



# The 2.5X Wm. Malcolm® USMC Sniper M73G4 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 M73G4 USMC SNIPER SCOPE made by Leatherwood / Hi-Lux Optics.

The Hi-Lux Optics is introducing the recreation of the M73 WWII Sniper Scope. When the United States entered World War II, the country was not prepared to arm as many soldiers as needed with the latest U.S. military rifle - the semi-automatic M1 Garand. Hundreds of thousands of WW I vintage Springfield Model 1903 rifles were pulled out of storage and sent back into war. Using the original tooling for building these rifles, both Remington and Smith-Corona also began producing what became designated the M1903A3. To fulfill the need for sniper rifles, in 1942 the U.S. Army adopted the M1903A4 as the first standardized U.S. sniper rifle. This version of the Remington M1903A3 came without a rear or front sight, and had been fitted with a 3/4-inch diameter Weaver 330C 2.5x riflescope, designated the M73B1, mounted with a one-piece base and rings produced by Redfield. In all, 29,964 of these rifles were produced.

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 was to bring to the Vintage Sniper Rifle competition shooter a top quality scope that surpasses the quality of the WWII originals used on the M1903A4 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 M73G4. Those improvements include a modern erector tube and quality multi-coated lenses for superior light transmission. The scope offers more windage and elevation adjustment than the original. The Wm. Malcolm M73G4 offers a total of 60 M.O.A. with either windage or elevation.

Scopes of this style were popular with hunters of the 1930s, and were used on both center-fire big game rifles and .22 small game rifles. If you've been looking for a period correct scope for grandpa's old Savage Model 99 deer rifle or Winchester Model 75 squirrel rifle, this Wm. Malcolm model will look right at home on those vintage rifles. The 2.5x magnification is ideal for those under 100 yard shots at deer in the woods, or for shots at a bushytail gnawing away at a hickory nut on a tree limb 30 or 40 feet overhead.

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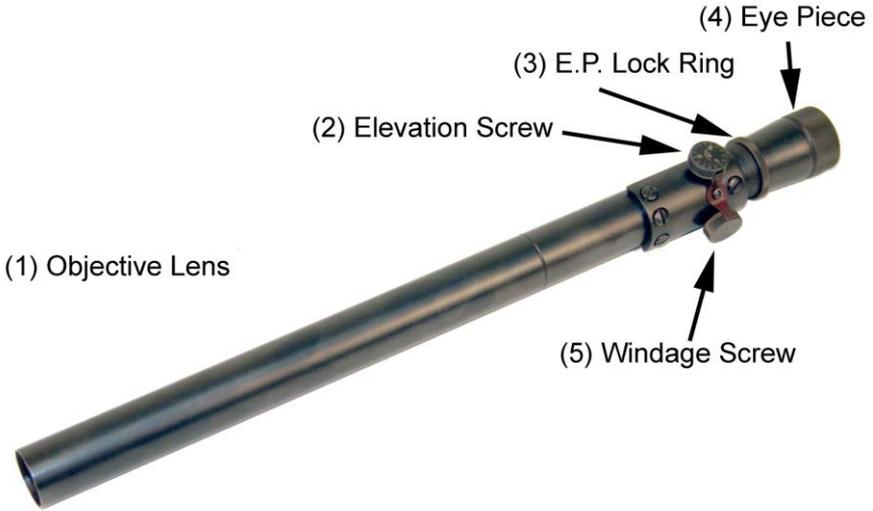
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# Section1: Telescopic Rifle Scope Specifications

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
M73G4	2.5 X	16mm	24.09	3.54	11.8	8.3	5.9	¾"

All lens surfaces are fully multi-coated using the special technology to maximize the light transmission. The reticle is a fine crosshair. Elevation and Windage adjustments are ½ MOA per click, 60 clicks ( 30 MOA ) per full turn. The total Min. adjustments for Elevation is 60 MOA, which is 30 MOA up and down from the center. The total Min. adjustments for Windage is also 60 MOA, which is 30 MOA left and right from the center.

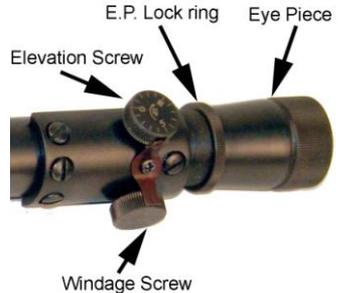
## Section 2: Basic Definitions and Adjustments



(1) Objective Lens; (2) Elevation Screw; (3) E.P. Lock Ring; (4) Eye Piece; (5) Windage Screw;

## Section 3: Eyepiece Focusing

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. Loosen the E.P.Lock Ring (3) (turn clockwise), and turn the Eyepiece (4)



clockwise or counter-clockwise until you are comfortable with the focus. Then tighten (turn counter-clockwise) the Lock Ring (3) snugly. Tighten the finger tight only. Do not use the tools to tighten.

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

## Section 4: Mounting Riflescope

To achieve the best accuracy from your rifle, the scope must be mounted properly. You should use a high-quality mount with bases and  $\frac{3}{4}$ " rings designed to fit your particular rifle. For example 1903 A4 rifle, we have the special mounting set for this scope. 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 **Left** and **counterclockwise** to move the point of impact **Right** 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.

- 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.

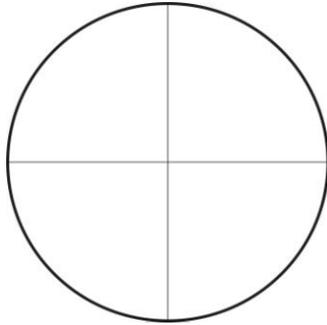
Each click of the adjustment changes bullet impact at 100 yards by  $\frac{1}{2}$ " for both windage and elevation adjustments. The adjustments are calibrated in Minutes of Angle (MOA). One minute of angle is very close to 1 inch at 100 yards. To calculate the click value at distances other than 100 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

### Fine Crosshairs Reticle:

The fine crosshairs provide a precise aiming point.



## Section 8: Maintaining Your Rifle Scope

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 by a clear 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 M73B1 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](tel:3102578142) 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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