
UNITED STATES MARINECORPS
THE BASIC SCHOOL
MARINE CORPS TRAINING COMMAND
CAMP BARRETT, VIRGINIA 22134-5019

**INTRODUCTION TO
CREW SERVED WEAPONS
B3M0499XQ-DM
STUDENT HANDOUT**

Introduction to Crew Served Weapons

Introduction The purpose of this class is to introduce you to the task organization and mission of the weapons platoon within a rifle company and the task organization of the weapons company within a battalion.

Importance This class will give you a basic understanding of the task organization of the weapons company and platoon prior to receiving instruction and evaluation of the crew served weapons within an infantry battalion.

In This Lesson This lesson covers the following topics:

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Learning Objectives

Enabling Learning Objectives

TBSDEF-1002a Without the aid of reference, identify machine gun capabilities and limitations without omission.

TBS-DEF-1002b Given an order from higher, machine gun support, as part of a unit, task organize machine guns to support the defensive scheme of maneuver.

TBS-DEF-1002c Given an order from higher, machine gun support, as part of a unit, determine method of support to establish command relationships.

Weapons Platoon

Mission To provide fire support coordination, light mortar, anti-mechanized assault, and medium machine gun support for the infantry company and its subordinate elements.

**Task
Organization,
Platoon
Headquarters**

Platoon Headquarters:

- Platoon Commander, First Lieutenant, 0302
- Platoon Sergeant, Gunnery Sergeant, 0369
- Platoon Messenger, Pvt-Cpl, 03XX
- **Total:** 3 Marines.

**Task
Organization,
Light Weight
Company Mortar
System (LWCMS)
Section**

LWCMS Section:

- Section Leader, Staff Sergeant, 0369
- Three squads per section, one M224A1 Mortar per squad, squad leader/gunner, Sergeant 0341
 - Assistant gunner, Lance Corporal, 0341
 - Ammoman, Private, 0341
- **Table of Equipment (T/E):** There are three M224A1 LWCMS mortars within the section and one per squad.
- **Total:** 10 Marines.

**Task
Organization
Machine Gun
Section**

Machine Gun Section:

- Section Leader, Staff Sergeant, 0369
- Three squads per section, squad leader, Sergeant, 0331
- Two machine gun teams per squad
 - Team leader, Corporal, 0331
 - Gunner, Lance Corporal, 0331
 - Ammoman, Private, 0331
- **T/E:** There are six M240B medium machine guns per section, two per squad, and one per machine gun team.
- **Total:** 22 Marines.

Weapons Platoon (Continued)

Task Organization Assault Section	<p>Assault Section</p> <ul style="list-style-type: none"> • Section Leader, Sergeant, 0351 • Three squads per section, Squad leader/Gunner, Corporal, 0351 (total 4 Marines) • Assault team two teams per squad • Team leader/gunner, Corporal, 0351 • Assistant Gunner, Lance Corporal, PFC, 0351 <ul style="list-style-type: none"> • T/E: There are six MK153 SMAWs per section, two per squad, one per team. <ul style="list-style-type: none"> • Total: 13 Marines. <ul style="list-style-type: none"> • Total for the Platoon: 48 Marines.
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Weapons Company

Mission	To provide fire support coordination, medium mortar, anti-mechanized assault, and heavy machine gun, support for the infantry battalion and its subordinate elements.
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Task Organization, Company Headquarters	<p>Company Headquarters</p> <ul style="list-style-type: none"> • Company Commander, Major, 0302 • Executive Officer, Captain, 0302 • First Sergeant, First Sergeant, 8999 • Operations Chief, Master Sergeant, 0369 • Property NCO, Sgt, 0311 • Messenger/Driver, Corporal, 0311 • Messenger/Driver, Corporal, 0311 • Total: 7.
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Task Organization, 81MM Mortar Platoon	<p>81MM Mortar Platoon</p> <ul style="list-style-type: none"> • Platoon Headquarters <ul style="list-style-type: none"> ○ Platoon commander, First Lieutenant, 0302 ○ Platoon sergeant, Gunnery Sergeant, 0848 ○ Ammo tech, Lance Corporal, 2311 ○ Ammo man/Driver, Lance Corporal, 0341 • Sections (2) <ul style="list-style-type: none"> ○ Section headquarters <ul style="list-style-type: none"> – Section Leader – Two Ammo men, Lance Corporal, 0341 – Plotter Sergeant, 0341 – Recorder Corporal, 0341
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Weapons Company (Continued)

**Task
Organization,
81MM Mortar
Platoon
(Continued)**

- Section headquarters (Continued)
 - Recorder/Driver, Lance Corporal, 0341
 - Forward Observer, Corporal, 0341
 - Forward Observer, Corporal, 0341
- Mortar Squad (4)
 - Squad leader, Sergeant 0341
 - Gunner, Corporal, 0341
 - Assistant Gunner, Lance Corporal, 0341
 - Ammoman Private First Class, 0341
 - Ammoman Private First Class, 0341
 - Ammoman Private First Class, 0341
- **T/E:** There are eight 81MM Mortars per platoon broken down into four mortars per section, and one per squad.
- **Total for the Platoon:** 68.

**Task
Organization,
Anti-Armor
Platoon**

Anti-Armor Platoon

- Platoon Headquarters
 - Platoon commander, First Lieutenant, 0302
 - Platoon sergeant, Gunnery Sergeant, 0369
 - Messenger/Driver, Private, 0331
- Javelin Section
 - Section Leader, Staff Sergeant, 0369
 - Two Squads, Squad leader, Sergeant, 0352
 - Four Teams, Gunner, Corporal 0352, Assistant gunner Lance Corporal 0352
 - There are eight Javelins per section, one per team
- Antitank Section
 - Section Leader Staff Sergeant, 0369
 - Four Squads Squad leader, Sergeant, 0352
 - TOW Gunner, Corporal, 0352
 - TOW Gunner, Corporal, 0352
 - Assistant TOW Gunner, Lance Corporal 0352
 - Assistant TOW Gunner, Lance Corporal 0352
 - There are eight M220E4 TOWs per section, two per squad

Weapons Company (Continued)

Task Organization, Anti-Armor Platoon (Continued)

- **T/E:** The platoon is equipped with eight Javelin Missile systems located in the Javelin section and eight M41A7 TOW missile systems located in the Anti-tank section.
- **Total for the Platoon:** 41.

Task Organization, Heavy Machine Gun Platoon

Heavy Machine Gun Platoon

- Platoon Headquarters
 - Platoon commander First Lieutenant, 0302
 - Platoon sergeant Gunner Sergeant, 0369
 - Messenger, Private 0331
 - Messenger/Driver Private 0331
- Sections (3)
 - Two squads per section, Section Leader/1st
 - Squad leader, Sergeant 0331
 - Gunner, Lance Corporal 0331
 - Assistant Gunner, Private 0331
 - Ammo man/driver Private 0331
- **T/E:** The platoon is equipped with six M2A1 .50 cal Browning Machine Guns and six MK19 mod 3 40MM Automatic Grenade Launchers. This is divided into two M2A1s and two MK19s per section, with each squad having one M2A1 and one MK 19.
- **Total for the Platoon:** 28.

Scout Sniper Platoon

Task Organization

Scout Sniper Platoon

- Platoon Headquarters
 - Platoon commander First Lieutenant, 0203
 - Platoon sergeant Gunnery Sergeant, 0317
- Section (2) 2 teams per section, senior team leader is section leader
- Teams (4)
- Six Marines per Team
- **T/E:** The platoon is equipped with eight M40A3 7.62 Sniper Rifles, eight M110 Semi-Automatic Sniper Systems (SASS) and four M107 Special Application Scoped Rifles (SASR).
- **Total for the Platoon:** 26.

M224A1 60MM LWCMS Mortar



The 60mm mortar, M224A1 Lightweight Company Mortar System (LWCMS), is a smoothbore, muzzle loaded, high angle of fire weapon. The components of the mortar consist of a canon, sight, mount, and baseplate. The 60mm mortar section is located in the weapons platoon of the rifle company, is armed with three 60mm mortars, and is immediately responsive to commander's need for fire. Effective use and employment of the 60mm mortar depends upon the training and knowledge of the company leaders since there is no forward observer or fire direction center in the 60mm Mortar Section. Computation of fire commands and fire adjustment must be understood by platoon commanders, squad leaders, and others in the company. Accordingly, the principle of indirect fire and the methods of employing the 60mm mortar must be mastered by all hands.

Characteristics	M225A1 Cannon	13 lbs
	M170A1 Mortar Mount	13.2 lbs
	M64A1 Sight	2.5 lbs
	M7A1 Baseplate	9.1 lbs
	M8 Baseplate	3.6 lbs
	SL-3 Complete	37.6 lbs

Rates of Fire	Max Rate of Fire	30 rounds per minute for 4 minutes
	Sustained Rate of Fire	20 rounds per minute

M224A1 60MM LWCMS Mortar (Continued)

Rates of Fire (Continued)

Maximum Effective
Range

3500m

Types of Ammunition

- High explosive.
- White phosphorus.
- Illumination.
- IR Illumination
- Training Practice

M240B Medium Machine Gun



Description. The M240B machine gun is an belt-fed, air-cooled, gas-operated, fully automatic machine gun that fires from the open bolt position. The M240B machine gun is found in the machine gun section of the weapons platoon of every rifle company in the Marine Corps. Six of these machine guns are in each section, divided into three, two-gun squads.

Specifications

Machine gun	27.6 pounds
Spare barrel case, SL-3 complete	12.9 pounds
Tripod, pintle, and T&E	20 pounds
Total system	47.6 pounds
Length of machine gun	49 inches
Rifling	4 grooves with a uniform right-hand twist. One turn in 12 inches.
Sustained rate of fire	100rpm
Rapid rate of fire	200 rpm
Cyclic rate of fire	650 rpm
Muzzle velocity	2,800 fps

M240B Medium Machine Gun (Continued)

Specifications (Continued)

Maximum Range	3,725 meters
Effective range (suppression)	1,800 meters
Grazing fire	600 meters

MK153 Shoulder Launched Multipurpose Assault Weapon (SMAW)



Description. The MK153 SMAW is a one-man, or team operable, 83 mm smooth bore, shoulder-fired, rocket launcher with a spotting rifle attached to the right side of the launcher tube. The encased rocket is fitted into the aft end of the launcher, and the fiberglass encasement is discarded after use. The spotting rifle, which improves first-round hit probability, is fed 9 mm tracers by a magazine, which holds six rounds. The 9 mm round is ballistically matched to the 83mm rocket.

The weapon is aimed by using the:

- Iron sights
- Telescopic sight
- The AN/PEQ-2A can also effectively be used on this weapon system in conjunction with night vision goggles.
- Sight confirmation using spotting rifle.

SMAW Ammunition

The SMAW fires a:

- Inert, Common Practice Round
- HEDM (High Explosive Dual Mode) Rocket which is employed against bunkers and field fortifications and light skinned vehicles.
- HEAA (High Explosive Anti Armor) rocket, which is employed against armor vehicles.
- NE (Novel Explosive) rocket, which is a High Impulse Thermobaric explosive and is employed against caves and houses and uses extreme heat and overpressure to destroy target.

MK153 SMAW (Continued)

Specifications

Rocket launcher	
Length	29.9 inches
Weight	16.9 pounds
Encased rocket (as carried)	
Length	27.3 inches
Weight- Varies by rocket	12.7-18.25 lbs.
Caliber	83 mm
Spotting rifle	
Length	27.3 inches
Weight	3.74 pounds
Caliber	9 mm
Telescopic sight (MK 42 MOD 0)	
Length	7.9 inches
Weight	1.99 pounds
Magnification	3.8 times
Field of view	6 degrees
Weapon ready to fire	
Length	53.1 inches
Weight	29.0 pounds
Range	
Minimum	17 m
Maximum	1800 m
Maximum effective (HEDM)	250 m
Maximum effective (HEAA)	500 m
Penetration capabilities	
Bunker, sandbag, with wood reinforcements	7 feet
Brick	12 inches
Concrete	8 inches
Steel armor	1 inch
Anti-armor round	23-24 inch/steel

M252 81 MM Mortar



The 81mm mortar, M252, is a smoothbore, muzzle loaded, and high angle of fire weapon. The components of the mortar consist of a cannon, sight, mount, and base-plate. The 81mm mortar platoon is located in the weapons company of the infantry battalion and is organized into a platoon headquarters and two 81mm mortar sections with four mortars per section for a total of 8 Mortars per platoon. The weapons company commander has administrative control (feeding, billeting, clothing, etc.), but tactical control is directly in the hands of the battalion commander working through the 81mm mortar platoon commander. The 81mm mortar is the infantry battalion commander's organic indirect fire weapon in the same manner as the 60mm mortar is the rifle company commander's organic indirect fire weapon.

Characteristics	Cannon 253	35 lbs
	Mount M177	28 lbs
	Base-plate M3A1	30 lbs
	Sight M64A1	2.5 lbs
	SL-3 Complete	95.5 lbs
Rates of Fire / Range	Maximum rate of fire	30 rounds per minute for 2 minutes
	Sustained rate of fire	15 rounds per minute
	Maximum Effective Range	5700m
Types of Ammunition	<ul style="list-style-type: none"> • High explosive • White phosphorus • Red phosphorus • Illumination • IR Illumination • Training Practice 	

Javelin M98A2

The Javelin is a fire-and-forget weapon system (increases gunner survivability), soft launch (very small backblast), dual mode (top attack or direct fire), man-portable, medium antitank weapon. The Javelin missile has an increased capability to engage and defeat tanks and other armored vehicles.

The command launch unit (CLU) consists of the:

- Day sight.
- Night sight.
- Controls.
- Indicators.

The round is sealed in a launch tube assembly that is composed of the:

- Propulsion section.
- Guidance and control section.
- Warhead and fuse section.
- Control surfaces and seeker section.

Ranges:

Maximum	2500 meters
Minimum	65m Direct Attack / 160m Top Attack

Penetration capabilities are classified. The Javelin penetrates all known armor, "well" in excess of 36 inches of cold rolled homogeneous steel

M41 TOW Saber System

The tube launched, optically tracked, wire command link guided missile system is a heavy antitank/assault weapon that can be fired from a tripod or an armored high mobility multipurpose wheeled vehicles (HMMWV) with a special mount. The TOW Saber is located in the infantry battalion, tank battalion, and Light Armored Reconnaissance (LAR). Unlike its predecessor, which was restricted during periods of limited visibility, the TOW Saber weapon system has all weather capability.

Specifications:

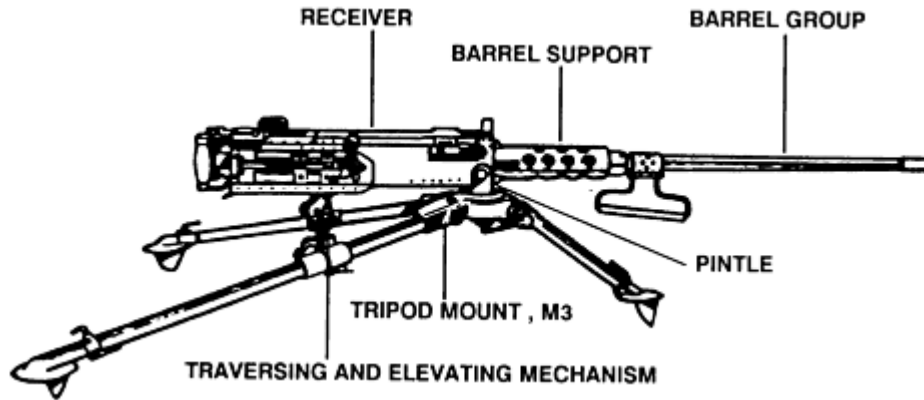
Weight	
TOW weapon system complete	265 pounds
Missile	50 pounds
Ground mounted ready to fire	300 pounds
Range	
Minimum	65 meters
Maximum	3750 meters

M41A7 TOW Saber System (Continued)

Specifications (Continued)

Ammunition	
TOW 2A	<ul style="list-style-type: none"> • Round has a 10-inch probe in front of the warhead. • Purpose of the probe is to detonate any reactive armor found on enemy armored vehicles
TOW 2B	<ul style="list-style-type: none"> • Round is a fly-over shoot down missile. • Once missile flies over the vehicle, the missile will shoot down two warheads on top of the vehicle
Penetration	In excess of 36 inches of homogeneous steel
Operates	<ul style="list-style-type: none"> • In all weather conditions in which the gunner can see the target through the day or night sight tracker. • In temperature of –32 degrees to +60 Celsius (-25 degrees to +140 degrees Fahrenheit) • At altitudes up to 3050 meters (10,000 feet). Cold weather (<0 degrees Fahrenheit) range decreases to 3000 meters

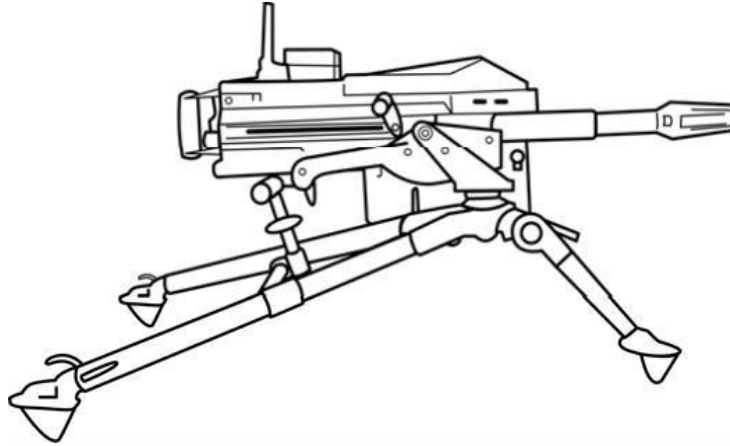
M2A1 .50 Caliber Machine Gun



The Browning machine gun caliber .50 HB, M2A1 (see picture below) is a belt-fed, recoil-operated, air-cooled, crew-served machine gun. The gun is capable of single shot, as well as automatic fire, and operates on the short recoil principle. More information on the M2A1 will be presented in B3M4238 Heavy Machine Guns.

.50 Caliber Heavy Machinegun	
6 M2A1/Platoon	
Max Effective Range	1830m
Grazing Fire	700m
Max Range	7400m
Rapid Rate	>40 rounds/minute
Sustained Rate	<40 rounds/minute
Weight (total system)	128 Lbs
Ammunition	Ball, Tracer, AP, APIT, SLAP

MK19 MOD 3 Automatic Grenade Launcher



The MK19 is a belt-fed, air-cooled, blowback-operated, crew-served, fully automatic 40 mm grenade launcher. More information on the MK 19 will be presented in B3M4238 Heavy Machine Guns.

40mm Automatic Grenade Launcher	
6 Mk19/Platoon	
Max Effective Range	2212m
Maximum Range	2212m
Rapid Rate	60 rounds/minute
Sustained Rate	40 rounds/minute
ECR	15m
Weight (total system)	140.6 Lbs
Ammunition	HE, HEDP, Training Practice

M40A3 – Anti-personnel



The M40A3 is a 7.62mm sniper rifle with a maximum effective range of 1000 meters. It has a 3-12x50, point of aim/ point of impact and a five round magazine.

M110 Semi-Automatic Sniper System



The M110 SASS is a 7.62mm x 51mm sniper rifle with a maximum effective range of 800 meters. It has a 3-15x scope and a 20 round box magazine.

M82A3 Special Application Scoped Rifle (SASR) – Anti-Material



The SASR is a semi-automatic, 50 cal rifle that weighs about 32 pounds. It has a maximum effective range of 1800 meters and a 10 round box magazine.

Summary

In this class you received a basic instruction of the task organization of the weapons company and platoon and a brief introduction to the weapons found in each. Further instruction and evaluation of the crew served weapons within an infantry battalion is in upcoming classes, practical application events, and live fire exercises.

References

Reference Number or Author	Reference Title
FMFM 6-3	Marine Infantry Battalion
FMFM 6-4	Marine Rifle Company/Platoon
FM 7-91 (FM 3-21.91)	Tactical Employment of Anti-armor Platoons, Co and Bn
FMFM 2-11	Anti-Armor Operations
MCWP 3-15.5	Anti-armor Operations
FM 3-22.34 (FM 23-34)	TOW Missile System
TM 9-1425	Technical Manual for the Javelin, Army
TM 09397B-12/1	Technical Manual for the Javelin, Marine Corps
MCI 0351	SMAW and LAW gunner
FM 7-90	Tactical Employment of Mortars Ch1
FM 23-90	Mortars
MCRP 3-15.2A	Mortars
FM 23-91	Mortar Gunnery Ch 1
MCRP 3-15.2B	Mortar Gunnery
MCWP 3-15.1	Machine Guns and Machine Gunnery (Under Revision)
TM 08206B-OR/1	Conventional
TM 9-1015-249-10	

Glossary of Terms and Acronyms

Term or Acronym	Definition or Identification
LWCMS	Light weight crew served mortar system
MK 153 SMAW	Shoulder Launched Multi-Purpose Assault Weapon located in the assault section
M220E4 TOW	Tube Launched Optically Tracked Weapon System located in the anti-Armor platoon
T/E	Table of Equipment

