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# **INTRODUCTION TO INFANTRY BATTALION AND ITS EQUIPMENTS**



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# LESSON PLAN

## INF 1



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# ORGANISATION OF AN INFANTRY BATTALION AND ITS WEAPONS



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## **Introduction**

The infantry battalion is the most important organisation of the army. It is trained and equipped to face any adverse situation. It can fight an enemy independently or as part of a larger force. It has the sustenance power and motivation to fight till the end. The Infantry Battalion is a balanced force which can withstand any difficult situation both in offensive, defensive, as well as in special operations against the enemy.

The support weapons available with the Battalion can contain the plan of the enemy by causing maximum damage both in fortified fire positions and Armoured protected tanks/personal carriers. Infantry battalion has inherent fire power capability at long ranges in terms of battalion support weapons. The two important infantry battalion support weapons are 81mm Mortar and Anti Tank guided missile.

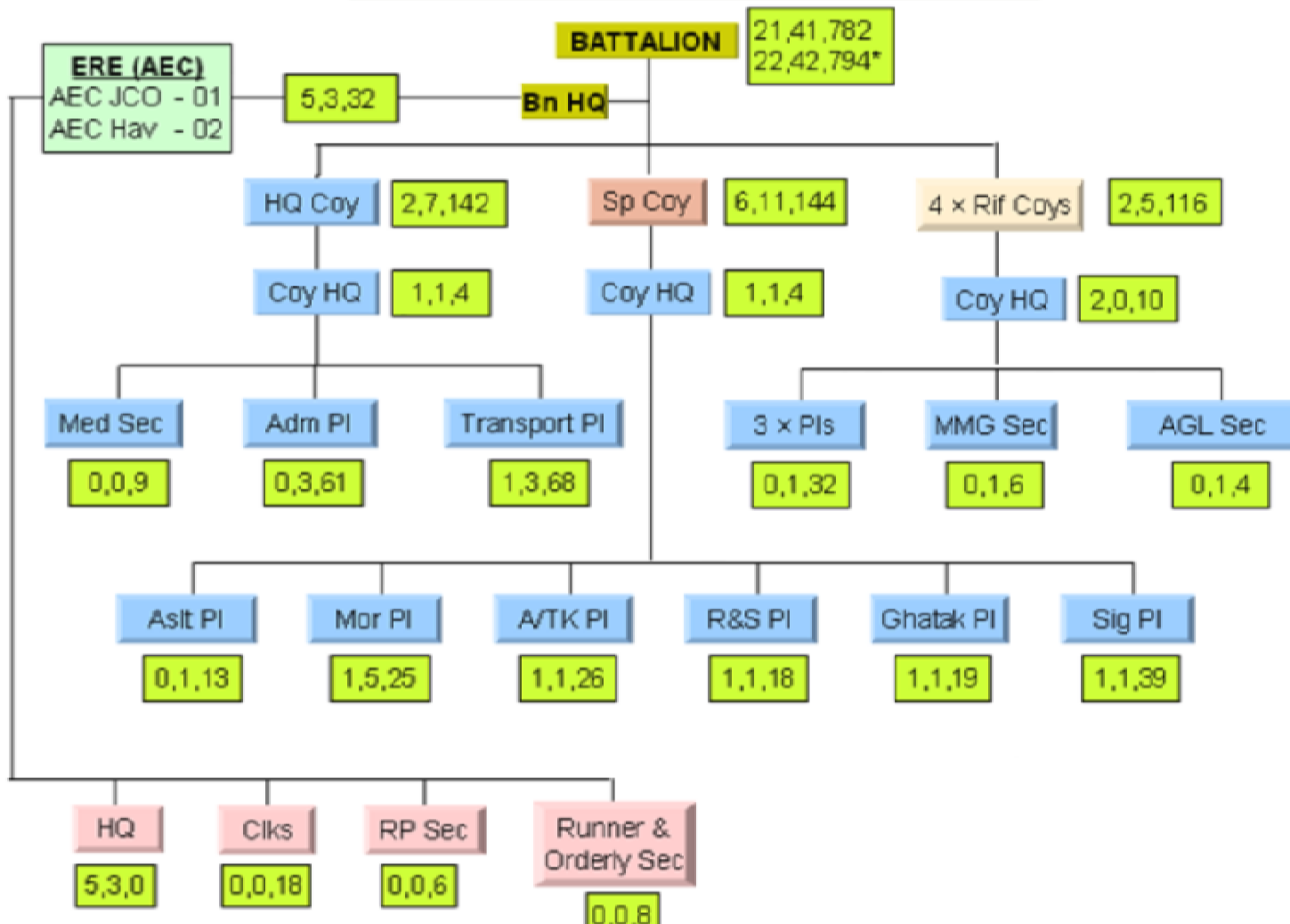
## **ORGANISATION OF INFANTRY BATTALION**

The infantry battalion is the most important organisation of the army. It is trained and equipped to face any adverse situation. It can fight an enemy independently or as part of a larger force. It has the sustenance power and motivation to fight till the end.

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### OUTLINE ORGANISATION OF INFANTRY BATTALION 4(B) MOD : STD



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## **CAPABILITIES**

### **The capabilities of Infantry Battalion are as under:**

- (a) **Self Reliance:** The infantry is equipped trained and organized to fight with the enemy without any outside support. It can fight itself for a long time.
- (b) **Ability to Hold Ground:** The infantry Battalion can hold ground effectively with or without outside support.

**(c) Adaptability:**

An Infantry battalion is highly adaptable and can operate over any type of ground by day or by night and under any difficult climate conditions. The infantry battalion can be readily shifted by land, sea or air to the battle field.

**(d) Mobility:**

Infantry battalion has a high degree of mobility. It can go through almost all kinds of obstacles.

(e) **Vulnerability:**

In battle, an infantry battalion becomes vulnerable in front of tanks, artillery, small arms, air attack and anti-personnel mines.

**Employability**

The basic role of infantry battalion is to close in with and destroy or capture the enemy and to hold ground. Fire and movement is the basis of infantry tactics.

Infantry battalion from section up wards is based on this principle. Infantry battalion and its sub-units are trained to operate in the face of the enemy opposition without entirely depending on support from other arms, by skilful use of ground, weapons, and above all the infantrymen with their sheer courage, determination and valour.

## **COMPANY SUPPORT WEAPONS**

The company support weapons are 7.62mm Dragunov Sniper Rifle, 7.62mm Medium Machine Gun, 30mm Medium Grenade Launcher and 84mm Rocket Launcher. They are used both in defensive and offensive operations.

## **Types of Infantry Company Support Weapons**

- (a) 7.62 mm Dragunov Sniper Rifle.
- (b) 7.62mm Medium Machine Gun.
- (c) 30 mm Automatic Grenade Launcher.
- (d) 84 mm Rocket Launcher.

## CHARACTERISTICS

### 7.62 mm Dragunov Sniper Rifle



Caliber	7.62 mm
Range	800 mtr
Range with telescope sight	1300 mtr
Weight	4.3 kg
Magazine capacity	10 rounds
<u>Ammunition fired:</u>	



Armor Piercing, Sniper Balls,  
Steel Core, Tracer and Incendiary.

## 7.62 mm Medium Machine Gun

### Weight

Gun 14.2 kg

Tripod 10.2 kg

Effective Battle Range 1800 m

Traverse 360 degree

No. of rounds in belt 235 rounds

### Rate of Fire

Normal 100 rounds/min

Rapid 200 rounds/min

Cyclic 500-1000 rounds/min

(Adjustable by setting of  
gas regulator)





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**Length** 20 rounds (Service Burst)

**Sustained Fire** Being air-cooled can maintain normal rate of fire indefinitely. However barrel should be changed after firing four belts

Range	Beaten Zone
560m	110m x 1m
600m	100m x 1m
1200m	65m x 3m
1800m	50m x 4m

**Trajectory** When the sight is fixed up to 600m bullets do not rise above 1.2m (4 ft)

**Night Firing** It is possible to fire the gun at night using passive night sight

## 30mm Automatic Grenade Launcher

### Weight

Launcher	18 kg
Mount	12 kg
Sight	1 kg (without case) 3.5 kg (with case)
Gun Box	14.5 kg (with 29 grenades in one belt)
Sight with case	3.5 kg

**Range** 800 to 1700 m (with and without sight)

### Rate of Fire

Normal	50 grenades/min
Rapid	100 grenades/min
Cyclic	350 to 400 grenades/min



**Flexibility** It can be mounted on a vehicle or helicopter. It can fire in low angle as well as in high angle. It has crest clearance capability. Flexibility is mainly due to

Controlled Elevation	67 degrees
Controlled Depression	14 degrees
Free Traverse	260 degrees

**Effect of fire.** It fires a fragmentation type of grenade which can be fired in a single shot or burst mode. The killing area of a grenade is 7m all around from the point of burst.

**Limitations.** It has the following limitations:

- (i) Due to sustained fire small parts get damaged.
- (ii) Barrel needs to be cooled after firing 80 to 90 grenades.
- (iii) It gives out flash and blast on firing.

## 84 mm Rocket Launcher.

Caliber	84mm
Weight	16kg with mount and telescopic sight
Length	1065mm
Traverse	No traverse of its own
Range	

HEAT 400m (moving targets)

HE 1000m (killing area 10 m)

Smoke 1300m (width 15 m)

Illumination 2100m (area of 400-500m diameter for 30 seconds)



Rate of Fire

Maximum sustained 06  
rounds / minute

Types of ammunition

Heat, HE, Smoke,  
Illumination

Armor Penetration

400 mm (Heat)

Back Blast Area

15 m



## CHARACTERISTICS of 81 mm Mortar

Caliber	81mm
Weight	40.6 kg (without sight) 4.7 kg (sight without case)
Range Minimum	68 mts (from safety point of view 90 m)
Range Maximum	5200 m
Rate of fire	(per minute)
Slow	6-8 rounds
Normal	9-11 rounds
Rapid	12-20 rounds
Muzzle vel.	305 m/sec (maximum)
Elevation limit	45 degrees to 85 degrees
Safety Distan.	Flanking 200m, Overhead 250m

## Anti Tank Guided Missile (ATGM)

Minimum Range	75 m
Maximum Range	2500 m
Rate of Fire	03 missiles/minute
Hit Probability	90% to 96%
Accuracy	60 cm around point of aim, at max. range
Generation	Second
Launcher Mount	
Traverse	360 degrees
Elevation	8 degrees + 20 degrees
Magnification	10 times
Guidance	Semi automatic optically tracked wire guided
Penetration	At 90 degrees angle of impact 460 mm At 60 degrees angle of impact 230 mm





### Visit to nearby Infantry/Fighting Arms Unit

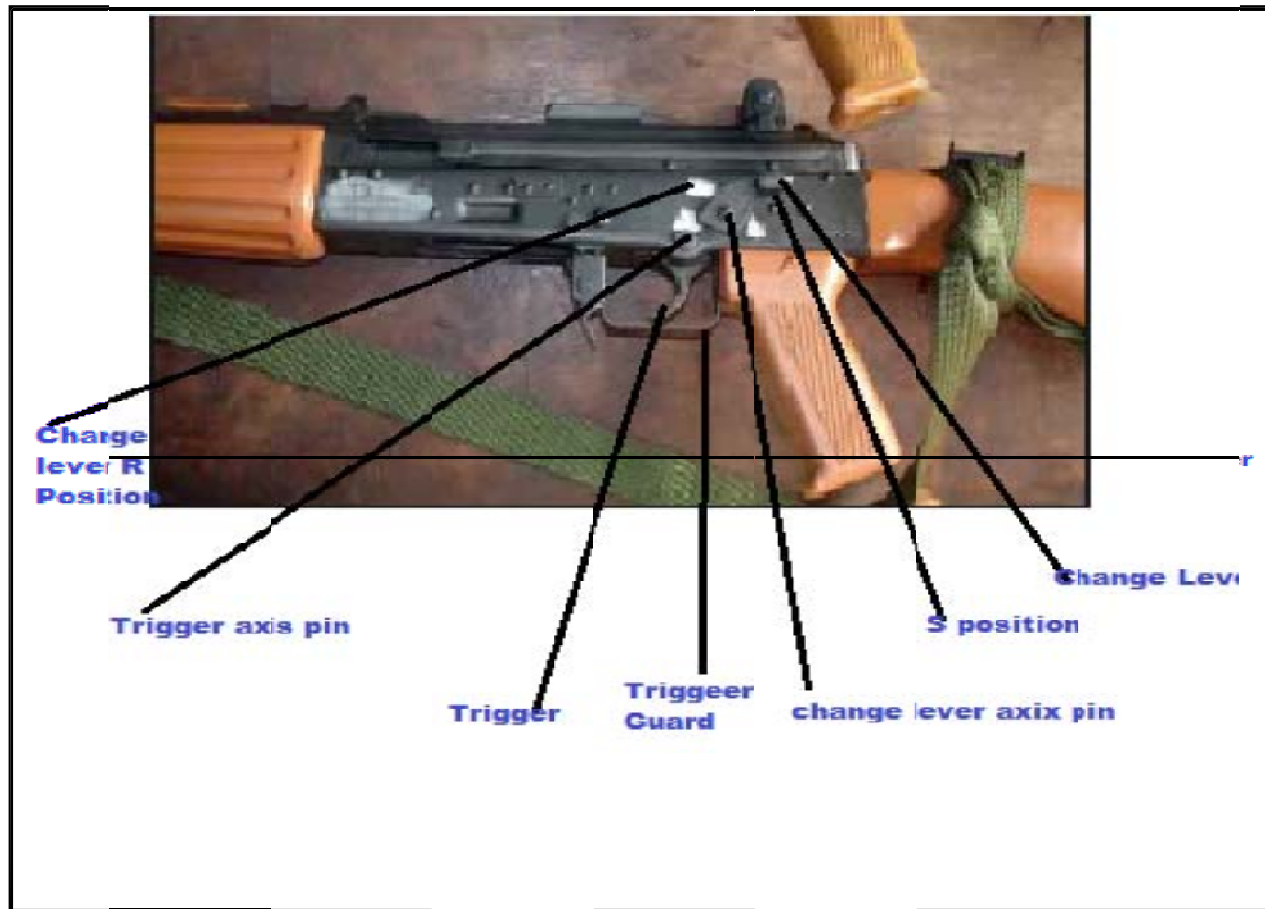
Cadets will be taken on a visit to any nearest Infantry Battalion to show the support weapons on ground where ever possible. In the absence of Infantry Battalion a short video can be screened showing the Infantry Battalion and company support weapons for better understanding of the cadets

**CHARACTERISTICS OF 5.56 MM INSAS RIFLE,**  
**AMMUNITION, FIRE POWER, STRIPPINGS,**  
**ASSEMBLING & CLEANING**

The 5.56MM INSAS Rifle is produced by the Indian Ordnance Factory Board and is being used by the Indian army. It is the personal service weapon of a soldier. It is lighter than the AK47 and easy to handle



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**5.56 mm INSAS RIFLE**

## Characteristics, Ammunition and Fire Power

Calibre	5.56 mm
Length of Rifle without bayonet	960 mm
Length of Rifle with bayonet	1110 mm
Length of barrel	464 mm
Weight	
Fixed butt empty magazine	3.6 kg
Fixed butt with loaded magazine	3.69 kg
Full magazine	90 gm
Bayonet	305 gm

## Characteristics, Ammunition and Fire Power

**(Cont..)**

Effective range	400 mm
Sight Radius	470 mm
Principle of Operation	Gas Operated
Penetration	3 mm at 700m
Mode of fire	Single Shot & Three Round Burst
Rate of fire	
Normal	60 rounds/min
TRB (Three Round Burst)	90 rounds/min
Intense	150 rounds/min
Cyclic	600 to 650 rounds/min

## Types of Ammunition

Ball Round, Tracer Round, Blank Round, High Density Cartridge

## Stripping

5.56mm INSAS rifle is the personnel weapon of a soldier. It is responsibility of the soldier to take care of his weapon. Stripping, assembling and cleaning of this weapon is very easy. If a soldier maintains the weapon properly, it will produce good result.

**Removing Magazine:** Hold the magazine with left hand and press them magazine catch to the front with thumb and then remove them again.

**Stripping Assembly Cover:** Cock the rifle and keep the change lever on 'S'. Press lever locking retainer with left hand and press the retainer to the front with right hand thumb. When retainer moves to the front, it is free from locking retainer. Now lift the assembly opening cover and move to the front.

## Stripping of Piston Extension Assembly

- While pressing retainer make the recoil spring assembly free from the guide and move it out.
- Hold rear portion of piston extension and while pressing it down ward, remove it from the rifle.

## Stripping of Breech Block

- Hold piston extension switch left hand, turning it upside down and with the right hand slide out the breech block from the recess.



## Stripping of Firing Pin

Remove locking pin with the help of drift. Firing pin will come out.

## Stripping of Extractor

Drift tool is used for stripping of the extractor. Press the extractor with the left hand thumb. Then press access pin with pointed portion of the drift. Access pin will come out. Now remove the extractor and spring from its recess.

## Stripping of Gas Plug and Projector Sight

With the help of drift, remove the pin fixing gas plug and while pressing gas plug remove the gas block. Now the projector sight will also get removed.

## Stripping of Hand Guard

The front edge of hand guard is in the cup near the gas block. Straighten the pin locking and remove it with the help of drift. Shifting the cup towards gas block, remove the hand guard.

## Stripping of Magazine

While pressing retainer dimple remove bottom plate.  
Remove retainer spring and the platform.



## Assembling

Assembling of the rifle is carried out in reverse sequence of stripping as under:

- (a) Assembling of magazine.
- (b) Assembling of extractor and firing pin.
- (c) Assembling of hand guard.
- (d) Assembling of piston extension and breech block.
- (e) To insert piston extension assembly in gas cylinder and bracket.

## Assembling (Cont...)

- (f) To insert recoil spring assembly in piston extension.
- (g) To insert piston extension assembly and recoil spring in body housing.
- (h) To close cover assembly and loading of retainer
- (i) Fix magazine.



## Parts of 5.56 mm INSAS Rifle

Inspection after Assembling of Rifle:

- (a) Remove magazine.
- (b) Move change lever to 'R'.
- (c) Cock the rifle
- (d) Ensure piston extension has completely moved forward.
- (e) Move change lever to 'S'
- (f) Try to press trigger, it will not get pressed



## Cleaning

### Items required for cleaning are as under:

- (a) Oil bottle with oil
- (b) Brush cleaning bore
- (c) Pull through
- (d) Road cleaning barrel
- (e) Tool adjusting sight/rear sight
- (f) Tool removing repair case
- (g) Chindi



**Rifle parts to be oiled are as under:**

- (a) Complete breach box less its face.
- (b) Magazine Catch.
- (c) Trigger mechanism.
- (d) Rifle spring Assembly





**Rifle parts not to be oiled are as under:**

- (a) Barrel
- (b) Cylinder
- (c) Gas plug
- (d) Piston extension assembly
- (e) Magazine platform site.



Strip the rifle and clean its parts. Clean bore with pull through and chindi. Oil the bore and clean the cylinder gas. Clean cylinder with pull through and chindi. Gas affected parts like breech block, piston, extension and firing pin to be cleaned carefully so that gas fouling is completely removed. After cleaning, the parts should be oiled with a piece of cloth. Do not rub hard outer surface of the rifle with soaked oil.

## **Conclusion**

The rifleman of an infantry is capable of closing with the enemy and neutralise him with his personnel weapon. However with the presence of company support weapons his punch increases. The company support weapons give additional effective strength to the Infantry Rifle Company both in defensive well as offensive operations.

The fire power with the Infantry Battalion as its support weapons in the form of 81 mm mortar and anti tank missile makes its formidable force to deal with enemy. It provides the fire support as well as metal support to the troops fighting on ground.

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**THANK YOU**



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