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ME G.S. Pamphlet 331

**NOTES ON THE  
ORGANIZATION AND THE  
TACTICAL HANDLING  
OF  
MEDIUM MACHINE GUNS**

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MILITARY TRAINING PAMPHLET No. 31—1940  
NOTES ON THE ORGANIZATION AND THE TACTICAL  
HANDLING OF MEDIUM MACHINE GUNS

1. Introductory

The information given in this pamphlet is designed to amplify that already given in the training manuals. It clarifies the role of the medium M.G. and lays down the principles of its tactical employment. It is emphasized that the medium M.G. is only one of a number of weapons which will be working in co-operation in attack and defence, and in order to understand its employment the organization and tactical handling of other arms must be fully understood.

The medium M.G. can, if necessary, with the aid of instruments, be fired from indirect fire positions, but firing from such positions must be regarded as the exception. Because some technical training in the use of instruments is necessary for shooting from indirect fire positions, there is a tendency to regard the medium M.G. as a complicated weapon; this tendency must be avoided. The medium M.G. is a simple automatic weapon which is capable of sustained and accurate fire and should be sited to shoot from direct fire positions whenever possible.

2. Organization

1. M.G. battalions are corps troops provided on a scale of one per division. They are fully mechanized, men and weapons being carried in trucks.

2. Each battalion consists of headquarters, headquarter company and four M.G. companies.

3. Battalion headquarters includes the headquarter staff, police and medical section. An intelligence officer is provided, but there is no intelligence section.

On the strength of the headquarter company there are :-

No. 1 Platoon.—Signals.

No. 2 Platoon.—Protection.—This platoon is equipped with four L.M.G.s. for A.A. and ground defence, and four anti-tank rifles; each of the four trucks is provided with a Mathey mounting.

No. 3 Platoon.—Administrative.—Unlike infantry battalions, there is no pioneer platoon, though a small pioneer section is included in the administrative platoon.

3. Each M.G. company contains three platoons, each of two sections of two guns each. For each platoon six 15-cwt. trucks are provided.

The battalion is so organized that by attaching certain personnel from headquarters and the headquarter company, each M.G. company can be made administratively self contained.

4. Each platoon (including the signal and administrative platoon) is equipped with an anti-tank rifle.

5. The battalion transport includes 123 vehicles (exclusive of attached vehicles and motor cycles); the fighting transport of each company consists of 21 vehicles. The handling of this transport is a consideration of major importance in the handling of the battalion.

3. Concealment

1. The stopping power of small arms in defence is almost entirely dependent on the effective concealment of fire positions, and the consequent surprise produced.

The selection of defiladed positions and the use of natural and artificial camouflage will be of primary importance when siting machine guns if they are to attain their maximum effect.

4. Characteristics

1. The medium M.G. is capable of producing a concentrated volume of accurate and sustained fire beyond the effective reach of rifles and L.M.G.s., and yet it presents only a small target when in action. In direct fire the fire unit is the section. In indirect fire the platoon. At ranges in excess of 1,400 yards it will normally be necessary to engage the target with more than one section.

2. Range.—With accurate range-taking, and the correct application of the fire control rules, medium M.Gs. can fire with effect up to 4,500 yards. Medium M.Gs. ranges are defined as follows :-

1. Class, up to 800 yards.—The range up to which, on level ground, the trajectory is sufficiently flat to hit a standing man at all points between gun and target.

ii. *Intermediate, up to 1,400 yards.*

iii. *Long, over 1,400 yards*—At these ranges two sections will generally be necessary to produce effective fire.

(The changed nomenclature from that given in Infantry Training, 1937, sec. 4, 1, should be noted.)

3. *Beaten zone*—Owing to the great length of the beaten zone in proportion to its width, fire is most effective and has the greatest moral effect when delivered *obliquely* or in *enfilade*.

4. *Rate of fire*—Medium M.Gs. use two rates of fire—normal and rapid. At these rates they expend a belt of 250 rounds in two minutes and one minute respectively. A "service burst" is 28 rounds under all conditions, except when firing on fixed lines, or at a moving target, when it is 50.

5. *Ammunition supply*—M.G. ammunition is factory-packed in expendable belts ready for firing. Sixteen belts are normally brought into action with the gun; in addition, further belts are carried in company and platoon trucks. Ammunition may be dumped to meet expenditure which can be foreseen.

6. *Duration of fire*—The system of ammunition supply, together with the fact that the barrel is water-cooled, enable the medium M.G. to keep up a normal rate of fire for as long as supplies of water and ammunition continue.

7. *Overhead fire*—Fire over the heads of our own troops can be used with safety, provided that ranges are accurately ascertained and simple precautions are taken. The value of the support of an attack by overhead fire will generally depend on whether the ground is favourable and, visibility good, and whether time is available to arrange for intimate co-operation with the troops to be supported. On level ground, on account of the low trajectory and the safety limit, the fire must necessarily fall far ahead of the advancing troops. Unlike artillery support, when the infantry can see the fall of the shells, the infantry have no means of knowing when they are moving too fast and into the zone of the M.G. supporting fire. Safety precautions therefore depend entirely on the observation and skill of the supporting machine gunners.

For this reason, when an infantry attack is being supported, M.Gs. should be used where possible for the neutralization of the more distant targets, the closer targets being allotted to the artillery.

When firing over an area in which only our own tanks are operating the safety precautions can be dispensed with as tanks are immune from fire from medium M.Gs.

8. *Direct fire*—Direct fire is the normal, and most effective, method of engaging a target, and is particularly devastating when applied at close range and the effect of the fire can be observed.

9. *Indirect fire*—Medium M.Gs. are capable of engaging a target which is not visible from the gun position, but is visible from an O.P. Flexibility is limited, but concealment is more easily obtained, and the chances of guns being neutralized by enemy artillery is minimized.

In cases where the target is not visible from an O.P., or where it has not been possible to range on it in daylight, the necessary data can be obtained from a 1/25,000 map. The accuracy of map shooting depends chiefly on the accurate pin pointing of the gun position and target on the map. Artillery units, who possess methods of surveying, can often be of assistance in this.

10. *Fired lines*—Medium M.Gs. are equipped with instruments which enable them to fire on pre-arranged targets or to apply a belt of fire in a pre-arranged direction, under conditions of darkness, fog, or smoke. Preparation for such tasks must be made whilst the visibility is good.

11. *Mobility*—The M.G. battalion being fully mechanized is highly mobile for movement by road; its battlefield mobility, however, is poor. Man-handling is possible and will often be necessary; but the loads are heavy, and with only four belts of ammunition three men at least are required to get a gun into action at any distance from the vehicle.

12. *Night firing*—Provided preparations are made by day, guns can be brought into action so that a target, or targets, can be engaged at night. Platoon commanders must be given their tasks and platoon areas sufficiently early to ensure a minimum of an hour for reconnaissance in daylight, the guns themselves being moved in after dark.

## 5. Machine guns in the defence

1. The main role of medium M.Gs. is to give depth to the defence. In order to carry out this task they should normally be sited for direct fire tasks at close ranges. On occasion, and if the situation demands it, they may be employed on defensive fire tasks in connection with the fire plan for the defence of the F.D.Ls. Normally, however, they will form the framework of the defence of reserve localities. When a break-in occurs, their role will be to check further enemy penetration by defensive fire in front of these localities.

2. A further role of medium M.Gs. is to carry out harassing fire. Harassing fire tasks will not, however, be allotted to medium M.Gs. sited for defensive fire; and when medium M.Gs. sited for direct fire tasks are required to carry out harassing fire, they will usually be moved to specially detailed positions.

3. The more normal tasks which will be allotted to medium M.Gs. in defence are therefore as follows:—

i. *Defensive fire in front of reserve localities.* There can be no signal for this type of defensive fire, and at night or in smoke or fog a difficult problem is presented when to open and cease fire. The responsibility for opening fire must rest with the section commander, and he must realize that if his section is overrun before his fire has taken its toll of the enemy, he has failed in his duty.

ii. *Defensive fire in front of the foremost localities.* (See Infantry Training, 1937, sec. 75, 2, 1.)

Now that L.M.Gs. can be fired on fixed lines, they can carry out efficiently, and often more economically, most of the shorter range defensive fire tasks for which medium M.Gs. were employed in the past. There will still, however, be cases in which defensive fire at longer ranges (over 300 yards) will be needed, and for which medium M.Gs. must be employed. The following are examples:—

Where fire at shorter ranges can only be produced from unduly exposed positions.

To sweep in enfilade the crest of a ridge behind which a reverse position has been occupied.

To supplement, by longer range fire from the flank or positions in depth, the short range defensive fire of L.M.Gs. Medium M.Gs. sited for this purpose may escape the neutralizing fire of tanks supporting an enemy attack, or compel the enemy to disperse his available means of support.

iii. *Harassing fire.*—Fire employed to hinder movement by the enemy behind his lines. By day it should be confined to observed shooting, but by night guns may be laid on tracks, etc., known to be used by the enemy, and fire opened according to a pre-arranged programme. Harassing fire will never be carried out by guns from their battle positions. In static warfare it is often advisable to have several previously reconnoitred positions on each

divisional front from which harassing fire tasks may be carried out, the necessary technical information being available to the commander of any M.G. unit detailed to carry out the task. This precaution minimises the risk of harassing fire positions being spotted by the enemy, and the chances of guns being neutralized are thereby lessened. Harassing fire tasks are expensive in ammunition. They should, therefore, only be ordered when the chances of causing material damage to the enemy justify the expenditure of ammunition.

iv. *Defence of rear localities.*—Medium M.Gs. may be used to provide a nucleus for the defence of rear localities.

*Counter preparation.*—Counter preparation is directed with the object of disorganizing the assembly of troops and if possible preventing an attack from materializing.

The effect of counter preparation depends on surprise and an adequate volume of fire; it is undesirable to disclose prematurely the area in which it will fall. Maximum fire effect is obtained by observed fire but this will seldom be possible, and guns will normally be laid and fire opened according to a pre-arranged programme. Counter preparation by M.Gs. should be co-ordinated with that of the artillery.

vi. *Mobile reserve guns.*—Though the carrier platoons of infantry battalions are better suited for the purpose, medium M.Gs. may still be required as a mobile reserve to check penetration or support counter-attacks. Positions for these guns will invariably be reconnoitred, and technical arrangements made, so that guns can come into position after dark, or in the event of fog or smoke, should the occasion arise. Reserve guns will normally be used for harassing and counter preparation tasks.

4. *Secondary tasks.*—Machine guns should, whenever possible, be given primary and secondary tasks, but it must be borne in mind that guns allotted the primary task of providing defensive fire in front of reserve localities will seldom be able to give defensive fire at close range near to the line of F.D.Ls. They can often, however, provide defensive fire at intermediate and long ranges, and still be available to carry out their primary task should the necessity arise. A certain

amount of ammunition will always be reserved for the primary task and will not be expended on secondary tasks.

5. *Concrete defences*.—When M.Gs. are located in concrete defences they may be sited to fire singly.

#### 6. Machine guns in the attack

1. The cross-country performance of 15-cwt. trucks is limited. It is therefore doubtful whether M.Gs. can be relied upon to get forward quickly enough to give close support in the later stages of the attack. Infantry carrier platoons are better equipped for this purpose.

2. The tasks of machine guns in the attack are therefore :—

##### i. *Covering fire whilst the attack is in progress*.—

The task of neutralizing by fire, in conjunction with the artillery, known points of enemy resistance, or areas suspected of concealing hostile troops. Guns allotted to this task will fire by observation of the advance of our own troops, or if this is not possible, in accordance with a timed programme.

In addition to their primary task of covering fire, these guns should be allotted an aim in which to watch for unexpected developments and in which to engage any enemy who may interfere with the progress of the advance.

##### ii. *Consolidation*.—

Guns allotted to this task should be assembled under cover near the infantry starting line and sent forward on to their objective as soon as it has been gained. They will be used to repel counter-attacks and to give covering fire during the advance to the next objective. As pointed out above, the occasions on which trucks can be got forward in the attack will be rare. The M.Gs. used in this role will usually have to be manhandled.

##### iii. *Flank Protection* (See Infantry Training, 1937, sec. 68, 5).—

Though infantry will provide a measure of its own flank protection by its dispositions, great assistance can be given by medium M.Gs., which by reason of their range can carry out the task with less movement than infantry. Observation will generally be the deciding factor with regard to movement, and positions should be selected accordingly.

Flank protection may in time merge into defence, and it must be remembered that at night medium M.G. units are unsuited for a defensive role without the assistance of infantry. Flank protection involves not only the prevention of enemy counter-attacks, but also the neutralization of enemy fire from the flank. To carry this out effectively involves constant and intelligent observation of our own troops and the area in which they are operating.

##### iv. *Reserve*.—

There will seldom be cases when a surplus of fire power will be available for the support of an attack, and guns should be held in reserve for some definite purpose only. Machine guns can only assist in the attack when in action and actually firing. Guns held in reserve will therefore, whenever possible, be given a secondary task to be carried out from areas in which they are instantly available to move as required.

3. *Distribution of tasks*.—A proportion of guns allotted to the covering fire task should remain in action and provide depth to the consolidation.

#### 7. Machine guns in withdrawal

1. The choice of rear-guard positions will be influenced largely by the position of tank obstacles and, when in contact with the enemy, withdrawal will normally be by night.

The principal role of machine guns in withdrawal will be to stiffen the defence of rearguard positions.

When unarmoured forces are following up the withdrawal and the country is suitable, occasions may arise when machine guns may be included in the composition of rearguard mobile troops.

2. The normal tasks of machine guns in a rearguard position in order of priority will be :—

##### i. *Harassing fire and counter preparation*

To delay the enemy's approach, to interfere with his repair work on demolitions, and to prevent his assembly for attack on the position.

##### ii. *Defensive fire in front of the foremost localities*

The additional fire power provided by machine guns will stiffen the defence which is usually disposed on a wide front with comparatively shallow depth.

### iii. *Defensive fire in front of reserve localities.*

When it is impossible to carry out both ii and iii from the same position, the decision as to which of these two tasks is to be adopted must be made by the rearguard commander in accordance with the tactical situation.

## B. Independent roles

1. There are occasions on which M.G. battalions may usefully be employed on independent roles.

- i. Against unarmoured forces. To form part of a picketing force to cover the move of a mechanised column.
- ii. To fill a gap during daylight and so form a basis of stabilisation.
- iii. To hold a portion of a front during daylight to make infantry available for offensive action.
- iv. To form the framework of the defence on a position seized by an armoured formation.

## B. Control

Except in so far as signals are concerned, M.G. companies can be made administratively self-contained units; M.G. platoons, however, working away from their parent unit must be attached to other units for administrative purposes.

The occasions will be rare when a M.G. battalion will be sufficiently concentrated for independent signal communications to be either possible or desirable. The signal resources available should therefore be employed for communication between M.G. sub-units and the infantry unit or formation being supported.

In both attack and defence, brigade tasks will usually be given to medium M.G. sub-units and further decentralization should be avoided as far as possible. Although when time is limited it may be necessary in defence for M.G. tasks to be detailed initially by infantry battalion commanders, direct brigade control should be re-established as early as possible.

As the availability or otherwise of M.Gs. may have considerable influence on the dispositions adopted, an early initial allotment of M.Gs. should be made to divisions and brigades, based on estimated requirements, adjustments being made later. A M.G. reconnaissance party should in any case be attached to any formation to which an allotment is likely to be made.