The Short “Wm. Malcolm®” Telescopic 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 our 60° type dovetail bases provided with the scope package or equivalent bases. 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.

THANK YOU for purchasing a WM-3X or 6X short "Wm Malcolm" telescopic riflescope made by Leatherwood / Hi-Lux Optics.

Our Malcolms are a piece of history.

Since very little is generally known about early telescopic sights, a little history is in order to understand how the Malcolm scope fits in.

Good terrestrial telescopes were being built by the early 1700's. These had all the optical quality that was necessary for a rifle telescope. However it would not be until the mid 1800s that rifles became sufficiently accurate to require a telescopic sight.

The problem was how to mount the scope to the rifle so it could be "zeroed" to the rifle. In 1855, William Malcolm started building riflescopes. He understood that a riflescope must be properly constructed to hold zero. He made his scope tubes, by the same procedure as was used to build rifle barrels, by boring them from solid bar stock. The lenses were mounted on separate housings, securely screwed to the scope tube.

His first mounts followed the pattern that was written about by John Chapman in his book published in 1844 and used by many early riflescope builders. The elevation adjustment was a threaded post in the rifle tang.

At some point (probably after the Civil War) Malcolm devised a new solution to accommodate this much elevation. He built a "rabbit eared" type mount that was located where the rear sight was usually positioned. This was much more rugged than the previous designs and could be precisely adjusted either by a vernier scale or a scale and a micrometer like screw system. Also his scopes were assembled to withstand the recoil of the heavier calibers.

But in that time between the opening of the West and the death of the great Buffalo herds, Malcolm scopes saw it all.

As repeating rifles appeared and the need for long-range single shot rifles was on the wane, short scopes in new styles of mounts began to appear. By the turn of the century, Malcolm was primarily producing this type of scope. Our new M-3XS short scope is a design that continued in use even during WWII. By the turn of the 20th Century, Malcolm had become the leading scope manufacturer in the U.S. The company continued in business until WWII, even though some new optical technologies, which would make these types of scopes obsolete, had been developed in Europe. However Americans would still carry this type of scope into combat during WWII. Descendents of these scopes such as the Unertl was used in combat as late as Vietnam.

Our new Malcolm scopes are constructed in the same manner as the originals and in keeping with the general look and feel of the original scopes. To give modern performance to these old style scopes, we are using the high quality fully multicoated lenses.

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Section1: Telescopic Riflescope 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
M334151	3X	17	15	4.5	17	17.5	5.8	¾"
M634181	6X	17	12	4.5	18	18	5.8	¾"

All the air-glass surfaces are fully multi-coated using the special technology to maximize the light transmission. The Parallax is from 10' to infinity. The reticle is a fine crosshair. The rear mount is a Caged Type Mount with windage and elevation adjustment built in. The main tube is ¾" OD. The scope is a shockproof, waterproof and nitrogen filled.

Section 2: Basic Definitions and Adjustments

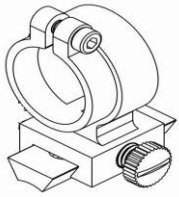
A. Eyepiece:

The eyepiece is at the rear of the scope. A knurled locking ring secures the eyepiece. You can change the scope's focus to suit your individual eyesight. Loosen (turn clockwise) the knurled locking ring, and turn the eyepiece clockwise or counter-clockwise until you are comfortable with the focus. Then, tighten the locking ring snugly. Tighten finger tight only. Do not use tools to tighten.

B. Rear Mount.

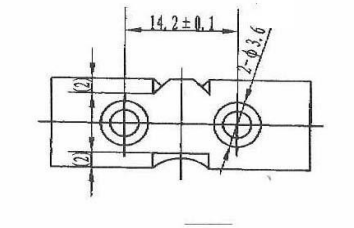
The rear mount contains the windage and elevation adjustments. It has a standard 60-degree type dovetail groove and a locking screw.

C. Front Mount.



The front mount provides a precise pivot system for the scope. It has a standard 60-degree dovetail groove and locking screw. There is also a locking ring attached with the front mount to prevent the scope tube from rotating and moving forward.

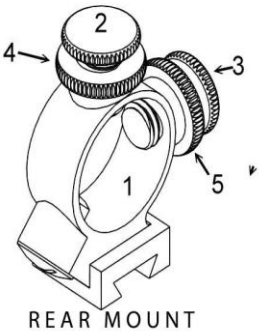
D. Standard 60 degree type dovetail base



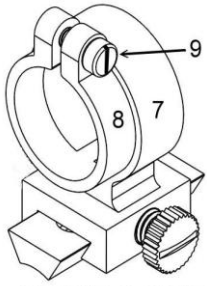
The scope comes with two pieces standard 60-degree type dovetail bases. The dovetail slots in the mount are cut ½" wide. The cross section dimensions should be compatible with the popular bases that have been used in the market for 100 years. The hole spacing is one of the most popular ones. Unertl or other 60-degree bases should all work with the scope mounts. The dovetail slot in the mounts is ½ inch wide and should fit the wide variety of these types of bases.

Section 3: Adjusting the Short "Wm. Malcolm" Telescopic Riflescope

This scope is designed to replicate the look of the scopes that appeared at the end of the 1800's and continued in use until WWII. However they are constructed using the most modern advances in optics and construction, to give the modern shooter a fun and dependable scope.



REAR MOUNT



FRONT MOUNT

Don't let the external adjustments of the Short "Wm. Malcolm" mounts intimidate you. If you'll take a few minutes to study the relationship of the front and rear mounts, you'll find that making sight adjustments with this sighting system is actually every bit

as easy as making sight adjustments with the standard equipment open sights that probably came installed on your rifle. In fact, the movements of all adjustments with these mounts have the same exact effect on the point of impact as the same adjustments made with standard open sights.

The **REAR MOUNT** offers adjustments for both **WINDAGE** and **ELEVATION**. When the **SIDE TURRET** is adjusted to move the scope tube to the **RIGHT** (turned **COUNTER CLOCKWISE**), it moves the point of impact to the **RIGHT**. When the **SIDE TURRET** is adjusted to move the scope tube to the **LEFT** (turned **CLOCKWISE**), point of impact moves to the **LEFT.**

When the **TOP TURRET** is adjusted to move the scope tube **UPWARD** (turned **COUNTER CLOCKWISE**), point of impact moves **UPWARD**. When the **TOP TURRET** is adjusted to move the scope tube **DOWNWARD** (turned **CLOCKWISE**), the point of impact moves **DOWNWARD**.

Section 4: Mounting the Short “Wm Malcolm” Telescopic Riflescope

The font and rear mounts are designed to fit the standard 60-degree type base, which has been used for 100 years to mount externally adjusted scopes. The dovetail slots in the mounts are cut ½” wide. This type base has been widely used for many externally adjusted scopes such as the Unertl and Fecker. Our clamp screw is designed to engage either the half moon slot or the Posa slot found on these bases. The supplied bases have bother types of slots, which have one on each side. If the scope is going to be used on a high recoil rifle, the base locking screw should engage a type Posa slot to prevent scope movement during recoil.

Section 5: Steps To Sighting In The Short "Wm. Malcolm" Telescopic Riflescope

1. Make sure that the mounts have been correctly and

Securely attached to the barrel using the mount blocks provided (will require gunsmithing if rifle is not pre-drilled and tapped), and that the crosshairs in the scope are level. This can be done by loosening the **SCREW(9)** at the top of the **STOP RING(8)** used in conjunction with the **FRONT MOUNT(7)**. This allows the scope to be rotated until crosshairs are level. Be sure to retighten the screw to prevent the scope tube from sliding rearward and turning in the mount.

2. Familiarize yourself with all of the features of the scope and mounts, especially the **LOCK COLLAR (4,5)**of both the **SIDE TURRET SCREW (1)** and **TOP TURRET SCREW (1)**. Before adjustment can be made with either turret, the **LOCK COLLAR** must be loosened by turning **COUNTER CLOCKWISE.**

3. We recommend starting at just 25 yards, placing a sizeable 2'x2' or large sheet of cardboard or paper on the target board. Using a small aiming mark near the middle of the target, center the crosshairs and take a shot. If you're on the paper, you have your starting point.

4. It's best to adjust the windage first. Begin by first loosening the **LOCK COLLAR(5)**, then adjust the **SIDE TURRET SCREW (2)** to move the scope tube in the direction you want to move the point of impact. To move shots to the RIGHT, turn the adjustment **COUNTER CLOCKWISE**. To move shots to the **LEFT,** turn the Adjustment **CLOCKWISE**. (Note: As the original scopes of this design, there are no micrometer clicks. However, there are numbered graduations, so pay attention to how much you moved the adjustment, and how far point of impact moved. This will make additional adjustments easier.)

5. Once windage has been adjusted, retighten the **LOCK COLLAR (4)** by turning **CLOCKWISE**.

6. To adjust elevation, again first loosen the **LOCK COLLAR (4)** of **TOP TURRET SCREW (2)** by turning **COUNTER CLOCKWISE**. To move point of impact UP turn the adjustment **COUNTER CLOCKWISE.** To move point of impact **DOWN** turn adjustment **CLOCKWISE.**

7. Once elevation has been adjusted, retighten the **LOCK COLLAR (4)** by turning **CLOCKWISE.**

8. Move target to 50 yards and repeat this process, once the rifle is printing on, move the target to 100 yards and repeat again to secure a good 100 yd zero.

Note:

The caged rear mount of the Short Circa 1990 Wm. Malcolm Scope does not provide as much elevation for low velocity big bore black powder cartridge rifles (i.e. .45-70, .50-70, .50-90) as the rear mount of the earlier styled Long Circa 1870 Wm. Malcolm scope. However, it should provide ample adjustment for typical hunting ranges (100 to 200 yards) with the large .45 and .50 caliber metallic cartridge rifles, while providing adjustment for 250 to 300 yard shooting with rifles chambered for the faster and lighter bullets of cartridges like the .30-40 Krag, .30-30 Winchester or .30-06 Springfield.

We also have some special mounts available to mount the short scopes for Win. 1885, Win. 73 / 76, Win. 92 / 94, Marlin 94 / 95, Henry Golden Boy .22, and the Sharps Side Mount Set. For more details, please contact Hi-Lux, Inc. at toll free No.1-888-Hi-Lux12 (1-888-445-8912).

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