



Leatherwood® / Hi-Lux™ Optics



CMR4 /CMR4-AK762 RIFLESCOPE INSTRUCTIONS

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CONGRATULATIONS! You have just purchased our 1-4x Close-Medium Range **CMR4** Tactical riflescope; one of the best built. Leatherwood® / Hi-Lux™ Optics **CMR4** scope is a 30mm tube scope. When a shooting situation gets up close and personal, you need a scope that was designed and built specifically for that kind of shooting - whether during a tactical situation or when hunting dangerous big game. To compromise with anything else could prove to be life threatening. The **CMR4** scope is the scope you need.

Our 1-4x CMR tactical scope has been a huge success. The quality and features of that scope brought a tremendous amount of tactical scope technology to today's shooter.

The CMR4 is truly the next generation of CMR tactical scope technology - loaded with advanced design features that truly put it in a class all of its own. So, what sets this scope apart from the first generation Hi-Lux Optics CMR? It's built with the same rugged 30mm one-piece high tensile strength aluminum tube, with the same 1-4x magnification range and 24mm objective lens as the standard CMR. While the lenses of all Hi-Lux scopes feature fully multi-coated air surfaces for optimum light transmission, clarity and sharp target image, we've gone all out to use the best lenses available today in the CMR4. We know the importance of quickly identifying your target and seeing it clearly, especially when lives can be on the line. Many tactical shooters shared that they wanted the windage adjustment moved to the left side, and that's exactly where you'll find it on the CMR4. It allows the right-handed shooter to make windage adjustment without taking the scope off of the target...or finger off the trigger. Both the windage and elevation turrets feature our "ZRO-LOK" System, which does exactly that - it locks windage and elevation alignment in place, while still allowing minor adjustments to be made in the field, then being able to return to exact zero. Tactical shooters across the country are now recognizing this system as the best available today. The CMR4 also comes with protective screw on aluminum turret caps.

Leatherwood®/Hi-Lux™ Optics' **CMR4** scope is built with all of the ruggedness and reliability that has made this line well known for its quality and value. Other features include tough, wear resistant Perma-Coat soft luster blue-black finish, *DiamondTuff* fully multi-coated lenses polished to photographic quality, "Tri-Center" coil spring tension for positive windage and elevation adjustment, and *Fast Focus Eye Adjustment*.

Here is a riflescope that's built to take on anything that Mother Nature can dish out. With this, you get Quality, Precision and Ruggedness at a price that doesn't break your budget. The CMR4 is built to meet the wants and needs of all shooters.

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SECTION 1: SPECIFICATIONS AND BASIC DEFINITIONS

(1) SPECIFICATIONS:

| Model | Power | Obj. (mm) | F.O.V. @ 100 Yds (Feet) | Eye Relief (Inch) | Length (Inch) | Weight (O.Z.) | Exit Pupil Range In Variable (mm) | Tube (mm) |
|-------|----------|-----------|-------------------------|-------------------|---------------|---------------|-----------------------------------|-----------|
| CMR4 | 1 x - 4x | 24 | 94.8 -26.2 | Min. 3 | 10.2 | 16.5 | 11.1 - 6 | 30mm |

All air-glass surfaces are fully multi-coated using special technology to maximize the light transmission. The **Elevation** and **Windage** click adjustment is $0.1\text{Mrad} = 10\text{mm}$ at 100 meters ≈ 0.36 inch at 100 yards. A special ranging reticle is used in this model. The details of the **CMR4** and **CMR4-AK762** reticles are illustrated in the Section 8. The Elevation Adjustment of the **CMR4** scope has at least 25 mrad (90 MOA) up and down adjustment from center of the tube and the Windage Adjustment of the **CMR4** scope has at least 25 mrad (90 MOA) left and right from the center of the tube as well.

(2) BASIC DEFINITIONS:



A. EYEPICE; B. FAST FOCUS; C. RHEOSTAT; D. POWER CHANGE RING (EXTENDED LEVER IS SOLD SEPARATELY); E. ELEVATION; F. WINDAGE; G. TURRET COVERS; H. OBJECTIVE LENS;

Warning:

The Tri-Center coil spring which is located on the right side at lower center has been preset at the factory for the best tracking results. Please do not try to alter it yourself. It will damage the scope.



SECTION 2: EYEPIECE FOCUSING AND RHEOSTAT

Hold the scope about three inches from your eye and look through the eyepiece at a featureless flatly lit bright area such as a wall or open sky. If the reticle is not sharply defined instantly, you just need to turn the fast focus (4) in or out for adjustment until the reticle appears in sharp focus.

The rheostat with 11-positions is for varying the brightness of the reticle illumination. For the best results in a low light situation, we recommend that you set the brightness as low as possible while you are still able to see the reticle clearly. The “Nv1, Nv2, and Nv3” positions are designed for night vision use. The setting 4 and 5 are the low illumination zone. The settings from 6 to 9 are the intermediate brightness zone that can give you more choices to choose from at the low light situation. The Max position is the brightest setting. There are two “Off” positions that are located at 0° and 90° positions.



There is a protruded rib at the main “0” off position. This is to make it easier to locate the main off position in the dark. The two off positions will let you to turn off the illumination from both right and left side equally convenient. The rheostat is located at 45° left on the top of the eyepiece. The battery, which is included with the scope, is a coin style CR2032 3V lithium battery. The battery can be replaced by first removing the battery compartment cover (1) located in the top of the rheostat adjustment (2), then remove the old battery, insert a new battery with “+” side facing up and retighten the cover (1).

SECTION 3: ZRO-LOK™ ELEVATION AND WINDAGE TURRETS

We have developed a special ZRO-LOK™ turret system for **CMR** series scopes. Before you initially zero your **CMR4** scope, you just need to loosen the two locking screws (1) on both elevation and windage turrets. Then you can adjust the elevation turret as the regular scope turret up & down till you zeroed the scope. Once you get the initial elevation zero of the scope done, you need to rotate the mrad index mark ring (2) to line up the zero on the index mark rings with the dot as the picture shows and then retighten the two locking screws. After you retightened the two locking screws (1) on the top of the turret, the elevation



turret will be locked down in place and it will only allow you to make one revolution full-turn on the adjustment turret. One revolution full-turn on the elevation turret can give you 8 mrad (28.8 MOA) adjustment. In case if you have a need for a few mrad going down from the zero point, you just need to line that number up with the zero mark. Then the adjustments from that number to "0" are the adjustments that are going down below the zero point. For example: If you need to have 2 mrad going down below the elevation zero point, you just need to line up number "2" with the zero mark dot. Then tighten the two lock screws. The number "2" is the true zero. The Numbers from "2" and up are the adjustments that are going higher from zero point. The number adjustments from "2" to "0" are the adjustments that are going below the zero point. The mrad index mark ring can only go counterclockwise from "0" position. For the windage turret, rely on the same process to make the initial zero. After you have the windage zeroed, you need to rotate the mrad index mark ring to line up the zero mark and retighten the two locking screws (1). Once you lock the windage system in place, it only allows you to turn half a circle on each side, which is 4 mrad (14.4 MOA) left and right. With this ZRO-LOK™ turret locking system, you can never lose your scope zero. You can always quickly trace back to the scope zero. In order to make your adjustment more convenient for operating the bolt, we moved the windage adjustment knob to the left side of the scope body. **Please make a note that the CMR4 scope windage knob is located on the left of the scope as the above picture indicates.**

SECTION 4: MOUNTING

To achieve the best accuracy from your rifle, the scope must be mounted properly. You should use a high-quality mount with bases designed to fit your particular rifle. To mount the scope:

- A. The scope should be mounted as low as possible without touching either the barrel or the receiver.
- B. Before tightening the mount rings, look through the scope in your normal shooting position. Adjust the scope (either forward or backward) until you find the farthest point forward (to ensure maximum eye relief) that allows you to see a full field of view.
- C. Rotate the scope in the rings until the reticle pattern is perpendicular to the bore and the elevation turret is on top.
- D. Then tighten the mounting screws.

WARNING: AVOID OVER-TIGHTENING THE RINGS. THIS CAN DAMAGE THE SCOPE, AFFECTING PERFORMANCE OR RENDERING IT INOPERABLE. THERE SHOULD BE A SLIGHT EVEN GAP BETWEEN THE SHOULDERS OF THE RING HALVES. BE SURE THAT THE SCOPE IS

MOUNTED FAR ENOUGH FORWARD. ITS REARWARD MOTION MAY INJURE THE SHOOTER WHEN THE RIFLE RECOILS.

SECTION 5: HOW TO RESET THE SCOPE OPTICAL OR PHYSICAL CENTER

The elevation and windage adjustments on all new Leatherwood®/Hi-Lux™ scopes are preset to the optical center and the physical center at the factory. **For all the new scopes you do not need to reset the optical and physical center for the scope.** However, if you are mounting a scope that was previously used on another rifle, you should recenter the scope first before you zero the scope again. Centering the **Elevation** and **Windage** adjustments to the scope optical and physical center not only will help you to get the optimum travel of the adjustments, but also to save you time to re-zero the scope. If the erector unit inside the scope is off to one side, the **Elevation** and **Windage** adjustments won't give equal travel in all directions. If you want the **Elevation** and **Windage** adjustments moving the entire erector unit horizontal and vertical consistently and correctly inside the scope, you need to keep the erector unit centered (This may require using a set of rings or a base mount that also allows some adjustment.). To regain the full adjustment travel, you need to recenter the adjustments as followings:

- (1) Turn the **Windage** adjustment all the way to the **Left** as the arrow indicates on the turret to the point that it stops moving.
- (2) Turn the **Elevation** adjustment all the way **UP** to the **TOP** as the arrow indicates on the turret to the point that it stops moving too.
- (3) Then turn the **Windage** adjustment all the way back in the other direction **Right** till it stopped. Counting the clicks or hash marks while you are turning the adjustment back. Remember the total clicks or the hash marks.
- (4) Moving the **Windage** adjustment back to **Left** half the amount of the clicks or hash marks. This is the position that the **Windage** is in the optical or physical center.
- (5) Then you can repeat the above (3) and (4) two procedures to reset the optical and physical center for **Elevation** adjustment too.
- (6) This centers the erector unit inside the scope. The **Windage** now in the scope is at optical and physical center. If you can zero the scope on your rifle near to this **Windage** optical center position, then you will maximize your Elevation Adjustment.

SECTION 6: PRE-ZEROING

Pre-zero sighting can be done either manually, or with a bore-sighting device. To bore sight manually,

- A. It is necessary to be able to see through the bore from the breech end. In the case of a bolt action, this usually means removing the bolt.
- B. Set the variable-power scope to low power.
- C. With the firearm in a rested position, loosen the two locking screws on both **Windage** and **Elevation**. Then you can turn the windage and elevation turrets freely.
- D. Look through the bore and center the target in the bore and adjust the **Windage** and **Elevation** turrets to position the reticle on the center of the target.
- E. For the **Windage** adjustment, turn the **Windage** adjustment turret **Clockwise** to move the point of impact **Right** and **Counterclockwise** to move the point of impact **Left** as the arrow on the turret indicates.
- F. In the same manner, adjust the **Elevation** by turning the **Elevation** adjustment turret **Clockwise** to **Lower** the point of impact and **Counterclockwise** to **Raise** the point of the impact. **If a large amount of adjustment is required to align the reticle, make approximately one-half of the **Windage** correction, then approximately one-half of the required Elevation correction.
- G. Finish by applying the balance of **Windage** and **Elevation** correction.

If you can't see through the bore then it will be necessary to use some type of bore-sighting device. When using a bore-sighting device, follow the instructions provided with the device.

NOTE: If your mounting system allows for adjustments of the scope, the gross adjustments should be made in the mount and then the final adjustments will be made with the scope's internal adjustment system.

SECTION 7: ZEROING

DANGER: IF A BORE SIGHTING COLLIMATOR OR ANY OTHER BORE OBSTRUCTING DEVICE WAS USED; IT MUST BE REMOVED BEFORE PROCEEDING. AN OBSTRUCTION CAN CAUSE SERIOUS DAMAGE TO THE GUN AND POSSIBLE PERSONAL INJURY TO YOU AND OTHERS NEARBY.

The zero range will depend on your shooting needs and range conditions.

- A. In general, if most of your shots will be at short range, zero-in at 100 meter. If you want to use the **CMR4** reticle hold over lines to compensate the drop, you need to zero the CMR scope at 100 meters (For the CMR-AK762 scope zeroing, we will talk more in SECTION 8 under the CMR-AK762 Reticle section). The hold over

value in the Ballistic Data Comparison Example Chart is based on the 100-meter zeroing. The framing information in the reticle to frame the target or estimate the range should be done at 4x magnification.

- B. Set the power to 4X and loosen the two locking screws on both **Elevation** and **Windage**.
- C. From a rested position, fire three rounds at the target.
- D. Observe the center of the points of impact on the target and adjust the **Windage** and **Elevation** screws as needed to bring the point of aim to the desired relationship to the points of impact. The point of impact moves in the direction indicated on the adjustment turrets and by the amount indicated.
- E. Repeat as necessary.
- F. Once the zeroing of the scope is completed, you can re-index the mrad index mark ring to line up with the zero mark and then retighten the two locking screws on both **Elevation** and **Windage** to lock the turrets in place. You can reference Section 3 for details how to use the **ZRO-LOK™** turret locking system.

The **CMR4** adjustments are calibrated in mrad adjustment (MiL). Each click of the adjustment changes bullet impact at 100 meters by the amount 0.1 mrad which is indicated on the windage and elevation knobs. One mrad is very close to 1cm at 100 meters. To calculate the click value at distances other than 100 meters, use the following formula: divide the distance (number of meters) by 100. Then multiply this number by the click value stated on the windage and elevation adjustments. This will tell you the actual click value of the scope at that distance. For Example: your range is 200 meters. Divide 200 by 100 and that equals 2. Multiply the 0.1 mrad- the “click value” indicated on the adjustment turrets by 2 and the adjustment at 200 meters is 2 cm per click. For 400 meters, you would multiply 0.1 mrad- the “click value” by 4 and that would give 0.4 mrad adjustment which is about 4 cm per click and so on. Once the zeroing of the scope is completed, you can reset the zero marking per the instruction by tightening the screws on the windage and elevation turrets in place.

WARNING: ALL SHOOTING SHOULD BE DONE AT AN APPROVED RANGE, OR SAFE AREA. EYE AND EAR PROTECTION IS RECOMMENDED.

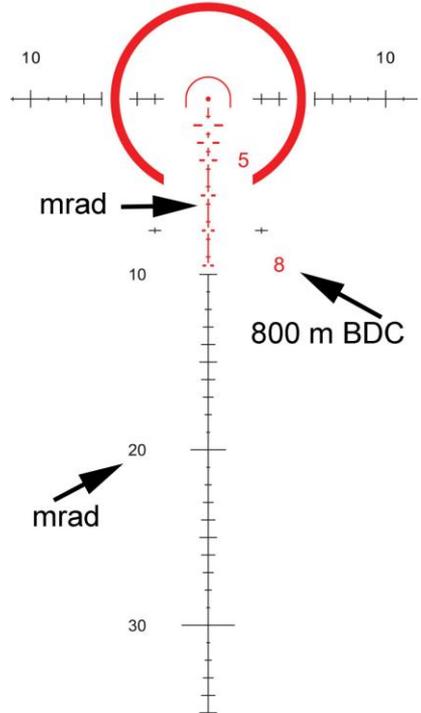
SECTION 8: SPECIAL RANGING ILLUMINATED RETICLES

1. CMR4 Reticle:

(1) CMR4 Reticle Details:

This reticle provides useful ranging & framing reference information. When you use this reticle to frame and estimate the range, you need to turn the magnification to 4X. The horizontal line has 1 mrad scale all the way to 35 mrad on each side. The vertical line also has the mrad (trigonometric mill radian) scale up to 35 mrad. All the ranging estimate features are based on the magnification 4X. The I.D. of the big circle is 10 mrad (≈ 36 MOA). The thickness of the line of the big circle is 0.5 mrad (1.8 MOA). The small circle O.D. is 2.5 mrad (≈ 9 MOA). The center dot is 1 MOA. **The center dot, the big circle, the small circle, and the vertical line up to 8 can be illuminated as needed.** The vertical line is calibrated with the hold over value to compensate the bullet drop from 200 to 800 meters for different calibers. You can compare the ballistic data of any caliber you want to shoot with the hold over value listed in the chart to find out what each vertical BDC line represents to you. In order to use the vertical BDC lines to compensate the drop, the center dot should be zeroed at 100 meters. The vertical BDC lines below the center dot represent 300, 400, 500, 600, 700, and 800 meters. The 200 meter hold-over is using the top point of the vertical line just below the center dot. The width of each vertical BDC line (the short bar) is to frame a 19.7" target at each range. The meaning of each open area in the center of each vertical BDC line is to frame a 7.9" target at each range. The numbers 10, 20, and 30 on the horizontal and vertical lines mean 10 Mil, 20, and 30 Mil. The numbers 5 and 8 on the right side of the vertical line are for the ranges. 5 means 500 meters and 8 is for 800 meters. The Ballistic Drop Data Examples listed in the **Ballistic Data Comparison Chart** are just for two popular rounds .223 (62 grain) and .308 (168 grain) for you to understand how to compare with our hold over value in the reticle. The .223 and .308 are two calibers are working very well with that hold over value of this reticle.

CMR4 Center Reticle



(2) CMR4 Ballistic Data Comparison Example Chart:

| Target W | INCH | | INCH | | Ballistic Drop Data Example | | | | Vertical Line Hold Over Values | |
|-----------|--------------|------|---------------|-------|-----------------------------|-------|-----------------|-------|--------------------------------|-------|
| | 7.9" (20 cm) | | 19.7" (50 cm) | | Cal .223 62gr | | Cal. .308 168gr | | MOA | MIL |
| Range (m) | Reading W | | Reading W | | MOA | MIL | MOA | MIL | | |
| | MOA | MIL | MOA | MIL | | | | | | |
| 25 | 28.80 | 8.00 | 72.00 | 20.00 | 3.50 | 1.00 | 3.25 | 0.90 | 4.00 | -1.50 |
| 50 | 14.40 | 4.00 | 36.00 | 10.00 | 0.50 | 0.25 | 0.50 | 0.14 | 0.50 | -0.3 |
| 100 | 7.20 | 2.00 | 18.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200 | 3.60 | 1.00 | 9.00 | 2.50 | -1.75 | -0.50 | -2.00 | -0.56 | 1.80 | 0.50 |
| 300 | 2.40 | 0.67 | 6.00 | 1.67 | -4.50 | -1.25 | -4.75 | -1.32 | 5.40 | 1.50 |
| 400 | 1.80 | 0.50 | 4.50 | 1.25 | -8.00 | -2.25 | -8.25 | -2.29 | 9.00 | 2.50 |
| 500 | 1.40 | 0.40 | 3.60 | 1.00 | -12.25 | -3.50 | -12.25 | -3.40 | 12.60 | 3.50 |
| 600 | 1.20 | 0.33 | 3.00 | 0.83 | -17.75 | -5.25 | -17.00 | -4.72 | 19.80 | 5.50 |
| 700 | 1.00 | 0.29 | 2.60 | 0.71 | -24.50 | -7.00 | -22.50 | -6.25 | 27.00 | 7.50 |
| 800 | 0.90 | 0.25 | 2.30 | 0.63 | 32.75 | -9.50 | -29.00 | -8.06 | 34.20 | 9.50 |

**The data in the column "Reading W" has the both MOA and MiL value, which is calculated and based on the target width 7.9" and 19.7" at each range in meters.

2. CMR4-AK762 Reticle:

CMR-AK762 reticle is calculated for AK-47 type of rifles with

Barrel Length: 415mm = 16.3"

7.62x39mm FMJ BT Russian Military ammo type: 57-H-231 or 7H23

Bullet Diameter Ø: 7.92mm=0.312"

Bullet Weight: 7.9g = 122gr, BC: 0.295

Drag Function: G1

Muzzle (3m=10ft) Velocity: 715 m/s = 2,345 fps

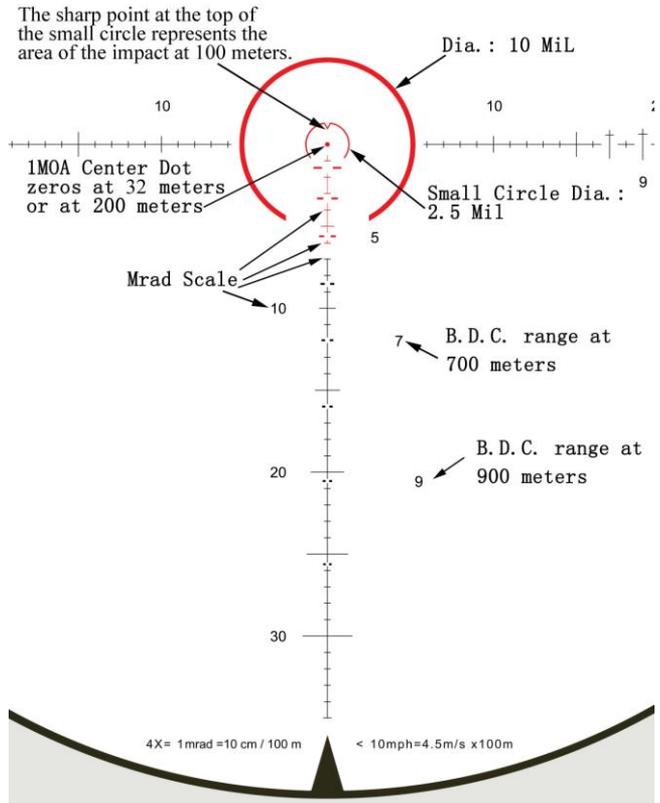
Zero: 200m ≈219yds or 32m ≈ 35yds (1 meter = 1.094 yard)

(1) CMR-AK762 Reticle Ranging Scale:

The CMR-AK762 reticle has 8 vertical BDC (bullet drop compensation) lines on the center vertical line from 300 to 1000 meters. The vertical line also has the mrad (trigonometric mill radian) scale up to 35 mils. All the ranging estimate features are based on the magnification 4X. **The center dot, the two circles and the vertical BDC line to 5 are illuminated either in green or red. The ranging crosses on the right side from 200 to 600 meters are also illuminated.**

a) The center part of the CMR4-AK762 scope reticle:

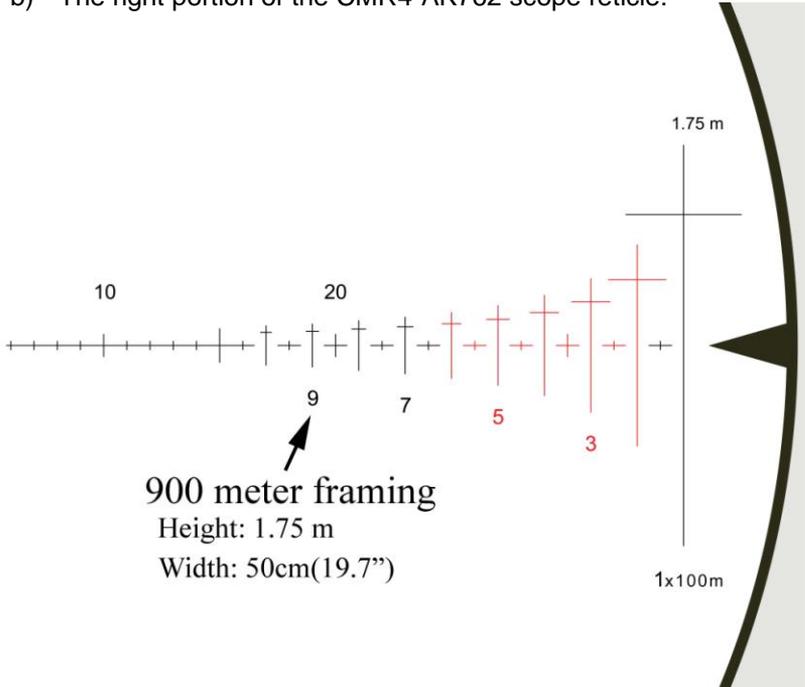
The diameter of the big illuminated circle is 10 Mil. The open of the big circle at the bottom is 5 Mil. The diameter of the small circle is 2.5 Mil. The open of the small circle is 2 Mil. For precision shooting we recommend to zero the scope at 200 meters. For this cartridge the **32m ≈ 35yds** and **200m ≈ 219yds** will have the same zero. You can zero the center dot at either 32 or 200 meters. If you zero the center dot at 200 meters, then the 1st BDC line is the hold over line to compensate for 300 meters. The 2nd BDC line is the hold



over line for 400 meters. The 3rd BDC line is the hold over line for 500 meters...and the 8th BDC line is the hold over line to compensate 1000 meters. With the center dot zeroed at either 32 meters or 200 meters, the sharp point at top of the small circle is to represent the area of the impact at 100 meter. The width of the BDC line is to frame the 50cm (19.7") at each

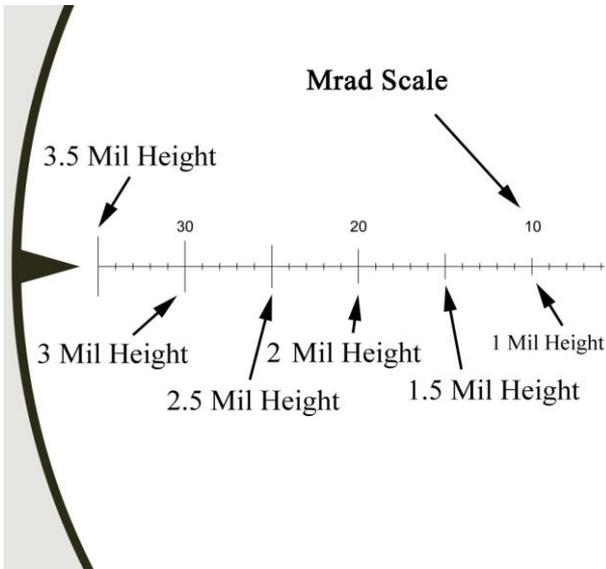
range. The open in the center of each BDC line is frame for 20cm (7.9") at each range. The vertical line also has the mrad scale up to 35 Mil. The heights of the 10 Mil, 15 Mil, 20 Mil, 25 Mil, and 30 Mil are 1 Mil, 1.5 Mil, 2 Mil, 2.5 Mil and 3 Mil respectively. The BDC no 5, 7, and 9 are also given the windage compensation at that range respectively at the wind speed 10mph.

b) The right portion of the CMR4-AK762 scope reticle:



The right side of the reticle has the ranging features. **The ranging crosses from the 200 meters to 600 meters are illuminated.** The height of each ranging cross is to frame the 1.75 m ($\approx 69''$) at that range. The width of each ranging cross is to frame 50cm ($\approx 19.7''$) at that range. Just frame a known size target in the proper ranging cross, and you can easily estimate the range with this reticle. The numbers 10 and 20 above the horizontal line are for the mrad scale 10 Mil and 20 Mil. The heights of the 10 Mil and 20 Mil are 1 Mil. The height of the 15 Mil is 1.5 Mil. All other heights of the 1 Mil scale are all 0.4 Mil. The numbers 3, 5, 7, 9 below the horizontal line represent 300 meter, 500 meter, 700 meter, and 900 meter respectively.

c) The left portion of the CMR4-AK762 scope reticle:



The left portion of the reticle has only the mrad scale up to 35 Mil. The heights of 10 Mil, 15 Mil, 20 Mil, 25 Mil, and 30 Mil, and 35 Mil are 1 Mil, 1.5 Mil, 2 Mil, 2.5 Mil, 3 Mil, and 3.5 Mil respectively. All other heights of the 1 Mil scale are all 0.4 Mil.

d) CMR-AK762 scope sighting suggestions:

You can zero the scope at 32 meters (\approx 35 Yards). For precision shooting, we recommend to zero the scope at 200 meters (\approx 219 Yards) for better accuracy. For the quick "Battle Sighting Zero", you could zero the scope at 30 meters (\approx 33 Yards) range. Remember if necessary always check and correct the sighting of the scope before each use. Do not forget to make necessary adjustments to compensate for different weather conditions. For example: Cold air has higher density. That will create higher resistance for the bullet to propel through the air. As a result the point of bullet impact will be lower in comparison to the same shot in warmer weather. The scope elevation setting should be adjusted higher to move up the point of impact.

(2) CMR-AK762 Framing and hold over line chart at the range:

| Target W | INCH | | INCH | | 7.62x39 AK FMJBT 7.9g=122gr,BC=0.295 Muzzle Velocity:2,345fps 16.3”(415mm) Barrel |
|-----------|-------------|------|---------------|-------|--|
| | 7.9" (20cm) | | 19.7" (50 cm) | | |
| Range (m) | Reading W | | Reading W | | BDC Hold Over Line |
| | MOA | MIL | MOA | MIL | |
| 25 | 27.50 | 8.00 | 68.80 | 20.00 | N/A |
| 32 | 22.90 | 6.67 | 57.30 | 16.67 | Center dot is zeroed at 32 m |
| 50 | 13.80 | 4.00 | 34.40 | 10.00 | N/A |
| 100 | 6.90 | 2.00 | 17.20 | 5.00 | Small circle's Sharp Point is the area of impact at 100 meters |
| 200 | 3.40 | 1.00 | 8.60 | 2.50 | Center dot is zeroed at 200 m |
| 300 | 2.30 | 0.67 | 5.70 | 1.67 | The 1 st BDC hold over line is the impact point for 300 meters |
| 400 | 1.70 | 0.50 | 4.30 | 1.25 | The 2 nd BDC hold over line is the impact point for 400 meters |
| 500 | 1.40 | 0.40 | 3.40 | 1.00 | The 3 rd BDC hold over line is the impact point for 500 meters |
| 600 | 1.10 | 0.33 | 2.90 | 0.83 | The 4 th BDC hold over line is the impact point for 600 meters |
| 700 | 1.00 | 0.29 | 2.50 | 0.71 | The 5 th BDC hold over line is the impact point for 700 meters |
| 800 | 0.90 | 0.25 | 2.10 | 0.63 | The 6 th BDC hold over line is the impact point for 800 meters |
| 900 | 0.80 | 0.22 | 1.90 | 0.56 | The 7 th BDC hold over line is the impact point for 900 meters |
| 1000 | 0.70 | 0.20 | 1.70 | 0.20 | The 8 th BDC hold over line is the impact point for 1000 meters |

**The data in the column “Reading W” has the both MOA and MiL value, which is calculated and based on the target width 7.9” and 19.7” at each range in meters. The vertical BDC lines are the hold over lines for the appropriate range.

SECTION 9: CMR SCOPE EXTENDED LEVER INSTALLATION (Item No.: SMA-EL)

This is optional accessory for all CMR series. This kit includes three components: Bushing Screw #1; Screw #2; Extended Lever.



Bushing Screw #1



Extended lever



Screw # 2

The installation instructions are as followings:

- (1) Remove the existing small top covering screw on the power change ring. **Do not unscrew the screw underneath the covering screw. This underneath screw is connected to the erector unit. Unscrewing the underneath screw will damage the scope.**

Remove the existing
Cover Screw



- (2) Place Bushing Screw # 1 into the screw hole and tightened it down until it is flush with the curved surface.
- (3) Place the Extended Lever on top of the curved surface. Make sure the small arch of the Extended Lever matches up properly with the curved surface on the bump.



- (4) Place Screw #2 through the extended lever and tighten it into the bushing screw #1.

SECTION 10: MAINTAINING YOUR RIFLESCOPE

Your scope, though amazingly tough, is a precision instrument that deserves reasonable and cautious care. For normal maintenance:

- A. Do not attempt to disassemble or clean the scope internally.

- B. The external optical surfaces should occasionally be wiped clear with the lens cloth provided or an optical quality lens paper.
- C. Keep the protective lens covers in place when the scope is not in use.
- D. Remove any external dirt or sand with a soft brush so as to avoid scratching the finish.
- E. Wipe the scope with a damp cloth, followed by a dry cloth.
- F. Then go over the metal portions of the scope with a silicon treaded cloth in order to protect the scope against corrosion.
- G. Store the scope in a moisture-free environment.
- H. Avoid storing the scope in a hot place, such as the passenger compartments of a vehicle on hot days. The high temperatures could adversely affect the lubricants and sealants. A vehicle's trunk, a gun cabinet or a closet is the preferred storage locations.
- I. Never leave the scope where direct sunlight can enter either the objective or the eyepiece lens. Damage may result from the concentration of the sun's rays (burning glass effect).

WARNING: UNNECESSARY RUBBING OR USE OF A COARSE CLOTH MAY CAUSE PERMANENT DAMAGE TO LENS COATINGS.

SECTION 11: LIMITED LIFETIME WARRANTY

Hi-Lux, Inc. warranties its products against defects arising from faulty workmanship, or materials, for the lifetime of the **original purchaser**. Any attempt to alter, dismantle or change the standard specifications of the products, will make this warranty null and void. This warranty is made to the original purchaser of the goods including all international sales, and applies only to the products purchased through our authorized distributors or dealers. The international warranty is subject to approval from our authorized distributor or us directly. The warranty is not transferable. Warranty obligation is limited to the repair or replacement of any product returned to **Hi-Lux, Inc.**, which is determined by the manufacturer to have defects arising from faulty workmanship, or materials that adversely affect the satisfactory operation of the product. It should be noted that on items containing an etched glass reticle that the occasional appearance of some small particles is common and not a warrantable repair. We only have a one-year warranty for the electronic components that are contained on the products. **Hi-Lux, Inc.** reserves the right to request proof of purchase and purchase date. To guarantee warranty service, the enclosed warranty form must be completed and returned within ten (10) days of purchase to establish all warranty rights between you, the original purchaser, and **Hi-Lux, Inc.** We assume no liability for any incidental or consequential damages, or incidental expenses. Some states do not allow the exclusion or limitation of incidental or consequential

damages, so the above limitations or exclusion may not apply to you. No warranties are made, or are authorized to be made, other than those expressly contained herein. To file a claim under this warranty, please contact the Customer Service Department of **Hi-Lux, Inc.** at (310) 257-8142 to obtain a Return Authorization number (RA number). After receiving your RA number, please mark the number on the outside of the package; enclose the defective item with a brief explanation of the problem. Please be sure to include your name, address and phone number. Failure to obtain a RA number may result in either refusal upon delivery, or lengthy delays for warranty repairs and service required for the item returned to us. All returns are to be shipped prepaid direct to **Hi-Lux, Inc.** including a check or money order in the amount of \$17 to cover postage and handling. Additional fees will be applied to all returns from outside of the United States.

Attn.: Warranty & Service Dept.

Hi-Lux, Inc.

3135 Kashiwa Street

Torrance, CA 90505

Tel: (310) 257-8142, Fax: (310) 257-8096

E-Mail: service@hi-luxoptics.com

www.hi-luxoptics.com

In the event of a non-warranty repair, you will receive an estimate prior to any work being done. This warranty gives you specific legal rights and you may have other rights, which vary from state to state. As defined by federal law, this is a limited warranty.



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