

# FM 23-23

DEPARTMENT OF THE ARMY FIELD MANUAL

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## ANTIPERSONNEL MINE M18A1 AND M18 (CLAYMORE)

This copy is a reprint which includes  
current pages from Changes 1 and 2.

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HEADQUARTERS, DEPARTMENT OF THE ARMY  
JANUARY 1966

CHANGE }  
N O . 2 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C. 30 March 1973

### ANTIPERSONNEL MINE, M18A1 and M18 (CLAYMORE)

FM 23-23, 6 January 1966, is changed as follows:

*Page 2, para 3, line 13.* The words “(knife-edge sight on later model)” is added after “slit/type sight,”.

*Page 2, para 3, line 15.* The last sentence of paragraph 3 is changed to read: An instruction sheet for the M18A1 mine is attached to the inside cover of the bandoleer. The instruction sheet which accompanies the M18A1 mine having the knife-edge sight is shown in figure 3.

Page 3. Figure 1 is superseded.

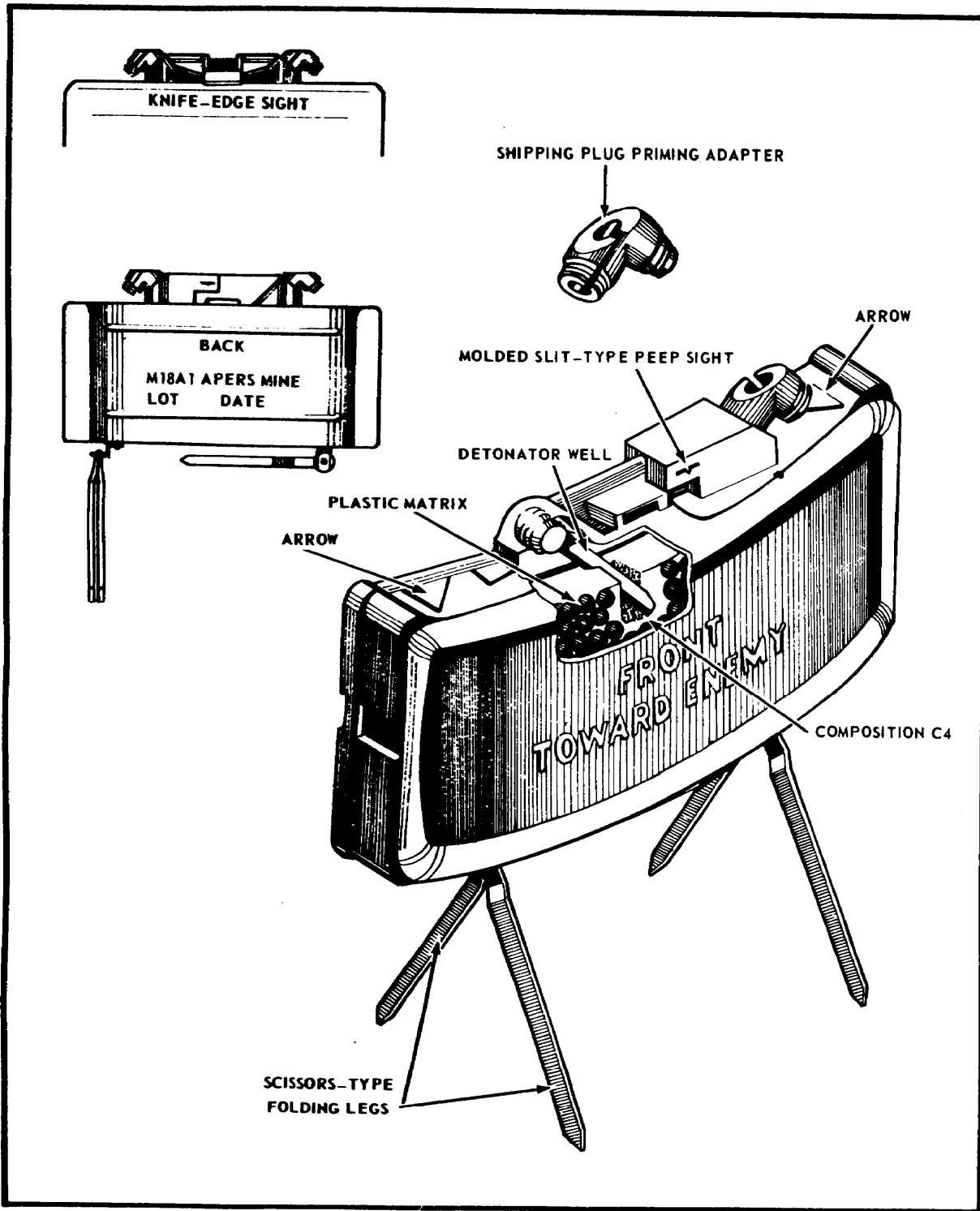


Figure 1. The M18A1 antipersonnel mine (CLAYMORE)

Page 6. Figure 3 is superseded.

**INSTRUCTION SHEET**  
M16A1 ANTIPERSONNEL MINE

**1. WHERE TO POSITION MINE**

WITHIN 300 FT. (112 PACES) TO REAR & SIDES OF MINE  
ALL FRIENDLY PERSONNEL MUST TAKE COVER

50 FT. (22 PACES)  
MINIMUM SAFE DISTANCE

FRAGMENT SPRAY

DIRECTION OF ENEMY APPROACH

150 FT.

7 FT.

AIMING POINT

WARNING TAKE COVER

STONES OR MINE DEBRIS MAY BE THROWN TO THE REAR OR SIDE WITHIN 300 FT. (112 PACES) TO REAR & SIDES OF MINE ALL FRIENDLY TROOPS MUST TAKE COVER. THE MINE MAY BE SAFELY FIRED ONLY FROM PROTECTED OR SHIELDED POSITIONS NO CLOSER THAN 50 FT FROM THE MINE.

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**2. HOW TO AIM MINE**

1. TURN LEGS OF MINE DOWNWARD AND SPREAD APART. TWIST THE SPREAD LEGS TO LIE TO THE FRONT AND BACK AS SHOWN. ARROWS POINT TO ENEMY.

2. AIM MINE BY ALIGNING THE TWO EDGES OF SIGHT WITH THE AIMING POINT. EYES SHOULD BE SIX TO NINE INCHES TO THE REAR OF SIGHT. AIMING POINT SHOULD BE AT GROUND LEVEL 150 FEET IN FRONT OF MINE. PRESS LEGS FIRMLY INTO GROUND RECHECKING AIM.

SIGHT

AIMING POINT

SIGHT EDGES (FRONT & REAR)

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**3. HOW TO ARM MINE**

1. REMOVE BLASTING CAP ASSEMBLY FROM BANDOLEER.  
2. LAY WIRE BETWEEN MINE AND FIRING POSITION. UNROLL WIRE FROM FIRING POSITION TOWARDS MINE. WRAP WIRE AROUND STAKE AS SHOWN AND BURY WIRE IF POSSIBLE.

3. INSERT BLASTING CAP IN EITHER DETONATOR WELL AND LOCK WITH SHIPPING PLUG-PRIMING ADAPTER.

4. RECHECK AIM OF MINE AFTER ABOVE ARMING.

EMEMY

SHIPPING PLUG - PRIMING ADAPTER

BLASTING CAP

DETONATOR WELL

BURY WIRE IF POSSIBLE

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**4. HOW TO TEST CIRCUIT**

(TAKE COVER AT FIRING POSITION):

1. REMOVE SHORTING PLUG FROM BLASTING CAP WIRE.  
2. INSERT PLUG OF BLASTING CAP WIRE INTO TEST SET  
3. INSERT PLUG OF TEST SET INTO FIRING DEVICE.  
4. SWING SAFETY BAIL TO FIRE POSITION AND FROM COVERED POSITION DEPRESS FIRING HANDLE. LIGHT IN WINDOW OF TEST SET INDICATES GOOD CIRCUIT. IF NO LIGHT, WIRE OR CAP MAY BE DEFECTIVE. CHECK AND REPAIR WIRE BY TWISTING LEADS TOGETHER OR REPLACE CAP. IF AVAILABLE, TAPE OVER REPAIRED WIRE.

TO TEST CIRCUIT

UNROLLED BLASTING CAP ASSEMBLY

SHORTING PLUG

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**5. HOW TO FIRE MINE**

(TAKE COVER AT FIRING POSITION):

1. INSERT PLUG OF BLASTING CAP WIRE DIRECTLY INTO FIRING DEVICE - SAFETY ON.  
2. WHEN READY TO FIRE, SWING SAFETY BAIL TO ARMED POSITION.  
3. FIRE BY DEPRESSING HANDLE SMARTLY.

NOTE: IF TWO OR MORE FIRING DEVICES ARE LOCATED AT ONE POSITION, THE LOOPS ON FLAP OF BANDOLEER MAY BE USED TO IDENTIFY THE FIRING WIRES BY SLIPPING WIRES THRU LOOPS BEFORE CONNECTING TO FIRING DEVICE.

TO FIRE

SAFE

ARMED

TO INDICATE DIRECTION THE MINE IS FACING, PHOSPHORESCENT TAPE, FSM 970-22 (467), MAY BE APPLIED TO "BACK" COVER. CROSS SLICING THE TAPE WITH A KNIFE AFTER APPLICATION WILL PREVENT UNIFORM REMOVAL. WARNING TAPE AND MINE MAY BE TURNED. CHECK PERIODICALLY TO ASSURE CORRECT DIRECTION.

Figure 3. The instruction sheet attached to the M7 bandoleer.

## C2, FM 23-23

Page 8, para 7c(9), line 1. The words "Peepsight and arrows." are changed to read "Sight and arrows."

Page 8, para 7a(9), line 2. The words "(or knife-edge sight)" are added after the word "peepsight".

Page 9, para 7b(2), line 2. The word "assembly" is added after the word "cap".

Page 9, para 7b(2). The following note is added:

Note. With mines of later manufacture, the M4 electrical blasting cap assembly is wound on a spool.

Page 11, paragraph 12 is superseded as follows:

### 12. Installation for Electrical Firing

#### a. Laying and Aiming.

##### (1) Laying.

(a) Check to see that the mine and all accessories (fig. 2) are in the bandoleer. Read the instruction sheet (fig. 3) attached inside the bandoleer cover before installing the mine.

(b) Remove the electrical firing wire leaving the mine and other accessories in the bandoleer.

**Warning: During installation the M57 firing device must be kept in the possession of the man installing the mine to prevent accidental firing by a second man.**

(c) Secure the shorting plug end of the firing wire at the firing position. Place the bandoleer on your shoulder and unroll the firing wire to the position selected for emplacing the mine.

Note. The instructor sheet which accompanies the M18A1 mine with slit-type peepsight indicates that the firing wire can be unrolled from the mine or from the firing position; however, the firing wire should always be laid from the firing position to the mine emplacement.

(d) Remove the mine from the bandoleer; turn the legs rearward and then downward. Spread each pair of legs about 45 degrees. One leg should protrude to the front and one to the rear of the mine. Position the mine with the surface marked "FRONT TOWARD ENEMY" and the arrows on top of the mine pointing in the direction of the enemy or the desired area of fire. On snow or extremely soft ground the bandoleer may be spread beneath the mine for support.

(e) To prevent tipping in windy areas or when the legs cannot be pressed into the ground, spread the legs to the maximum (about 180° so that the legs are to the front and rear of the mine. A top view of the M18A1 antipersonnel mine is shown in figure 10.

##### (2) Aiming.

##### (a) Mines with slit-type peepsight.

1. Select an aiming point which is about 50 meters (150 feet) to the front of the mine and about 2½ meters (8 feet) above the ground (fig. 11).

2. Position the eye about 15 centimeters (6 inches) to the rear of the sight. Aim the mine by sighting through the peepsight. The groove of the sight should be in line with the aiming point. The aiming point should be in the center of the desired area of coverage, and the bottom edge of the peepsight should be parallel to the ground that is to be covered with the fragment spray.

##### (b) Mines with knife-edge sight.

1. Select an aiming point at ground level that is about 50 meters (150 feet) in front of the mine.

2. Position the eye about 15 centimeters (6 inches) to the rear of the sight. Aim the mine by aligning the two edges of the sight with the aiming point (fig. 11.1).

#### b. Arming and Electrical Firing.

(1) Secure the firing wire about 1 meter behind the mine so it will not become misaligned should the firing wire be disturbed.

(2) Test the firing device, test set, and blasting cap assembly as described in paragraph 15.

**Warning.** Make certain that the combination shorting plug and dust cover is assembled to the connector of the firing wire before proceeding with installation of the mine.

(3) Unscrew one of the shipping plug priming adapters from the mine. Slide the slotted end of the shipping plug priming adapter (fig. 12) onto the firing wires of the blasting cap between the crimped connections and the blasting cap. Pull the excess wire through the slotted end of the adapter until the top of the blasting cap is firmly seated in the bottom portion of the shipping plug priming adapter. Screw the adapter with blasting cap into the detonator.

**Warning.** Make certain that the face of the mine marked “Front Toward Enemy” and the arrows on top of the mine point in the direction of the enemy.

(4) Recheck the aim of the mine. Camouflage the mine and, if possible, bury the firing wire to protect it from fire and enemy detection. Make certain you have the bandoleer and other accessories and then move back to the firing position.

**Warning.** The mine firing position should be in a foxhole or covered position at least 16 meters to the rear or the side of the emplaced mine.

(5) Before connecting the M57 firing device (fig. 5) to the firing wire, make certain that the safety bail is in the SAFE position and that all friendly troops within 250 meters of the front and sides and 100 meters of the rear of the mine are under cover. Do not connect the firing device to the firing wire until the actual time of firing.

(6) To fire the mine, remove the dust cover on the firing device, remove the combination shorting plug and dust cover from the end of the firing wire, and connect the firing device to the firing wire. Fire the mine by positioning the firing device safety bail in the FIRE position and actuating the firing device handle with a firm, quick squeeze.

By Order of the Secretary of the Army:

Official:

VERNE L. BOWERS  
Major General, United States Army  
The Adjutant General

CREIGHTON W. ABRAMS  
General, United States Army  
Chief of Staff

Distribution:

To be distributed in accordance with DA Form 12–11 requirements for Antipersonnel Mine, M18, and M18A1.

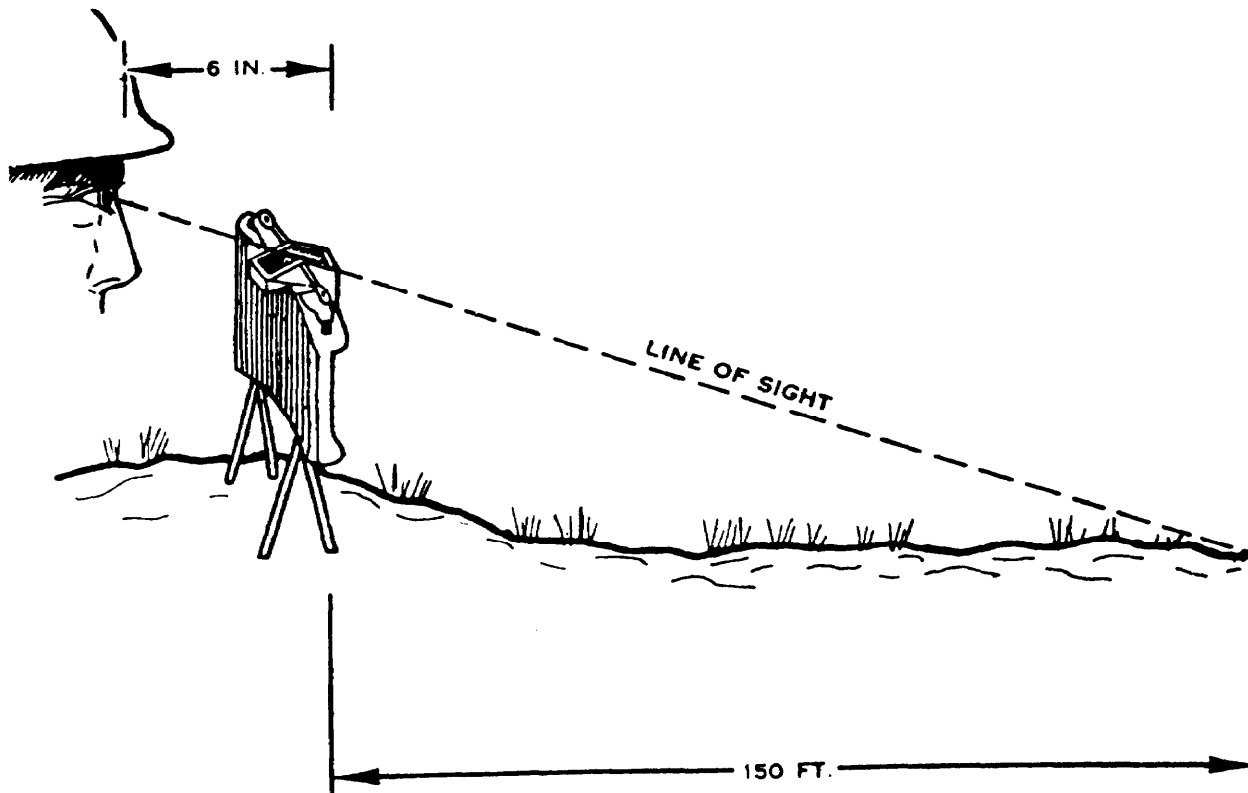
**ANTIPERSONNEL MINE M18A1 AND M18 (CLAYMORE)**

FM 23-23, 6 January 1966, is changed as follows:  
Page 12, paragraph 12 a. Subparagraph 12 a (5) is added as follows:

(5) When using the mine with the knife-edge sight, select an aiming point at ground level that

is approximately 150 feet in front of the mine. Position the eye approximately 6 inches (15 cm.) to the rear of the sight. Aim the mine by alining the two edges of the sight with the aiming point (fig. 11.1).

Page 13, figure 11.1 is added as follows:



*Figure 11.1 Aiming the M18A1 antipersonnel mine equipped with the knife-edge sight.*

Page 33, appendix IV, paragraph 2 b is superseded as follows:

b. Graphic training aid (GTA) 7-1-15, "Anti-

personnel Mine, M18A1 (Claymore)" illustrates the mine and its methods of employment.

**C 1, FM 23-23**

By Order of the Secretary of the Army:

Official:

KENNETH G. WICKHAM,  
*Major General, United States Army,  
The Adjutant General.*

W. C. WESTMORELAND,  
*General, United States Army,  
Chief of Staff.*

**Distribution:**

To be distributed in accordance with DA Form 12-11 requirements for Antipersonnel Mine, M18 and M18A1 (CLAYMORE).

**TAGO 713A**



FIELD MANUAL }  
No. 23-23 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D. C. 6 January 1966

## ANTIPERSONNEL MINE M18A1 AND M18 (CLAYMORE)

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\* This manual supersedes TC 7-3, 5 October 1962.

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# CHAPTER 1

## INTRODUCTION

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### Section I. GENERAL

#### 1. Purpose and Scope

*a.* This manual provides guidance for commanders and instructors presenting instruction and training on the functioning, installation, and employment of the antipersonnel mine, CLAYMORE.

*b.* This manual describes the M18A1 antipersonnel mine, CLAYMORE, its functioning, and installation. It provides a basis for conducting training utilizing the electric firing system issued with the mine. It also gives guidance for tactical employment and safety requirements. An earlier model of the CLAYMORE antipersonnel mine, the M18, is covered in appendix II.

*c.* The material contained herein is applicable without modification to both nuclear and nonnuclear warfare.

*d.* Users of this manual are encouraged to submit recommended changes or comments to

improve the publication. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to the Commandant, United States Army Infantry School, Fort Benning, Ga. 31905.

#### 2. Roles of the Antipersonnel Mine, CLAYMORE

The number of ways in which the CLAYMORE may be employed is limited only by the imagination of the user. The CLAYMORE is used primarily as a defensive weapon, but has its application in the offensive role. It must be emphasized that when the CLAYMORE is referred to as a weapon, this implies that it is employed in the controlled role. In the uncontrolled role, the CLAYMORE is considered a mine or boobytrap (FM 20-32 ).

### Section II. DESCRIPTION

#### 3. General

The M18A1 antipersonnel mine was standardized in 1960, and replaced the M18 antipersonnel mine (app. II). Both mines are similar in appearance and functioning. The M18A1 (fig. 1) is a directional, fixed-fragmentation mine. When employed in the controlled role, it is treated as a one-shot weapon. It is primarily designed for use against massed infantry attacks; however, its fragments are also effective against light vehicles. The M18A1 mine is equipped with a fixer plastic slit-type sight, adjustable legs, and two detonator wells.

The mine and all its accessories are carried in the M7 bandoleer (fig. 2). The instruction sheet for the M18A1 is shown in figure 3.

#### 4. Casualty Effects

When detonated, the M18A1 mine will deliver spherical steel fragments over a 60° fan-shaped pattern that is 2 meters high and 50 meters wide at a range of 50 meters (fig. 4). These fragments are moderately effective up to a range of 100 meters and can travel up to 250 meters forward of the mine. The optimum effective range (the range at which the

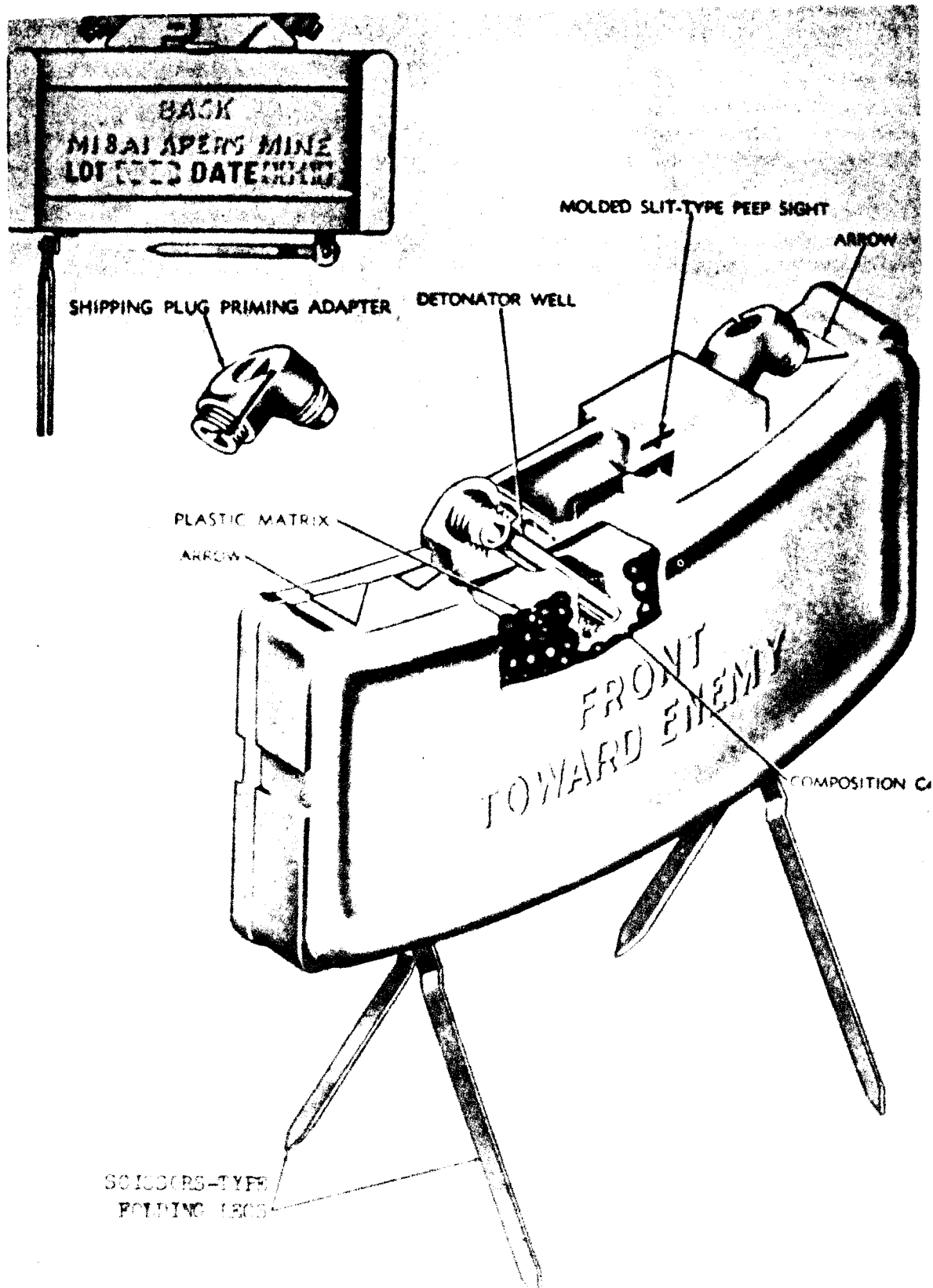


Figure 1. The M18A1 antipersonnel mine (CLAYMORE).

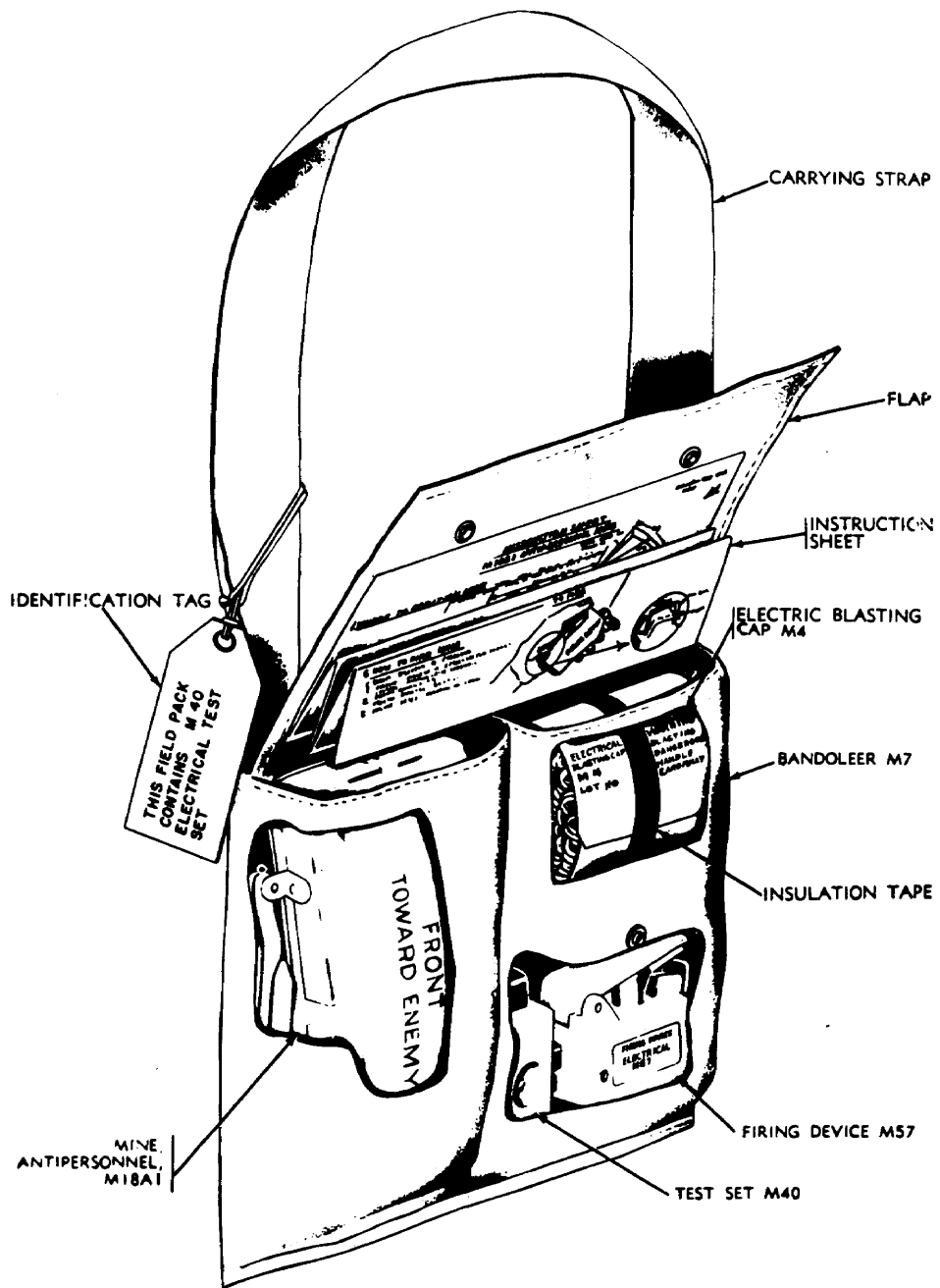
most desirable balance is achieved between lethality and area coverage) is 50 meters.

## 5. Danger Area

*a. Danger From Fragments* (fig. 4). The danger area consists of a 180° fan with a radius of 250 meters centered in the direction of aim.

*b. Danger Area of Backblast and Secondary Missiles* (figs. 4 and 24). Within an area of 16 meters to the rear and sides of the mine, backblast can cause injury by concussion (ruptured eardrums) and create a secondary missile hazard.

- (1) Friendly troops are prohibited to the rear and sides of the mine within a radius of 16 meters.
- (2) The minimum safe operating distance from the mine is 16 meters. At this distance, and regardless of how the mine is employed, the operator should be in a foxhole, behind cover, or lying prone in a depression. The operator and all friendly troops within 100 meters of the mine must take cover to prevent being injured by flying secondary objects such as sticks, stones, and pebbles.



*Figure 2. The M18A1 antipersonnel mine and accessories packed in the M7 bandoleer.*

**INSTRUCTION SHEET**  
**M18A1 ANTIPERSONNEL**

DIRECTION OF ENEMY

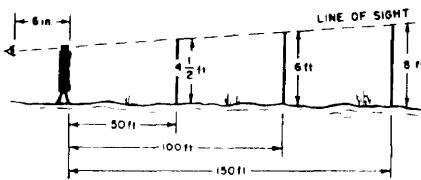
**1. WHERE TO POSITION MINE**



**WARNING: TAKE COVER**

STONES OR MINE DEbris  
300 FT. (732 PAGES) TO  
TAKE COVER. THE MINE  
SHIELDED POSITIONS NO CLOSER THAN 50 FT. FROM THE MINE.

**AIMING DISTANCE INSTRUCTIONS**

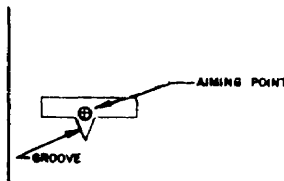
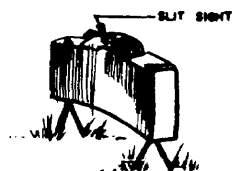


The mine should be sighted on a point 8 ft high at a distance of 150 ft, or one of the alternative points shown.

**2. HOW TO AIM MINE :**

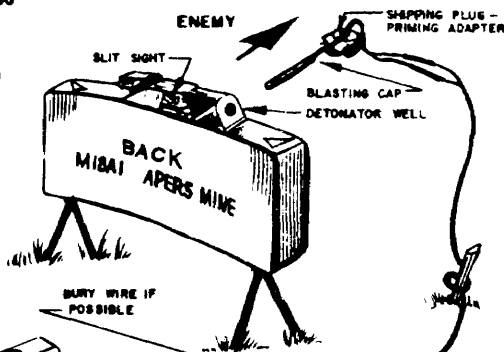
1. TURN LEGS OF MINE DOWNWARD AND SPREAD APART. TWIST THE SPREAD LEGS TO LIE TO THE FRONT AND BACK AS SHOWN. ARROWS POINT TO ENEMY.

2. AIM MINE BY SIGHTING THROUGH SLIT SIGHT. SHIFT MINE TO PUT GROOVE IN LINE WITH AIMING POINT. PRESS LEGS FIRMLY INTO GROUND RECHECKING AIM.



**3. HOW TO ARM MINE :**

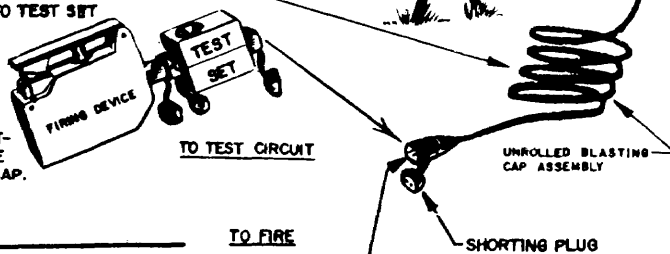
1. UNROLL PAPER FROM BLASTING CAP ASSEMBLY BY PULLING INSULATING TAPE TAB (SAVE TAPE FOR POSSIBLE REPAIR OF WIRE.)
2. LAY WIRE BETWEEN MINE AND FIRING POSITION (CAN UNROLL WIRE FROM MINE OR FIRING POSITION) WRAP WIRE AROUND LEG OF MINE AS SHOWN AND BURY WIRE IF POSSIBLE.
3. INSERT BLASTING CAP IN EITHER DETONATOR WELL AND LOCK WITH SHIPPING PLUG-PRIMING ADAPTER.
4. RECHECK AIM OF MINE AFTER ABOVE ARMING.



**4. HOW TO TEST CIRCUIT :**

(TAKE COVER AT FIRING POSITION)

1. REMOVE SHORTING PLUG FROM BLASTING CAP WIRE.
2. INSERT PLUG OF BLASTING CAP WIRE INTO TEST SET
3. INSERT PLUG OF TEST SET INTO FIRING DEVICE.
4. SWING SAFETY BAIL TO FIRE POSITION AND FROM COVERED POSITION DEPRESS FIRING HANDLE. LIGHT IN WINDOW OF TEST SET INDICATES GOOD CIRCUIT. IF NO LIGHT, WIRE OR CAP MAY BE DEFECTIVE. CHECK AND REPAIR WIRE WITH TAPE SAVED FROM WRAPPER OR REPLACE CAP.



**5. HOW TO FIRE MINE :**

(TAKE COVER AT FIRING POSITION)

1. INSERT PLUG OF BLASTING CAP WIRE DIRECTLY INTO FIRING DEVICE (SAFETY ON)
2. WHEN READY TO FIRE, SWING SAFETY BAIL TO ARMED POSITION.
3. FIRE BY DEPRESSING HANDLE SMARTLY.

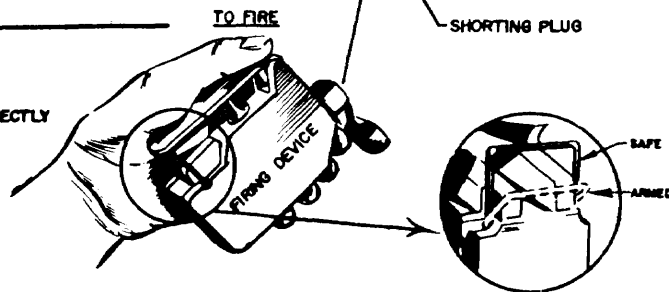


Figure 3. The instruction sheet attached to the M7 bandoleer.

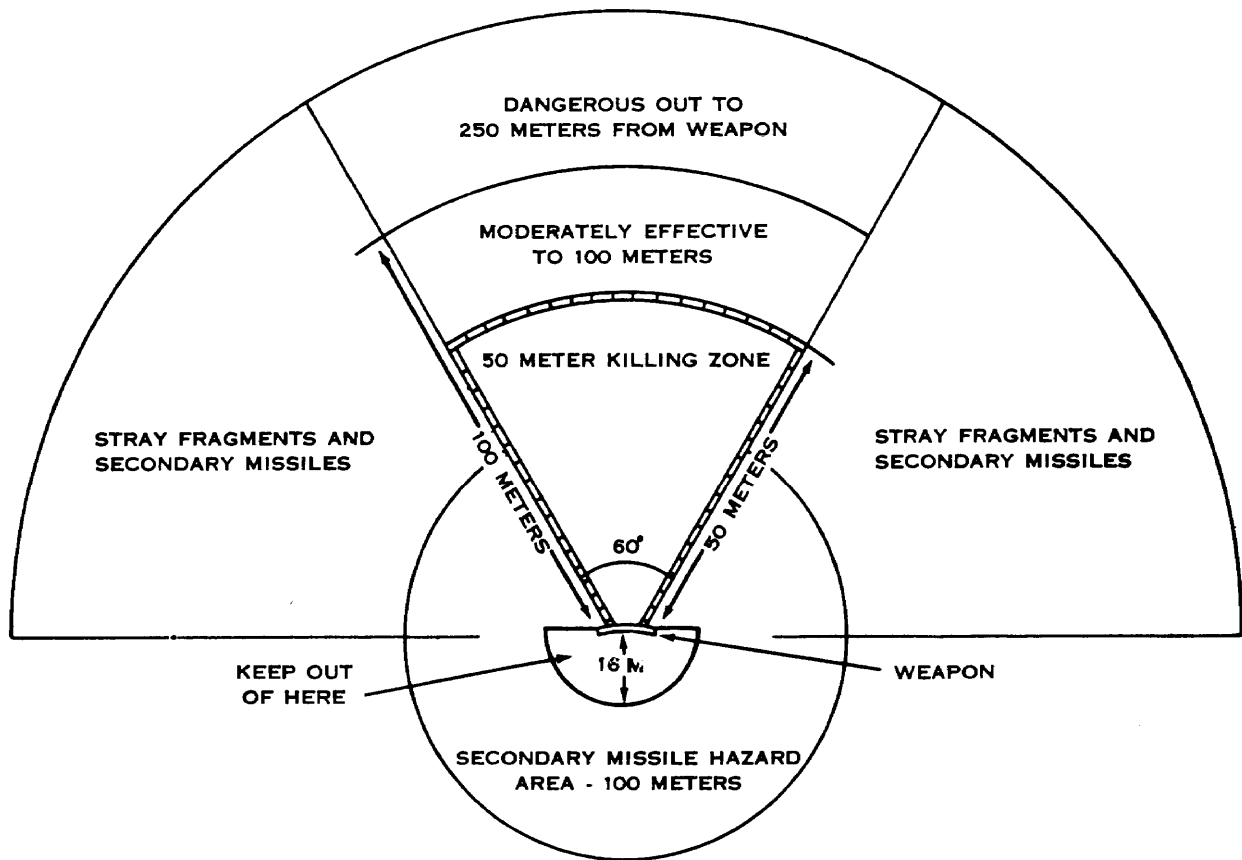


Figure 4. Danger radius and effects of the M18A1.