



The 2.5X Wm. Malcolm® U.S. Military M82G2 Sniper Riflescope Instruction Manual



WARNING:

For safe usage of this scope, it is absolutely necessary that it must be securely mounted to your rifle. The front and rear scope mounts require installation using the special mount and rings. This should be done by a competent gunsmith and requires drilling and tapping in your barrel. Failure to follow this procedure can result in personal injury.

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THANK YOU for purchasing a WM. MALCOLM M82G2 U.S. MILITARY SNIPER SCOPE made by Leatherwood / Hi-Lux Optics.

When the U.S. was forced into WW II in late 1941, America's infantry troops were not prepared for the scale of combat they would encounter. The country was not prepared to arm hundreds of thousands of new riflemen with the latest U.S. military rifle - the semi-automatic M1 Garand. Several hundred thousand WW I vintage Springfield Model 1903 rifles were pulled out of storage and sent back into war - and both Remington and Smith-Corona used modified original tooling to produce a slightly modernized version of the rifle, known as the M1903A3. Some were fitted with a low-power 3/4-inch tube 2.5x scope, to become the official U.S. Army M1903A4 sniper rifle, while the Marine Corps installed an 8x target scope on select '03 rifles to create their Model 41 sniper rifle. (Hi-Lux Optics produces superb reproductions of both scopes.)

By 1944, U.S. troops had been adequately armed with the M1 Garand, which had proven to be an excellent and reliable combat rifle. Efforts were then turned to transforming some of these rifles into sniper rifles - and the M1C was born. Since the Garand is a top eject semi-auto rifle, a mount was devised that off-set a scope enough to the left side of the receiver to allow empty cartridge cases to clear without hitting the scope.

The riflescope chosen for the new M1C sniper rifle was the 7/8-inch tube 2.5x Lyman Alaskan - which was designated "TELESCOPE M82". The sporting versions of this riflescope had proven to be rugged, and capable of withstanding rough and tumble use in the wilds of Alaska, and to withstand the hard recoil of rifles with the firepower to put down a 1,000 pound grizzly.

This scope was actually used in two versions - the M82 with a tapered post reticle, and the M81 with a cross-wire reticle. Primarily the M82 was used to turn select M1 Garand rifles into very effective longer range (600 to 800 yards) sniper rifles. However, some were also mounted on Remington Model 1903A4 Springfield pattern bolt-action .30/06 rifles. The scopes and rifles saw a limited amount of use as WW II wound down, but were called upon again for use during the Korean Conflict of the early 1950s. A few of the rifles also saw service in Vietnam during the 1960's.

Hi-Lux Optics has totally re-engineered this scope design from the inside out, to produce the clearest, brightest and most reliable scope of this type ever manufactured - and we're proud to add it to our lineup of Wm. Malcolm vintage riflescopes. Our goal is to bring to the Vintage Sniper Rifle competition shooter a top quality scope that surpasses the quality of the WWII/Korean era originals used on the M1C sniper rifles.

Externally, this scope is the spitting image of the original. Internally, this scope is far superior - and due to the vast improvements Hi-Lux Optics has made, we are referring to the Wm. Malcolm version as the M82G2. Those improvements include high quality multi-coated lenses for superior light transmission and exceptional clarity. The new M82G2 scope also offers more windage and elevation adjustment than the original. The Wm. Malcolm version provides a total of 80 MOA with either windage or elevation.

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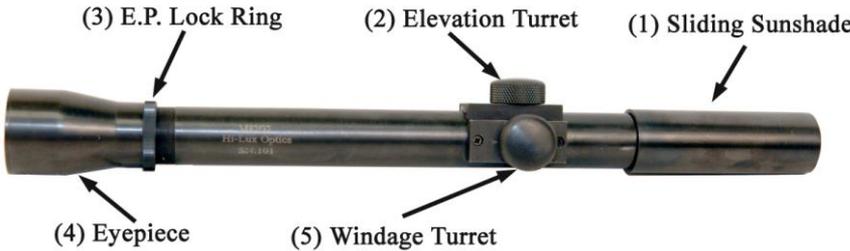
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Section1: Telescopic Riflelescope Specifications

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 Size
M82G2	2.5 X	20mm	35.20	3.50	11	12.9	6	7/8"

All lens surfaces are fully multi-coated using the special technology to maximize the light transmission. The reticle is a tapered post with a fine cross-wire. Elevation and Windage adjustments are ½ MOA per click, 40 clicks (20 MOA) per full turn. The total Min. adjustments for Elevation is 80 MOA, with 40 MOA up and down from the center. The total Min. adjustments for Windage is also 80 MOA, with 40 MOA left and right from the center. The length of the scope with the sunshade in is 11". The overall length with the sunshade extended out is 12".

Section 2: Basic Definitions and Adjustments

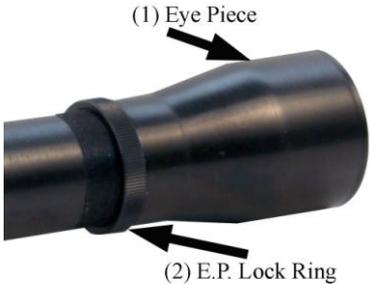


(1) Sliding Sunshade; (2) Elevation Turret; (3) E.P. Lock Ring; (4) Eye Piece; (5) Windage turret;

Section 3: Eyepiece Focusing and Turret Adjustment

(1) Eyepiece Focusing Adjustment

Hold the scope about 3.5 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 need to

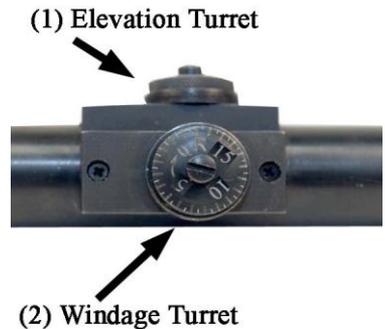


change the scope's focus to suite your individual eyesight. Turn the E.P. Lock Ring (2) clockwise to loosen, or turn the Eye Piece (1) counter-clockwise to loosen. Then turn the Eye Piece (1) clockwise or counter-clockwise until the focus allows you to see the reticle clearly and sharply. Without moving the Eye Piece (1), turn the E.P. Lock Ring (2) counter-clockwise to tighten snugly against the Eye Piece (1). Tighten finger tight only - DO NOT USE TOOLS TO TIGHTEN.

WARNING: NEVER LOOK AT THE SUN WITH THIS PRODUCT, OR EVEN THE NAKED EYE. YOU COULD PERMANENTLY DAMAGE YOUR EYES.

(2) Elevation and Windage Turret Adjustments:

Both Elevation and Windage have total minimum 80 MOA adjustments, which is 40 MOA up & down and left & right from the optical center. Each revolution is 20 MOA (40 clicks) and each click value is 1/2 MOA. Turning the turrets clockwise for the elevation is to move the point of impact **UP** and for windage is to move the point of impact to the **RIGHT**. The marks on the elevation and windage cannot be re-indexed after the scope has been zeroed. Do not try to loosen the screws on either the elevation or windage turrets.



WARNING: Loosening the slotted head screws on the windage and elevation turrets will disengage the internal click adjustment components and will affect the scope click adjustment function. Please check the screws periodically. If you see the screws are loosened, please retighten them, check them often.

Section 4: Mounting Rifle Scope

To achieve the best accuracy from your rifle, the scope must be mounted properly. You should use a high-quality mount base, or pair of bases, and 7/8" rings designed to fit your particular rifle. For example, Hi-Lux Optics offers a special base mount and rings for mounting this scope on the 1903A4 rifle. In order to mount this scope properly, you should follow the general guidelines as following :

- 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 furthest 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 TOP AND BOTTOM HALVES OF THE RINGS.

Section 5: 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 firearm in a rested position.
- C. Look through the bore and center the target in the bore and adjust the windage and elevation screws to position the reticle on the center of the target. The bore sight can only give you a rough idea about the point of impact. It is not your scope zero. You still need to shoot the rifle to get the scope zero adjusted accordingly.
- D. For the Windage adjustment, turn the windage adjustment screw **clockwise** to move the point of impact **Right** and **counterclockwise** to move the point of impact **Left** as the arrow on the turret indicates.
- E. In the same manner, adjust the Elevation by turning the elevation adjustment screw **clockwise** to **Raise** the point of impact and **counterclockwise** to **Lower** the point of the impact.
- F. 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 you're mounting system allows for adjustment of the scope, the gross adjustments should be made in the mount and then the final adjustments made with the scope's internal adjustment system.

Section 6: 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 hunting conditions or competition shooting requirement.

- A. In general, if most of your shots will be at short range, zero-in at 100 yards. For long-range shooting at big game, most experienced shooters zero-in about three inches high at 100 yards.
- B. From a rested position, fire three rounds at the target.
- C. 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 knob by $\frac{1}{2}$ MOA each click.
- D. Repeat as necessary.
- F. Once the zeroing of the rifle is completed, you can remember the position of the elevation and windage turrets for the zero position.

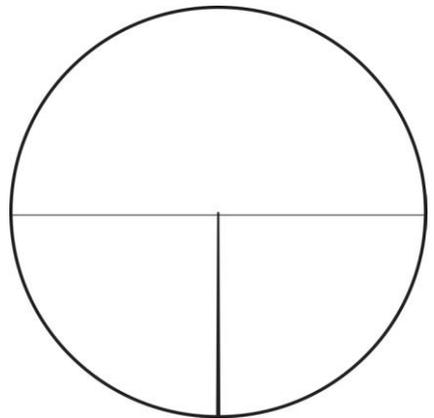
Each click of the adjustment changes bullet impact at 100 yards by $\frac{1}{2}$ " for both windage and elevation adjustments. The adjustments are calibrated in Minutes of Angle (MOA). One minute of angle is very close to 1 inch at 100 yards. To calculate the click value at distances other than 100 yards, use the following formula: divide the distance (number of yards) by 100. Then multiply this number by the click value $\frac{1}{2}$ for both windage and elevation adjustments. This will tell you the actual click value of the scope at that distance. For Example: your range is 200 yards. Divide 200 by 100 and that equals 2. Multiply the $\frac{1}{2}$ minute by 2 and the adjustment at 200 yards is 1 inch per click. For 400 yards, you would multiply $\frac{1}{2}$ by 4 and that would give 2 inch per click and so on.

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

Section 7: Reticle In Use

Post and Cross Wire Reticle:

The post and cross wire reticle provides a precise aiming point. The top of the post is the center of the reticle. The width of the top post is 2 MOA. The cross wire is 3 MOA below the top post. The width of the bottom post is 5 MOA.



Section 8: 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 be wiped occasionally with optical quality lens paper. Grease should be removed using alcohol only.
- C. Keep the protective lens rubber 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 treated cloth in order to protect the scope against corrosion. **DO NOT USE penetrating oils on this or any rifle scope.**
- G. Store the scope in a moisture-free environment or don't use this scope in the rain, because this scope is not sealed as the original M82 scope.
- H. Avoid storing the scope in a hot place, 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 9: Limited Lifetime Warranty

Hi-Lux, Inc. warrants 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. that 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 \$25 to cover postage and handling. Additional fees will be applied to all returns from outside of the United States.

Attn.: Warranty & Service Dept.

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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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