



# SAAB

# Carl-Gustaf M4

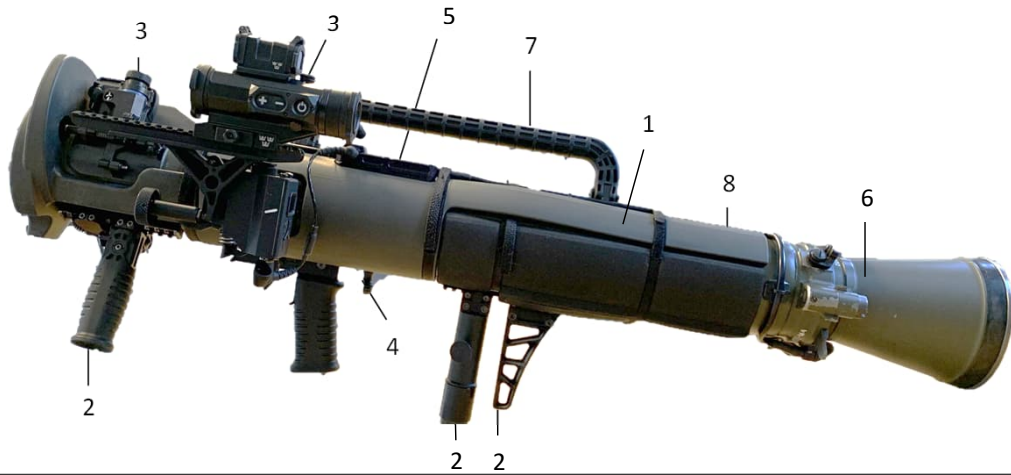
## Quick Handling Guide

---



# Carl-Gustaf M4

## Quick Handling Guide



### Before use: Pre-Fire Inspection

Check the weapon to ensure it is not damaged, appears functioning, and is safe to use.

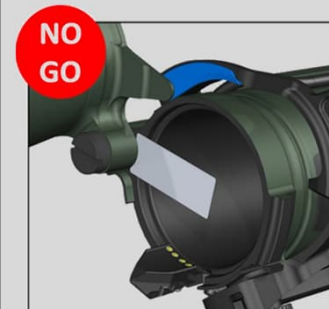
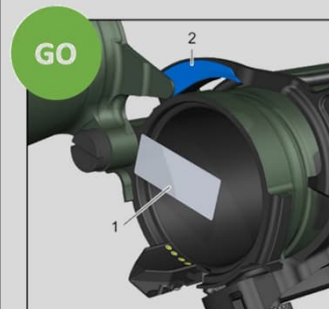
#### WARNING

Check that the weapon is not loaded.

| Key | Item                                      | Gunner Check to assure                                                             |
|-----|-------------------------------------------|------------------------------------------------------------------------------------|
| 1   | Impact protection and barrel              | Clean. No obstruction. No scratches, dents, cuts or cracks.                        |
| 2   | Front grip, shoulder pad and bipod holder | Function and adjustment.                                                           |
| 3   | Sights                                    | Clean. Not damaged. Function.                                                      |
| 4   | Firing mechanism                          | Clean. Function. Shot counter plug, screws and caps securely attached. Firing pin. |
| 5   | Electronics system                        | Not damaged. Clean connectors.                                                     |
| 6   | Venturi and locking lever                 | Clean. Not damaged. Correct operation. Clearance between venturi and barrel.       |
| 7   | Carrying handle                           | Function.                                                                          |
| 8   | Carrying sling and fastening strap        | Function.                                                                          |
| 9   | Functional test                           | Perform functional test (page 4).                                                  |
| 10  | Boresighting                              | Check boresighting and adjust zeroing on sights, if necessary (pages 5, 6 and 7).  |

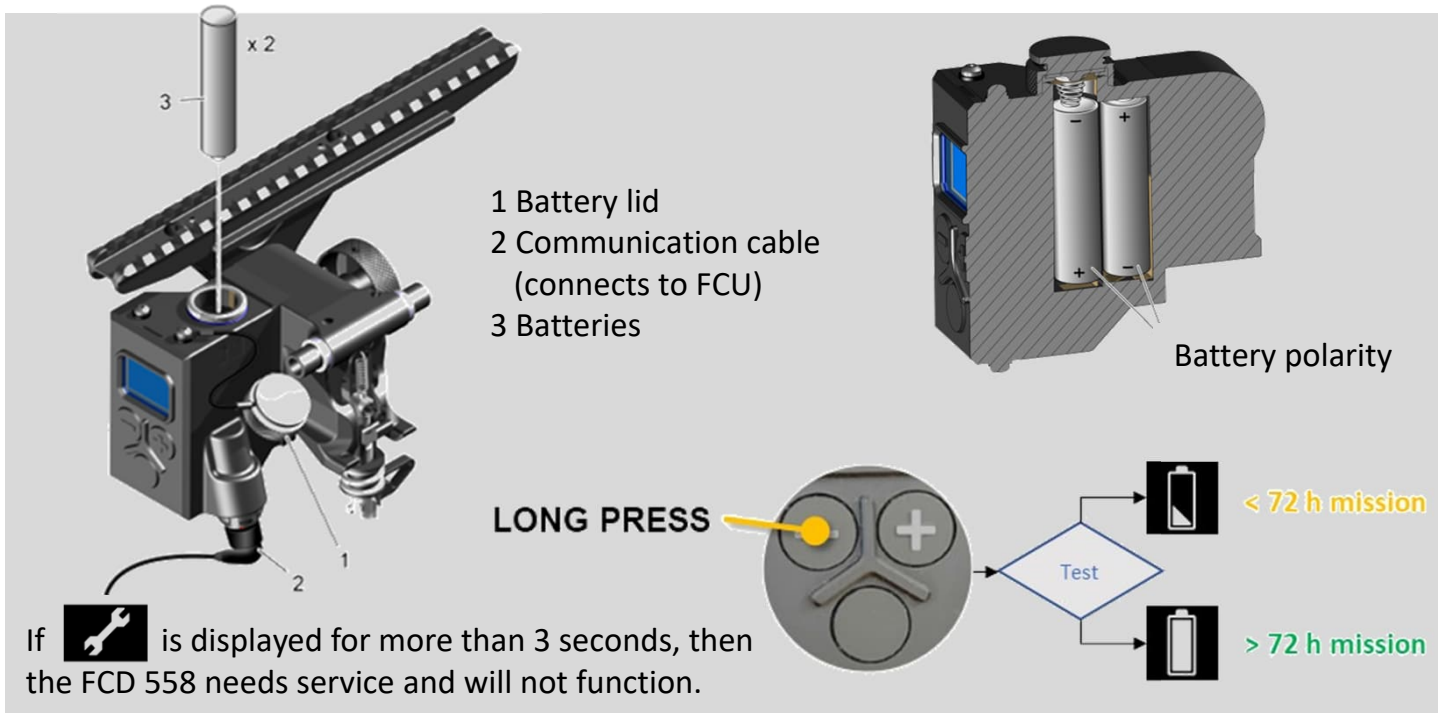
#### Checking clearance between venturi and barrel.

1. Measuring plate (from bag no 1).

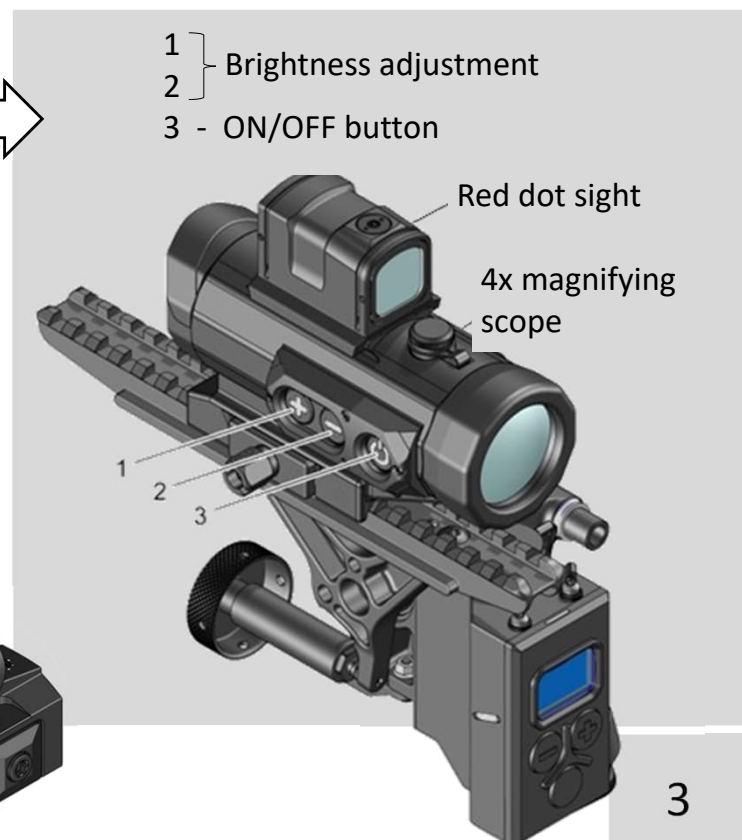
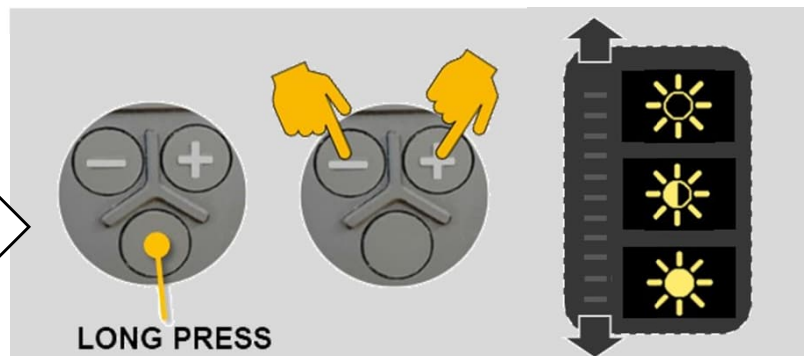


## FCD 558 preparation and functional checks

1. Check batteries – 2x AA-batteries (any type works, but lithium is preferred).



2. Mount scope on FCD 558 elevation unit.
3. Mount FCD 558 on weapon.
4. Adjust screen brightness.
  - Enter menu by pushing and holding down middle key.
  - Adjust with left or right key.
5. Turn on reticle illumination and adjust reticle brightness in sights.
6. Prepare range scales short list (see page 8).

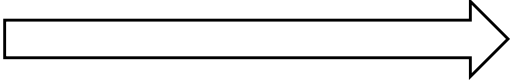


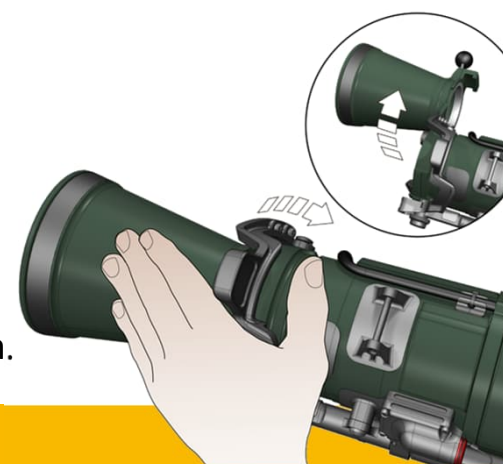
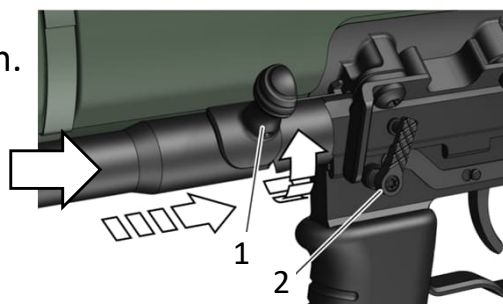
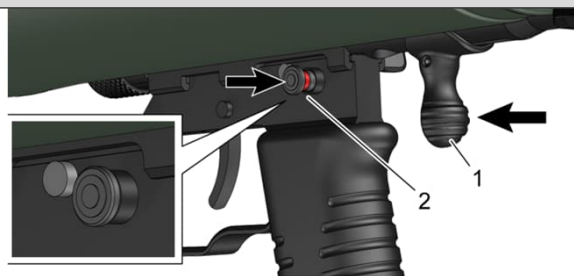
### Integrated red dot sight

- Long press => Day-mode
- Short press => Night-mode (for NVG)
- Short press to toggle intensity step within mode. (8 steps)
- Long press to turn off. (Auto-off after 3h).



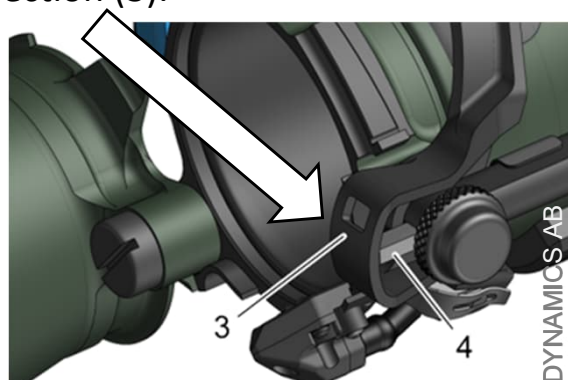
## Functional test

1. Place the weapon on the right shoulder, left hand on front grip
2. With right hand thumb, cock the weapon (1).
3. Make sure that the safety catch (2) operates freely with two firm stop positions; safe and fire.  
Push from inside with right thumb, and from outside with right index finger
4. Push the safety catch (2) to the right to the safe position. You should not be able to fire the weapon.
5. Push the cocking lever (1) forward and upwards with your right thumb anti-clockwise until it stops.
6. Try to push the safety catch to the left, to make sure that the fire position of the safety catch (2) is blocked in the transport safety position.
7. Push the cocking lever (1) downwards clockwise until it stops. (Release transport safety).
8. Open the venturi. 
9. Make sure that the venturi opens and closes correctly, keep it open.
10. Push the safety catch to the left to the fire position.
11. Check function of the trigger spring and that the trigger has a defined pressure point.
12. Pull the trigger.
13. Make sure that the firing rod (4) is blocked by the venturi locking lever safety projection (3).
14. Close the venturi.
15. Check that the firing rod pass the hole in the locking lever.
16. Check with your finger that the firing pin protrudes inside the barrel.



### NOTE

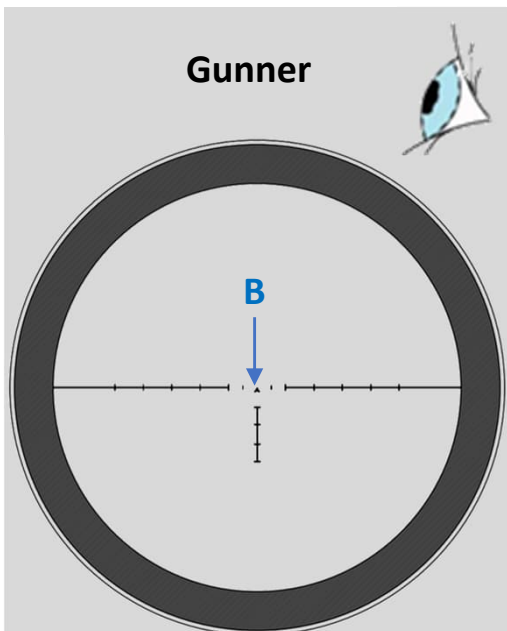
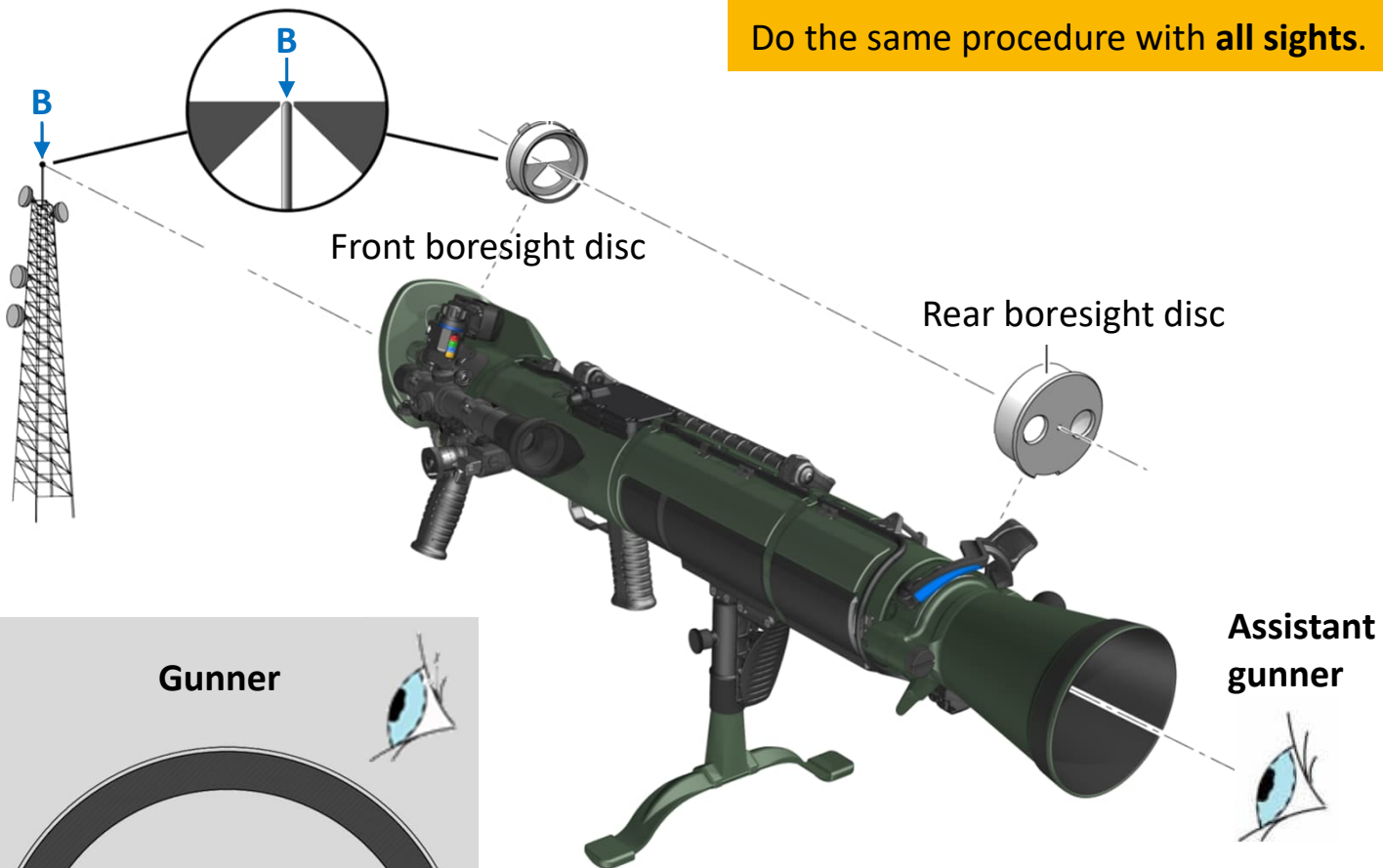
Always operate the venturi only with your left hand to minimize the risk of having your left hand in the backblast when firing.



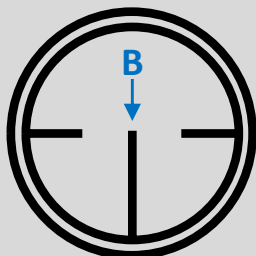
## Boresighting - principle

Correctly performed boresighting is required for combat effectiveness.

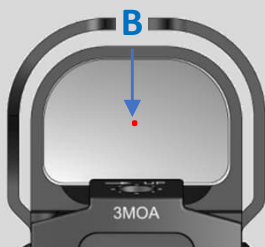
Do the same procedure with **all sights**.



FCD 558



Open sight



Red dot sight

1. Mount boresight discs in barrel. Use prone firing position (see page 7).
2. Agree on a well defined target and aiming point (**B**) at a distance **>200 m** away.
3. The gunner takes his prone position and checks that **the range scale is set on 0**. If necessary, calibrate the elevation sensor. See page 6.
4. The assistant gunner takes position behind the weapon, with both hands around the Venturi, and aims through the boresight discs.
5. The **assistant gunner** aims at the agreed point (**B**) and starts saying "la-la-la-la-la" as long as he is on the target.
6. The **gunner** looks through the sight and checks that the sight's central aiming mark is on the agreed point (**B**).
  1. If so, change places and double-check.
  2. If not, adjust (zero) the sight (pages 6 and 7).
7. When adjusted, check, change places and double-check again.

## Integrated open sight, zeroing

1. Unfold front and rear sight.
2. Set range on range scale to zero, using the elevation knob (4).
3. Loosen the locking screw (2).
4. Adjust the aperture sight in elevation with the elevation knob (4), and in azimuth by sliding the aperture.
5. When satisfied, tighten the locking screw (2).
6. Loosen the range indicator screw (3) and adjust the range indicator (center of the white mark) to zero meter.
7. Tighten the range indicator screw (3).

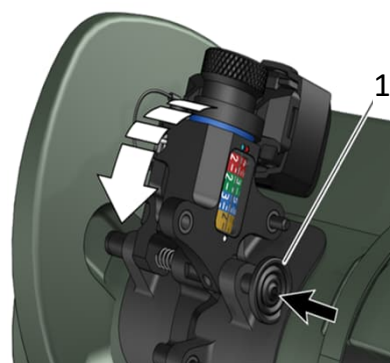


## Integrated red dot sight, zeroing

1. Push button (1) and unfold the sight.
2. Set range on range scales to zero using the range knob (2).
3. Adjust the red dot with the elevation and azimuth screw (3).

### NOTE

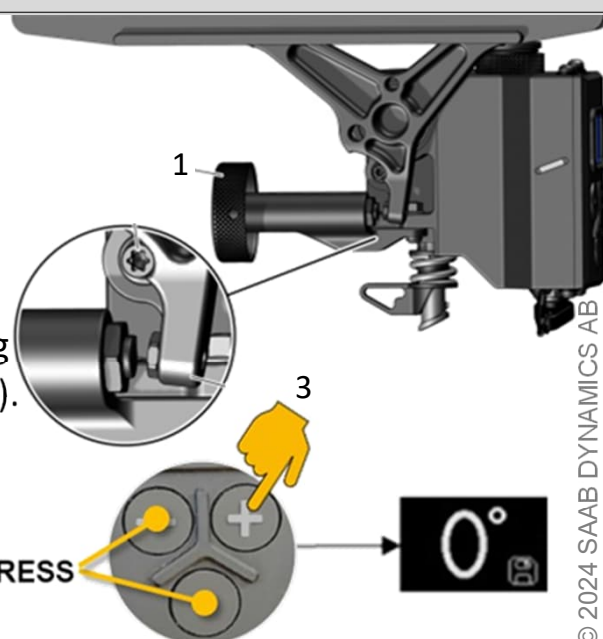
Use only the small screwdriver from the RDS accessory pouch



## FCD 558, zeroing

### A. Check calibration of elevation sensor

1. Turn elevation knob (1) to mechanical stop at zero elevation position.  
If range is not displayed as zero (0 m), the elevation sensor needs calibrating.
2. Enter menu for sensor calibration by pushing and holding down the left and middle key (2).
3. Press right key (3) to zero (calibrate) the elevation sensor.



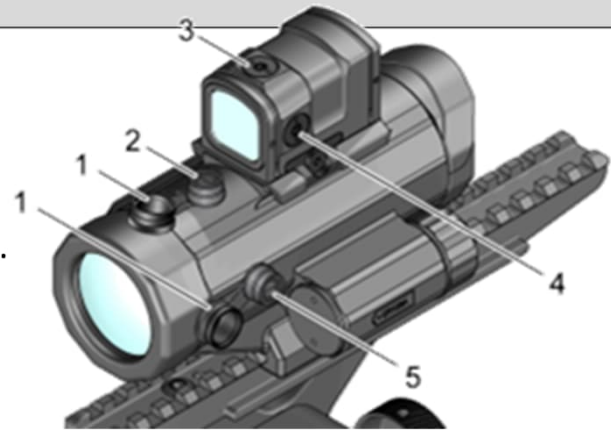
2 - LONG PRESS



## FCD 558, zeroing

### B. Zeroing of scope

1. Remove the protective caps (1).
2. Adjust the reticle with the elevation and azimuth screws (2 and 5), use the multi tool.
3. When satisfied, install protective caps (1).



### C. Zeroing of red dot sight

1. Adjust the reticle with the elevation and azimuth screws (3 and 4), use Torx 10 L-key.

### D. Check setting for propellant temperature compensation.

1. Enter menu by pushing and holding down left and right key.
2. Toggle setting with left or right key.  
Automatic (A) is recommended for most cases, when sight and ammo is expected to have the same temperature.



Below 0 °C

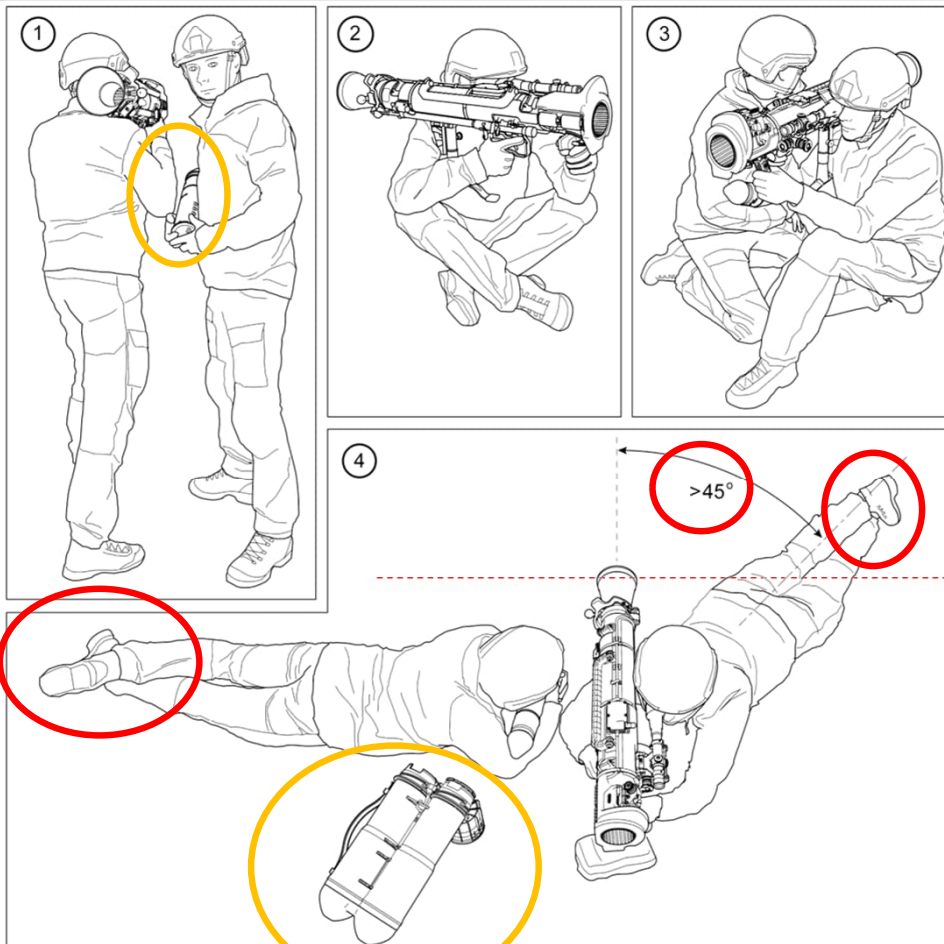


Over +30 °C

LONG PRESS



## Firing positions



### WARNING

- Body outside backblast danger area.
- No part of upper body in pressure zone behind venturi.
- Lock legs.

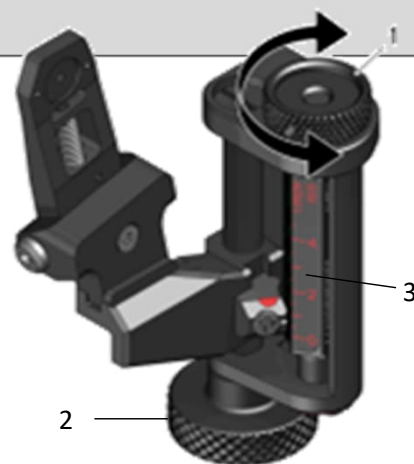
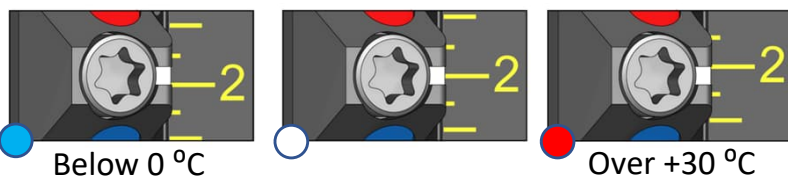
1. Standing
2. Sitting
3. Kneeling
4. Prone

## Integrated open sight and range scales

Select range scale on the pillar (1).

Adjust range setting using the elevation knob (2) and the range indicator (3).

**Propellant temperature compensation:** *example 200 m*



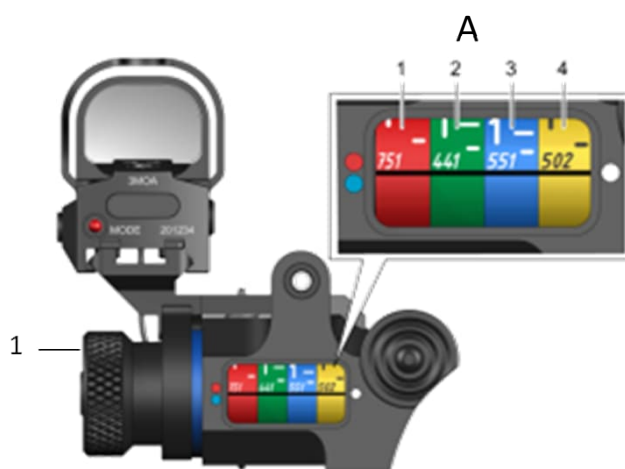
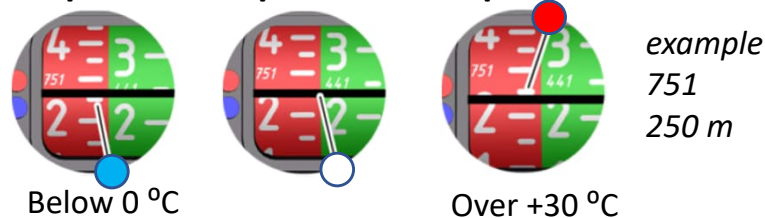
## Integrated red dot sight and range scales

Select range scale on the drum (A).

Adjust range setting using the range knob (1)

Black index over white line for range.

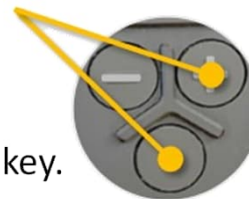
**Propellant temperature compensation:**



## FCD 558 and range scales – setting short list

1. Enter menu for short list selection by pushing and holding down the right and middle key.
2. Toggle through range scales using the middle key.
3. Mark, or unmark, range scales for short list using left key.
4. When satisfied, save the short list by pressing right key.

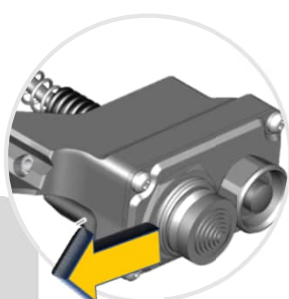
LONG PRESS



## FCD 558 and range scales

Select range scale by using the middle key to browse through the short list, or use the remote control.

Adjust range setting using the elevation knob.



Selected range scale  
Range setting



Elevation knob

## Handling and firing

### Fire mission received

1. Select correct range scale for the ammunition.
2. Set the target range on the range scale.
3. Prepare ammunition. Inspect for damages.
4. For HE 441 airburst or ILLUM, set desired range to burst on fuze.

See page 10 for range setting and fuze setting rules.

### WARNING

Always use (double) hearing protection. Plugs and muffs recommended.

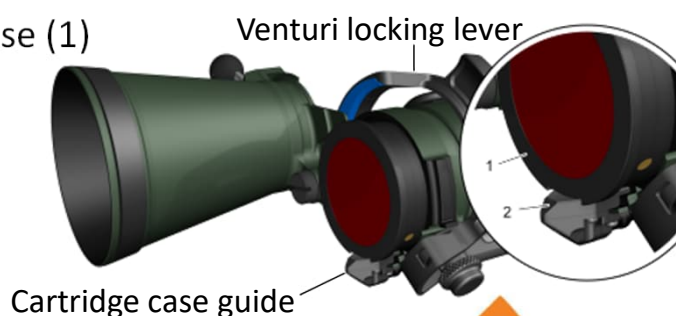
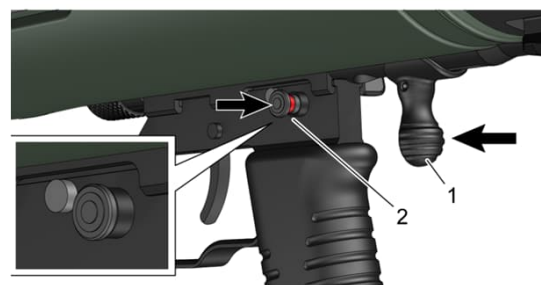
Always use the correct range scale for the ammunition being fired.

### WARNING

Do **NOT** fire ammunition with visible damages

### Loading the weapon

5. Cock the weapon (1), and push the safety catch (2) to the right, to the safe position.
6. Open venturi and check barrel to make sure there are no foreign objects.
7. Load ammunition. Ensure the cartridge case (1) aligns with the cartridge case guide (2).
8. Close venturi. Lightly tap on the venturi locking lever backwards to make sure the venturi is fully closed.

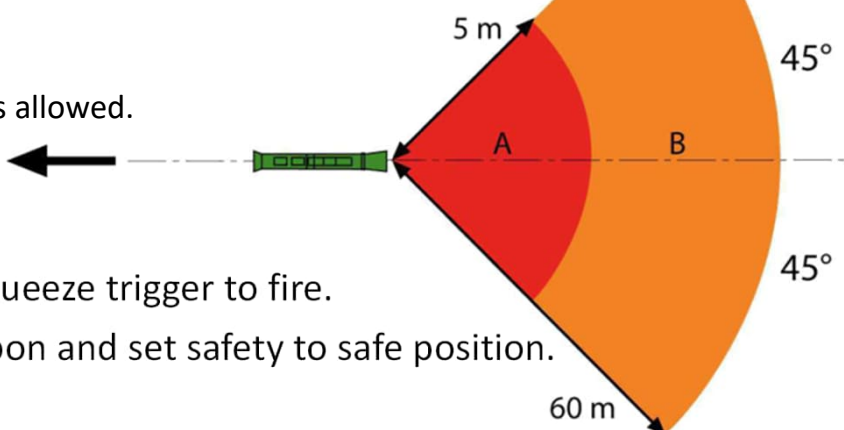


### Firing

9. Aim and push the safety catch to the left, to the fire position.
10. Check backblast danger area.

Area A: No large vertical objects allowed.

Area A + B: No personnel allowed.



11. Find trigger pressure point, squeeze trigger to fire.
12. Immediately re-cock the weapon and set safety to safe position.

### Unloading, reloading

- To unload, open the venturi and tap the venturi locking lever forward to eject the cartridge. Pull the spent cartridge out, and discard it outside of the backblast danger area.
- After unloading, reload and fire a new round (1-12), or if the weapon is empty, check backblast area and fire to make sure the weapon is unloaded.

## Range and fuze setting rules

| Ammunition type       | Mode                      | Range scale | Range setting                                        | Practical ranges<br>(Function, not Safety) |
|-----------------------|---------------------------|-------------|------------------------------------------------------|--------------------------------------------|
| HEAT 751              | Impact                    | 751         | Target range                                         | 40 – 500 m                                 |
| HEAT 551/551C RS      | Impact                    | 551         | Target range                                         | 40 – 700 m                                 |
| HEDP 502              | Impact/Delay              | 502         | Target range                                         | 40 – 300 m                                 |
| HE 448                | Impact                    | 448         | Target range                                         | 70 – 1500 m                                |
| HE 448                | Airburst <sup>1)</sup>    | 448 A       | Target range                                         | 70 – 1500 m                                |
| HE 441 (all versions) | Impact                    | 441         | Target range                                         | 70 – 1300 m                                |
| HE 441 (all versions) | Airburst <sup>2)</sup>    | 441         | Target range + 100 m                                 | 70 – 1200 m                                |
| HE 441 (all versions) | Airburst <sup>2),3)</sup> | 441 A       | Target range                                         | 70 – 1200 m                                |
| SMOKE 469             | Impact                    | 441         | Target range                                         | 70 – 1300 m                                |
| ILLUM 545             | Airburst                  | Any         | 0 m – use luminous groove (1) for 20°-25° elevation. | 300 – 2100 m                               |

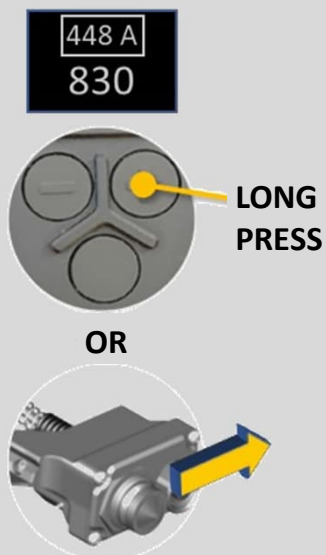
<sup>1)</sup> Programmable airburst requires communicating FIREBOLT® configuration.

<sup>2)</sup> Compensate fuze setting when firing from CG M4 by adding 30 m (or 5% of target range).

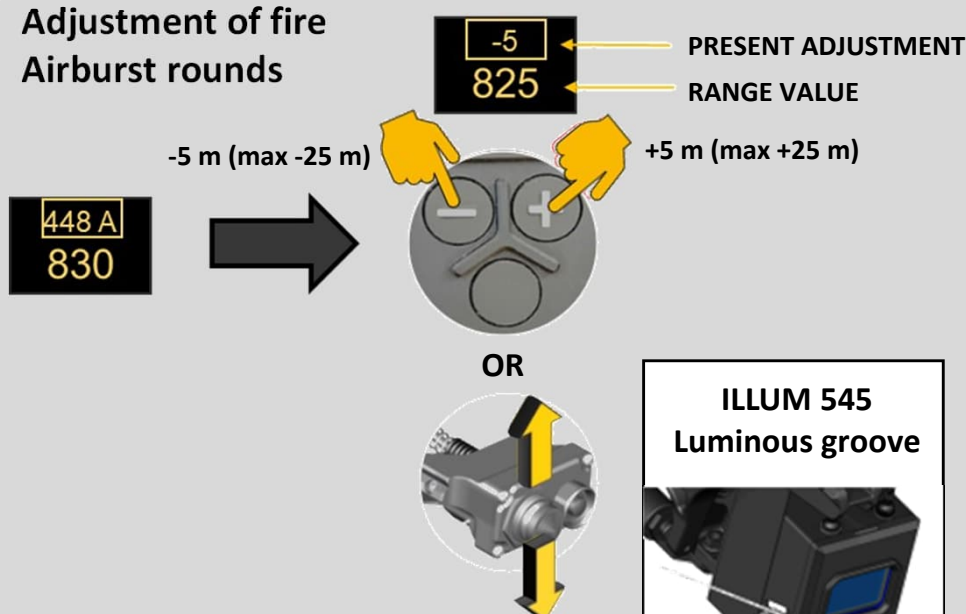
<sup>3)</sup> FCD 558: use special function for compensated fuze setting value. See below.

## FCD 558 – FIREBOLT®

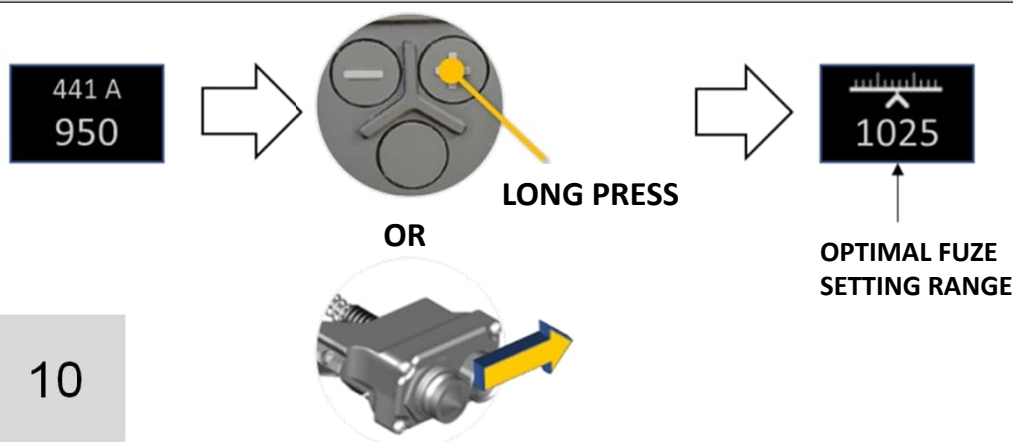
### Manual programming



### Adjustment of fire Airburst rounds



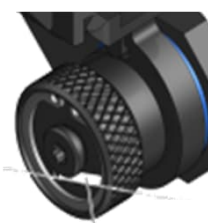
## HE 441 compensated fuze setting



### ILLUM 545 Luminous groove



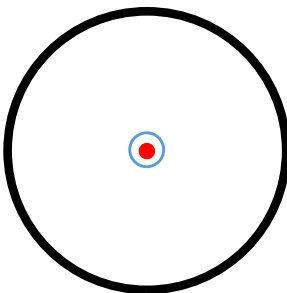
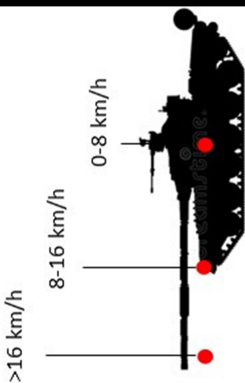
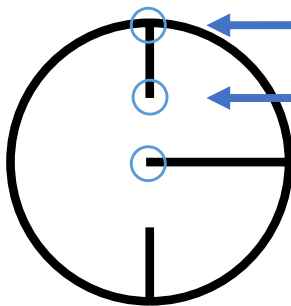
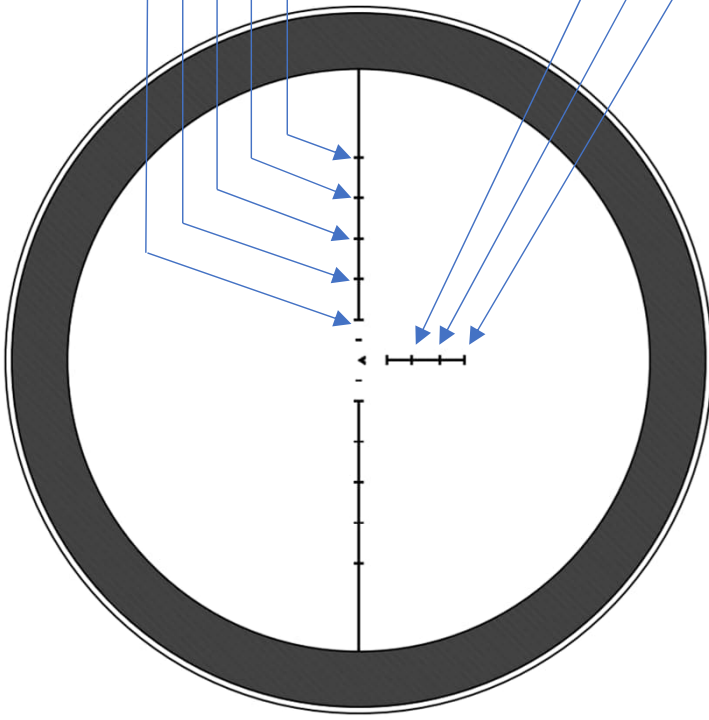
FCD 558


Integrated  
red dot sight

# Aiming rules

© 2024 SAAB DYNAMICS AB

## Aiming rules

|                     | Integrated red dot sight                                                                                                                                                                                                                                | Integrated open sight (dioptre sight)                                                                                                                                                                                                                                                                                | FCD 558 ZF4R |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|---------|-----|-----|--|-----|--|--|-----|---------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|-----|-----|-----|--------|---------|---------|---------|---------|-----|--------------|-------|----------|----------|----------|
| Aiming in elevation | Setting range provides correct elevation.<br>Use aiming mark on horizontal centre line.<br>Always aim with the selected aiming mark at target centre height.                                                                                            |                                                                                                                                                                                                                                                                                                                      |              |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| Aiming in azimuth   | <div><p>Always centre aiming mark</p><p>Select aiming point in target</p></div> | <div><table><tr><td>448</td><td>15 km/h</td><td>30 km/h</td></tr><tr><td>551</td><td></td><td></td></tr><tr><td>751</td><td></td><td></td></tr></table><table><tr><td>502</td><td>10 km/h</td><td>20 km/h</td></tr></table></div> | 448          | 15 km/h  | 30 km/h | 551 |     |  | 751 |  |  | 502 | 10 km/h | 20 km/h | <div><table><tr><td>10 km/h</td><td>20 km/h</td><td>30 km/h</td><td>40 km/h</td><td>50 km/h</td><td>448</td><td>551</td><td>751</td></tr></table><table><tr><td>7 km/h</td><td>14 km/h</td><td>21 km/h</td><td>28 km/h</td><td>35 km/h</td><td>502</td></tr></table><table><tr><td>Combat sight</td><td>200 m</td><td>448, 551</td><td>441, 751</td><td>502, 756</td></tr></table><p>Set range to 0. Use aiming mark in elevation.</p></div> | 10 km/h | 20 km/h | 30 km/h | 40 km/h | 50 km/h | 448 | 551 | 751 | 7 km/h | 14 km/h | 21 km/h | 28 km/h | 35 km/h | 502 | Combat sight | 200 m | 448, 551 | 441, 751 | 502, 756 |
| 448                 | 15 km/h                                                                                                                                                                                                                                                 | 30 km/h                                                                                                                                                                                                                                                                                                              |              |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| 551                 |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                      |              |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| 751                 |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                      |              |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| 502                 | 10 km/h                                                                                                                                                                                                                                                 | 20 km/h                                                                                                                                                                                                                                                                                                              |              |          |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| 10 km/h             | 20 km/h                                                                                                                                                                                                                                                 | 30 km/h                                                                                                                                                                                                                                                                                                              | 40 km/h      | 50 km/h  | 448     | 551 | 751 |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| 7 km/h              | 14 km/h                                                                                                                                                                                                                                                 | 21 km/h                                                                                                                                                                                                                                                                                                              | 28 km/h      | 35 km/h  | 502     |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |
| Combat sight        | 200 m                                                                                                                                                                                                                                                   | 448, 551                                                                                                                                                                                                                                                                                                             | 441, 751     | 502, 756 |         |     |     |  |     |  |  |     |         |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |         |     |     |     |        |         |         |         |         |     |              |       |          |          |          |

Select aiming mark in azimuth based on target speed and direction.

Always aim with the selected aiming mark at target centre.



11



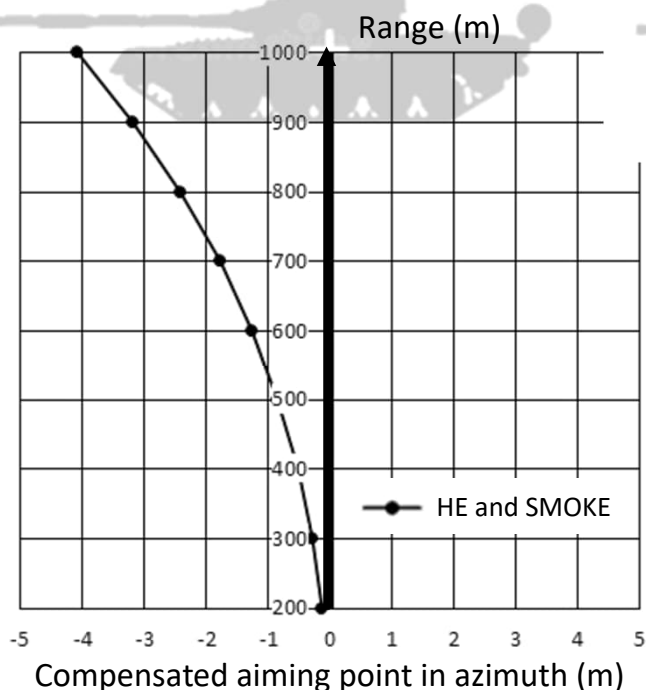
Select aiming mark in azimuth based on target speed and direction.

Always aim with the selected aiming mark at target centre.

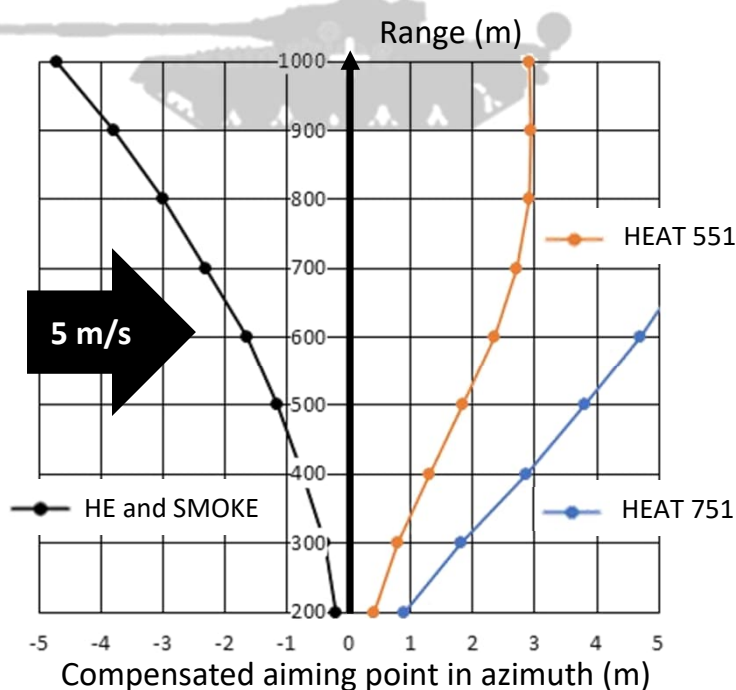
## Drift and cross wind compensation

Only compensate at ranges > 400 m, or for wind forces > 5 m/s.

### Drift compensation



### Wind compensation



## Misfire procedure

If a misfire occurs, keep the weapon pointed in a safe direction (on target) at all times, and follow the procedure:

1. Wait **5 seconds** and re-cock the mechanism.
2. Aim and pull the trigger. If it still misfires...
3. Wait **5 seconds** and re-cock the mechanism.
4. Aim and pull the trigger. If it still misfires...
5. Re-cock the mechanism and set safety catch to safe position, and wait **2 minutes**.
6. Unload the weapon.
7. Check the round.
  - a) If the firing pin has hit the percussion cap, then the round is a DUD and shall be treated in accordance with EOD procedures.
  - b) If not, then check the firing pin and firing mechanism on the weapon.

### WARNING

Never try to pry out a jammed round using a tool. You may accidentally initiate the percussion cap. Make sure the safety catch is set to safe position. Always point weapon in safe direction (on target). Use the cleaning tool on the cleaning rod (never a metal object) to push the round or cartridge case backwards out of the chamber.