

M4 / M68 CLOSE COMBAT OPTIC (CCO)

(10 meter Borelight Sighting Procedures)

ACTION: Boresight the M68 CCO to the M4 carbine for long range shooting.

CONDITIONS: Given an M4 Carbine, M68 CCO (mounted on receiver rail), 10M Boresight target, Boresight laser, and a steady platform.

STANDARD: Boresight the M68 CCO at 10M to achieve a point of aim, point of impact within 4" at distances of 100-300 meters, Using the predetermined hold under or over point of aim.

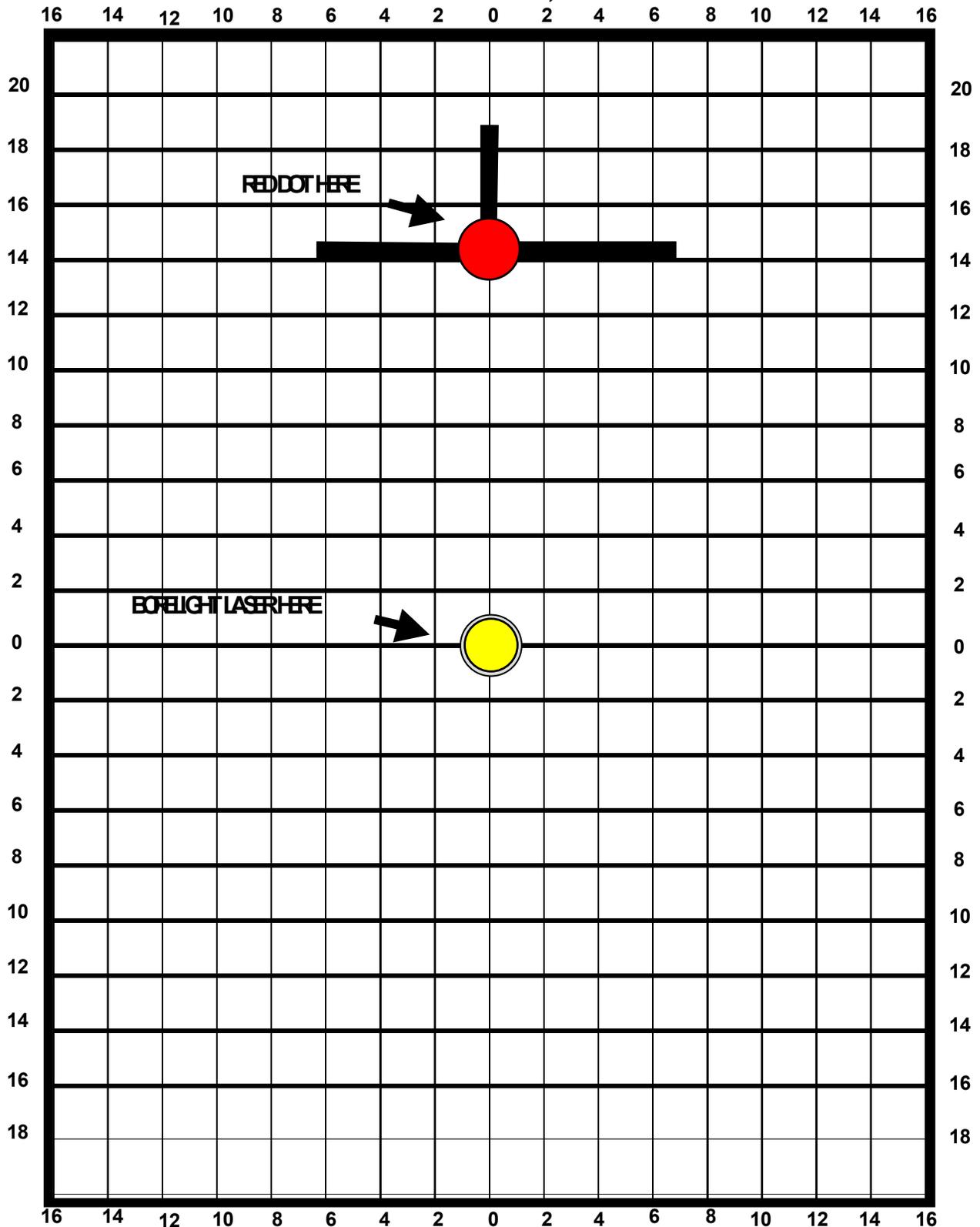
PROCEDURE: **Ensure the weapon is locked down in a secure device to eliminate movement of the laser and sight. Zero the boresight laser.** Using a 10M Boresight target, place the boresight laser dot on the solid black dot of the target, then using the directional arrows on the M68 CCOS adjustment rings, make the necessary adjustments to move the M68 red dot on to the crosshair of the boresight target. Refer to attached target.

MOUNTING: The best way to mount the M68 CCO to the M4 is to have the shooter assume a prone supported firing position with a comfortable stock weld. Have an assistant place the M68 CCO on the receiver to check the shooter eye relief. Move the M68 CCO until the shooter has good eye relief and focus when assuming a natural stock weld.

FEEDBACK: This technique of zeroing the M68 CCO will allow a point of aim, point of impact zero at ranges of 150-200 meters. Shooter will need to learn hold under for ranges up to 150meters (approximately 2" high at 100) and determine the hold over for 200- 300 meters (approximately 4"-6" at 300 meters). The M68 CCO is designed to be a Close Combat Optic Sight but can be used at longer ranges with good results. The red dot will cover a very large area on an E-type silhouette at 300 meters (9"-12"). To limit this, place the intensity setting on the lowest possible size that will allow the shooter to acquire and engage targets. This zero can also be used as a close quarters marksmanship zero but the point of impact will be slightly lower than the point of aim. By zeroing the weapon and sight in this manner it allows the Airman to be confident in his zero at CQM or field fire ranges. Results will vary if using the spacer between the receiver rail and M68 CCO or if the shooter moves his sight. (When using the M68 CCO with-out the spacer, the offset aiming point will need to be approximately 1/2 to 1 cm lower) To confirm this boresight, the Shooter can fire at an E-type silhouette at longer ranges to see the point of impact. To raise the strike of the round at 200-300 meters, decrease the offset distance. To lower the strike of the round, increase the offset distance. To use this weapon combination during limited visibility, simply assume a modified firing position that allows the shooter to look through the M68 CCO with an AN/PVS-14 monocular. The shooter will need to adjust the intensity setting to 1 of the 3 I.R. settings

NOTE: THE STANDARD IS TO DEVELOP CONFIDENCE IN BORESIGHTING BECAUSE THAT IS WHAT WE WILL BE DOING IN COMBAT.

M4/COMP-M 10meter BORESIGHT ZERO TARGET, TOP MOUNTED, 29/10/99



ELEVATION ADJUSTMENTS:

- TO MOVE THE POINT OF AIM DOWN, TURN THE ELEVATION ADJUSTMENT SCREW COUNTER-CLOCKWISE
- TO MOVE THE POINT OF AIM UP, TURN THE ELEVATION ADJUSTMENT SCREW CLOCKWISE

WINDAGE ADJUSTMENTS:

- TO MOVE THE POINT OF AIM LEFT, TURN THE WINDAGE ADJUSTMENT SCREW COUNTER-CLOCKWISE
- TO MOVE THE POINT OF AIM RIGHT, TURN THE WINDAGE ADJUSTMENT SCREW CLOCKWISE

M4 / M68 CCO

(Zeroing Procedures)

ACTION: Zero the M68 CCO to the M4 carbine for long range shooting.

CONDITIONS: Given an M4 Carbine, M68 CCOS mounted on receiver rail, 25M Zero target, and ammunition.

STANDARD: Zero the M68 CCOS at 25M to achieve 7 rounds out of two consecutive 5 round shot groups within the 4cm circle to achieve a point of aim, point of impact within 4" at distances of 100-300 meters.

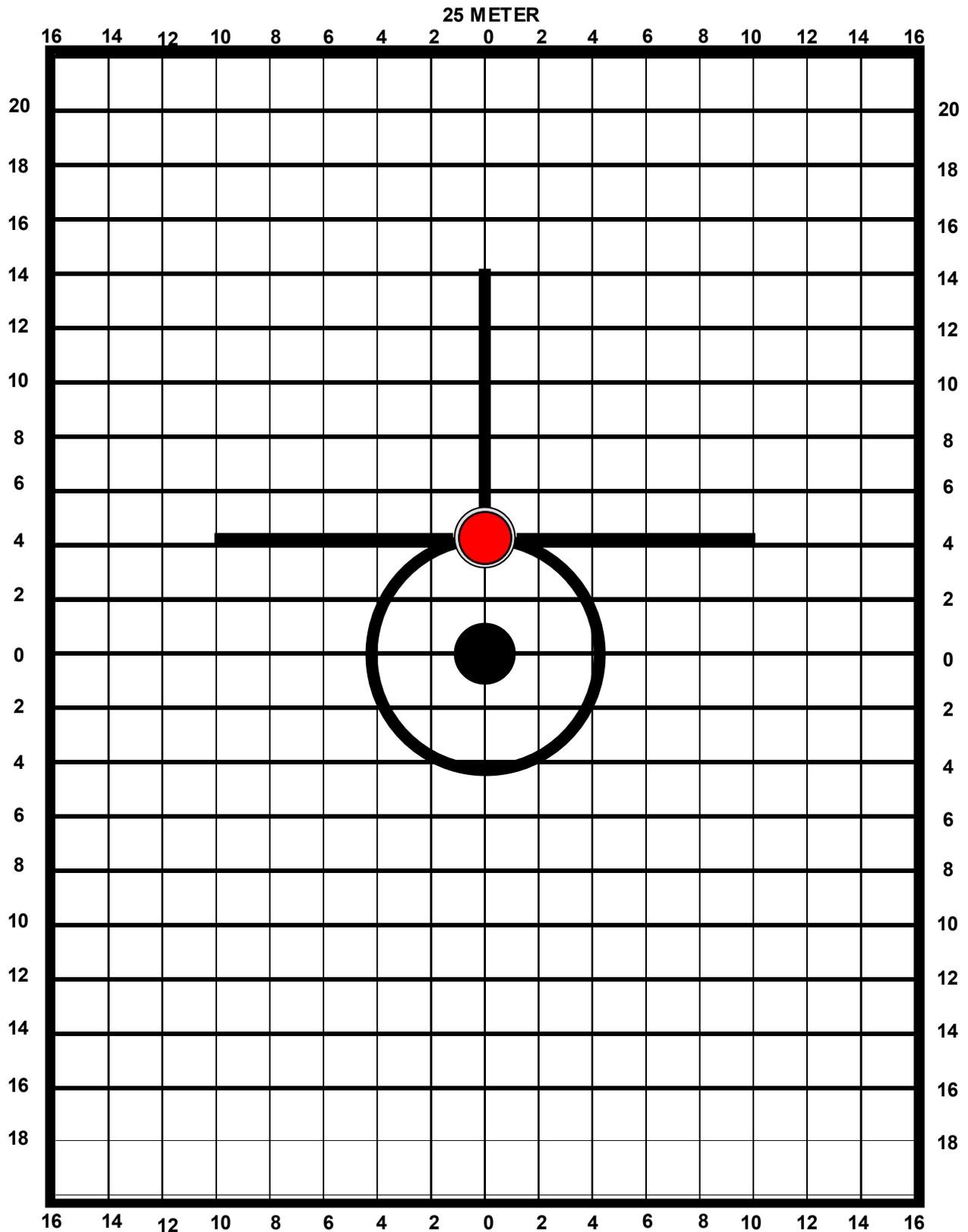
PROCEDURE: Using a standard 25M scaled silhouette zero target, place the red dot on the M68 CCOS approximately 2 cm. above the center of the 4cm circle and fire one 5 round shot group. Using the directional arrows on the M68 CCOS adjustment rings, make the necessary adjustments to move the strike of the rounds within the 4cm circle. Continue this process of grouping and adjusting the sight until 7 rounds from two consecutive 5 round shot groups are centered in the 4cm circle. The end result is a shot group approximately 2 cm below the point of aim.

MOUNTING: The best way to mount the M68 CCOS to the M4 is to have the firer assume a prone supported firing position with a comfortable stock weld. Have an assistant place the M68 CCOS on the receiver to check the firers eye relief. Move the M68 CCOS until the firer has good eye relief and focus when assuming a natural stock weld.

FEEDBACK: This technique of zeroing the M68 CCOS will allow a point of aim, point of impact within 4"-6" at ranges of 100-300 meters. The M68 CCOS is designed to be a Close Combat Optic Sight but can be used at longer ranges with good results. The red dot will cover a very large area on an E-type silhouette at 300 meters (9"-12"). To limit this, place the intensity setting on the lowest possible size that will allow the firer to acquire and engage targets. This zero can also be used as a close quarters marksmanship zero but the point of impact will be slightly lower than the point of aim. By zeroing the weapon and sight in this manner it allows the Airman to be confident in his zero at CQM or field fire ranges. Results will vary if not using the spacer between the receiver rail and M68 CCOS or if the Airman moves his sight. (When not using the spacer, the offset aiming point will need to be approximately 1/2 to 1 cm lower). To confirm this zero, the Airman can fire at an E-type silhouette at longer ranges to see the point of impact. To raise the strike of the round at 200-300 meters, decrease the offset distance. To lower the strike of the round, increase the offset distance. To use this weapon combination during limited visibility, simply assume a modified firing position that allows the Airman to look through the M68 CCOS with an AN/PVS-14 monocular. The Airman will need to adjust the intensity setting to 1 of the 3 I.R. settings.

NOTE: THE STANDARD IS TO DEVELOP CONFIDENCE IN BORESIGHTING BECAUSE THAT IS WHAT WE WILL BE DOING IN COMBAT.

M4/COMP-M ZERO TARGET (RECEIVER RAIL W/OUT SPACER)



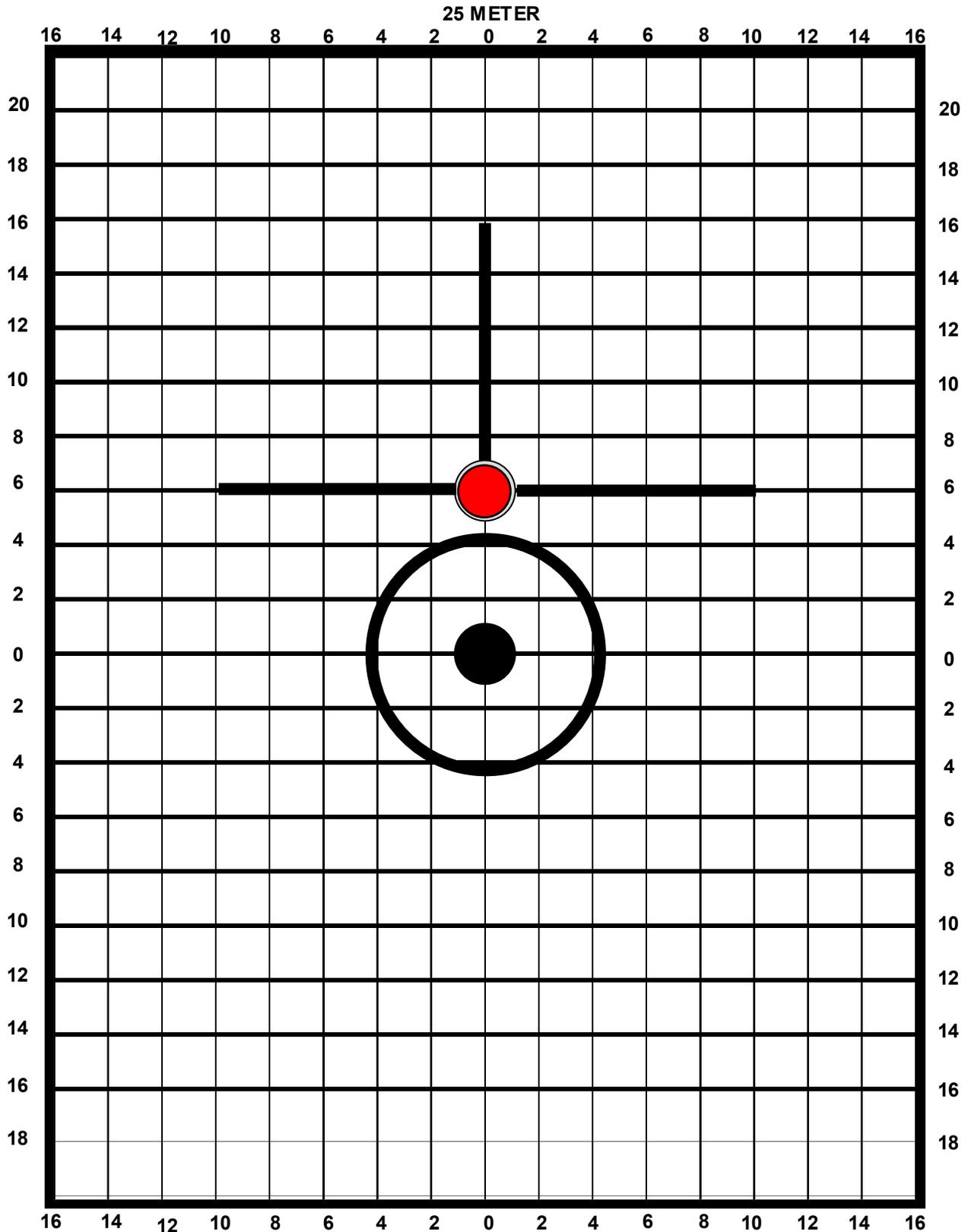
ELEVATION ADJUSTMENTS:

- TO MOVE THE POINT OF IMPACT DOWN, TURN THE ELEVATION ADJUSTMENT SCREW CLOCKWISE.
- TO MOVE THE POINT OF IMPACT UP, TURN THE ELEVATION ADJUSTMENT SCREW COUNTERCLOCKWISE.

WINDAGE ADJUSTMENTS:

- TO MOVE THE POINT OF IMPACT LEFT, TURN THE WINDAGE ⁴ADJUSTMENT SCREW CLOCKWISE.
- TO MOVE THE POINT OF IMPACT RIGHT, TURN THE WINDAGE ADJUSTMENT SCREW COUNTERCLOCKWISE.

M4/COMP-M ZERO TARGET (RECEIVER RAIL W/SPACER)



2 CLICKS = 1 SQUARE

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WINDAGE ADJUSTMENTS:

- TO MOVE THE POINT OF IMPACT LEFT, TURN THE WINDAGE ADJUSTMENT SCREW CLOCKWISE.
- TO MOVE THE POINT OF IMPACT RIGHT, TURN THE WINDAGE ADJUSTMENT SCREW COUNTERCLOCKWISE.