspection</li> <li>– Sect orders</li> <li>– Rehearsals</li> <li>– Test fire wpns</li> </ul>
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	Battle Drill 2 - Reaction to effective en fire	<ul style="list-style-type: none"> <li>- Give order "take cover," double tap, dash, down, crawl, observe, fire, communicate, move</li> </ul>
	Battle Drill 3 - Locating the en	<ul style="list-style-type: none"> <li>- Target indication: <ul style="list-style-type: none"> <li>- direct method</li> <li>- clock ray</li> <li>- ref point</li> <li>- spec fire</li> <li>- tracer</li> <li>- change posn (gp or indiv) to draw fire</li> <li>- hand angles</li> <li>- use of binoculars or C7 optical sight</li> </ul> </li> </ul>
	Battle Drill 4 - Winning the fire fight	<ul style="list-style-type: none"> <li>- Give fire control order using GRIT: <ul style="list-style-type: none"> <li>- gp</li> <li>- range</li> <li>- indication</li> <li>- type of fire: <ul style="list-style-type: none"> <li>- normal: C7-5 rds/min, C9-50 rds/min</li> <li>- rapid: C7-20 rds/min, C9-100 rds/min</li> <li>- auto: bursts of rapid fire (close quarter battle)</li> <li>- snap: watch and shoot</li> </ul> </li> <li>- Maintain suppressing fire</li> <li>- Types of fire control orders: <ul style="list-style-type: none"> <li>- full</li> <li>- brief</li> <li>- delayed</li> <li>- indiv</li> </ul> </li> </ul> </li> </ul>
	Battle Drill 5 - Approach	<ul style="list-style-type: none"> <li>- To do: <ul style="list-style-type: none"> <li>- change mag</li> <li>- quick Battle Orders <ul style="list-style-type: none"> <li>- G – gp</li> <li>- E – en</li> <li>- T – task</li> <li>- M – move order</li> </ul> </li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- sect move to ammo point</li> <li>- Ensure/remember:</li> <li>- en neutralized during approach</li> <li>- maintain momentum</li> <li>- remain alert for the unexpected</li> <li>- may have to use own fire sp</li> <li>- Use: <ul style="list-style-type: none"> <li>- indirect fire</li> <li>- SRAAW, Smoke, Gren Launcher</li> </ul> </li> </ul>
	Battle Drill 6 - Aslt	<ul style="list-style-type: none"> <li>- Fire and mov</li> <li>- Maintain momentum</li> <li>- Command and control (C2)</li> </ul>
	Battle Drill 7 - Consolidation	<ul style="list-style-type: none"> <li>- Form a def; prep for C atk</li> <li>- Prep hasty def, sect comd to cfm indiv posns and arcs, particularly LMG and AAW</li> <li>- Verify and redistribute ammo</li> <li>- Search obj if time permits</li> <li>- Estb Link with other sects</li> <li>- Secur</li> <li>- Cas/PW</li> <li>- Send detailed SITREP</li> </ul>

### 3. Platoon Assault



**FIGURE 8-2 PLATOON ASSAULT FROM A FLANK**

### 4. Deliberate Attack

<b>PLATOON/SECTION COMMANDER</b>		
Mounting stage	Detailed prep	<ul style="list-style-type: none"> <li>- Detailed recce by comds down to sect level</li> <li>- Use of detailed models for orders and briefings</li> <li>- All ranks briefing by coy and pl comds</li> <li>- Rehearsals, including night rehearsals if applicable</li> <li>- Deception measures</li> </ul>
Aslt stage	Approach	<ul style="list-style-type: none"> <li>- Guides may be used to bring elms up to the atk posn and the fire base</li> <li>- Rtes, atk posns and LD should be marked and secured ahead of time</li> </ul>

	Aslt	<ul style="list-style-type: none"> <li>- Navigational aids, such as MGs firing on fixed lines along the flanks and arty fire on the obj, may be used to help keep direction</li> <li>- Since control is more difficult at night, objs should be limited to avoid soldiers and sects getting lost</li> <li>- Avoid passing one aslt gp through another to prevent confusion and cas from friendly fire</li> <li>- Avoid converging on en wpns flashes when assaulting a posn</li> <li>- Avoid the explosion of grenades above ground level</li> <li>- Every effort must be made to distinguish friend from foe before engaging</li> </ul>
Consolidation	General	<ul style="list-style-type: none"> <li>- Indicate consolidation posn as stated in your orders</li> <li>- Give arcs of fire to sects and sp wpns</li> <li>- Send SITREP to pl/coy comd</li> </ul>

5. **Deliberate Attack Orders**, see TAM 109.03

<b>PLATOON 2IC</b>		
Deliberate Atk	Mounting	<ul style="list-style-type: none"> <li>- Pass Wng O to sect comds; initiate concurrent activity</li> <li>- Dispatch O Gp</li> <li>- Supervise prep for battle</li> <li>- Issue eqpt (if applicable)</li> <li>- Control meals (if applicable)</li> </ul>

	Approach	<ul style="list-style-type: none"> <li>- Assist in control of fmns and concealment</li> <li>- Assist in forming up for aslt</li> </ul>
	Aslt	<ul style="list-style-type: none"> <li>- Control pl HQ and reserve sect (if applicable)</li> <li>- Control pl mor (if applicable)</li> <li>- Control fire base (if applicable)</li> <li>- Prep to assume command at all times</li> <li>- Maintain strict control of pl HQ (if not at the fire base)</li> <li>- Read the battle and enforce pl comd's decisions</li> <li>- Supervise reserve sect in the mop up</li> </ul>
	Consolidation	<ul style="list-style-type: none"> <li>- Bring up rear of pl quickly</li> <li>- Check ammo and redistribute</li> <li>- Arrange cas evac and PWs</li> <li>- Supervise digging of pl HQ</li> <li>- Send ammo and cas rep; info pl comd</li> <li>- Receive briefing from pl comd</li> </ul>

## 6. The Pursuit

Pursuit	Definition	<ul style="list-style-type: none"> <li>- A series of rapid advs and hasty atks to continue the dislocation of the en</li> </ul>
	Pursuit vs Adv to Contact	<ul style="list-style-type: none"> <li>- They are alike as far as tactics and grouping are concerned</li> <li>- They differ fundamentally in the en sit</li> </ul>



	<p>Adv to Contact</p> <p>Pursuit</p>	<ul style="list-style-type: none"> <li>- The en strength has not been tested</li> <li>- Follows the defeat of an en whose strength has been depleted; risks can be taken to hasten his final defeat</li> <li>- The sub-unit takes risks that it does not normally take when the en sit is uncertain</li> <li>- Large en posns may be bypassed, gaps exploited, and the battle group (BG) thrusts deeply into en territory without excessive concern for its own flanks and rear</li> <li>- Battle procedure is accelerated to maintain the pace</li> <li>- Sub-unit comds receive verbal/radio instructions giving them greater freedom of action</li> </ul>
	Sect/PI Level	<ul style="list-style-type: none"> <li>- Translated into bold off action but it does not affect the manner in which the battle drills are executed</li> </ul>

### 807.03 – DEFENSIVE OPERATIONS

<b>PLATOON COMMANDER</b>	
Recce	<ul style="list-style-type: none"> <li>- Ensure your posn conforms to the overall intentions of the coy OC/combat team (cbr tm) comd</li> <li>- Estb and follow a track plan</li> <li>- Maintain concealment</li> <li>- Make a sketch of the terrain</li> <li>- Conduct an estimate</li> <li>- Determine posn of sp wpns</li> <li>- Estb sect locs</li> <li>- Liaise with other elms in your loc</li> <li>- Select DF (defensive fire) / PPF (final protective fire) tasks and coord with flanking units</li> </ul>

	– Issue preliminary orders
Occupation	<ul style="list-style-type: none"> <li>– Occupy the hide with call signs in the proper order</li> <li>– Brief all pers on the track plan</li> <li>– Brief all pers on concealment</li> <li>– Ensure sentries are in place by day/night and the pl CP is manned</li> <li>– Supervise prep of the hide</li> <li>– Early warning</li> <li>– Contact pl 2IC on arrival</li> <li>– Study the occupation plan and make changes if nec</li> <li>– Order sect comds to occupy the posn</li> <li>– Receive final brief from pl 2IC</li> <li>– Take command of the posn</li> <li>– Tour posn and confirm plan/arcs with sect comds</li> <li>– Give confirmatory orders</li> <li>– Ensure loc of flanking units is known to all</li> <li>– Info superior when ready</li> <li>– Ensure camouflage (cam) is maintained</li> <li>– Confirm state of readiness of wpns and sentries</li> <li>– Confirm loc and arcs of fire of sp wpns</li> <li>– Supervise noise and light discipline</li> <li>– Indiv range cards</li> <li>– Confirm priority of work and duty roster</li> <li>– Sect range cards</li> <li>– Liaise with flanking units</li> <li>– Pl range cards</li> <li>– Send info/diagram/range card to higher comds</li> <li>– Inspect all wpns, eqpt, and pers</li> </ul>

1. **Defence Preliminary Orders**, see TAM 109.05
2. **Defence Confirmatory Orders**, see TAM 109.06

<b>PLATOON 2IC</b>		
Def	General	<ul style="list-style-type: none"> <li>- Prior to occupation ensure:               <ul style="list-style-type: none"> <li>- cam and conceal in the assy area</li> <li>- distribution of eqpt</li> <li>- inspect wpns and eqpt</li> </ul> </li> </ul>
		<ul style="list-style-type: none"> <li>- pass info to pl</li> <li>- Occupation:               <ul style="list-style-type: none"> <li>- supervise layout of pl HQ and digging</li> <li>- supervise setting out and concealment of admin area</li> <li>- coord construction of obstacles (obs)</li> </ul> </li> </ul>
	Def Routine	<ul style="list-style-type: none"> <li>- Control feeding arrangements</li> <li>- Inspect sanitary arrangements</li> <li>- Organize carrying parties</li> <li>- Estb duty roster for manning pl observation post (OP)</li> <li>- Ensure to be briefed at all times by the pl comd</li> <li>- Prep to assist pl comd at all times</li> </ul>

### 3. **Frontages/Fields of Fire**

<p>Frontages are determined by the often-conflicting requirements of assigned tasks, depth, mutual sp, control and ground</p>	<ul style="list-style-type: none"> <li>- Sects can have 4 trenches 10 m apart</li> <li>- Approx 150-200 m between sects</li> <li>- A pl in open country could occupy a frontage of up to 300 m, and a depth of 100 m</li> </ul>
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Trenches must be sited with good fields of fire (normally not less than 100 m) and ideally a little beyond the max effective range of the wpn	– In very close country, 50 m may have to suffice
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<b>SECTION COMMANDER</b>		
Def	General	<ul style="list-style-type: none"> <li>– Pl comd sites indiv posn</li> <li>– Check posns</li> <li>– Get indiv to check posn</li> <li>– Start digging</li> </ul>
	Ensure	<ul style="list-style-type: none"> <li>– Sect wpns cover arcs</li> <li>– Sect is not surprised by the en</li> <li>– All know the alarm schemes</li> <li>– Sect trenches are properly dug</li> <li>– Sect is concealed from air and ground</li> <li>– Track discipline is strictly observed</li> <li>– Sentry roster is made out</li> <li>– Proper routine is observed</li> <li>– Range cards/all likely tgts recorded</li> </ul>
	Know	<ul style="list-style-type: none"> <li>– Open fire policy</li> <li>– Task of sect</li> <li>– When an atk is expected</li> <li>– Are covering troops forward of posn?</li> <li>– Layout of pl posn</li> <li>– Loc of neighbouring posns</li> <li>– Loc of coy/pl HQ</li> <li>– Surveillance and target acquisition orders</li> <li>– Priority of work</li> </ul>

		<ul style="list-style-type: none"> <li>- Time by which sect must be dug in</li> <li>- Ptls, timings, rtes in and out</li> <li>- Allocation of tools to sect</li> <li>- Additional tasks</li> <li>- Track plan</li> <li>- C atk plan reced, rehearsed</li> </ul>
	Routine	<ul style="list-style-type: none"> <li>- Ensure enforcement of:             <ul style="list-style-type: none"> <li>- wpn readiness and sentries</li> <li>- priority of work</li> <li>- ensure occupation of OP</li> <li>- eqpt (eqpt) layout/inspection</li> </ul> </li> <li>- cam</li> <li>- rge cards</li> <li>- noise/light</li> <li>- duty roster</li> <li>- Pass on info to superiors and to subordinates</li> </ul>
	Stand-to	<ul style="list-style-type: none"> <li>- Why?</li> <li>- to check battle readiness</li> <li>- if posn is vulnerable</li> <li>- if atk has been launched or is expected</li> <li>- When?</li> <li>- after completion of posn to confirm locs, cam</li> <li>- during the conduct of a clearing patrol (ptl)</li> <li>- half hr before until half hour after first light and last light or twice in 24 hours</li> <li>- on order</li> </ul>

4. **Defence Preliminary Orders**, see TAM 110.05
5. **Defence Confirmatory Orders**, see TAM 110.06

#### **807.04 - THE DELAY** see TAM 104.02

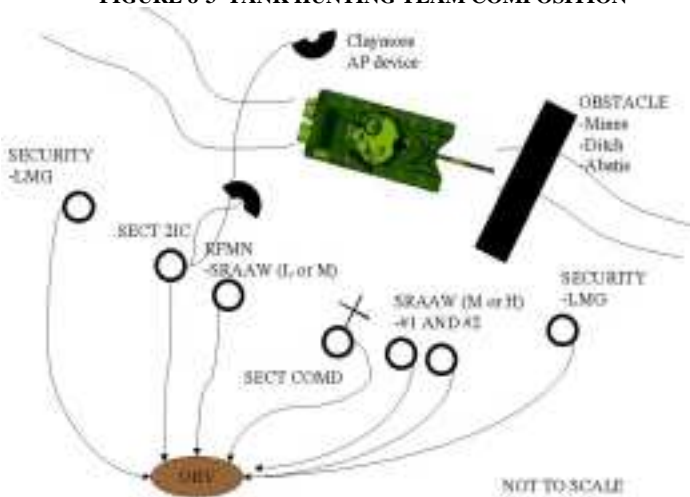
1. **Demolition Guard** see TAM 103.03
2. **Example Of A Bridge Demolition Guard Layout**, see TAM 103.04

#### **807.05 - TANK HUNTING**

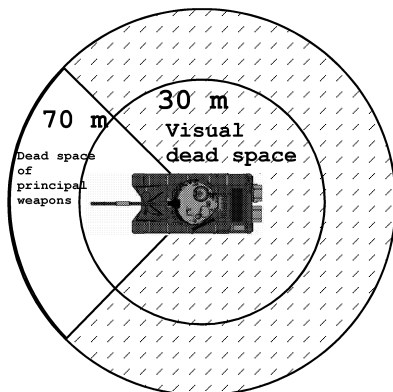
1. Tank (tk) hunting teams are deployed to destroy tks in close terrain such as defiles, gaps, densely wooded or forested areas and when fighting in built-up areas. They may use short range anti-armour weapons (SRAAWs), mines, unconventional devices such as Molotov cocktails, and they make expedient use of obs to accomplish their aim.
2. The tk hunting tm is based on the infantry (inf) sect. The sect veh provides the teams with mobility, anti-APC and anti-pers fire sp. The use of the APC for tk hunting depends on the msn, the terrain and the en sit.



**FIGURE 8-3 TANK HUNTING TEAM COMPOSITION**



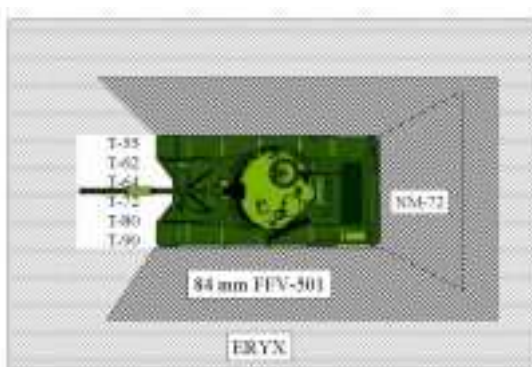
**FIGURE 8-4 EXAMPLE OF A SECT ANTI-ARMOUR AMBUSH**



□ Principal direction of fire and observation when turret is to the front and the hatches are closed

▨ Most favourable direction of attack when the turret is to the front

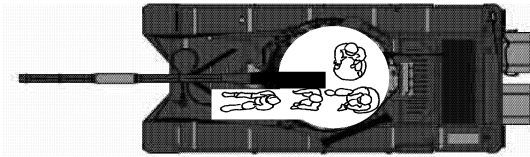
**FIGURE 8-5 TANK DEAD SPACES**



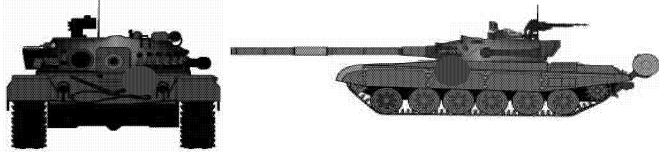
**FIGURE 8-6 ANGLE OF ATTACK FOR ANTI-ARMOUR WEAPONS**



## Crew Layout for a Genfor MBT



### Critical Points of Engagement



**FIGURE 8-7 CREW LAYOUT AND CRITICAL POINTS OF ENGAGEMENT**

### 3. Useful Information

ERYX – wire guided	50 – 600 m	900 mm rolled homogeneous armour (RHA), all known armour including reactive armour.
84mm HEAT- RAP FFV-501	500 m stationary 400 m moving	400 mm
84mm HEDP FFV – 502	500 m stationary 300 m moving	150 mm (approx)
NM-72, HEAT	220 m	300 mm
Steep ditches	More than 60 <sup>0</sup>	
Escarpments and barriers	More than 1.5 m high	
Ravines and trenches	Wider than 5 m	
Rivers, streams, canals	150 m wide and 1.5 m deep	Otherwise snorkel

Lakes, marshes, ponds		Significantly reduces speed
Deep snow	More than 1 m	Reduces speed
Arty, Mor and smoke		Armour will close hatches

## 807.06 - TRANSITIONAL PHASES

### 1. Advance to Contact

Adv	<ul style="list-style-type: none"> <li>- Maintain the direction of the adv</li> <li>- Proper use of ground features</li> <li>- Maintain secur through: <ul style="list-style-type: none"> <li>- depl of scouts</li> <li>- depl of sp wpns (over watch)</li> </ul> </li> <li>- Use of proper fmns</li> <li>- Timely passage of info to sect comd/wpn det</li> <li>- Comd</li> </ul>
Anticipatory Orders May Include:	<ul style="list-style-type: none"> <li>- Axis of adv</li> <li>- Reference points</li> <li>- Bounds</li> <li>- Possible en locs</li> <li>- Actions if under effective en fire</li> <li>- Confirmation that everyone understands</li> </ul>
Adv In Contact, Use Fire and Mov Taking Into Consideration:	<ul style="list-style-type: none"> <li>- That bounds depend upon posns of fire and obsn</li> <li>- Visual contact is maintained between gps and teams within gps</li> <li>- Use hand signals when appropriate</li> <li>- Give sufficient time and cover by fire for gps and teams to move to the next bound</li> <li>- Take advantage of protective fire and move the sect forward at top speed to the next bound</li> </ul>

## 2. Meeting Engagement

Definition	<ul style="list-style-type: none"><li>- A meeting engagement occurs when a moving force, incompletely deployed for battle, engages an en at an unexpected time and place</li></ul>
Basic Principle	<ul style="list-style-type: none"><li>- The seizure and retention of the initiative; thus the comd can regain or retain freedom of action and subsequently adopt the best course of action to accomplish his original msn</li></ul>
Pl/Sect Level	<ul style="list-style-type: none"><li>- Reaction to a meeting engagement is quick and violent</li><li>- Confusion may ensue and there is a need to regain control through decisive orders and strong leadership</li><li>- Sect/pl comd must assess the sit quickly, accurately, and then pass this info to the pl/coy comd</li></ul>

## 3. Link-up

Definition	<ul style="list-style-type: none"><li>- Where forces are to meet in en controlled territory</li></ul>
Aim	<ul style="list-style-type: none"><li>- To estb contact on the ground between forces which may have the same or differing msns</li></ul>
Consideration	<ul style="list-style-type: none"><li>- Generally off in nature</li><li>- Speed in estb the link-up is crucial</li><li>- Speed reduces the possibility of en reaction and minimizes the period of vulnerability</li></ul>
Sect/Pl	<ul style="list-style-type: none"><li>- Drills are applied aggressively to maintain the adv</li><li>- During the last phase of the link-up, the point sect and pl must estb contact with the other force as early as possible and avoid the danger of exchanging fire with them</li><li>- Well-briefed, well-trained troops are the key to success</li></ul>

Control Measures	<ul style="list-style-type: none"> <li>- Axis of adv or boundaries for the link-up</li> <li>- Objs to be held and/or captured by each of the forces taking part</li> <li>- The locs where contact between the forces will be estab</li> <li>- The timing of the op for the forces involved</li> <li>- Liaison teams ident</li> <li>- Passwords and visual identification signs</li> <li>- Report lines and reference points</li> <li>- Contact frequencies (freqs), radio authentication procedures and codes</li> <li>- No fire line (NFL) / restrictive fire line (RFL) report times</li> </ul>
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#### 4. Withdrawal

<b>PLATOON COMMANDER</b>	
Battle Procedure	<ul style="list-style-type: none"> <li>- Conduct a recce briefing for the recce gp (pl 2IC and guide)</li> <li>- Recce the pl/coy check point and RV</li> <li>- Recce rtes</li> </ul>
During the Wdr	<ul style="list-style-type: none"> <li>- Ensure obsn posts and ptls have returned</li> <li>- Ensure suitable forces remain to deny posn to the en until ordered</li> <li>- Sects pass through the pl check pt at times allotted</li> <li>- Move to pl RV</li> <li>- Sect comd accounts for all pers and eqpt at the RV</li> <li>- Pl moves to coy RV through coy check point on order of pl comd</li> <li>- Report pl to OC at coy RV</li> <li>- Pl comd is last off of the posn</li> </ul>
On the New Def Posn	<ul style="list-style-type: none"> <li>- Post sentries and ensure concealment</li> <li>- Establish a track plan</li> <li>- Make detailed recce ensuring the fol:</li> <li>- ground appreciation</li> <li>- determine arcs of any attached sp, sect,</li> </ul>

	<ul style="list-style-type: none"> <li>- and pl wpns</li> <li>- all sp wpns sited from the ground</li> <li>- tie in with neighbouring pl (left to right)</li> <li>- all trenches marked</li> </ul>
Arrival of the Pl	<ul style="list-style-type: none"> <li>- Meet the pl</li> <li>- Lead pl to the posn</li> <li>- Brief pl comd and take over from acting pl 2IC</li> </ul>

5. **Withdrawal Orders**, see TAM 108.07

<b>PLATOON 2IC</b>	
Prior	<ul style="list-style-type: none"> <li>- Assemble sect 2ICs or pick runners</li> <li>- Ensure to carry proper eqpt (map, compass, marking tape, etc.)</li> <li>- Attend pl comd orders if time permits</li> </ul>

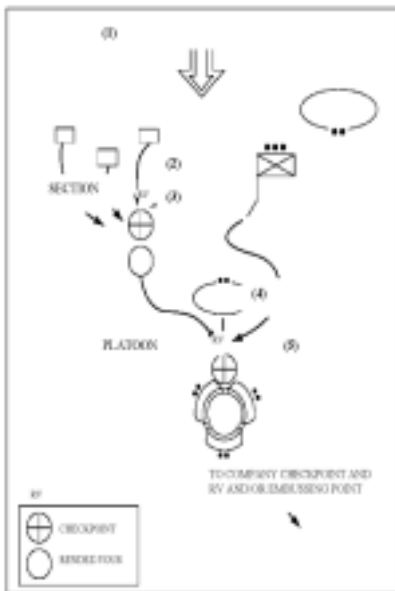
<b>SECTION COMMANDER</b>	
Disengagement	<ul style="list-style-type: none"> <li>- Sect comd goes personally to each trench collecting sect pers and move back to check pt /RV, sect withdrawal (wdr) complete</li> <li>- Fire and mov may be nec, if in contact</li> <li>- Sect comd always last to leave</li> <li>- One pers confirms numbers at check pt</li> <li>- RV used to re-org before proceeding; will not always stop</li> <li>- Consider what to do in case of cas or en indirect fire</li> </ul>

<b>SER</b>	<b>WITHDRAWAL BY DAY</b>	<b>WITHDRAWAL BY NIGHT</b>
(a)	(b)	(c)
1	Recce parties deploy to intermediate or new posns	Recce parties deploy to intermediate or new posns

<b>SER</b>	<b>WITHDRAWAL BY DAY</b>	<b>WITHDRAWAL BY NIGHT</b>
(a)	(b)	(c)
2	Non-essential elms are thinned out	Non-essential elms are thinned out
3	A covering force is estb	A covering force is estb
4	Ptls are wdr	Troops in depth are wdr
5	Forward troops in contact are wdr	Ptls are wdr
6	Troops in depth are wdr through the covering force	Forward troops in contact are wdr through the covering force

**FIGURE 8-8 COMPARATIVE CHART – DAY AND NIGHT WITHDRAWALS**

6. **Withdrawal Orders**, see TAM 109.07



**NOTE**

1. Sect trenches manned until disengagement/timings.
2. Sect pers pass through the sect checkpoint and move directly to the sect RV. They do not stop at the sect checkpoint. A sect member counts as the sect passes by.
3. Sect comd estb physical control, ensures his sect is complete and commences the next phase of the wdr on time.
4. Sect pass through pl checkpoint at times allotted; they are counted as they pass by and they do not stop. Usually manned by a sect member and a wpn det member.
5. Pl RV secur is the responsibility of the first elm to arrive. PL comd estb physical control, checks that his pl is complete and commences with the next phase.

**FIGURE 8-9 CONTROL MEASURES DURING THE WITHDRAWAL**

7. **Relief in Place**

<b>PLATOON COMMANDER</b>	
Battle Procedure	– Determine composition of the recce party (as many comds as possible)
Recce	– Prep a written recce plan – Move with recce gp and guides to coy RV – Meet with counterpart – Conduct posn recce with the command of the pl to be relieved

	<ul style="list-style-type: none"> <li>- loc of OPs</li> <li>- contact points</li> <li>- track discipline</li> <li>- pl posn</li> <li>- arcs of fire, DF, FPF</li> <li>- loc of obs</li> <li>- ptl rtes and timings</li> <li>- range cards</li> <li>- Verify concerning the en:</li> <li>- identity, strength, eqpt</li> <li>- intentions</li> <li>- habits, ptls, shelling</li> <li>- activities during the past 24 hrs</li> <li>- Clarify and coord:</li> <li>- the conduct of the relief</li> <li>- change of command</li> <li>- who provides fire sp and when</li> <li>- safety</li> <li>- groupings and order of march</li> <li>- material replacement</li> <li>- comms and freqs</li> <li>- traffic control</li> </ul>
Control measures	<ul style="list-style-type: none"> <li>- Pl assy area</li> <li>- Pl check point</li> <li>- Timetable of all moves (ptls, etc.)</li> <li>- Time relief to be completed by</li> <li>- Remain with command post throughout the relief</li> <li>- Send pl guide to remain at coy check point</li> <li>- Signal OC when you are ready to assume command</li> <li>- Ensure all pers know when you have assumed comd and the relieved pl is clear of the posn</li> <li>- Give confirmatory orders for the def</li> </ul>



8. **Relief in Place Orders**, see TAM 108.08

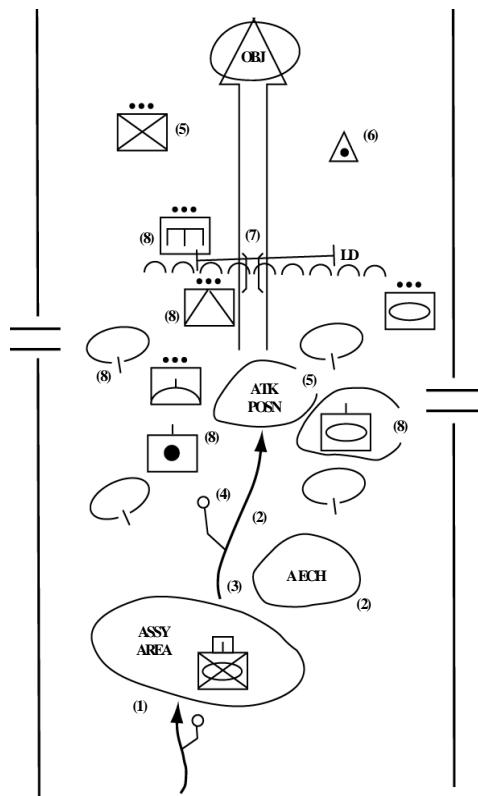
<b>PLATOON 2IC</b>	
General	<ul style="list-style-type: none"> <li>- Ensure Wng O passed</li> <li>- Supervise prep</li> <li>- Organize pl comd's O Gp</li> <li>- Ensure pl prep for op</li> </ul>
Conduct of relief	<ul style="list-style-type: none"> <li>- Move pl to coy check point</li> <li>- Adhere to all mov timings</li> <li>- Meet counterpart on posn</li> <li>- Accompany outgoing pl 2IC around posn</li> <li>- Get all info on posn as to:                             <ul style="list-style-type: none"> <li>- disposn, routine, admin areas, loc of stores and rations, resupply, med evac and wdr rtes</li> </ul> </li> <li>- Report posn clear of outgoing</li> <li>- Check stand-to action</li> <li>- Organize pl HQ</li> </ul>

<b>SECTION COMMANDER</b>	
During Relief in Place	<ul style="list-style-type: none"> <li>- Outgoing sect comd meets incoming sect pers and leads them, by pairs, to their locs</li> <li>- Soldiers exchange places; outgoing sect on stand-to</li> <li>- Avoid detection; crawl if req</li> <li>- Incoming sect pers stay clear of outgoing pers kit</li> <li>- Once all in place, outgoing and incoming sect comd move to each trench and brief all troops on:                             <ul style="list-style-type: none"> <li>- Arcs of fire</li> <li>- important details of the def</li> <li>- range cards</li> <li>- loc of flanking trenches</li> <li>- loc of sect comd's trench and rtes</li> </ul> </li> </ul>

9. **Relief in Place Orders**, see TAM 109.08

10. **Passage Of Line**

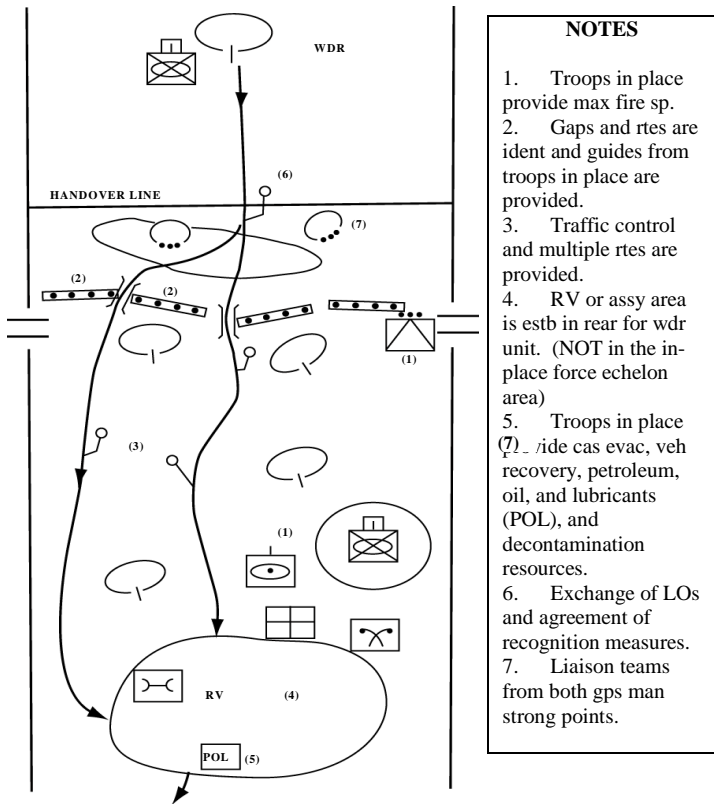
<b>PLATOON COMMANDER</b>	
Battle Procedure	<ul style="list-style-type: none"><li>- Estb contact with the local force and recce:</li><li>- rte</li><li>- point of contact</li><li>- assy areas</li><li>- obs and breaches</li><li>- atk posn</li><li>- LD</li><li>- loc of command posts (pl and coy)</li><li>- cas evac</li><li>- OP and ptls</li><li>- Coord:</li><li>- admin sp and responsibilities</li><li>- marking of rtes, LD, atk posn, etc.</li><li>- provision of guides</li><li>- fire sp and areas of responsibility</li><li>- C2 responsibilities</li><li>- Provide liaison officer (LO), if applicable</li><li>- Liase with in loc LOs at demolition grounds</li><li>- Give Wng O</li></ul>



## NOTES

1. Assy area loc at rear of in place troops. All rtes reserved.
2. Admin sp from in place unit to include:
  - a. refuelling;
  - b. cas evac;
  - c. pw assistance; and
  - d. veh recovery.
3. Share admin areas.
4. Traffic con provided by unit in place and marking of:
  - a. rtes;
  - b. atk posn; and
  - c. LD.
5. Close to in place unit for protection.
6. Ptls and OPs under command of atk unit.
7. Exact time or condition when forward area becomes responsibility of atk force.
8. Tactical sp from in place force:
  - a. direct/indirect fire sp;
  - b. obsn eqpt;
  - c. secur of LD; and
  - d. obs breaching.

**FIGURE 8-10 LAYOUT FOR FORWARD PASSAGE OF LINES**



- NOTES**
1. Troops in place provide max fire sp.
  2. Gaps and rtes are ident and guides from troops in place are provided.
  3. Traffic control and multiple rtes are provided.
  4. RV or assy area is estb in rear for wdr unit. (NOT in the in-place force echelon area)
  5. Troops in place (7) provide cas evac, veh recovery, petroleum, oil, and lubricants (POL), and decontamination resources.
  6. Exchange of LOs and agreement of recognition measures.
  7. Liaison teams from both gps man strong points.

**FIGURE 8-11 LAYOUT FOR REARWARD PASSAGE OF LINES**

## 807.07 - OPERATIONS IN SPECIFIC ENVIRONMENTS

### 1. Fighting in Built-up Areas

General Fighting In Built-up Areas (FIBUA)	Eqpt	<ul style="list-style-type: none"><li>- Webbing stripped down to allow easy mov</li><li>- Rucksacks used for carriage of ammo and eqpt</li><li>- Other special eqpt:</li><li>- ladders</li><li>- grappling hooks and sash cords</li><li>- wire cutters and gloves</li><li>- sledge hammers</li><li>- collapsible stretchers</li><li>- first aid kits</li><li>- flashlights</li><li>- field telephones with wire</li><li>- extra ammo (tracer rounds, grenades, etc.)</li><li>- extra water</li><li>- extra field dressings</li><li>- rope and carabiners</li><li>- flags (green, red, yellow, and blue)</li><li>- chem light (red, green, yellow, and blue)</li><li>- prepared mouse hole charges</li></ul>
	Command and Control	<ul style="list-style-type: none"><li>- All radios on coy net</li><li>- Sect comds giving SITREPs</li><li>- Use of remote antennas in dense urban areas</li><li>- Use of land line</li></ul>

		<ul style="list-style-type: none"> <li>- Use of linkman on entry points for comms and as a guide for comds and follow-on forces</li> <li>- Coloured arm bands for comds and 2ICs: <ul style="list-style-type: none"> <li>- Green - sect comds</li> <li>- amber - comds above sect level</li> <li>- blue - dmin pts and pers such as CSM, pl 2ICs</li> </ul> </li> <li>- During the atk: <ul style="list-style-type: none"> <li>- first bldg secure becomes coy RV pt and aid post</li> <li>- CSM and coy 2IC remain to the rear with coy aid post</li> <li>- pl comd of reserve pl forward with coy comd</li> </ul> </li> <li>- Forward passage of lines: <ul style="list-style-type: none"> <li>- incoming pl moves via marked entry pts, directed by the in place pl 2IC</li> <li>- met by pl comd, who will brief and launch the lead sect</li> <li>- Coy vehicle allocated to CSM for resupply and cas evac</li> </ul> </li> </ul>
Control	Coord	<ul style="list-style-type: none"> <li>- Marking: <ul style="list-style-type: none"> <li>- entry pts marked with coloured panels/lts (green)</li> <li>- cas marked at night with glow stick (yellow)</li> <li>- cleared rooms marked with chalk/white mine tape in a standard loc</li> <li>- gaps in wire obs marked with tape or lts</li> <li>- cleared bldgs and progress during atk shown by coloured tape or flags (green)</li> <li>- forward line of own troops (FLOT) marked with red flag</li> </ul> </li> </ul>

Considerations	Simple Plan	<ul style="list-style-type: none"> <li>- Maint a firm base</li> <li>- Short bounds and limited objs</li> </ul>
	Coord	<ul style="list-style-type: none"> <li>- Boundary report lines</li> <li>- Rapid consolidation after each obj</li> <li>- Alternate means of control, comms</li> </ul>
	Thoroughness	<ul style="list-style-type: none"> <li>- Meticulous clearance</li> <li>- Prevent en from re-infiltrating</li> </ul>
	Mov Momentum and Max Covering Fire	<ul style="list-style-type: none"> <li>- Leap frogging of aslt elms</li> <li>- Rapid consolidation and passage of lines</li> <li>- Reserves well forward</li> <li>- Rapid resupply</li> </ul>
	Incendiarism and Devastation	<ul style="list-style-type: none"> <li>- Threat of fire, especially for defender</li> <li>- Careful selection of bldg types for def</li> <li>- Fire fighting capabilities</li> <li>- Rubble will restrict mov</li> </ul>
	Restricted Fields of Fire	<ul style="list-style-type: none"> <li>- Well constructed bunkers for fire posns</li> <li>- Wpns sited well back from openings</li> <li>- Secondary posns req</li> <li>- Def and harassing fire</li> </ul>
	Booby Traps	<ul style="list-style-type: none"> <li>- Engineer/pioneer (pnr) sp well forward</li> <li>- Located at strong points, shelter areas, avenues of approach</li> </ul>
	Civilians	<ul style="list-style-type: none"> <li>- Need for target discrimination</li> <li>- Sources of info, reserves, and manpower</li> <li>- Treat humanely</li> </ul>

Service Support	Logistics	<ul style="list-style-type: none"> <li>- Ammo-quantity, breakdown</li> <li>- Specific eqpt</li> <li>- Stockpiles in strong points</li> <li>- Resupply plan</li> </ul>
	Medical	<ul style="list-style-type: none"> <li>- Coy collection point</li> <li>- Evac plan</li> <li>- Extra pers for cas evac</li> </ul>
	Eqpt Sp	<ul style="list-style-type: none"> <li>- Received forward</li> <li>- Eqpt collection pt in a secure loc</li> </ul>
	Other	<ul style="list-style-type: none"> <li>- Liaison with civ authority</li> <li>- Civilian police (CIVPOL) in for refugees</li> </ul>

2. **Fighting In Built-up Areas**, see TAM 102.04

3. **Fighting In Built-up Areas – The Attack**

Isolation	Forces estb around a built-up area (BUA), on key areas and vantage pts	<ul style="list-style-type: none"> <li>- Sp break-in pt and forces</li> <li>- Prevent reinforcement of BUA by en</li> <li>- Cause attrition and en to wdr from BUA</li> <li>- All elms under one comd</li> </ul>
Break-in	Seize a foothold in BUA	<ul style="list-style-type: none"> <li>- Consider deception plan</li> <li>- Max fire sp to suppress en</li> <li>- Usually aslt on a narrow frontage</li> </ul>
	Seize immediate obj	<ul style="list-style-type: none"> <li>- Sect – first one or two rooms, possess first floor</li> <li>- Pl – first floor or bldg</li> </ul>



Fighting Through	Clearances: clearing the en from assigned areas based on secure objs from break-in point	<ul style="list-style-type: none"> <li>- Bring in reserve sect to consolidate</li> <li>- Short bounds</li> <li>- Emphasis on momentum</li> <li>- Clearance tasks sect/pl level</li> <li>- Meticulous searches</li> <li>- Control measures – sectors, boundaries, report lines, and numbering of buildings</li> <li>- Measures to prevent re-infiltration</li> </ul>
	Consolidation/ re-org: brief consolidation after each limited obj and after main obj has been secured	<ul style="list-style-type: none"> <li>- Prep for C atk</li> <li>- Prep to sp other atks</li> <li>- PW</li> <li>- Cas evac using safe rte</li> <li>- Resupply ammo well forward</li> <li>- Evac of civilians</li> </ul>
Sect/Pl Org	Aslt sects: two sects assaulting the BUA	<ul style="list-style-type: none"> <li>- Create the initial break-in</li> <li>- Secure initial obj</li> <li>- Estb a firm base for the pl to expand upon</li> <li>- Prep to sp the continuation of the aslt or other atks</li> </ul>
	Covering and Cut-Off Sects: Pl weapons detachment with 2IC	<ul style="list-style-type: none"> <li>- Fire sp to aslt sect</li> <li>- Suppress en posn around break-in pt</li> <li>- Cut-off reinforcement or withdrawal</li> <li>- Prep to re-join pl to consolidate and sp continuation of the atk</li> </ul>
	Reserve sect	<ul style="list-style-type: none"> <li>- Prep to assume the lead aslt</li> <li>- Called fwd ASAP for pl consolidation on initial obj</li> </ul>

Sect Org	Covering Gp: sect LMG and sect 2IC	<ul style="list-style-type: none"> <li>- 2IC may carry second LMG</li> <li>- Fire sp to aslt gp</li> <li>- Suppress en posn immed above and around entry pt</li> <li>- Cut-off reinforcement or withdrawal</li> <li>- Prep to re-join sect to consolidate and sp continuation of the aslt</li> </ul>
	Aslt Gp: 2x2 pers aslt tm	<ul style="list-style-type: none"> <li>- 1x aslt tm grenades entry pt and enters building</li> </ul>
	Command Gp: sect comd linkman	<ul style="list-style-type: none"> <li>- Comd gp then enters followed up by 2<sup>nd</sup> aslt tm</li> <li>- Inside, aslt teams clear rooms and corridors under control of sect comd</li> <li>- Secure immediate obj for pl</li> <li>- Linkman marks entry pt, maintains contact with pl comd, acts as a guide</li> </ul>

4. **House Clearing Orders**, see TAM 110.04

5. **Fighting In Built-up Area – The Defence**

General	Eqpt	<ul style="list-style-type: none"> <li>- Def stores list for coy:</li> <li>- sandbags                    18,000</li> <li>- concertina wire        75 rolls</li> <li>- barbed wire                40 rolls</li> <li>- bailing wire                6 coils</li> <li>- pickets 6 ft                250 ea</li> <li>- pickets 3 ft                150 ea</li> <li>- hessian                      100 m</li> </ul>
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		<ul style="list-style-type: none"> <li>- chicken wire 100 m</li> <li>- wheel barrows 12</li> <li>- crowbars 12</li> <li>- hammers 12</li> <li>- rope 150 m</li> <li>- ladders 4</li> <li>- axes 6</li> <li>- chainsaws 4</li> <li>- fire extinguishers 20</li> <li>- mouse hole charges 15</li> <li>- 1 lb demo charges 10</li> <li>- Eqpt for propping of buildings must be ordered.</li> </ul>
Perimeter Posts	Posns on perimeter of built-up area	<ul style="list-style-type: none"> <li>- Gives warning and info on en strength, intentions, and main effort</li> <li>- Destroys en recce and investment forces</li> <li>- Destroys en aslt forces in assy areas and forming up places</li> <li>- Covers obs</li> <li>- Forces en to deploy and atk</li> <li>- One comd (likely armoured)</li> <li>- Wdr once en depl to def localities or to form part of the res forces</li> <li>- Wdr should be planned in detail and rehearsed</li> </ul>
	Disruption/Delaying force	<ul style="list-style-type: none"> <li>- Causes en attrition</li> <li>- Delays, confuses, disrupts en</li> <li>- Channels en into killing zones (KZs)</li> </ul>

	Covers gaps between def localities and fwd perimeter posts	<ul style="list-style-type: none"> <li>– Disguises the def layout</li> <li>– Employs “hit and run” tactics as en attempts to estb foothold</li> <li>– Small inf tms conduct ambushes and tk hunting ptls</li> <li>– Consider use of snipers/armour/mor fire controllers (MFCs)</li> </ul>
Strong Points and Def Localities	Strong Points  Occupied by sects and pls Well prep Logistically self-sufficient	<ul style="list-style-type: none"> <li>– Based on 2 or 3 bldgs</li> <li>– Sited in depth, with mutually supporting fire posns</li> </ul>
	Def Localities  At least coy strength All arms involved Local reserves	<ul style="list-style-type: none"> <li>– Based on 2 or 3 strong points</li> <li>– Sited in depth and mutually supporting</li> <li>– All round def so that penetration between strong points should be impossible</li> </ul>
Central Reserve	Mobile Reserve  Located in depth Conducts C-atsks and recaptures overrun localities Destroys en penetration between localities May reinforce fwd posns as nec	<ul style="list-style-type: none"> <li>– Pre-planned options, rtes, fire posns and rehearsals</li> <li>– Maintain depl rtes</li> <li>– Trigger for commitment of reserves</li> </ul>

Def Prep Selection of Strong Points	Tactical Requirements	<ul style="list-style-type: none"> <li>- Size</li> <li>- Construction – sturdy, limited fire hazard</li> <li>- Surroundings: <ul style="list-style-type: none"> <li>- fields of fire</li> <li>- dominating features/buildings</li> </ul> </li> <li>- en and friendly force approaches</li> <li>- outside areas</li> </ul>
	Tactical Factors	<ul style="list-style-type: none"> <li>- Depl troops (tps) in fire tms</li> <li>- Cover all approaches with obsn and fire</li> <li>- Seal off unused approaches</li> <li>- Avoid concentrating or overstretching tps</li> <li>- Posns sited in depth and mutually supporting</li> <li>- Covered rtes for resupply, reinforcement and wdr</li> </ul>
Prep of Strong Points	Civilians Utilities	<ul style="list-style-type: none"> <li>- Gas and electricity turned off</li> <li>- Water left on and all containers filled</li> <li>- Wet house defs to reduce fires</li> <li>- Use of hospitals and gas stations</li> <li>- Use of civilian communications</li> </ul>
	External Defences	<ul style="list-style-type: none"> <li>- Arcs of fire assigned</li> <li>- Construct fire posns and cam</li> <li>- Clear fields of fire</li> <li>- Ensure mutual sp</li> <li>- Demolish outer bldgs</li> <li>- Obs to prevent en approaching walls</li> <li>- Mines/Claymores on likely approaches to houses</li> </ul>

		<ul style="list-style-type: none"> <li>- Remove climbing additions of houses</li> <li>- Obs to block vehicles approaches</li> <li>- Clear windows of glass and cover with mesh wire or boards if not in use</li> <li>- Entry pts not in use to be blocked</li> <li>- Streets not in use to be blocked</li> <li>- Block sewer entries</li> <li>- Slit trenches outside</li> <li>- Trenches outside for firing SRAAWs with covered wdr rtes to bldg</li> <li>- Dummy posns if time permits</li> </ul>
	Internal Defences	<ul style="list-style-type: none"> <li>- Construct sandbag walls around fire posns and build a bunker</li> <li>- Water to dampen sandbags to reduce wpn signature and prevent fires</li> <li>- Thicken walls and floors with sandbags, especially around fire posns</li> <li>- Shore up ceilings, including the cellar</li> <li>- Mouse holes in walls for comms and mov</li> <li>- Block mouse holes when not needed</li> <li>- Remove or block stairways</li> <li>- Create internal obs by removing floor boards or placing nail boards under windows</li> <li>- Darken rooms</li> </ul>

		<ul style="list-style-type: none"> <li>- Use cellars for protection during shelling and for storage of food, water, ammo</li> <li>- Gren holes between floors</li> <li>- Sandbag floors</li> <li>- Fire precautions</li> <li>- store water and fire fighting eqpt,</li> <li>- remove combustible mat</li> </ul>
	Other Considerations	<ul style="list-style-type: none"> <li>- Unoccupied houses: <ul style="list-style-type: none"> <li>- block entrances</li> <li>- booby trap rooms or bldg</li> </ul> </li> <li>- Siting of wpns: <ul style="list-style-type: none"> <li>- well back from openings</li> <li>- priority in siting is protection of wpn</li> <li>- good fields of fire through secondary and alternate posns</li> </ul> </li> <li>- Loopholes: <ul style="list-style-type: none"> <li>- cam</li> <li>- create false loopholes to make detection difficult</li> <li>- cone shaped with narrow side on outside of wall</li> <li>- use on internal walls to fire between rooms</li> </ul> </li> </ul>

## 6. Fighting in Wooded Areas

General	Command and Control	<ul style="list-style-type: none"> <li>- Use of remote antennas in dense wooded and undulating areas</li> <li>- Use of land lines</li> <li>- Use observers at key pts/junctions for visual comm, as a guide to track plan, for follow-on forces</li> </ul>
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		<ul style="list-style-type: none"> <li>- All radios on coy net</li> <li>- Sect comds giving SITREPs</li> </ul>
Control	Coord	<ul style="list-style-type: none"> <li>- Markings:               <ul style="list-style-type: none"> <li>- cas marked for easy recognition and retrieval (glow sticks by night)</li> <li>- cleared areas marked in a standard method</li> <li>- gaps in wire obs marked with tape or lts</li> <li>- marry-up points indicated</li> <li>- booby traps and mines marked with coloured tape or flags</li> <li>- FLOT marked with a flag on a pole</li> </ul> </li> </ul>
Considerations	Simple Plan	<ul style="list-style-type: none"> <li>- Maintain a firm base</li> <li>- Short bounds and limited objs</li> </ul>
	Coord	<ul style="list-style-type: none"> <li>- Boundaries, report lines</li> <li>- Rapid consolidation after each limited obj</li> <li>- Alternate means of control, coord and comms</li> </ul>
	Thoroughness	<ul style="list-style-type: none"> <li>- Meticulous clearance</li> <li>- Prevent en from re-infiltrating</li> </ul>
	Mov/Momentum and Max Covering Fire	<ul style="list-style-type: none"> <li>- Leap frogging of aslt elms</li> <li>- Rapid consolidation and passage of lines</li> <li>- Reserves well forward</li> <li>- Rapid resupply</li> </ul>

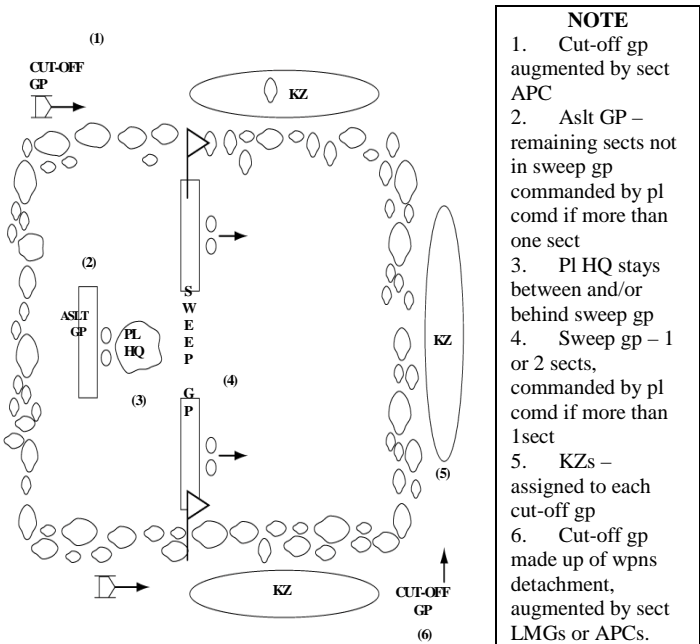


	Incendiarism and Devastation	<ul style="list-style-type: none"> <li>- Threat of fire, especially for defender</li> <li>- Fire fighting capabilities</li> <li>- Thick brush, fallen trees will restrict mov</li> </ul>
	Restricted Fields of Fire and Obsn	<ul style="list-style-type: none"> <li>- Wpns sited well back from openings</li> <li>- Secondary posns req</li> </ul>
	Booby Traps	<ul style="list-style-type: none"> <li>- Engineers/pnrs sp well forward with local protection</li> <li>- Located at strong points, shelter areas, avenues of approach</li> </ul>
Service Support	Logistics	<ul style="list-style-type: none"> <li>- Ammo – quantity, breakdown</li> <li>- Specific eqpt</li> <li>- Stockpiles if possible</li> <li>- Resupply plan</li> </ul>
	Medical	<ul style="list-style-type: none"> <li>- Coy collection point</li> <li>- Evac plan</li> <li>- Extra pers for cas evac</li> </ul>
	Eqpt Sp	<ul style="list-style-type: none"> <li>- Receive forward</li> <li>- Eqpt collection pt in a secure area</li> </ul>
	Other	<ul style="list-style-type: none"> <li>- Liaison with civ authority</li> <li>- CIVPOL present for refugees</li> </ul>

## 7. Fighting In Wooded Areas – The Attack

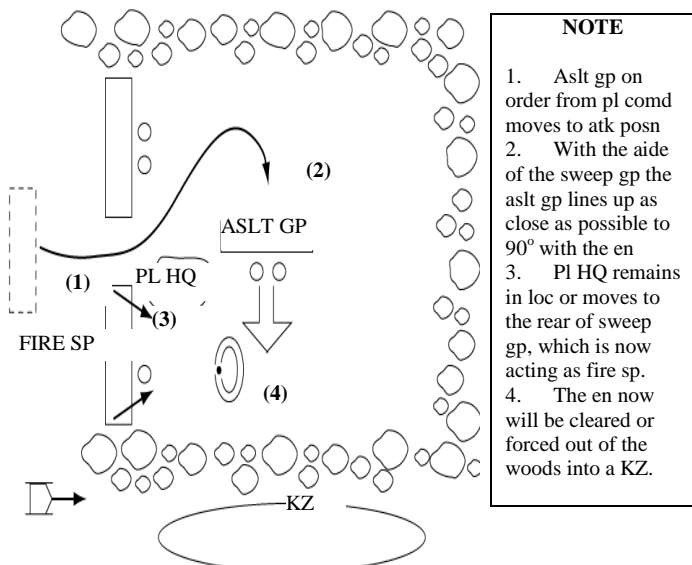
Planning	Speed	<ul style="list-style-type: none"> <li>- Rehearse drills</li> <li>- Include all possible en moves</li> </ul>
	Thoroughness	<ul style="list-style-type: none"> <li>- If woods cannot be cleared in one sweep, plans must be made to prevent en from entering cleared areas</li> </ul>
	Direction	<ul style="list-style-type: none"> <li>- Soldiers should see pers left and right of them</li> </ul>

		<ul style="list-style-type: none"> <li>- Atk down hill</li> <li>- Allow en to wdr along his rte</li> </ul>
	KZ	<ul style="list-style-type: none"> <li>- En should be forced into KZ</li> <li>- Friendly forces should not have to enter the KZ</li> </ul>
Organization	Cut-Off Gp	<ul style="list-style-type: none"> <li>- MGs, LAV, APC, and A armour</li> </ul>
	Sweep Gp	<ul style="list-style-type: none"> <li>- One or two sects</li> </ul>
	Aslt Gp	<ul style="list-style-type: none"> <li>- Remainder of atk force, including specialists</li> </ul>



- NOTE**
1. Cut-off gp augmented by sect APC
  2. Aslt GP – remaining sects not in sweep gp commanded by pl comd if more than one sect
  3. PI HQ stays between and/or behind sweep gp
  4. Sweep gp – 1 or 2 sects, commanded by pl comd if more than 1 sect
  5. KZs – assigned to each cut-off gp
  6. Cut-off gp made up of wpns detachment, augmented by sect LMGs or APCs.

**FIGURE 8-12 TYPICAL WOODS CLEARING DEPLOYMENT**



**FIGURE 8-13 PL ASSAULT DURING A WOODS CLEARING OPERATION**

### 8. Section Orders for Woods Clearing

1. SITUATION		
EN FORCES	FRIENDLY FORCES	ATTACHMENTS/DETACHMENTS
Strengths Loc Weapons Eqpt Morale Obs DFs Air Threat NBC Likely Intentions	Coy comd's intent Pl msn Pl concept of ops Locs and further actions of neighbouring forces that may affect this op Outline fire sp plan	Only if not covered under task org

**2. MISSION.** Sect msn from EXECUTION para of pl comd's orders

**3. EXECUTION.**

Concept of Ops: How will sect achieve its msn?

Gen outline

Taskings: Given to subordinates in turn:

- (1) Sweep gp
- (2) Aslt gp: LMGs and 2IC
- (3) Cut-off times and weapons

**Coord Instrs:** (Include variations from normal SOPs)

Timings:	Mov: To assy area To atk posn To LD To entry pt	Clearing of wood:  Sig to aslt Sig all clear	Clearance of wood:  Sweep times Aslt times Secur Sect obj's
Wood clear:  Signal to cut-off gp Consolidation plan Arcs Tasks for linkman	Obs:  Locs Responsibility Marking gap	Action on:  Cas PWs	P Info/Media:
<b>Summary:</b> if req			

<b>4. SERVICE SUPPORT</b>			
<b>SOP VARIATIONS</b>	<b>SVC SP</b>	<b>MED</b>	<b>TPT/REC</b>
Dress Eqpt Wpns Veh loading	Replen plan Ammo Rations Water POL  NBC Batteries	Locs of Coy Aid Post Carrying parties Cas evac plan Med packs Stretchers Morphine	Loc of ech Rec plan
<b>5. COMMAND AND SIGNALS</b>			
<b>HQs</b>	<b>PASSWORDS</b>	<b>RAD</b>	
Loc of pl Comd Loc of pl 2IC Altn comd	Recognition signals Passwords	Freqs Code words Nicknames	
<b>6. QUESTIONS?</b>			

**9. Fighting In Wooded Areas – The Defence**

Selection of Strong Points	Ops	<ul style="list-style-type: none"> <li>– Sited fwd of wood</li> <li>– Indirect fire observers</li> <li>– Surroundings:               <ul style="list-style-type: none"> <li>– fields of fire/obsn</li> <li>– dominating features</li> <li>– en and friendly force approaches</li> <li>– outside areas</li> </ul> </li> </ul>
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	Obs	<ul style="list-style-type: none"> <li>- Block rtes; channel en:</li> <li>- fields of fire/obsn</li> <li>- en and friendly force approaches</li> <li>- tk hunting tms</li> </ul>
	Ambushes	<ul style="list-style-type: none"> <li>- Placed between fwd edge of wood and main def posn; ideally pl strength</li> <li>- Cover all approaches with obsn and fire</li> <li>- Seal off unused approaches</li> <li>- Use extraction parties</li> <li>- Wdr rehearsed</li> </ul>
Prep	Main Posns	<ul style="list-style-type: none"> <li>- Arcs of fire assigned</li> <li>- Construct fire posns and cam</li> <li>- Clear fields of fire</li> <li>- Ensure mutual sp</li> </ul>
	C2	<ul style="list-style-type: none"> <li>- Coord rte use</li> <li>- Detailed knowledge of rtes</li> <li>- Alternate means of comms</li> </ul>
	Recce	<ul style="list-style-type: none"> <li>- All rtes reced</li> <li>- Ambush sited in defilade</li> <li>- Ops fwd of main posn</li> </ul>

## 807.08 - PATROLLING

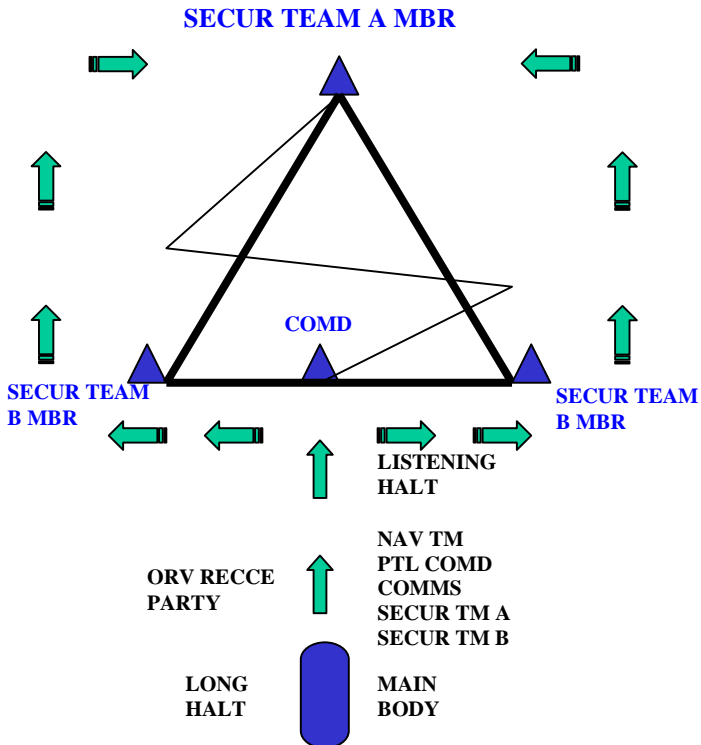
### 1. Fighting Patrol

<b>Purpose</b>	<ul style="list-style-type: none"> <li>- Inflict damage on the en</li> <li>- Provide secur to the unit</li> <li>- Estab and/or maintain contact with friendly and en forces</li> <li>- Deny vital ground to the en</li> </ul>
<b>Msns</b>	<ul style="list-style-type: none"> <li>- <b>Raid</b> – to destroy or capture pers or eqpt, destroy installations, liberate pers</li> <li>- <b>Secur</b> – to detect and defeat en infiltration, protect against surprise and ambush</li> </ul>

	<ul style="list-style-type: none"> <li>– <b>Estb and Maintain Contact</b> – both within friendly or en lines</li> <li>– <b>Ambush</b> – against en ptls, carrying parties, foot columns, vehicle convoys</li> <li>– <b>Provide Protection</b> – escort of technical specialists on specific msns</li> <li>– <b>Destroy Vehicles/Eqpt</b> – destroy en tks, APCs and self-propelled guns in def posns or leaguers</li> </ul>
<b>Org</b>	<ul style="list-style-type: none"> <li>– <b>Ptl HQ</b> – Ptl comd, ptl 2IC, communicator, nav tm, MFC or FOO</li> <li>– <b>Secur Elm</b></li> <li>– Secur Tm A – point and scouts</li> <li>– Secur Tm B – left flank secur</li> <li>– Secur Tm C – right flank secur</li> <li>– Secur Tm D – rear secur</li> <li>– <b>Aslt Elm</b> – Sect comd, communicator, wire cutting tm /pers, searchers/ search tm, demolition tm(s) and cas and PW tm(s)</li> <li>– <b>Sp Elm</b> – Sect comd, communicator, MG tm, anti-tk tm</li> </ul>
<b>18 Steps For Ptl Planning</b>	<ul style="list-style-type: none"> <li>– 1. Receive Wng O</li> <li>– 2. Make an initial map recce</li> <li>– 3. Make an initial time estimate</li> <li>– 4. Issue initial Wng O</li> <li>– 5. Receive orders</li> <li>– 6. Make a detailed map recce</li> <li>– 7. Make a detailed time estimate</li> <li>– 8. Make a preliminary plan–ptl org, general rtes, selection of pers and eqpt</li> <li>– 9. Issue detailed Wng O</li> <li>– 10. Coord</li> <li>– 11. Make a recce plan</li> <li>– 12. Conduct recce</li> <li>– 13. Complete the estimate, the plan and write orders</li> </ul>

	<ul style="list-style-type: none"> <li>- 14. Issue ptl orders</li> <li>- 15. Supervise prep</li> <li>- 16. Conduct rehearsals and inspections</li> <li>- 17. Ensure forced rest</li> <li>- 18. Conduct final briefings and inspections</li> </ul>
<b>Prep by 2IC</b>	<ul style="list-style-type: none"> <li>- Notifies all pers of the msn and Wng O details</li> <li>- Ensures tasks detailed in Wng O are completed</li> <li>- Coord loc and time of O Gp</li> <li>- Draws special eqpt</li> <li>- Draw and issue ammo</li> <li>- Draw and issue rations and arrange for additional feeding</li> <li>- Maintenance, testing and checking of wpns and eqpt</li> <li>- Initial inspections of eqpt</li> <li>- Standard rehearsals of estb SOPs</li> </ul>
<b>Occupation of an ORV</b>	<ul style="list-style-type: none"> <li>- The Objective Rendez-vous Point (ORV) is a RV near the obj, which the ptl occupies prior to carrying out its actions at the obj. Its occupation must be carefully conducted because it is near the obj and en</li> </ul>



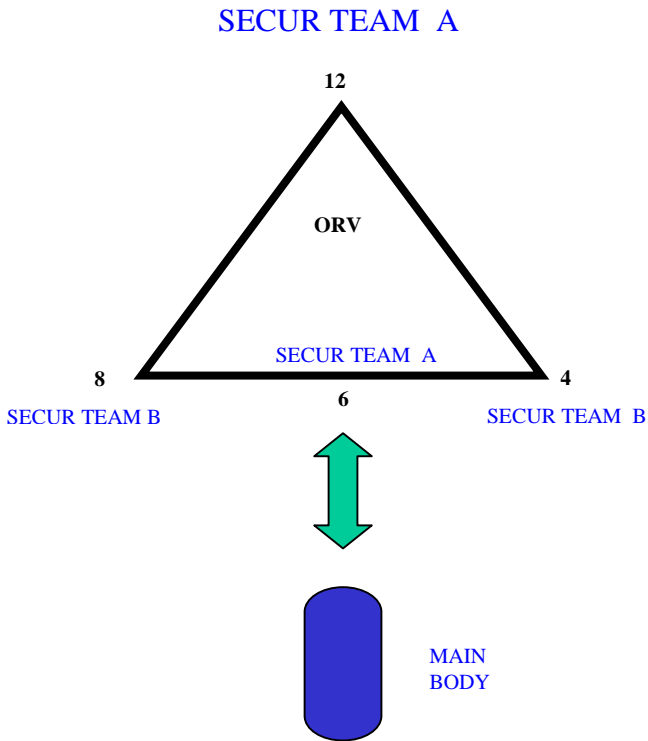


**Notes:**

After the secur halt, the ptl comd moves forward to recce the tentative ORV with the Nav Tm, Secur Tm A, Secur Tm B and communicator.

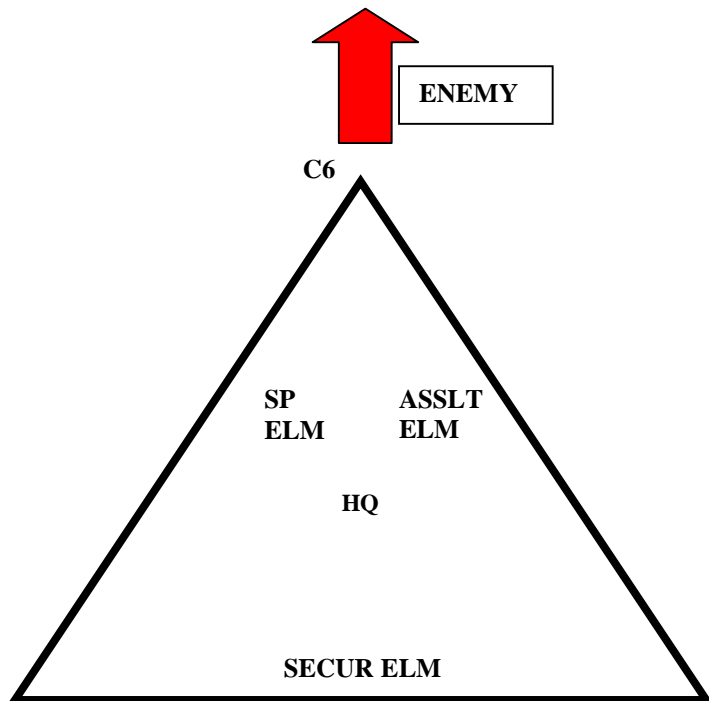
They perform a listening halt and sweep the ORV site. One member from Secur Tm A and one from Secur Tm B each go left or right. Secur Tm B mans the 8 and 4 o'clock posns (bottom corners). Secur Tm A completes the box search, meet at 12 o'clock posns and then mans the 12 and 6 o'clock posns.

**FIGURE 8-14 STAGE 1 AND 2 OF ORV OCCUPATION**



**Note:**  
Ptl comd, communicator and Nav Tm return to the main body, brief the ptl and move ptl to the ORV. The ptl halts just short of the ORV while ptl comd moves forward to confirm that nothing has changed with the ORV.

**FIGURE 8-15 STAGE 3 OF ORV OCCUPATION**



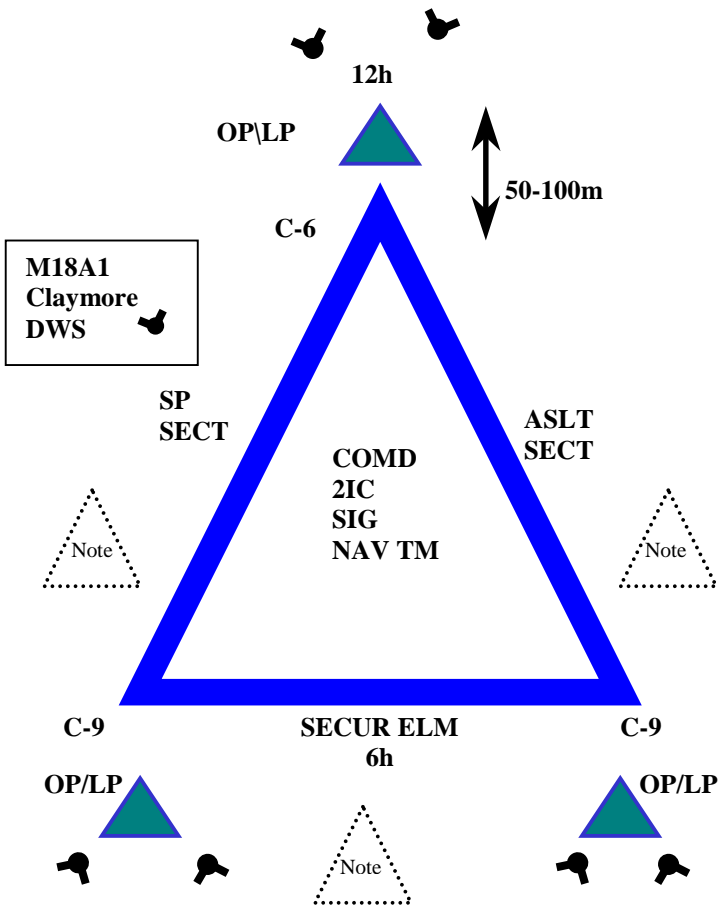
**Note:**

The ptl moves into the ORV, with sp elm manning the 8 to 12 o'clock posn (left), aslt elm manning the 4 to 12 o'clock posn (right) and secur teams manning the base of the triangle. Note: if the aslt elm is not large enough to cover entire area, a secur tm may be tasked to assist.

**FIGURE 8-16 FINAL STAGE OF ORV OCCUPATION**

<p><b>Ptl Base</b> – A ptl base should be estb when there exists:</p> <ul style="list-style-type: none"> <li>- a requirement to cease all mov during daylight hours to avoid detection</li> <li>- a need to rest and reorganize after extended mov</li> <li>- a requirement for reorganization after a ptl has infiltrated the en in small gaps</li> <li>- a requirement to provide a base of ops from which further ptls can be launched</li> </ul>	
<p><b>Passive Secur Measures</b></p>	<ul style="list-style-type: none"> <li>- <b>Select:</b></li> <li>- terrain with little tactical value</li> <li>- terrain that would impede foot mov (i.e., steep terrain, ravines)</li> <li>- areas offering dense vegetation</li> <li>- remote from human habitation</li> <li>- area close to a water source</li> <li>- terrain suitable for radio communication</li> <li>- <b>Avoid:</b></li> <li>- en posns, known or suspected</li> <li>- built-up areas</li> <li>- prominent features, topographical crests, ridgelines, lakes and streams, valleys</li> <li>- roads and trails</li> <li>- lines of drift (area the en may tend to move through)</li> <li>- open woods and clearings</li> </ul>
<p><b>Active Secur Measures</b></p>	<ul style="list-style-type: none"> <li>- estb an OP/LP system covering all likely en approaches</li> <li>- estb comms with OP/LP for early warning</li> <li>- develop a plan for wdr in the event of discovery</li> <li>- select an alternate ptl base for occupation</li> <li>- estb an alert plan with a certain percentage of pers awake at all times</li> <li>- use the chain of command to enforce strict light, noise and cam discipline</li> <li>- organize ptl elms so nec activities occur with min mov</li> </ul>

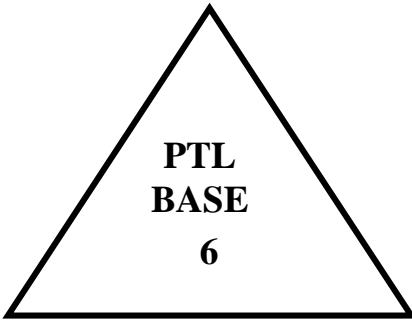
<b>Routine in Ptl Base</b>	<ul style="list-style-type: none"> <li>- upon occupation all ptl members stand-to</li> <li>- clearing ptls clear the perimeter and sect comds report clear to the ptl comd</li> <li>- Sect comd deploy OPs/LPs as detailed by the ptl comd</li> <li>- Sect comd report OPs/LPs posted</li> <li>- Ptl comd orders stand-down</li> <li>- estb track plan</li> <li>- eating and rest</li> <li>- cleaning of wpns on rotation</li> <li>- resupply parties</li> <li>- prior to last light wdr OPs/LPs and stand-to</li> <li>- conduct clearing ptls</li> <li>- stand-down after last light</li> <li>- night routine of three sentry posns (one per sect) manned all night, each with C9/C6 and doubled staggered piquets</li> <li>- prior to last light stand-to, clearing ptls, post OPs/LPs, stand-down</li> </ul>
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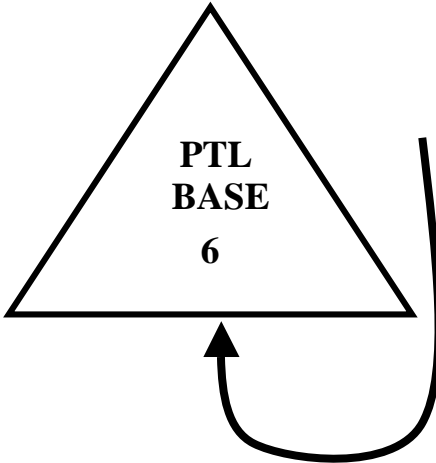
**Note:**  
 OPs do not always have to be positioned at the cardinal points on the triangle. They can also be located at the 6 o'clock, 10 o'clock, and 2 o'clock posns. Their loc will largely depend on the terrain the ptl is operating in.

**FIGURE 8-17 SUGGESTED LAYOUT FOR TRIANGULAR PATROL BASE**

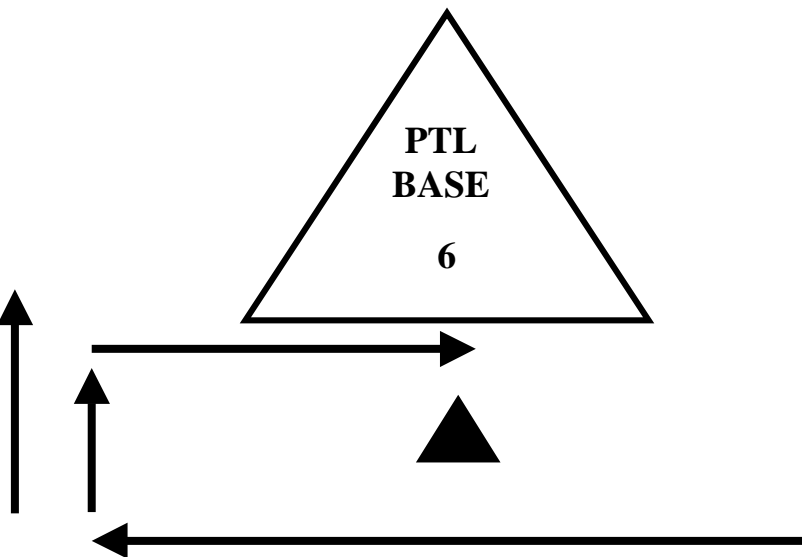
**Ptl Base Occupation Deception Methods** – when occupying the ptl base, the fol methods can be used to conceal the loc of the ptl base and deceive en trackers/scouts



**FIGURE 8-18 DOG LEG METHOD (STANDARD OCCUPATION)**



**FIGURE 8-19 FISH HOOK METHOD**



**FIGURE 8-20 BOX METHOD**

<p><b>Tips for Patrolling</b></p>	<ul style="list-style-type: none"> <li>- Be alert for en signs, e.g., heavy track pattern, timber cutting, smell and unoccupied sentry posts</li> <li>- The en will be looking for your signs, so hide them</li> <li>- When near villages, be particularly alert for dogs as they may give you away</li> <li>- When estb a night loc/ptl base, break track and double back to observe if there is any en following-up</li> <li>- On ptl in close country at night stop, look and listen at frequent intervals</li> <li>- If contact appears imminent, use bounds; always have one gp on the ground and in posn to provide covering fire</li> <li>- When advancing silently, record possible mor and arty targets en rte</li> </ul>
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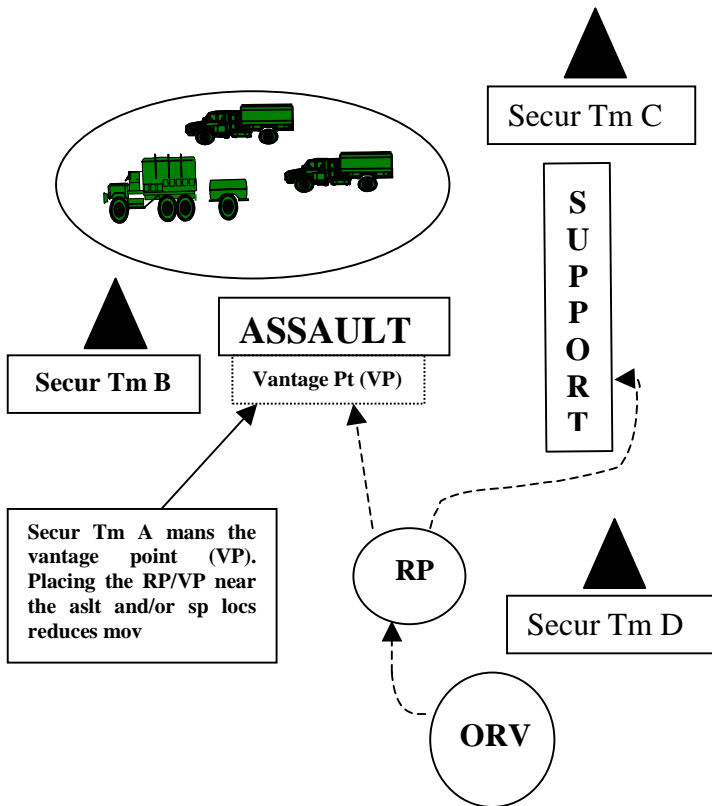


	<ul style="list-style-type: none"> <li>- When searching for the en, remember he needs water; search rivers, creeks and water holes for en signs</li> </ul>
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## 2. Raid

<b>Purpose</b>	<ul style="list-style-type: none"> <li>- A Raid is an atk that includes a planned wdr from the obj. It is normally deliberate in nature but can be hasty</li> <li>- A Raid can be conducted to destroy or capture en pers or eqpt, rescue friendly pers, gain intelligence or to gain the initiative</li> </ul>
<b>Considerations for planning</b>	<ul style="list-style-type: none"> <li>- There is always a planned wdr from the obj. The plan should include a signal to wdr, well planned rtes to a release point (RP) or ORV, elms to cover the wdr and assist in breaking contact, and a way to evac cas, PWs and captured eqpt from the obj</li> <li>- The raiding unit must be large enough to provide for secur elms to isolate the obj from reinforcement or wdr. Secur elms are the first to be in place and the last to wdr</li> <li>- Raids are normally conducted by pl to bn size units organized as a fighting ptl</li> </ul>

<b>Tasks of Elms</b>	<ul style="list-style-type: none"> <li>- <b>Secur Elms: A, B, C, D</b></li> <li>- secur of the obj</li> <li>- early warning</li> <li>- prevent en escaping from or reinforcing the obj</li> <li>- protect aslt and sp elms during the wdr</li> <li>- <b>Aslt Elm:</b></li> <li>- consists of demolition tm (two pers), search tm (two pers), specialist teams, and aid and litter tm.</li> <li>- tasked with aslt, control and destruction of the obj</li> <li>- extraction of cas from the obj back to the ORV</li> <li>- search the obj</li> <li>- control and backload PWs</li> <li>- protection of specialist elms</li> <li>- <b>Sp Elm:</b></li> <li>- this elm is organized according to the msn and must have the proper fire power and wpns to perform its assigned tasks</li> <li>- neutralise/destroy en on obj</li> <li>- stop/switch fire on order of ptl comd</li> <li>- protection of the aslt elm</li> <li>- sp the wdr of the aslt elm if req</li> <li>- sp wpns should be positioned close enough to the obj to mass accurate fire on it. If no suitable posns for sp wpns, consider placing them with the aslt elm</li> </ul>
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**Note:**

The sequence of events for both raids and ambushes are similar, with the layouts of pers and the "action during the aslt" being, in most cases, msn specific. Plans should be kept as simple as possible to avoid confusion. It is also important to note that because of the violence of action a raid or ambush will produce, friendly pers must be kept well out of the KZ. The danger area of wpns and the effects of their detonation must always be considered when siting pers.

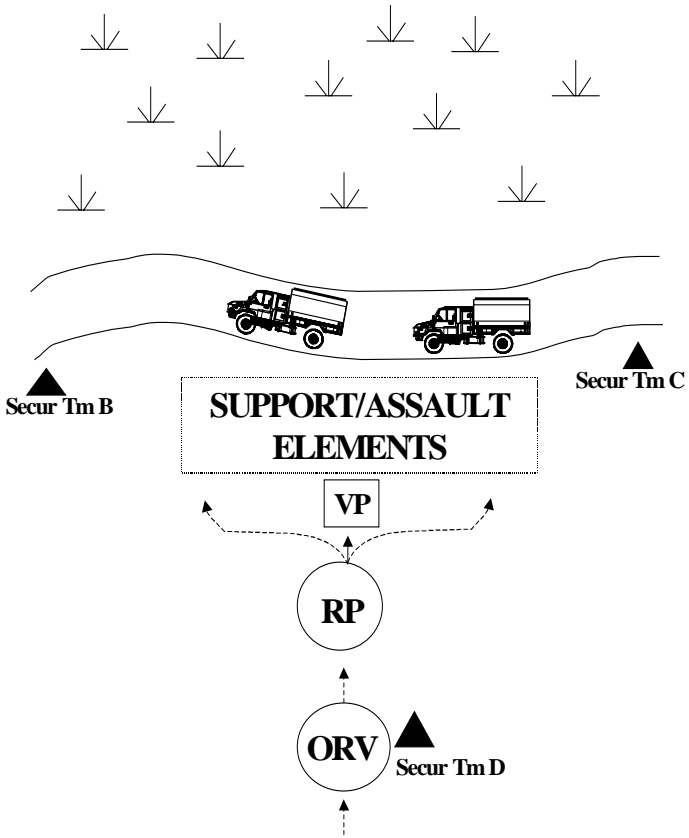
**FIGURE 8-21 BASIC RAID LAYOUT**

### 3. Ambush

<b>Types</b>	<ul style="list-style-type: none"><li>- <b>Immediate:</b><ul style="list-style-type: none"><li>- set with a min of planning in order to engage in imminent en action</li><li>- may be a def technique by a ptl</li><li>- success depends on comd's initiative, prior rehearsals of proven drills, tm work, silent signals, good battle discipline, swift and silent mov, fire control</li></ul></li><li>- <b>Deliberate:</b><ul style="list-style-type: none"><li>- planned and executed as a separate op</li><li>- ptl has time to plan, prep and rehearse in detail</li><li>- size of ambushing force may vary from a small four pers ambush to a major op involving an inf bn</li></ul></li></ul>
<b>General</b>	<ul style="list-style-type: none"><li>- Usually a brief encounter and does not reqr the capture and holding of ground</li><li>- May be sprung in front of and behind the en forward edge of the battle area</li><li>- A series of successful ambushes will make the en apprehensive and cautious in his movs</li></ul>
<b>Immediate Ambush Drill</b>	<ul style="list-style-type: none"><li>- The decision to ambush may depend on the orders given to the ptl comd. The fol sequence can be applied when orders permit ambushing:<ol style="list-style-type: none"><li>1. Lead elm indicates en approaching</li><li>2. Ptl comd gives signal for immediate ambush</li><li>3. Leading elms adopt hasty fire posns, with concealment as a primary concern</li><li>4. Rear elms have more time to select good fire posns</li><li>5. Signal to open fire is given by the ptl comd</li><li>6. Search and clear en, if time permits</li></ol></li></ul>

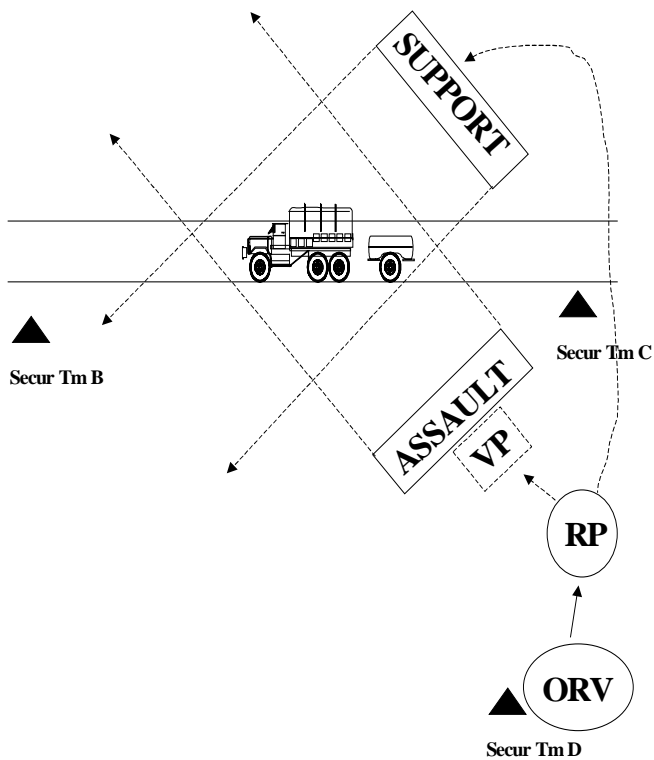
<b>Planning Factors for Deliberate Ambush</b>	<ul style="list-style-type: none"> <li>- <b>Surprise:</b> Achieved by: <ul style="list-style-type: none"> <li>- selection of unlikely ambush sites</li> <li>- avoiding set patterns in layout and techniques used in ambushing</li> <li>- attention to secur</li> <li>- taking advantage of darkness and poor weather</li> </ul> </li> <li>- <b>En:</b> Consider: <ul style="list-style-type: none"> <li>- en likely method of mov</li> <li>- known en counter-ambush techniques</li> <li>- size of en work parties, ration parties and similar detachments</li> <li>- en system of escort, e.g., when escorting supplies or convoys</li> </ul> </li> <li>- <b>Friendly Forces:</b> <ul style="list-style-type: none"> <li>- the ambush must be coord with other friendly forces near the ambush site</li> </ul> </li> <li>- <b>Ground:</b> Select: <ul style="list-style-type: none"> <li>- covered lines of approach</li> <li>- cover from view within the ambush site</li> <li>- suitable loc for OPs</li> <li>- likely en escape rtes</li> <li>- effective fields of fire</li> <li>- obs both natural and artificial</li> <li>- suitable base/admin area in case of prolonged ambush</li> </ul> </li> <li>- <b>Time and Space:</b> Consider: <ul style="list-style-type: none"> <li>- distance to be covered</li> <li>- method of transportation</li> <li>- rte selection</li> <li>- requirement for a ptl base</li> </ul> </li> <li>- <b>Admin:</b> Consider: <ul style="list-style-type: none"> <li>- rations and water</li> <li>- cas evac</li> <li>- resupply and relief</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>- <b>Eqpt:</b> Consider:</li> <li>- communication eqpt</li> <li>- weapons</li> <li>- command detonated devices, explosives</li> <li>- wire, gun stakes</li> <li>- vehicles</li> <li>- intrusion and early warning devices</li> <li>- night obsn devices and illumination means</li> <li>- dress and personal eqpt</li> <li>- <b>Assessment of Tasks:</b> Consider:</li> <li>- ptl organization and numbers req</li> <li>- command and control</li> <li>- secur and cut-off</li> <li>- aslt</li> <li>- fire support</li> </ul>
<b>Ambush Layouts</b>	<ul style="list-style-type: none"> <li>- There are numerous variations in which an ambush can be laid. The two linking principles are:</li> <li>- 1. All possible approaches must be covered</li> <li>- 2. The ambush must have depth</li> </ul>



**Straight Line Ambush-** In this layout the aslt and sup elms are parallel to the long axis of the KZ and subject the obj to heavy flanking fire. A disadvantage, is that the lateral dispersion of the target may be too great for full coverage. Secur Tm A mans the VP

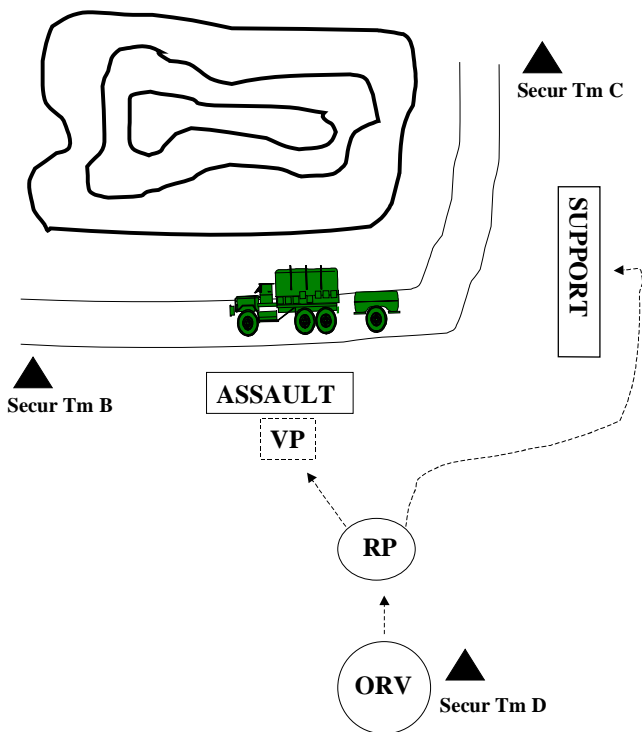
**FIGURE 8-22 STRAIGHT LINE AMBUSH**



**V Shaped Ambush-** In this layout the sup and aslt elms deploy on either side of the KZ, forming a V with the KZ in the middle. Care is taken to ensure neither gp (within the "V") fires into the other. Secur tms must be under cover. This ambush best suits open terrain but can be applied anywhere if the terrain and situation permit. Secur Tm A mans the VP.

**FIGURE 8-23 V-SHAPED AMBUSH**





**L Shaped Ambush-** In this layout the aslt and secur elms are positioned in a similar fashion to a basic raid. Secur tms must be under cover. The VP is manned by Secur Tm A.

**FIGURE 8-24 L-SHAPED AMBUSH**

<b>Tips for Ambushing</b>	<ul style="list-style-type: none"> <li>- Keep it simple</li> <li>- Prep eqpt to be used prior to departure</li> <li>- Consider the use of IR glowsticks to ident replenishment point and ORV</li> <li>- Upon returning to the ORV make sure ammo is redistributed</li> <li>- Use a running password when returning to the RV and ORV</li> <li>- Plan a primary rte which allows the ptl to enter the ambush site from the rear, in line with the ORV</li> <li>- Avoid obvious ambush sites and vary your pattern</li> <li>- Prep/rehearse the ptl to aslt through the obj. If you must search the obj do it quickly but thoroughly</li> <li>- Ensure an alternate open fire signal is available should the primary fail</li> <li>- Shoot low, particularly where obsn is limited in close country at night. Do not overlook the value of tracer rounds and fixing bayonets to keep the barrel down</li> <li>- Cover dead ground in the KZ with grenades, claymores and indirect fire wpns</li> <li>- Consider/select ground that makes it difficult for an en to aslt you from a flank</li> <li>- Consider the use of natural obs (e.g., dead fall or slippery rocks) to provide early warning.</li> <li>- Consider the use of silent adjustment of arty and mors to cover your wdr, if req</li> <li>- Cut gun stakes in a secure area and use sandbags to muffle the noise of banging them into the ground</li> <li>- Use claymore or anti-tk wpns rather than rifle or MG fire to initiate ambush</li> </ul>
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	<ul style="list-style-type: none"> <li>- Have your trip flare set to ignite when a claymore fires</li> <li>- Drag the en out of the KZ when searching them</li> <li>- Consider a second initiation shortly after the first if mov is detected in the KZ</li> <li>- Use a camera or take fingerprints to later ident dead en</li> <li>- On wdr, fire a claymore from the VP back into the ambush site to stop any possible en follow-up</li> </ul>
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## 807.09 - PLATOON WEAPONS

### 1. C6 General Purpose Machine-gun (Sure-Fire)

<b>CHARACTERISTICS</b>		
Range	<ul style="list-style-type: none"> <li>- Max (eff): Bipod 800 m</li> <li>- Sustained Fire 1800 m</li> <li>- Tracer burnout 1200 m</li> </ul>	
Method of Fire	<ul style="list-style-type: none"> <li>- Indirect</li> <li>- Direct</li> </ul>	
Types of Tgt	<ul style="list-style-type: none"> <li>- Traversing (wider than deep)</li> <li>- Point</li> </ul>	
Rate of Fire	<ul style="list-style-type: none"> <li>- Normal</li> <li>- Rapid</li> <li>- Cyclic</li> </ul>	<ul style="list-style-type: none"> <li>- 50 rds/min</li> <li>- 100 rds/min</li> <li>- 650-1000 rds/min</li> </ul>
Burst Length	<ul style="list-style-type: none"> <li>- Short</li> <li>- Long</li> </ul>	<ul style="list-style-type: none"> <li>- 3-5 rds</li> <li>- 8-10 rds</li> </ul>
Role	Primary	<ul style="list-style-type: none"> <li>- Direct area neutralizing fire</li> </ul>
	Secondary	<ul style="list-style-type: none"> <li>- Pt fire against soft targets</li> <li>- Anti aircraft fire</li> <li>- Speculative fire</li> <li>- Indirect area neutralizing fire</li> </ul>

Portability	- Man packed by two pers crew; three pers over long distances		
	- Wt	Gun	10.9 kg
		Barrel	2.8 kg
		Tripod	13.6 kg
		220 rds belt	5.4 kg

### PRINCIPLES OF EMPLOYMENT

Mutual Sp	One gun able to sp another gun's field of fire
Coord	Coord at all levels
Interlocking Arcs	Prevent gaps in KZ
Sited in Pairs	Two or more guns cover same targets, KZ
Sited in Defilade	Provide protection from en Direct fire and obsn
Sited to Produce Enfilade	Match long, narrow pattern of beaten zone over target. Usually achieved by siting to the flank of axis of adv
Protection and Concealment	Sited in defilade, with good trench construction
Economy	Match weapon and ammo type to target

### TACTICAL EMPLOYMENT (TASKS)

Atk	During the approach	<ul style="list-style-type: none"> <li>- Flank protection en rte</li> <li>- Securing of atk posns</li> <li>- Part of a deception plan</li> <li>- Direct/indirect fire on en possible locs/OPs</li> </ul>
	Aslt	<ul style="list-style-type: none"> <li>- Neutralize en posn up to last safe moment</li> <li>- Suppress en depth posns/sp wpns</li> <li>- Engage C atk or wdr rtes</li> </ul>

		<ul style="list-style-type: none"> <li>- Act as/as part of the cut-off gp</li> <li>- React to opportunity tgts</li> </ul>
	Consolidation	<ul style="list-style-type: none"> <li>- Engage en wdr rte</li> <li>- Flank protection</li> <li>- Depth targets</li> </ul>
Def	Main task	<ul style="list-style-type: none"> <li>- Provide FPF and mutual sp between coy/pl posn</li> </ul>
	Secondary tasks	<ul style="list-style-type: none"> <li>- Cover likely debussing pt</li> <li>- Cover en atk posn</li> <li>- Cover likely en approach</li> <li>- Cover obs/ mine fields</li> <li>- Cover hel landing zone (LZ)/drop zone (DZ)</li> <li>- En fire sp gp</li> </ul>
Transitional Ops	Adv to contact	<ul style="list-style-type: none"> <li>- Offer fire sp over difficult ground</li> <li>- Flank protection</li> <li>- Quick atk tasks as per atk</li> </ul>
	Wdr/delaying ops	<ul style="list-style-type: none"> <li>- Cover mov of friendly forces to and from posns</li> <li>- Used in res dml gd on home bank to cover hel LZ/DZ</li> </ul>
Machine-Gun Targets	Atk	<ul style="list-style-type: none"> <li>- En posns:</li> <li>- on obj</li> <li>- on flanks</li> <li>- in depth</li> <li>- Provide fire on possible en C atk rtes</li> </ul>

Def	<ul style="list-style-type: none"> <li>- Likely atk posn/forward atk posn</li> <li>- Obs</li> <li>- Handover lines (especially in dml gd tasks)</li> <li>- Inf and soft skin veh rtes</li> <li>- Likely en OP posns</li> <li>- Armd KZ</li> </ul>
Wdr	<ul style="list-style-type: none"> <li>- Infiltration rtes</li> <li>- Choke pts</li> <li>- En atk posns</li> <li>- Covering fire for troops/standing ptls</li> <li>- Harassing fire on en posns</li> <li>- Deception plan</li> </ul>
Adv	<ul style="list-style-type: none"> <li>- Likely en ambush loc</li> <li>- Flank protection</li> <li>- Covering flanks of defiles</li> <li>- Edges of open areas in FIBUA</li> </ul>

<b>DUTIES OF GUN CONTROL</b>
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CLOSE	<ul style="list-style-type: none"> <li>- Con fire onto whole target</li> <li>- Linkman to sect/pl</li> <li>- Observe and adjust fire</li> <li>- Select lines of adv and fire posn</li> <li>- Emergency action of fire</li> </ul>
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### INDIRECT FIRE

Site/Gun/ Tripod	<ul style="list-style-type: none"> <li>- Select tgt at 500 m; use laser range finder, if available, or estimation</li> <li>- Tgt should be at same height as gun with no crosswind</li> <li>- Centralize the cross-level bubble</li> <li>- Adjust onto target by fire as accurately as possible</li> <li>- Centralize the elevation bubble using the elevation fine-scale knob</li> <li>- Locate and undo the three screws in the face of the elevation fine scale. Set the indice to the tangent elevation for the rge you are at. For a tgt at 500 m, the setting is 0804 mils.; for a tgt at 1450 m, tangent elevation of 0832 mils. Tighten the screws</li> <li>- Undo the bearing scale clamp lever. Turn the telescope until the hairline in the centre bisects the centre of the tgt</li> <li>- Loosen the three screws in the face of the bearing fine scale knob and adjust all indices to 0</li> <li>- The sight should now be in adjustment with gun and adjustment</li> <li>- <b>Should be done only once</b></li> </ul>
Orientation of C2 Sight	<ul style="list-style-type: none"> <li>- It is nec to set the bearing scales on the sight to correspond with the grid bearing along which the barrel is pointing. To do this use the aiming lamp and post to do the fol:             <ul style="list-style-type: none"> <li>- Take a bearing through the barrel of the gun with a compass</li> <li>- If using a prismatic compass, convert this bearing into a grid bearing and make adjustment for compass error, if nec</li> </ul> </li> <li>- Turn the telescope on the sight until the vertical line bisects the centre of the aiming lamp</li> </ul>

	<ul style="list-style-type: none"> <li>- Undo the fine scale locking clamp, butterfly nut and unscrew the three screws; slip the scale rings to read the bearing to tgt by setting the fine scale numbers against the <b>INNER INDICE</b>; tighten the three screws, lock the butterfly nut and rotate the fine scale knob <b>BACK TO ZERO</b>. Undo the coarse scale locking screw, set the coarse scale ring against the <b>LOWER INDICE</b>, lock the coarse scale ring and rotate the fine scale knob back onto the fine bearing number</li> <li>- Do up the bearing clamp levers</li> <li>- Record the reading from the coarse upper bearing scale indice and the fine outer bearing scale indice. The sight must have all indices aligned to take the recorded bearing; <b>MARK AS A RECORDED BEARING</b></li> <li>- When taking a bearing with a compass, ensure you move 10 m away to counter the magnetic attraction. The cross level bubble and the elevation bubble of the sight should be central in their housing throughout the procedure (ideally, the MG should be sited on as level ground as possible)</li> </ul>
Laying onto Map Info	<ul style="list-style-type: none"> <li>- Using a protractor, find the grid bearing from the gun to the tgt and apply it to the C2</li> <li>- Sight</li> <li>- Obtain gun-to-target rge from the map</li> <li>- Using the rge table, find the elevation for that rge</li> <li>- Apply rge and nec corrections for the height difference to the sight</li> <li>- Lay gun onto the aiming post and level bubbles (as per normal drill)</li> <li>- Fire</li> </ul>



Scale Slippage	<ul style="list-style-type: none"> <li>- While firing, if bearing scale slips, adjust as fol:</li> <li>- apply recorded bearing to coarse upper and fine outer bearing scale</li> <li>- apply current bearing</li> <li>- relay onto aiming post</li> </ul>
Adjustment If observer	<ul style="list-style-type: none"> <li>- Plot on the map, the gun loc, the bearing from gun to tgt, the tgt loc, the back bearing (received from observer) from tgt to observer</li> <li>- When the observer sends adjustment, refer to the line drawn from tgt to observer and plot loc of strike</li> <li>- Work out adjustments and give the appropriate order/adjustment</li> </ul>

## 2. M203, 84 mm Carl Gustav, 60 mm Mortar

	<b>M203</b>	<b>84mm CG</b>	<b>60mm Mortar</b>
Range	<ul style="list-style-type: none"> <li>- Max 400 m</li> <li>- Max effective 350 m</li> <li>- Optimum 150 m</li> </ul>	<ul style="list-style-type: none"> <li>- Max 700 m</li> <li>- Static tgt 500 m</li> <li>- Moving tgt 400 m</li> </ul>	<ul style="list-style-type: none"> <li>- Max:</li> <li>- Hand held: 800 m</li> <li>- Bipod/baseplate 2816 m</li> </ul>
Method of Fire			<ul style="list-style-type: none"> <li>- Direct: hand held</li> <li>- Indirect: with bipod/baseplate, C2 sight</li> <li>- Fired by lever or drop fired</li> </ul>

Safety Distance	<ul style="list-style-type: none"> <li>- Peacetime 130 m</li> <li>- Wartime (cbt) 31 m</li> </ul>		<ul style="list-style-type: none"> <li>- Not yet known</li> </ul>
Killing Radius	<ul style="list-style-type: none"> <li>- 5 m</li> </ul>		
Rate of Fire	<ul style="list-style-type: none"> <li>- Max 5-7 rds/min</li> </ul>	<ul style="list-style-type: none"> <li>- 5 rds/min</li> </ul>	<ul style="list-style-type: none"> <li>- Normal 8 rds/min</li> <li>- Rapid 12 rds/min</li> <li>- Max 30 rds/min</li> </ul>
Ammo	<ul style="list-style-type: none"> <li>- Cbt ld: 36 (6 bandoleers of 6 rds)</li> <li>- Types: HEDP, TP</li> </ul>	<ul style="list-style-type: none"> <li>- HEAT RAP FFV 551</li> <li>- HEDP FFV 502 (bunker buster with instantaneous or delay fuse)</li> <li>- Range: <ul style="list-style-type: none"> <li>- Moving tgt: 300 m</li> <li>- Fortification: 500 m</li> </ul> </li> <li>- Trps in the open: 1000 m</li> </ul>	
Accuracy		<ul style="list-style-type: none"> <li>- Scope sight (FFV 556): 900 m</li> <li>- Iron sight: <ul style="list-style-type: none"> <li>- Stationary- 500 m</li> <li>- moving- 400 m</li> </ul> </li> </ul>	

Backblast Area		– 30 m at an angle of 800 mils	
Penetration		– HEAT RAP FFV 551: 400 mm – HEDP FFV 502: 150 mm	
Portability	– Wpn – Ammo (cvt ld)	– 16.35 kg, carried by one man	– 1 or 2 pers crew – Barrel: 7.7 kg (hand held role) – Baseplate M5: 5.8 kg – Bipod: 7.4 kg – C2 Sight (C2A1): 1.2 kg

### 3. ERYX

CHARACTERISTICS		
Range (moving and stationary)	– Min – Max	– 50 m – 600 m
Vulnerability	– SACLOS guidance system – 4.3 sec to max rge	
Rate of Fire	– 4 rds/min	
Portability	– Firing post: 5 kg – Tripod: 4.5 kg – Thermal imager: 3.5 kg – Missile: 13.3 kg – Two pers tm	

Backblast	<ul style="list-style-type: none"> <li>- Danger area: 7m to the rear at 30 degrees</li> <li>- Can be fired from enclosed spaces</li> </ul>
Op Conditions	<ul style="list-style-type: none"> <li>- Op guaranteed between -31C and +51C ambient temp</li> <li>- Storage between -41C and +71C</li> </ul>

**PRINCIPLES OF EMPLOYMENT**

Primary role of ERYX	<ul style="list-style-type: none"> <li>- Def A armour fire against main battle tanks (MBTs)</li> </ul>	
Fundamentals	<ul style="list-style-type: none"> <li>- Depth</li> </ul>	<ul style="list-style-type: none"> <li>- Slows en atk</li> <li>- Front to rear, flank to flank</li> <li>- Consider alternate and secondary posns/arcs</li> </ul>
	<ul style="list-style-type: none"> <li>- Mutual sp</li> </ul>	<ul style="list-style-type: none"> <li>- Due to slow rate of fire</li> <li>- Nec when in defilade</li> </ul>
	<ul style="list-style-type: none"> <li>- Secur</li> </ul>	<ul style="list-style-type: none"> <li>- All around def</li> </ul>
	<ul style="list-style-type: none"> <li>- Integration of weapons</li> </ul>	<ul style="list-style-type: none"> <li>- Integrate ERYX with other wpns such as Carl Gustav, TOW, mines, 25 mm cannon</li> </ul>
	<ul style="list-style-type: none"> <li>- Concentration</li> </ul>	<ul style="list-style-type: none"> <li>- A armour def cannot be strong everywhere at all times</li> <li>- Plan must allow for concentration of killing power at the right place at the right time</li> </ul>
Siting Considerations	<ul style="list-style-type: none"> <li>- Enfilade</li> </ul>	<ul style="list-style-type: none"> <li>- Fire on flanks of en where armd is thinner</li> <li>- Reduces chance of detection and neutralization</li> </ul>

	– Defilade	– Site behind hills, crests and on reverse slopes – Grd protects from obsn and fire
	– Range of weapon	– Site to remove en rge advantage – Reverse slopes
	– Site wpns in pairs	– More than one wpn can fire into the same sector
	– Coord	– Siting ERYX responsibility of coy/cbt tm comd – Coord with other supporting plans
Fire Control	– Delegate auth to open fire as low as possible – Engage as rapidly as possible – Keep fire con measures simple	

<b>EMPLOYMENT</b>		
Def Ops	– Covering tk approaches	
	– Covering obs or protective minefields	
	– Flank protection	
	– Covering gaps and grd not covered by longer rge wpns	
	– Local blocking and destroying penetrations	
	– Def of isolated posns and OPs	
	– Flank protection for a covering force	– Not suitable unless terrain is close

Off Ops	<ul style="list-style-type: none"> <li>- Destruction of armd veh while clearing defiles or obs and fighting through objs, particularly when grd or obs preclude intimate sp by tks</li> </ul>	<ul style="list-style-type: none"> <li>- Dismounted by depth tp only</li> <li>- Bunkerbusting and destroying en armd vehs encountered on posn</li> </ul>
	<ul style="list-style-type: none"> <li>- Spin breaching ops</li> </ul>	
	<ul style="list-style-type: none"> <li>- Providing flank protection</li> </ul>	
	<ul style="list-style-type: none"> <li>- Firebase wpn if rge is suitable</li> <li>- Covering armd approaches during reorg</li> </ul>	
Delaying Ops	<ul style="list-style-type: none"> <li>- Delay</li> </ul>	<ul style="list-style-type: none"> <li>- Not suitable unless terrain is close</li> <li>- Flank protection for delaying force</li> </ul>
	<ul style="list-style-type: none"> <li>- Tk Hunting</li> </ul>	<ul style="list-style-type: none"> <li>- Cover altn en armd approaches</li> <li>- ERYX useful if tks are expected</li> <li>- Ensure wdr of tm is possible</li> </ul>
	<ul style="list-style-type: none"> <li>- Ambushes</li> </ul>	<ul style="list-style-type: none"> <li>- Stop en armd on canalized rtes</li> <li>- ERYX useful if tks are expected</li> </ul>

		<ul style="list-style-type: none"> <li>- Plan for dismounted mov with entire sup of msls and resulting demands on manpower</li> </ul>
Transitional Ops	- Adv	<ul style="list-style-type: none"> <li>- Dismounted adv with ERYX more difficult if more than basic ld is carried</li> </ul>
	- Wdr	<ul style="list-style-type: none"> <li>- Cover abandonment of posn</li> <li>- Covered rtes and tpt close at hand</li> <li>- Sp from intermediate posn</li> <li>- Flank protection</li> <li>- Sp a dml guard</li> </ul>
FIBUA	- Off	<ul style="list-style-type: none"> <li>- Neutralize en strongpoints</li> </ul>
	- Def	<ul style="list-style-type: none"> <li>- Destroy en armd veh</li> <li>- Can be fired from within enclosed spaces</li> </ul>
Airmobile Ops	- ERYX can be transported in hel with no prep	

## 807.10 - COMMUNICATIONS

### 1. Radio Call Signs – Infantry Battalion

<b>BN HQ</b>	
<b>APPOINTMENT/SUB-UNIT</b>	<b>CALL SIGN</b>
CPs	0A, 0B, 0C
A COY REAR LINK	1A, 1B
B COY REAR LINK	2A, 2B
C COY REAR LINK	3A, 3B
D COY REAR LINK	4A, 4B
CBT SP COY REAR LINK	5
MOR PL REAR LINK (FSCC)	50
PNR PL REAR LINK	54
ANTI-ARMD PL REAR LINK	7
RECCE PL REAR LINK	60
ADMIN COY REAR LINK	8
CO	9
DCO	9A
OPS O	9B
FMN COMD	90
FMN AIR COMD	90A
ADJT	91
SIG O	92
SIG SGT	92A
RRBs	92B, 92C, ETC.
INT OFFR	93
INT SECT	93A
LO	94
RSM	95
MP DETs	96, 96A, 96B, ETC.
FAC	97

<b>ADMIN COY</b>	
<b>APPOINTMENT/SUB-UNIT</b>	<b>CALL SIGNS</b>
ADMIN COY REAR LINK	8
QM	81
RATION SECT	82



MED OFFR	83
AMBS	83A-F
MED STORES VEH	83G
TPT OFFR	84
TPT DET, POL	84A
TPT DET, AMMO	84B
A1 ECH	85
B ECH	85B
SPARE CALL SIGNS	87A-N
MAINT PL	88
MOBILE REPAIR TEAM (MRT) WHEELED	88A, 88B, 88C
MRT TRACKED	88D, 88E
REC VEH	88F
OC ADMIN COY	89
CQMS	89D

<b>CBT SP COY</b>	
<b>APPOINTMENT/SUB-UNIT</b>	<b>CALL SIGN</b>
CBT SP COY REAR LINK	5
MOR PL REAR LINK	50
MOR PL 2IC	50A
FC	50B
FC	50C
AMMO VEH	50D
AMMO VEH	50E
1 MOR GP COMD	51
MORS	51A-D
2 MOR GP COMD	52
MORS	52A-D
PNR PL REAR LINK	54
SECTS	54A, 54B, 54C
STORES VEH	54G
ANTI-ARMED PL REAR LINK	7
SECTS and DETS	71, 71A, 71B
	72, 72A, 72B
	73, 73A, 73B
	74, 74A, 74B
OC CBT SP COY	59
CQMS	59D

RECCE PL REAR LINK/PL	60
2IC	61A
OBSN DETS	62A-F
PTL DETS	63A, 63B, 63C, 63D
SNIPER DETS	
OC RECCE PL	69

**807.11 – CANADIAN/GENFORCE WPN CHARACTERISTICS AND CAPABILITIES**

	CANADIAN WPNS			GENFORCE WPNS		
SER	WPN	AMMO TYPES	MAX EFF RANGE (m)	WPN	AMMO TYPES	MAX EFF RANGE (m)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	C7	5.56 mm ball 5.56 mm tracer	300 m	AK 47/ AKM	7.62 X 39 mm ball and tracer	300 m
				AK 74	5.45 X 39 mm ball and tracer	300 m
2	C8	5.56 mm ball 5.56 mm tracer	200 m	AKMS	7.62 X 39 mm ball and tracer	300 m
				AKS 74	5.45 X 39 mm ball and tracer	300 m

	CANADIAN WPNS			GENFORCE WPNS		
SER	WPN	AMMO TYPES	MAX EFF RANGE (m)	WPN	AMMO TYPES	MAX EFF RANGE (m)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
3	C9	5.56 mm ball link (4 balls, 1 tracer)	600 m	RPK	7.62 X 39 mm ball and tracer (mag/belt box)	800 m
				RPK 74	5.45 X 39 mm ball and tracer (mag/belt box)	800 m
4	C6 GPMG	7.62 mm ball link (4 ball, 1 tracer)	800 m light role  1,200 m supporting fire role	PK/PKM	7.62 X 54R ball link	1,000 m
				PKS (tripod)	7.62 X 54R ball link	1,000 m

<b>SER</b>	<b>CANADIAN WPNS</b>			<b>GENFORCE WPNS</b>		
	<b>WPN</b>	<b>AMMO TYPES</b>	<b>MAX EFF RANGE (m)</b>	<b>WPN</b>	<b>AMMO TYPES</b>	<b>MAX EFF RANGE (m)</b>
<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>	<b>(e)</b>	<b>(f)</b>	<b>(g)</b>
5	HMG .50 CAL	12.7 mm ball link (4 ball, 1 tracer)	1,850 m A armour (BTR 70 gen APC)	DShK-38/46	12.7 X 108 mm	1,500-2,000 m
		Armour Piercing, Armour Piercing Tracer Incendiary	800 m Anti pers			
				NSV HMG	12.7 X 107 mm	1,500-2,000 m
6	SRAAW (L) NM72	66 mm HEAT	350 m	RPG 18	64 mm HEAT	200 m
				RPG 22	80 mm HEAT	250 m

	CANADIAN WPNS			GENFORCE WPNS		
SER	WPN	AMMO TYPES	MAX EFF RANGE (m)	WPN	AMMO TYPES	MAX EFF RANGE (m)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
7	SRAAW (M) CARL GUSTAV	84 mm HEAT RAP FFV 551	500 m moving 700 m stationary	RPG-7	85 mm (projectile)	300 m moving 500 m stationary
		HEDP FFV 502 (bunker buster)	300 m moving 500 m hard target 1,000 m unprotected troops	RPG-16	85 mm	500-800 m
8	SRAAW (H) ERYX	136 mm HEAT tandem warhead	50- 600 m	AT-7 SAXHORN	120 mm HEAT	40-1,000 m
				AT-13 Metis	HEAT	40-1,500 m

SER	CANADIAN WPNS			GENFORCE WPNS		
	WPN	AMMO TYPES	MAX EFF RANGE (m)	WPN	AMMO TYPES	MAX EFF RANGE (m)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
9	LRAAW TOW II	2A HEAT	65 - 3750 m	AT-2 SWATTER	HEAT	500-4,000 m
		2B HEAT (tandem warhead)	200 - 3750 m	AT-3 SAGGER	HEAT	500-3,000 m
				AT-4 SPIGOT	HEAT	70-2,500 m
				AT-5 SPANDREL	HEAT (tandem warhead)	100-4,000 m
				AT-6 SPIRAL	HEAT	400-7,000 m
				AT-8 SONGSTER	HEAT	4,000 m
				AT-10 STABBER	HEAT	100-5,000 m
				AT-11 SNIPER	HEAT	5,000 m
AT-12 SHEKSNA	HEAT	100-5,000 m				

	CANADIAN WPNS			GENFORCE WPNS		
SER	WPN	AMMO TYPES	MAX EFF RANGE (m)	WPN	AMMO TYPES	MAX EFF RANGE (m)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
10	L MOR 60mm	HE SMK ILUM	2,800 m bipod 800 hand held	No equivalent	No equivalent	No equivalent
11	MED MOR 81mm	HE PROX (fuse) SMK ILL	4,782 m (ch 6) 4,782 m 4,875 m (ch 4) 5,150 m (ch 6)	No equivalent	No equivalent	No equivalent



**807.12 – RANGE CARDS**

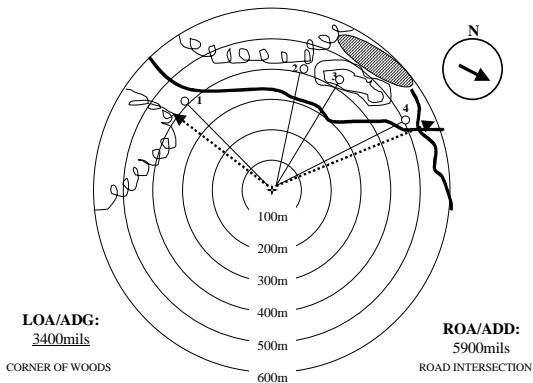
<p>Construction of Range Card</p>	<ul style="list-style-type: none"> <li>- May be prep using full 6400 mil circle or 3200 mil half circle</li> <li>- Only include reference points that are prominent and easy to ident</li> <li>- Range cards must not fall into en hands and will be removed when vacating the posn</li> </ul>
<p>Preparing Your Range Card</p>	<ul style="list-style-type: none"> <li>- Include the fol info:             <ul style="list-style-type: none"> <li>- primary and secondary arcs of fire, as assigned by your sect comd, indicated as dotted lines</li> <li>- prominent reference points, including a short description and the range to each</li> <li>- loc of adjoining trenches to prevent posns from accidentally firing on one another and to ensure all arcs of fire are interlocking</li> <li>- all likely target locs within your designated arcs will be marked. This is done by:                 <ul style="list-style-type: none"> <li>- estimating the distance to each object</li> <li>- drawing a small circle around the target object in the corresponding place on the range card</li> <li>- drawing a straight line from the object to your posn</li> </ul> </li> <li>- posn from which card was made</li> <li>- method of obtaining range (map, halving, judgement by eye)</li> </ul> </li> </ul>

- who made out the range card
- indicate north mark in the grid north to allow pl level range card orientation
- indicate the exact date and time the card was prep

**NOTE**

- Prominent objects further than 500 m are not included and it is important that the card be very neat and clearly illustrated to ensure that anyone can read it

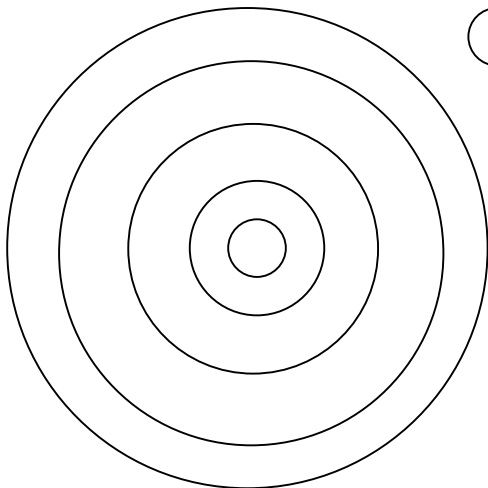
### RANGE CARD/CROQUIS DE REPERAGE



<b>LOCATION:</b> GR 4543 5684		<b>DATE:</b> 161430Z JUN99		
<b>METHOD/MÉTHODE:</b> MAP/LRF				
<b>MADE BY/RÉDIGÉ PAR:</b> CPL JOHNSON				
NO	GRID COORD	BEARING AZIMUT	DISTANCE	REMARKS REMARQUES
1	451 559	3600MILS	400M	ROAD EXITS WOODS
2	450 569	4600MILS	400M	BURNT OUT TANK
3	451 571	4800MILS	450M	CREST OF HILL
4	452 573	5700MILS	525M	HOUSE

LEGEND/LÉGENDE			
	DEAD GROUND		
	ROAD		
	HILL		
	TREES		

**FIGURE 8-25 RANGE CARD**

**MG RANGE CARD**

POINT MADE OUT FROM \_\_\_\_\_  
 METHOD OF OBTAINING RANGE \_\_\_\_\_  
 MADE OUT BY \_\_\_\_\_  
 SETTING RAY \_\_\_\_\_  
 DATE \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TGT INFO SHEET									
TGT No.	Rge	Elev	Bearing	Rate of Fire	TIME		Grid	Remarks	
					Fr.	To			
Loc Gr _____		Gun No. _____		Sect _____	Pl _____	Coy _____			
Date _____				Signature _____					

**FIGURE 8-26 MG RANGE CARD**

<b>GUN POSN</b>	<b>TGT POSN</b>	<b>RGE</b>	<b>HEIGHT CORR</b>	<b>TANGET ELEV</b>	<b>NEW TE</b>	<b>BEARING WIND</b>	<b>NEW BEARING</b>	<b>ELEV MILS</b>	<b>CALC LIFT</b>

**FIGURE 8-27 INDIRECT FIRE – CALCULATION TABLE**

Rge	Tangent Elevation	Lifts for 50m	Line correction for 16 kph wind, when wind direct in relation to tgt line using clock dial method is			No. of elevations req'd			Dimensions of horizontal beaten zone		Time of flt	Mils correction for a height differential of 10m are:
			3 or 9	2, 4, 8 or 10	1, 5, 7 or 11	Map	Rge Finder	Estd	Width	Length		
m	Mils	Mils	Mils	Mils	Mils				m	m	Secs	Mils
500	4.0	1.0	2	1	1	1	1	1	1	110	0.8	20.0
550	5.0	1.0	2	2	1	1	1	1	1	105	0.9	--
600	5.5	1.0	2	2	1	1	1	1	1	100	1.0	16.5
650	6.5	1.0	2	2	1	1	1	1	1	95	1.1	--

Rge	Tangent Elevation	Lifts for 50m	Line correction for 16 kph wind, when wind direct in relation to tgt line using clock dial method is			No. of elevations req'd			Dimensions of horizontal beaten zone		Time of flt	Mils correction for a height differential of 10m are:
			3 or 9	2, 4, 8 or 10	1, 5, 7 or 11	Map	Rge Finder	Estd	Width	Length		
m	Mils	Mils	Mils	Mils	Mils				m	m	Secs	Mils
700	7.5	1.0	3	2	1	1	1	3	1	90	1.2	14.0
750	8.5	1.0	3	3	1	1	1	3	2	85	1.4	--
800	9.5	1.0	3	3	2	1	1	3	2	85	1.5	12.5
850	11.0	1.5	3	3	2	1	1	3	2	80	1.6	--
900	12.0	1.5	4	3	2	1	1	3	2	80	1.8	11.0
950	13.5	1.5	4	4	2	1	1	3	2	75	1.9	--
1000	15.0	1.5	4	4	2	1	1	3	2	75	2.1	10.0

Rge	Tangent Elevation	Lifts for 50m	Line correction for 16 kph wind, when wind direct in relation to tgt line using clock dial method is			No. of elevations req'd			Dimensions of horizontal beaten zone		Time of flt	Mils correction for a height differential of 10m are:
			3 or 9	2, 4, 8 or 10	1, 5, 7 or 11	Map	Rge Finder	Estd	Width	Length		
m	Mils	Mils	Mils	Mils	Mils				m	m	Secs	Mils
1050	16.5	1.5	5	4	2	1	1	3	2	70	2.3	--
1100	18.5	1.5	5	4	2	1	1	5	2	70	2.4	9.0
1150	20.0	2.0	5	4	3	1	1	5	2	65	2.6	--
1200	22.0	2.0	5	5	3	3	3	5	3	65	2.8	8.5
1250	23.5	2.0	5	5	3	3	3	5	3	60	3.0	--
1300	25.5	2.0	6	5	3	3	3	5	3	60	3.1	7.5



Rge	Tangent Elevation	Lifts for 50m	Line correction for 16 kph wind, when wind direct in relation to tgt line using clock dial method is			No. of elevations req'd			Dimensions of horizontal beaten zone		Time of flt	Mils correction for a height differential of 10m are:
			3 or 9	2, 4, 8 or 10	1, 5, 7 or 11	Map	Rge Finder	Estd	Width	Length		
m	Mils	Mils	Mils	Mils	Mils				m	m	Secs	Mils
1350	27.5	2.0	6	5	3	3	3	5	3	60	3.3	--
1400	30.0	2.0	6	5	3	3	3	7	3	55	3.5	7.0
1450	32.0	2.0	6	5	3	3	3	7	3	55	3.7	--
1500	34.0	2.5	6	6	3	3	3	7	3	55	3.9	6.5
1550	36.5	2.5	7	6	3	3	3	7	3	55	4.1	--
1600	39.0	2.5	7	6	3	3	5	7	4	50	4.3	6.0

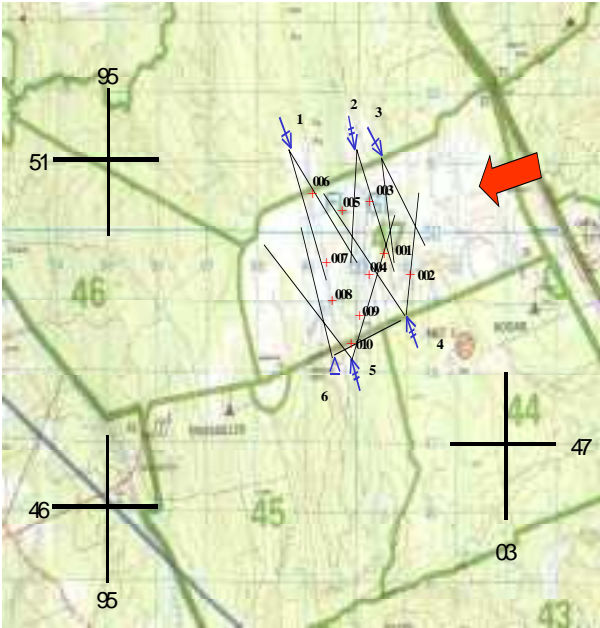
Rge	Tangent Elevation	Lifts for 50m	Line correction for 16 kph wind, when wind direct in relation to tgt line using clock dial method is			No. of elevations req'd			Dimensions of horizontal beaten zone		Time of flt	Mils correction for a height differential of 10m are:
			3 or 9	2, 4, 8 or 10	1, 5, 7 or 11	Map	Rge Finder	Estd	Width	Length		
m	Mils	Mils	Mils	Mils	Mils				m	m	Secs	Mils
1650	41.5	2.5	7	6	4	3	5	7	4	50	4.5	--
1700	44.0	2.5	7	6	4	5	5	7	4	50	4.7	6.0
1750	46.5	2.5	7	6	4	5	5	7	4	50	4.9	--
1800	49.5	3.0	8	7	4	5	5	7	4	50	5.1	5.5

**FIGURE 8 - 28 C2 SIGHT ADJUSTMENT TABLE**

### TARGET NUMBERS

C/S	WPN TYPE	WPN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
11D	C6 GPMG	1					X	X	X	X												
11E	.50 CAL HMG	2	X		X	X	X															
12D	C6 GPMG	3		X	X																	
12E	.50 CAL HMG	4	X	X																		
13D	.50 CAL HMG	5				X			X	X	X	X										
13E	C6 GPMG	6						X	X		X	X										

**FIGURE 8-29 MG MATRIX TARGET NUMBERS**



**FIGURE 8-30 COMPANY MACHINE GUNS FIRE SUPPORT PLAN**