**REPORT DOCUMENTATION PAGE**

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**PERFORMING ORGANIZATION NAME AND ADDRESS**

US Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Ave., Alexandria VA 22333-5600

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**KEY WORDS** (Continue on reverse side if necessary and identify by block number)

- Armor training
- Individual skills training
- Cross training
- M60A3
- Fire commands
- Reserve training
- Sustainment training
- Tank commander
- Tank gunner

**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 crew members. 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 knowledge and contains training notes. The remaining five booklets provide practice in: classifying threats (RP 83-01B); selecting ammo/weapon (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)
simultaneous engagements (RP 83-01F).
FIRE COMMANDS FOR THE M60A3 TANK

BOOKLET 4

FIRE COMMAND ELEMENTS AND SEQUENCE

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

Research Product
RP 83-1-D

86 2 25 116
FIRE COMMANDS FOR THE M60A3 TANK

BOOKLET 4

FIRE COMMAND ELEMENTS AND SEQUENCE

PRELIMINARY DRAFT - NOT FOR DISTRIBUTION

FOR RESEARCH PURPOSE ONLY

U.S. ARMY RESEARCH INSTITUTE

FOR THE BEHAVIORAL AND SOCIAL SCIENCES

Research Product
RP 83-1-D
BOOKLET NUMBER 4

FIRE COMMAND ELEMENTS AND SEQUENCE

USER'S GUIDE

This is booklet number 4 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 issue a fire command, you must announce all elements of the fire command in their proper sequence.
This booklet will give you practice in selecting the proper sequence of fire command elements.

The booklet contains battlefield scenarios. Each scenario includes:

- A picture of the battlefield.
- A short written description of the battlefield situation.
- A question for you to answer.
HOW TO USE THIS BOOKLET

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

SOME QUESTIONS ARE FOLLOWED BY A LIST OF POSSIBLE ANSWERS. FOR THESE QUESTIONS, YOU SHOULD SELECT THE CORRECT ANSWER.

SOME QUESTIONS DO NOT HAVE ANSWERS. FOR THESE QUESTIONS YOU MUST PROVIDE YOUR OWN ANSWER.

4. Check your answer with the Answer Key on the page following the scenario.
5. Refer to:
   • FM-17-12-3
   if you have any further questions
6. Complete the rest of the scenarios.
SCENARIO 1
THE SITUATION

- You are in a deliberate defense, turret down and undetected.
- A single PT-76 is identified at a range of 1200 meters.
- Your M60A3 is fully operational.
- Round loaded is SABOT.

What is your fire command?

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<th>B</th>
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<th>D</th>
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</tbody>
</table>

7
SCENARIO 1 ANSWER

Your correct answer is: A GUNNER SABOT TANK ... FIRE

This fire command has all the elements in the correct sequence. The elements are:

ALERT AMMUNITION/WEAPON DESCRIPTION EXECUTION
WRONG ANSWERS

B.
C. Elements are not in correct sequence.
D.
THE SITUATION

- You are stopped in a bounding overwatch position.
- Your M60A3 is fully operational.
- Round loaded is HEAT.

You see a dismounted SAGGER crew at 2000 meters preparing to fire.

What is your fire command?

A  B  C  D
MISSILE  MISSILE  HEAT  FIRE
GUNNER  GUNNER  MISSILE  . .  . .  GUNNER  FIRE
The correct answer is D:  GUNNER  HEAT  MISSILE  FIRE

The elements of this command are in the right order.  The elements are:

- ALERT
- AMMUNITION/WEAPON
- DESCRIPTION
- EXECUTION
THE SITUATION

- M60A3 is moving in a deliberate attack, fully operational.
- Round loaded is SABOT.
- A BMP is identified moving to your left front at 2000 meters mounting sagger.
- It is not aiming in your direction.

What is your fire command?

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15
SCENARIO 3 ANSWER

The correct answer is C: DRIVER STOP
GUNNER
SABOT
MOVING PC ...
FIRE

Whether or not an M60A3 tank crew should come to a halt to fire is the decision of the tank commander at that time. Given the present situation the tank crew would increase its probability of a first round hit if it came to a brief halt to fire. This is especially true since the tank is undetected by the PC.
WRONG ANSWERS

A. Incorrect elements, incorrect sequence.

B. Correct, but not preferred since the probability of a 1st round hit is less than firing from a stationary tank.

D. Incorrect sequence.
THE SITUATION

- You have advanced to the enemy's defensive area and stopped for a brief halt.
- M60A3 is fully operational.
- Round loaded is SABOT.
- A self-propelled howitzer is identified, at 2000 meters, direct front.

What is your fire command?

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<tr>
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<th>A</th>
<th>B</th>
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<td></td>
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</table>
SCENARIO 4 ANSWER

The correct answer is C: GUNNER
SABOT
TANK...
FIRE

This fire command has the correct elements in the right sequence. Remember, artillery pieces such as a self-propelled howitzer are identified as TANK in the fire command.
WRONG ANSWERS

A. Wrong target description, incorrect sequence of elements.

B. }

D. Incorrect sequence of elements.
THE SITUATION

- You resume the attack and are advancing in the enemy's main defensive belt.
- Your laser rangefinder has failed.
- Round loaded is SABOT.
- A self-propelled howitzer suddenly appears to your right front at 1000 meters and stops.
- It has seen you and is preparing to fire.

What is your fire command?

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<th>A</th>
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<th>D</th>
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</table>
SCENARIO 5 ANSWER

The correct answer is D: GUNNER
BATTLESIGHT
MOVING TANK . . .
FIRE

This fire command is correct because it has all the right elements in the right order. The elements are:

ALERT
AMMUNITION/WEAPON (in this case, BATTLESIGHT)
DESCRIPTION
EXECUTION

Remember, BATTLESIGHT can be employed in situations where you are suddenly presented with a most dangerous surprise target or when denied use of the LRF. Whether the tank should come to a brief halt to fire or fire on the move is the TC's decision. Given this situation, the tank crew should fire on the move to get off the 1st round as quickly as possible.
WRONG ANSWERS

A. Incorrect element. Says BATTLESIGHT and SABOT.
B. Incorrect element. Does not say BATTLESIGHT.
C. Incorrect elements and sequence of elements.
THE SITUATION

- You are stopped and providing overwatch for the lead tank(s).
- Laser rangefinder has failed.
- Round loaded is SABOT.
- You see a T-72 crossing your direct front at about 2000 meters.

What is your fire command?

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<td></td>
<td>FIRE</td>
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SCENARIO 6 ANSWER

Your correct answer is B: GUNNER
SABOT
MOVING TANK
INDEX TWO THOUSAND ...
FIRE

Note. If the tactical situation dictated rapid target engagement, the TC should announce an estimated range and the gunner should fire from the M105D telescope.
WRONG ANSWERS

A. That is the correct fire command for precision gunnery if the laser rangefinder was operational.

B. Wrong elements. Fire command does not have a "DRIVER STOP" element.

D. Wrong elements. Target is moving and beyond battlesight range.
**THE SITUATION**

- You are at a halt, turret exposed and not well concealed.
- M60A3 is fully operational.
- Round loaded is HEAT.
- You see a T-72 at 2000 meters.
- He has detected you.

What is your fire command?

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<th>D</th>
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</table>
SCENARIO 7 ANSWER

The correct answer is C: GUNNER
HEAT
TANK ... FIRE
FIRE SABOT

Remember:

You are detected and DO NOT have enough time to unload the HEAT round and reload with SABOT.
You must shoot NOW, and reload with the BEST round for your next shot.
The fire command tells the loader what kind of ammo to put in next, and for the Gunner to change his AMMUNITION SELECT switch.
WRONG ANSWERS

A. If you announce this, the loader will reload the next round with HEAT.

B. If you announce this, the loader will immediately unload the HEAT round, reload with SABOT, and announce SABOT UP. You'll lose a lot of time in getting off your first shot. This is NOT a good idea.

D. Target is beyond battlesight range.

E. Incorrect sequence of elements.
THE SITUATION

- You are in a deliberate defense, turret down and well concealed.
- M60A3 is fully operational.
- Round loaded is HEAT.
- A T-72 appears at 2000 meters. It does not see you.

What is your fire command?

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<th>A</th>
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<th>C</th>
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<td>FIRE</td>
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</table>
SCENARIO 8 ANSWER

The correct answer is B: GUNNER
SABOT
TANK...
FIRE

In this situation, you are well concealed and the T-72
HAS NOT seen you.
You have enough time to unload the HEAT round and reload
with SABOT, the BEST round for armor.
The way to reload is to announce SABOT in the AMMUNITION
element.
The Loader will respond "SABOT UP", and the Gunner will
change from HEAT to SABOT.
WRONG ANSWERS

A. This is the 2d best round against armor.

C. This is what you would do if you do not have time to reload.

D. Technically correct, but not the standardized fire command recommended in FM 17-12-3.
SCENARIO 9
THE SITUATION

- You are moving in a traveling overwatch mode.
- M60A3 is fully operational.
- Round loaded is SABOT.
- You see a man pack SAGGER team off to your left at 750 meters.

What is your fire command?

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<th>B</th>
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<td>COAX</td>
<td>BEEHIVE</td>
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</tbody>
</table>
SCENARIO 9 ANSWER

The correct answer is D: GUNNER
COAX
MISSILE ...
FIRE

This fire command contains all the correct elements in the correct sequence. Whether or not an M60A3 tank should come to a halt to fire is the decision of the tank commander. Given this present situation, the tank crew should continue to move and engage the target with the coax machinegun.
WRONG ANSWERS

A. If you wanted to use the CAL 50, you WOULD NOT announce the fire command like that. It would be:

   CAL 50

B. Careful! The loader CAN'T fire the COAX.

C. The loader would unload the SABOT round and reload with BEEHIVE. That probably isn't a good idea because an enemy tank might come along and you can't hurt him with BEEHIVE. Leave the SABOT in the tube and use the COAX to take care of the SAGGER team.
THE SITUATION

- You are in a deliberate attack and have penetrated the enemy's forward defensive position.
- M60A3 is fully operational.
- Round loaded is SABOT.
- You see a BM-21 mounting 122 mm rocket launchers to your right at 1000 meters.

What is your fire command?

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<th>A</th>
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<tr>
<td>FIRE HEAT</td>
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SCENARIO 10 ANSWER

The correct answer is D: CAL 50

Whenever the TC is going to engage a target with his weapon, the fire command is: CAL 50. Again, the preferred method of engagement is to fire on the move.
WRONG ANSWERS

A. Not a bad choice, but save your main gun ammo and take him out with your CAL 50.

B. No, the truck is at 1000 meters. That's a little too far for the 7.62 mm. Remember, the COAX has a maximum effective range of 900 meters.

C. No way! The gunner can't fire the CAL 50.
The M60A3 Fire Command Booklets are prototype training documents. For comments or questions contact:

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ATTN: PERI-IK  
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