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armor training	individual skills training	cross training
M60A3	fire commands	reserve training
sustainment training	tank commander	tank gunner
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Research was performed to develop tank gunnery sustainment training materials for M60A3 armor crewmembers. This research product consists of 6 booklets for use by tank commanders in maintaining their knowledge and skill in issuing basic fire commands. The first booklet (RP 83-01A) provides an overview of fire command knowledges and contains training notes. The remaining five booklets provide practice in: classifying threats (RP 83-01B); selecting ammo/weapons (RP 83-01C); sequencing fire command elements (RP 83-01D); issuing fire commands for single engagements (RP 83-01E); and issuing fire commands for multiple and (continued)		

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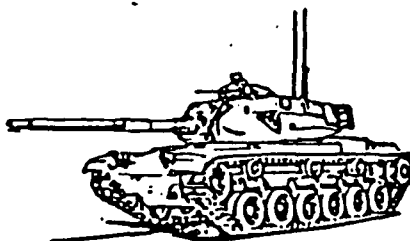
simultaneous engagements (RP 83-01F).

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COMPLIMENTARY NOTICE

FIRE COMMANDS FOR THE M60A3 TANK
BOOKLET 5
SINGLE TARGET ENGAGEMENTS



U.S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

RESEARCH PRODUCT
RP 83-1-E

6 2 25 111

BOOKLET NUMBER 5

SINGLE TARGET ENGAGEMENTS

USER'S GUIDE

This is booklet number 5 in a set of six booklets. The set deals with issuing fire commands on the M60A3 tank. When you have finished the complete set you will be able to:

ISSUE A CORRECT FIRE COMMAND FOR THE MAIN GUN OR ANY MACHINEGUN IN EITHER SINGLE, MULTIPLE OR SIMULTANEOUS TARGET ENGAGEMENTS.

BACKGROUND

In order to win on the battlefield, you must be able to construct a correct fire command.



THIS BOOKLET

This booklet will give you practice in constructing fire commands for single target engagements.

The booklet contains battlefield scenarios. Each scenario includes:

- A picture of the battlefield,
- A short written description of the battlefield situation, *et cetera*,
- A question for you to answer.

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HOW TO USE THIS BOOKLET

1. Look at the scenario picture.
2. Read the written description.
3. Read the question following the description.

NONE OF THE QUESTIONS HAVE ANSWERS. YOU MUST PROVIDE YOUR OWN ANSWER.

4. Check your answer with the Answer Key on the page following the scenario.
5. Refer to:
 - FM-17-12-3if you have any further questions.
6. Complete the rest of the scenarios.

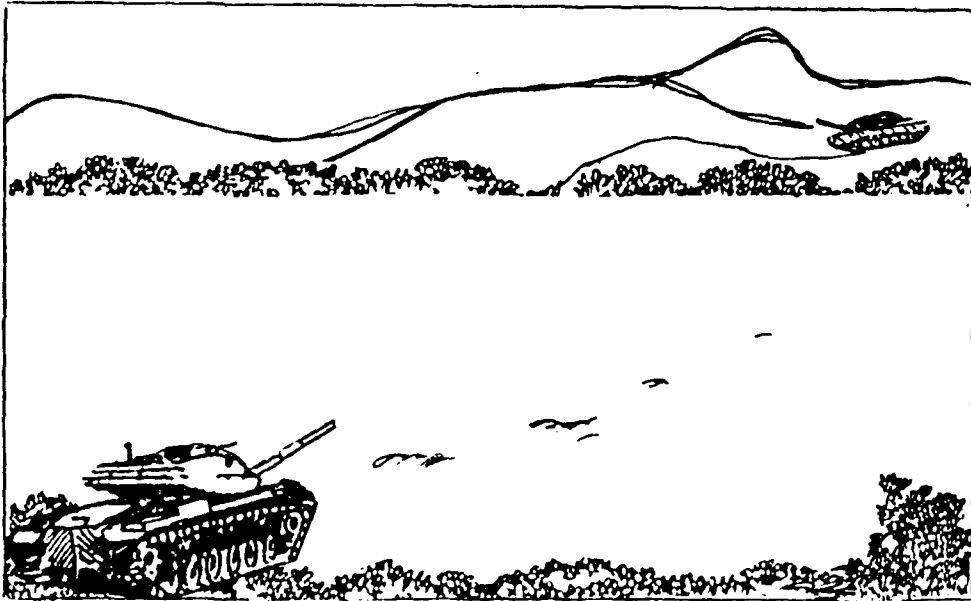
BEFORE YOU USE THIS BOOKLET

Before you use this booklet, be sure you have completed booklets 1 through 4 of this set.

TANK COMMANDER TRAINING NOTES

Training notes are presented in booklet 1.

SCENARIO 1



THE SITUATION

- You are moving in a hasty attack.
- You meet a T-72 setting off to your right, range 1500 meters.
- The T-72 sees you.
- Round loaded is SABOT.
- M60A3 is fully operational.

What is your fire command?
What are the crew responses?

(Assume a first round hit.)

SCENARIO 1 ANSWER

Your fire command should look like this:

TC: GUNNER
SABOT
TANK

Loader: UP

Gunner: IDENTIFIED
LASING

TC: FIRE

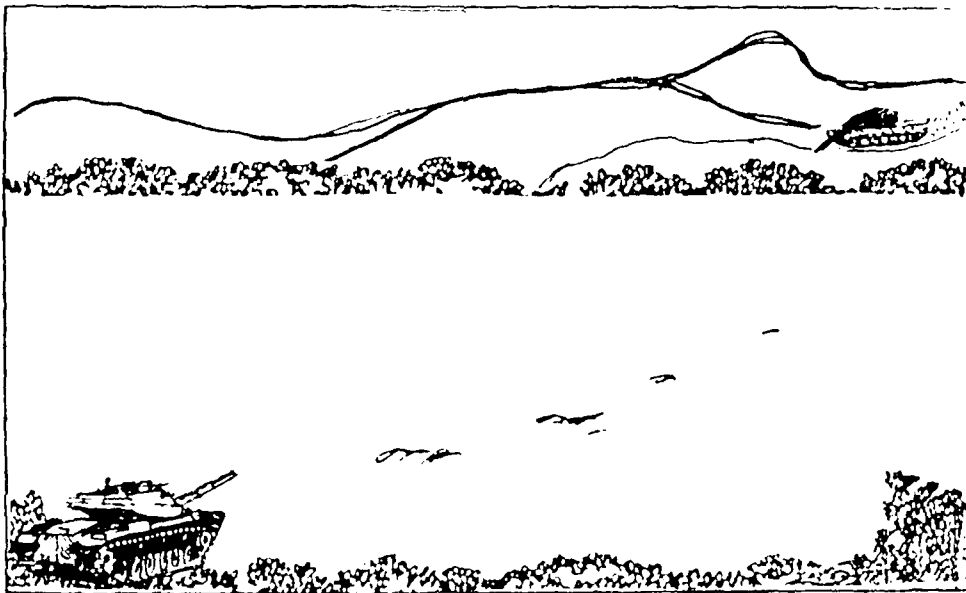
Gunner: ON THE WAY
TARGET

TC: TARGET, CEASE FIRE

This fire command is correct because it contains all of the right elements and crew responses in the correct order.

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SCENARIO 2



THE SITUATION

- You are in a hasty attack.
- You meet a T-72 moving in from your right, range 1500 meters.
- The T-72 sees you.
- Round loaded is HEAT.
- M60A3 is fully operational.

What is your fire command?

What are the crew responses?

(Assume a first round hit.)

SCENARIO 2 ANSWER

The best fire command is:

TC: GUNNER
HEAT
MOVING TANK

Loader: UP

Gunner: IDENTIFIED
LASING

TC: FIRE
FIRE SABOT

Gunner: ON THE WAY
TARGET

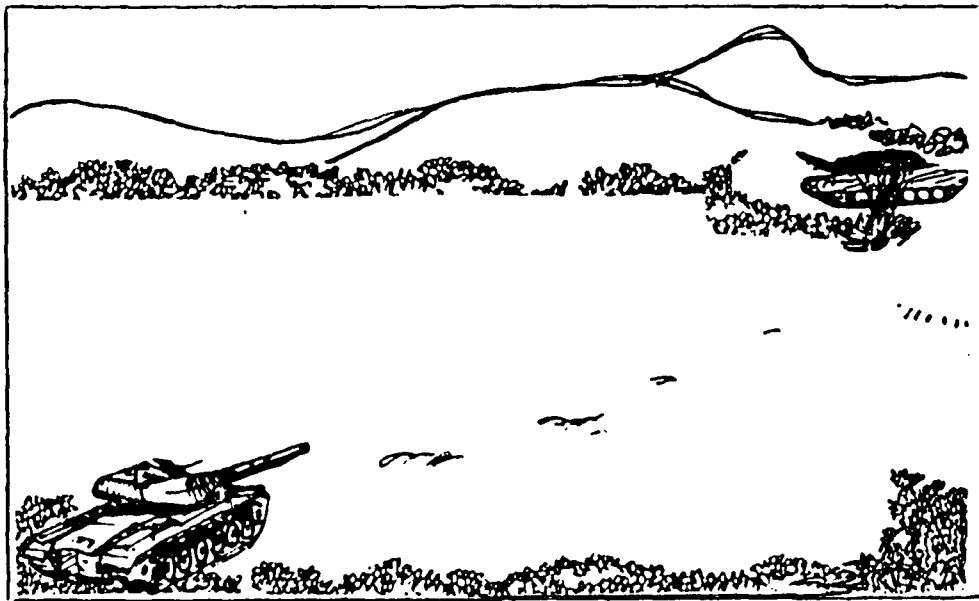
TC: TARGET, CEASE FIRE

Your fire command should include the information that says the tank is moving.

You should fire off the HEAT round that is in the tube because the T-72 is a MOST DANGEROUS THREAT (he can kill you, he has seen you, and he is preparing to engage you).

You should also tell the loader you want your next round to be SABOT in case you have to reengage this target.

SCENARIO 3



THE SITUATION

- You are in a hasty attack.
- M60A3 is fully operational.
- You just fired a SABOT round at the T-72, range 1880 meters.
- The gunner reports an observation of SHORT.
- Your observation agrees with the gunner's.

What is your next command?

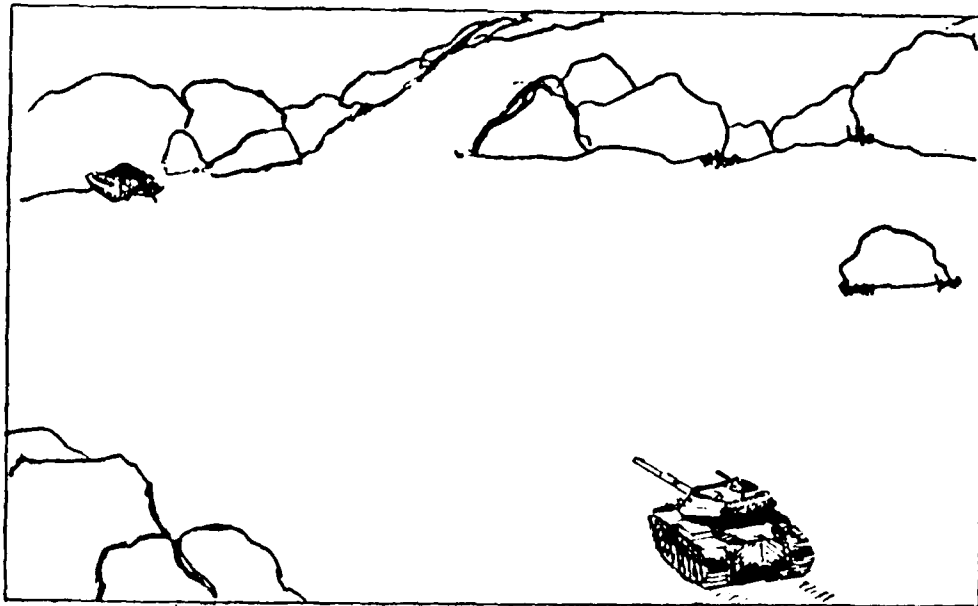
SCENARIO 3 ANSWER

TC: SHORT
 REENGAGE

Your M60A3 if fully operational. Since the round fell SHORT, the TC should check the gunner's lase and the range return to ensure a correct (increased) range reading.

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SCENARIO 4



THE SITUATION

- You are in a hasty attack.
- Round loaded is SABOT.
- You see a T-62 at 1000 meters.
- Your laser rangefinder fails.
- The T-62 is preparing to engage you.

What is your fire command?

What are the crew responses?

(Assume a first round hit.)

SCENARIO 4 ANSWER

The correct fire command is:

TC: GUNNER
BATTLESIGHT
TANK

Loader: UP

Gunner: IDENTIFIED

TC: FIRE

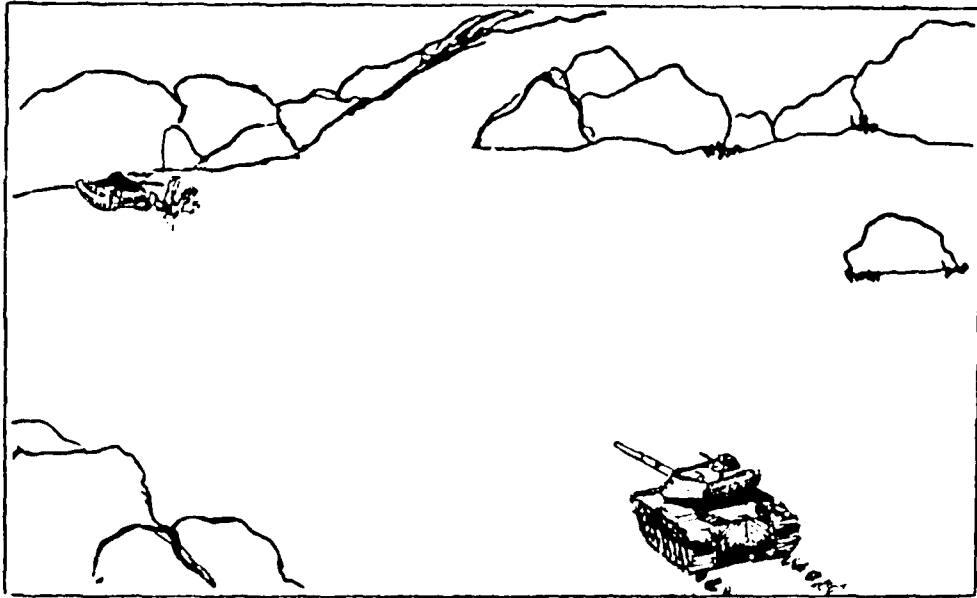
Gunner: ON THE WAY
TARGET

TC: TARGET, CEASE FIRE

It is very important to know that in this engagement you MUST use BATTLESIGHT gunnery. You should realize BATTLESIGHT is needed when:

A most dangerous surprise target appears,
OR when denied use of the LRF.

SCENARIO 5



THE SITUATION

- You just fired a shot at the T-62 using BATTLESIGHT gunnery.
- The gunner reports an observation of SHORT.
- Your observation agrees with his.

What is the next fire command you would give in this situation?

SCENARIO 5 ANSWER

You could do one of two things:

- 1) When your observation agrees with the gunner's, you don't have to issue an adjustment command. You could simply remain silent.

The gunner would then make the sight picture adjustments he thinks are necessary to hit the target.

- 2) Even though your observation agrees with the gunner's, you can announce an adjustment command to assist the gunner achieve target destruction. This adjustment command will normally contain four elements:

ALERT
DEFLECTION CORRECTION
RANGE CORRECTION
EXECUTION

NOTE: ADJUSTMENT commands are NOT given during M35E1/TTS precision gunnery.

Both DEFLECTION and RANGE corrections are given in TARGET FORM or MILS.

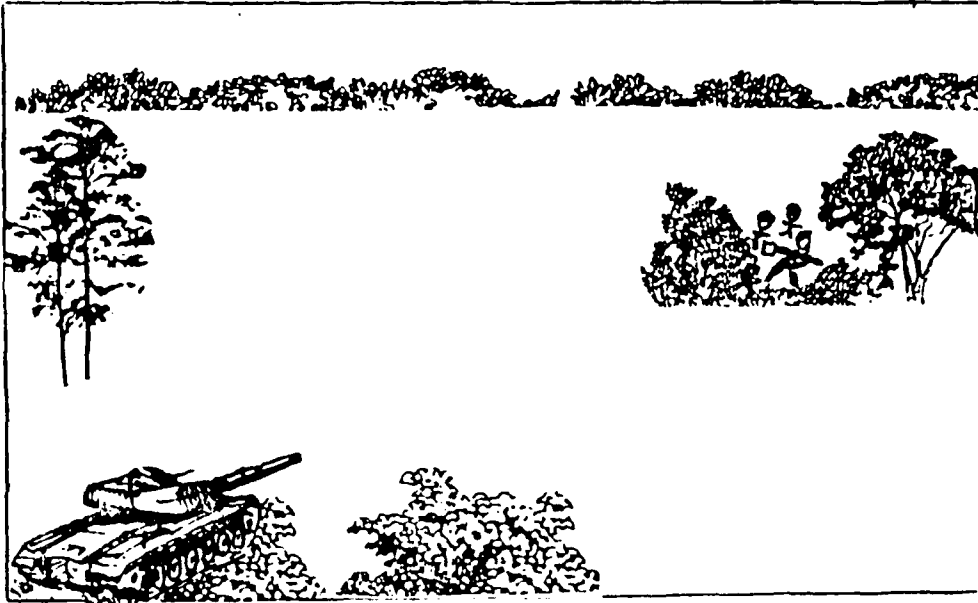
For example:

TC: SHORT
LEFT ONE FORM
ADD ONE-HALF FORM
FIRE

or

TC: SHORT
LEFT ONE
ADD ONE
FIRE

SCENARIO 6



THE SITUATION

- You are in a deliberate attack.
- M60A3 is fully operational.
- Round loaded is SABOT.
- You see an SPC-9 at 1000 meters set up and ready to fire at you.

What is your fire command?
What are the crew responses?

(Assume target destruction with first shot.)

SCENARIO 6 ANSWER

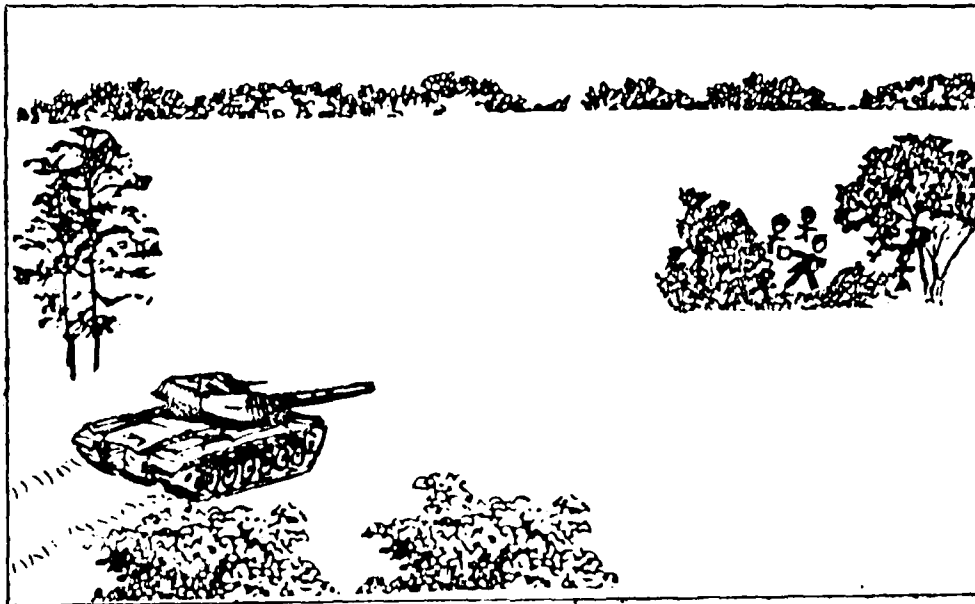
The fire command should be:

TC: CALIBER FIFTY . . .
TC COMPLETE

You should engage the SPG-9 with your CAL 50. It is out-of-range for the COAX (900 meters maximum for the 7.62 mm!).

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SCENARIO 7



THE SITUATION

- You are in a deliberate attack.
- Laser rangefinder not operational.
- Round loaded is HEAT.
- You see an SPG-9 at 750 meters that is set up and ready to fire at you.

What is your fire command?
What are the crew responses?

(Assume target destruction with first shot.)

SCENARIO 7 ANSWER

The best fire command is:

TC: GUNNER
COAX
ANTITANK

Gunner: IDENTIFIED
LASING

TC: FIRE

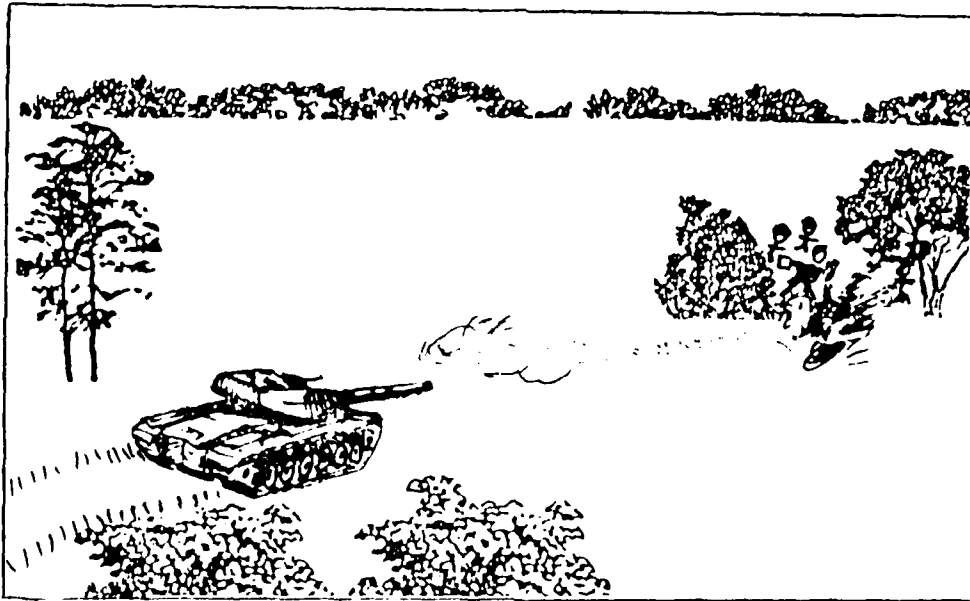
Gunner: ON THE WAY
TARGET

TC: TARGET, CEASE FIRE

You could have used the CAL 50, but the target was within range of the COAX. The M60A3 carries more of the 7.62 mm ammo than it does CAL 50. It's better to save the CAL 50 ammo for targets that are out of range of the COAX.

The gunner could have fired a burst without lasing to the target and then walked the rounds into the target area. The correct answer is really dependent on the situation.

SCENARIO 8



THE SITUATION

- You are engaging the SPG-9 at a range of 750 meters with the COAX.
- The gunner fires one burst at it, which falls SHORT.

What is your next command?

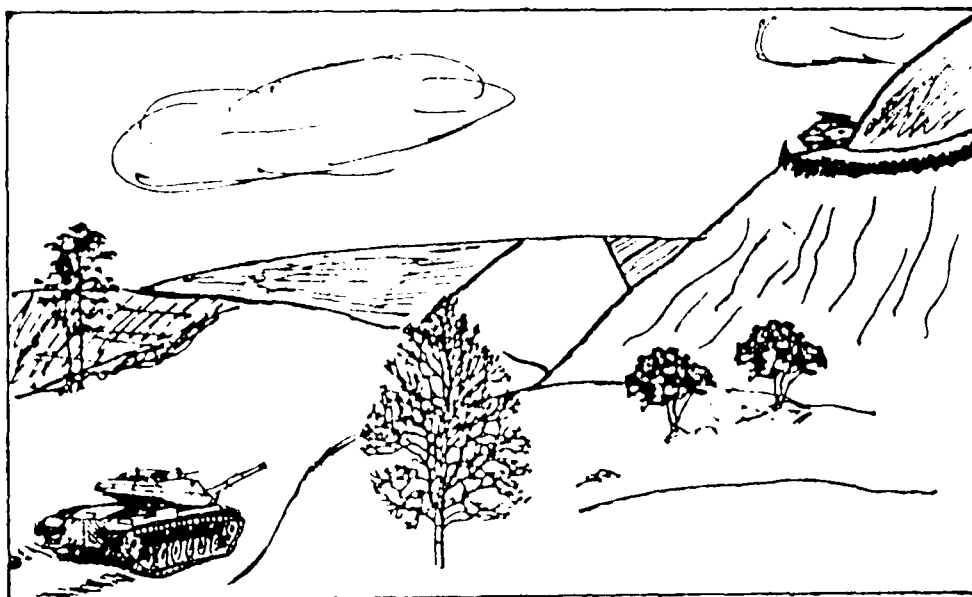
SCENARIO 8 ANSWER

You can do one of two things:

- 1) Your observation will probably agree with the gunner's, so you can simply let him shoot another burst at the target. He will apply the sight picture adjustments he thinks are needed to kill the target. All you have to do is remain silent. If you remain silent the gunner then fires another burst. He DOES NOT announce "ON THE WAY" for the second burst.
- 2) You could assist the gunner by giving him adjustment information such as: "BRING IT UP AND LEFT."

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SCENARIO 9



THE SITUATION

- You are in a bounding overwatch.
- You see a BRDM mounting SAGGER missiles at a range of 2000 meters.
- He is stopped and set up for a launch at you.
- M60A3 is fully operational.
- Round loaded is SABOT.

What is your fire command?

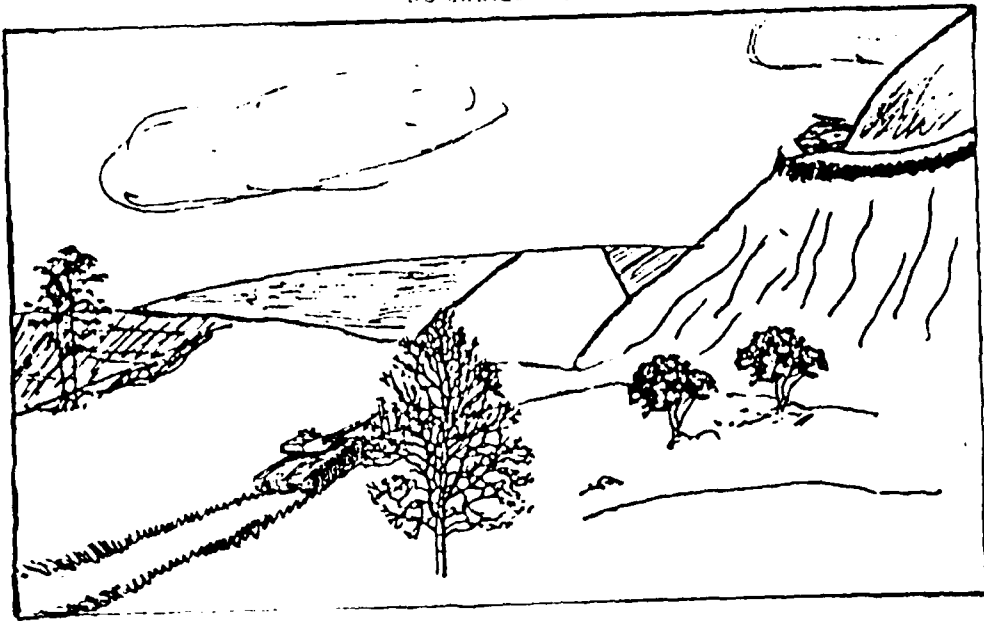
What are the crew responses?

(Assume a first round hit.)

In this situation, you'd better fire the SABOT round at the BRDM (rather than unload it) because he is a MOST DANGEROUS THREAT.

You have to be ready to fire a second round, if necessary. Since the best ammo for a BRDM is the HEAT round, it should be announced as part of the initial fire command.

SCENARIO 10



THE SITUATION

- Your LRF is not operational.
- You are in a bounding overwatch.
- You see a BRDM mounting SAGGER missiles, off to your right at a range of 1000 meters.
- He is stopped and set up for a launch at you.
- Round loaded is HEAT.

What is your fire command?

What are the crew responses.

(Assume a first round hit.)

SCENARIO 10 ANSWER

The best fire command is:

TC: CALIBER FIFTY . . .
TC COMPLETE

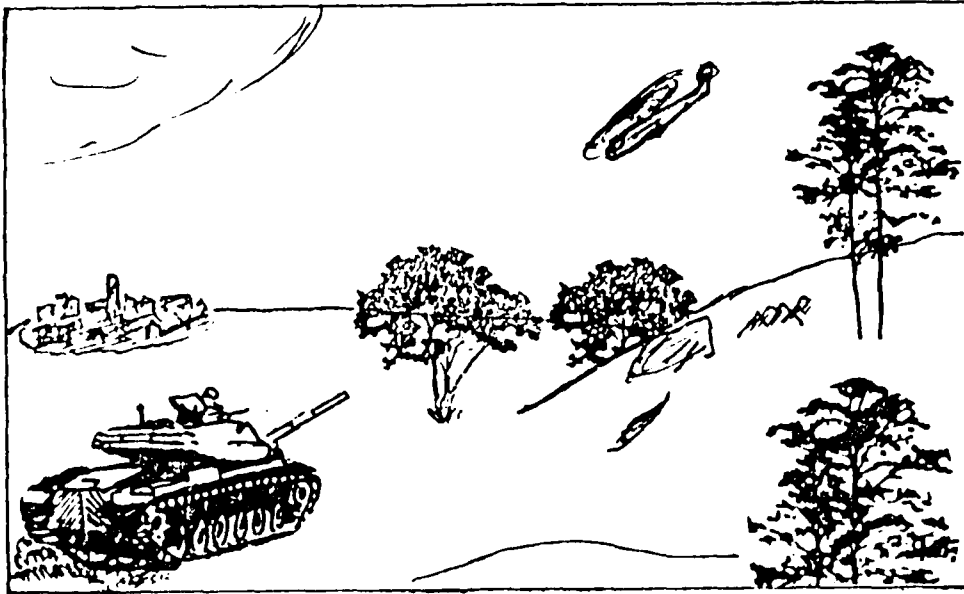
You must engage the BRDM right away because it is a MOST DANGEROUS THREAT.

The quickest engagement is with the CAL 50.

You could use HEAT BATTLESIGHT gunnery but it would take longer and the BRDM is BEYOND battlesight range for the HEAT round that is loaded.

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SCENARIO 11



THE SITUATION

- You are in a traveling overwatch.
- M60A3 is fully operational.
- Round loaded is SABOT.
- A HIND-D helicopter mounting SAGGER missiles begins a pass at you, about 100 meters high, at a range of 500 meters.

What is your fire command?
What are the crew responses?

SCENARIO 11 ANSWER

The best fire command is:

TC: GUNNER
SABOT
CHOPPER

Loader: UP

Gunner: IDENTIFIED
LASING

TC: FIRE
FIRE HEAT

Gunner: ON THE WAY
TARGET

TC: TARGET, CEASE FIRE

The chopper is a MOST DANGEROUS THREAT, so you want to fire immediately.

The primary round against choppers is HEAT, so your command tells the loader to load a HEAT round for the second shot.

The M60A3 Fire Command Booklets are
prototype training documents. For
comments or questions contact:

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