HANDBOOK FOR SIGHT PICTURE TRAINING

OBJECTIVE
Using this handbook, you can check how much you know about how to place sight reticles on targets in response to fire commands.

U. S. Army Research Institute for the Behavioral and Social Sciences
The Handbook for Sight Picture Training is a prototype training document. For comments or questions contact:

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The handbook was developed as a research instrument for research on retention of sight picture skills. It consists of instructional material on the M60A1 tank sight reticles. The material is self-paced, performance-based, and self-correcting. Soldiers place plastic reticles on targets in response to fire commands. They then examine a picture of the correct sight picture to determine if they are in error.
The Performance-Based Training Team of the Army Research Institute (ARI) performs research in the areas of acquisition and retention of skills. This product was developed in order to provide armor crewmen with sight picture skills so that retention characteristics can be determined. The final objective of the research is to determine the required frequency of training to maintain competence in critical armor skills. This product also serves as a training aid in an ongoing research project to determine the effects of introducing new training in units.

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JOSEPH ZEIDNER
Technical Director
PART I

INSTRUCTIONS

1. Part I reviews things that you should know about sight reticles.

2. Remove the three plastic reticles from the pocket on the last page.

3. Go on to the next page.
Study this picture of the periscope reticle.

If you forget some of the distances on the reticle, look back to this page.
On the following pages, read the command on the left-hand side of the page. Place the reticle, and then lift the flap to check your answer.
Using the plastic periscope reticle:
place the center of the aiming cross
1 mil to the right of the
dot below.

1. The central aiming cross is 2 mls wide
   and 2 mls high.
2. The distance from the center of the aiming
cross to the dot is 1 mil.
Using the plastic periscope reticle: 2 mils down
place the center of the aiming cross 2 mils below the dot below

1. The distance from the center of the aiming cross to the dot is 2 mils.
Using the plastic periscope reticle:
place the center of the aiming
cross 2½ mils to
the left of the dot below.

1. The distance from the center of the
aiming cross to the dot is 2½ mils.
Study this picture of the HEAT reticle.

If you forget some of the distances on the reticle, look back to this page.

Now continue as before.
Using the plastic HEAT reticle:

place the center of the
2000 meter line on the
dot below.

HEAT-T M456
Using the plastic HEAT reticle:
place the center of the
1600 meter line 5 mils
to the right of the
dot below.

1600 meters, 5 mils right

HEAT-T M456

1. The lead lines on the HEAT reticle are
5 mils long.
Using the plastic HEAT reticle: place the center of the 2800 meter line 200 meters below the dot.

2800 meters, drop 200 meters

HEAT-T M456

1. The range lines on the HEAT reticle are 200 meters long.
Using the plastic HEAT reticle: place the center of the 2600 meter line on the dot below.

HEAT-T M456
Study this picture of the combined APDS and HEP reticle.

If you forget some of the distances on the reticle, look back to this page.

Now continue as before.
Using the plastic HEP reticle:
place the center of the 1600 meter line 5 mils to the left of the dot below.

1. The lead lines on the HEP reticle are 5 mils long.
Using the plastic HEP reticle: place the center of the 2000 meter line 200 meters above the dot.

1. The range lines on the HEP reticle are 200 meters long.
Using the plastic HEP reticle:
place the center of the 2200 meter line on the dot below.
Using the plastic APDS reticle: place the center of the 2400 meter line 2½ mils to the right of the dot below.

APDS, 2400 meters, right 2½ mils

1. The lead lines on the APDS reticle are 2½ mils long.
Using the plastic APDS reticle: place the center of the 1600 meter line 200 meters above the dot below.

APDS, 1600 meters, add 200 meters

1. The range lines on the APDS reticle are 200 meters long.
PART II

INSTRUCTIONS

1. Part II of the handbook reviews things you should know about initial sight pictures and second shot corrections.

2. On the following pages, place the reticle over the picture as you would if you were actually firing at the target. Then lift the flap to check your answer.

3. Underneath the correct sight picture there are two or three sentences describing why the sight picture is correct.
1. Because range is not announced, use periscope.

2. Because ammunition is announced, aim at center of visible target.
1. Because range is not announced, use periscope.
2. Because ammunition is announced, aim at center of tank.
3. When firing SABOT against a moving target, initial lead is 2½ mils.
1. Because range is not announced, use periscope.
2. Because ammunition is announced, aim at center of tank.
3. When firing HEAT against a moving target, initial lead is 5 mils.
1. Because it is a battlesight engagement, aim at base of target.
2. When firing SABOT against a moving target, initial lead is 2½ mils.
3. If APDS reticle is used, 1600 meter range line should be at base of target with same lead applied.
1. Because it is a battlesight engagement, aim at base of target.
2. When firing HEAT against a moving target, initial lead is 5 mils.
3. If HEAT reticle is used, 1100 meter range line should be at base of target with same lead applied.
1. Because it is a battlesight engagement, aim at base of visible target.
2. If APDS reticle is used, 1600 meter range line should be at base of visible target.
1. Because periscope is damaged, use telescope.
2. Because ammunition is announced, place 1600 meter range line at center of tank.
(Periscope damaged)
Gunner
HEAT
Moving Tank
1800
Fire

1. Because periscope is damaged, use telescope.
2. Because ammunition is announced, aim at center of tank.
3. When firing HEAT against a moving target, initial lead is 5 mils.

(Periscope damaged)
Gunner
HEAT
Moving Tank
1800
Fire

HEAT-T M456

1. Because periscope is damaged, use telescope.
2. Because ammunition is announced, aim at center of tank.
3. When firing HEAT against a moving target, initial lead is 5 mils.
1. Because periscope is damaged, use telescope.
2. Because ammunition is announced, aim at center of tank.
3. When firing SABOT against a moving target, initial lead is 2½ mils.
Because periscope is damaged, use telescope.

Battlesight range for SABOT is 1600 meters.

Because it is a battlesight engagement, aim at base of target.
1. Because periscope is damaged, use telescope.
2. Battlesight range for HEAT is 1100 meters.
3. Because it is a battlesight engagement, aim at base of target.
1. Because periscope is damaged, use telescope.
2. Because ammunition is announced, aim at center of target.
3. When firing HEP against a moving target, initial lead is 7½ mils.
1. Raise sight 1 mil for range change.
1. Range remains the same as on initial sight picture.
2. Move sight right 2 mils.
1. Use HEAT reticle as in initial sight picture.
2. Move sight left 2 mils.
3. Raise sight 200 meters. New range is 2200 meters.
Short
Add $\frac{1}{2}$ form
Fire $\frac{1}{2}$

Initial Sight Picture

1. Raise sight $\frac{1}{2}$ tank form for range change
   New Sight Picture
1. Initial Round

Initial Sight Picture

New Sight Picture
Initial Round

Initial Sight Picture

New Sight Picture

Short BOT

Short BOT
Lost
(Apply Standard Adjustment)

1. Round was lost and tank commander gave no command.
2. Apply standard adjustment.
3. Standard adjustment for a precision engagement using the periscope is drop 1 mil.

Initial Sight Picture

New Sight Picture