



User Manual
MTC Viper



Forward

Thank you for buying this Viper Scope with the reticule designed solely by MTC Optics.

The Viper range of scopes are manufactured with the following features:

- ✓ ETE Microlux coated lenses
- ✓ Fully waterproof, fog-proof and shock-proof
- ✓ Patented push-pull turret locking system
- ✓ Patented ISIR (Integrated Side Focus with IR)
- ✓ 30mm tube

Our scopes have been manufactured by a company who have been making glass for many of our prestige Japanese branded scope manufacturers for years. We think you' will be impressed.

Sammie and Gary Cooper, of MTC Optics have between them, been hunting for 45 years. Gary writes for Airgun World and Realtree and won the UKAHFT open series in 2004 and was runner up in 2005, Sammie was ladies series winner in 2004 and runner up in 2005. They designed the Small Calibre Ballistic reticule to be universally useful for hunting and target shooting for air, rim-fire and centre-fire rifles.

Your scope is guaranteed free of all defects for 3 years from date of purchase, and this warranty is transferable as long as we are informed at time of re-sale.

If you have any questions or problems please feel free to contact us on:

mtcoptics@dsl.pipex.com

Telephone 08450 941542 (local call)
Fax 01666 825504
Or via our website www.mtcoptics.co.uk

Guarantee Registration

Date of Sale

Dealer Stamp

Dealer Signature

Dealer Print name

Care and Maintenance.

The Viper is a precision optical instrument and needs to be treated with care.

Clean the casing with a damp and soft cloth, then dry. Close the lens protective covers when the scope is not in use to protect the lens.

When necessary clean the lenses ONLY with a lens cleaning cloth and lens cleaning fluid suitable for photographic equipment. Store the scope in dry, well-ventilated place.

Before starting

Please see the picture on the right and familiarise yourself with the contents of your scope box, and terminology used in this description. Please see Fig1 and Fig2

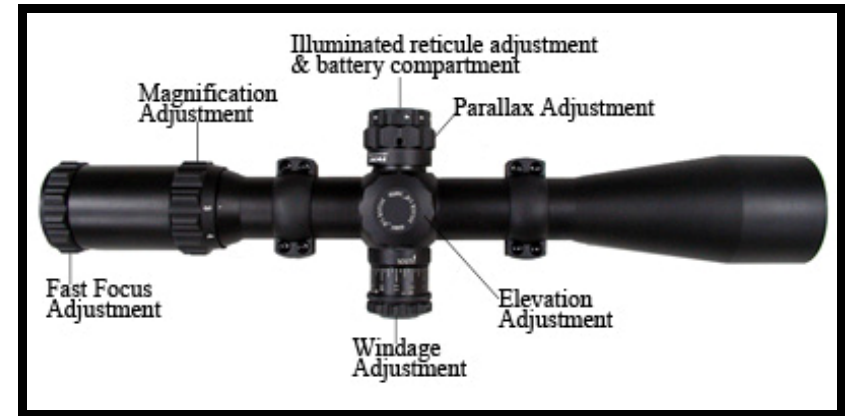


Fig 1 : Controls and adjustments

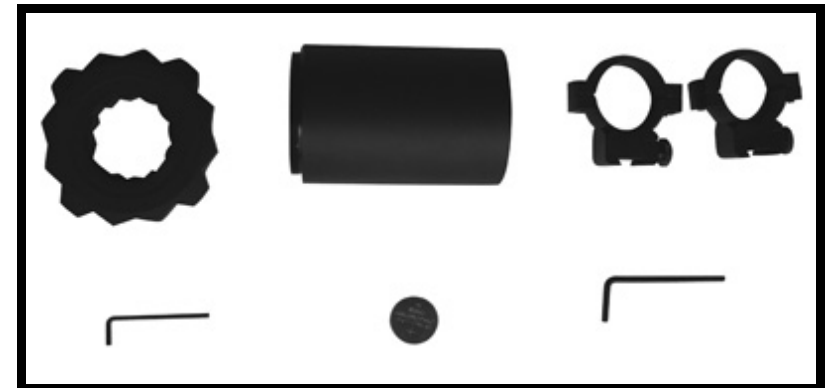


Fig 2 : Accessories

OPERATION OF THE SCOPE

1. Mounting the scope

The scope must be mounted using 30mm diameter rings. These rings should not be over-tightened or damage may result. Ensure rings are high enough to allow the scope objective lens to clear the rifle, but not so high as to make sure the eyepiece is too high so making sighting difficult. Please do not use poor quality mounts as they will cause misalignment and inaccuracy. Ensure that the horizontal cross hair is parallel to the action. This is best done by placing a level on the action and sighting the vertical cross hair down a vertical edge / plumb line etc.

2. Fast Focus Adjustment

This obtains the sharpest Reticule image, and MUST be carried out first. This adjustment only needs to be carried out once and is unique to each user's eye. Rotate fast focus ring to get the sharpest possible reticule. Hint: Don't look at the Reticule for more than a few seconds at a time as your eye will compensate for less than perfect sharpness. Look away and look back again. See Fig 3.

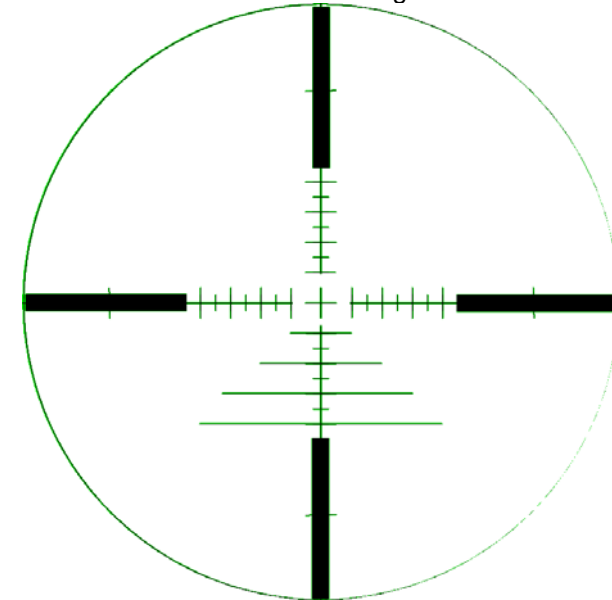
3. Focusing

Focus the sight on the target using focusing ring (Fig4). This is called parallax adjustment. Never try to zero without a perfectly clear picture as aiming errors will occur due to parallax error. Take care when focussing not to turn on the illuminated reticule or battery wear will occur.

4. Turret Operation

Windage and Elevation turrets both benefit from Optisan's patented push-lock system and locking number bezel. When pulled OUT the turrets can be rotated, when pushed in the turrets are locked and adjustments cannot be made. The numbers on the turrets can be rotated freely on loosening the locking ring and locked in place by re-tightening. This allows easy return to a zero point. See Figs 5 & 6

Reticule Discussion
True mil dot at x10 magnification



We have included a blank ret for you to photocopy. This is useful for you to note your aiming marks for the various ranges. The primary hold over aiming marks are given – ½ mil dot at the bottom of the floating cross, ¼ mil dot at the top of the vertical ret, then 1 mil dot on the 1st cross. These are mirrored on the upper cross hair and the horizontal left and right hairs. The small lines bisecting the thicker cross hair correspond to 10 mil dots from the centre or 20 mil dots between them. These have been included for target bracketing. We feel the Christmas tree reticule leads to faster target acquisition, more awareness of cant and better windage calculation.

This scope can be used on any small calibre rifle, probably on any calibre but at the time of writing long term tests have not been carried out on large calbres so this cannot be guaranteed. As an aide memoire some typical aim points for air rifle are shown below.

Holdover at given ranges in mildots, 1.75" scope height													
	Zero	10	15	20	25	30	35	40	45	50	55	60	65
0.177 12ft/lb	35yds	0.9	-0.1	-0.5	-0.5	-0.3	0.0	0.4	0.8	1.3	1.9	2.5	3.0
.22 12ft/lb	30 yds	0.0	-0.8	-0.8	-0.5	0.0	0.6	1.3	2.5	3.0	4.0	4.7	5.7
.22 28ft/lb	45 yds	0.7	0.0	-0.5	-0.6	-0.6	-0.5	-0.3	0.0	0.4	0.6	1.0	1.3
<i>Pellets shown Daystate FT.</i>						<i>Hold under shown as negative</i>							

Technical Specifications:

Optical magnification	3X-12X , 4X-16X
Field Of-View	400'-110' / 133m-37m, 300'-
Ft@1000yds/M@1000m	80' / 100m-27m
Min. focusing distance	10yds
Dimensions	44mm , 50mm objective
Weight	520g / 570g
Eye relief	3.5"-3.2"
Battery	CR2032



Fig 3 : Fast Focus Adjustment



Fig 4 : Parallax Adjustment

SCB Reticule
By MTC Optics. Pat pending

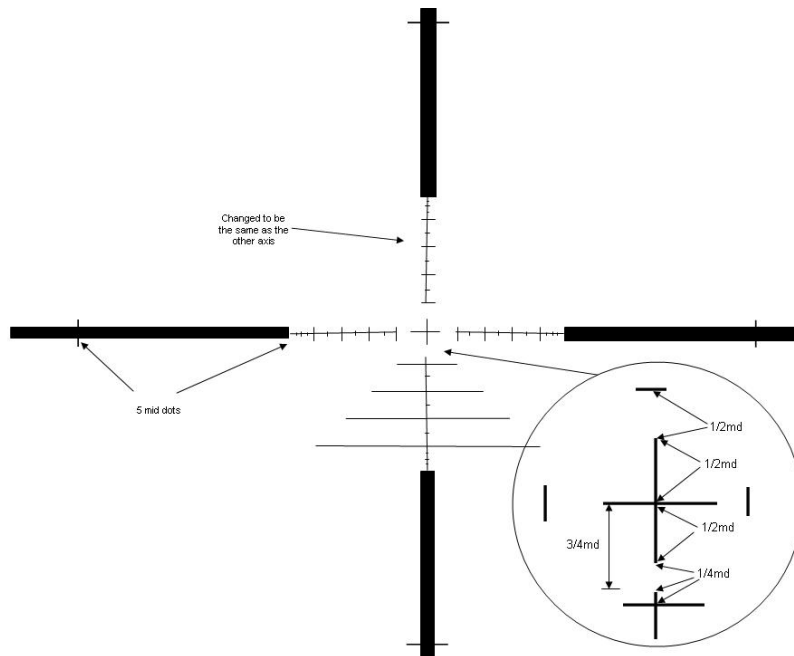


Fig 5a : Windage Turret (Locked)



Fig 5b : Windage Turret (Unlocked)



Fig 6a : Elevation Turret (Locked)



Fig 6b : Elevation Turret (Unlocked)

5. Zeroing your rifle

Unlock Windage turret and Elevation turret (Figs 5 & 6) by pulling outwards until they click and will rotate. This locking system is patented by Optisan and prevents accidental movement when shooting.

Place a suitable target at 15 yards, ensuring a suitable backstop. Ensure the rifle is held steadily and take 1 shot. Observe the pellet strike. Use the Elevation Turret to move the point of impact UP (anti-clockwise) or DOWN (clockwise). When the point of impact is in the centre of the target this can then be repeated at progressively further ranges until the chosen zero range is reached. When you are happy that your rifle is zeroed correctly push the turrets down to lock

When the rifle is almost zeroed start to fire groups of 5 shots before making small adjustments. Remember that wind will effect the pellet flight so zeroing should be carried out in calm conditions.

6. Illuminated Reticule

It is recommended that the battery (CR2032 or equivalent) be removed from the scope until the I/R is required. To fit simply unscrew the cover and insert observing correct polarity. Rotate the adjusting knob until the desired illumination is achieved. Over illuminating the reticule will obscure the target at night. (Fig 7).

7. Large Side-wheel

Big isn't it? We wanted this bad boy for hunting at night or in the winter and the Optisan team came up with a gem. Superbly functional, with it fitted the parallax ring can easily be found in the darkest night or wearing the thickest gloves. The design means it is a push on "overshoe" concept. Set your Illuminated ret to "off" and your parallax to minimum, then line up the distance numbers on the big slide on wheel with the numbers on the fixed ring. Slide it on, the rubber inner will form a perfect friction fit.

(Fig 8a & 8b)

8 Sunshade

A sunshade is supplied, this simply screws into the end of the scope. This is useful when facing towards the Sun, or where reflections are encountered.

CAUTION : NEVER LOOK AT THE SUN OR ANY BRIGHT LIGHT DIRECTLY ESPECIALLY THROUGH A SCOPE. PERMANENT EYE INJURY OR EVEN BLINDNESS CAN RESULT

Obviously a sunshade will reduce the amount of light entering the scope, so in times of low light it should be removed.

9 Metal Flip-up Lens Covers

A pair metal flip-up lens covers are supplied, which are connected to the front end of objective tube or rear end of ocular tube with the special silver tools provided.



Fig 7 : IR Adjuster with battery cover removed



Fig 8a : Sliding on large side-wheel



Fig8b : Large side-wheel in place



Fig 9a : Metal Flip-up Lens Cover (Closed)



Fig9b : Metal Flip-up Lens Cover (Open)

