



MLTC

OPTICS



**SWAT SERIES
USER MANUAL**

edition 2

SWAT PRISMATIC • 12x50 • 10x30

FORWARD

Congratulations on investing in an MTC Optics SWAT Prismatic riflescope which will give you years of accurate, trouble-free shooting. Manufactured to MTC Optics' exacting brief, SWAT Prismatic riflescopes incorporate cutting edge scope technology in their design brief and have been built using state-of-the-art manufacturing processes. Features include:

Model shown: SWAT 12x50



- **SWAT (Super-Wide-Angle Technology):** with close eye-relief for greater field of view and fast target acquisition
- **Bespoke mount:** to fit Picatinny and 11mm (with supplied adapters) with integral tilt adjustment feature
- **External tactical turrets:** elevation and windage turrets (lockable and resettable) for quick in-the-field adjustments
- **Side parallax adjustment:** eliminates parallax error and assists in range-finding
- **6-meter minimum focus:** suitable for airgun use and ultra-close-range shooting
- **Multi-brightness illuminated reticle:** to assist with tricky background and lighting scenarios
- **Fast-focus eyepiece:** for pin-sharp target when shooting at ultra-close ranges
- **Ocular concertina eye-cup:** allows for wide-angle view of sight picture
- **Magnetic, rotating flip-up lens cover:** fast and practical protection for lenses when in the field
- **Fully water, fog and shock proof:** increases longevity
- **Nitrogen purged:** internal regulation of scope's high-end performance

This User Manual will help you get the very best from your new riflescope. Please read it thoroughly and familiarise yourself with your new scope before fitting it to your rifle.

Tip: Your new SWAT Prismatic riflescope is supplied with a top-quality mount to fit a Picatinny-type receiver. Adapters are provided for use with 11mm receivers. In addition, the mount can be angled to improve scope/bore alignment or to compensate for trajectory fall-off.

BEFORE STARTING

Please familiarise yourself with the layout of your new MTC Optics SWAT Prismatic scope, and the terminology used in this manual.

Model shown: SWAT 10x30



1. Objective
2. Elevation turret (lockable)
3. Windage turret (lockable)
4. Parallax adjustment turret
5. Reticle illumination rheostat
6. Scope body tube
7. Mount (with tilt facility)
8. Concertina eye-cup
9. Fast-focus eye-bell (diopetre adjustment)

CARE AND MAINTENANCE

MTC's SWAT Prismatic riflescopes are precision optical instruments, so they need to be treated with care. When cleaning the exterior, use a soft, damp cloth and dry off the surface afterwards. Keep the lens cover(s) closed when not shooting to protect your scope's lenses.

Important: Should you need to clean the lenses, do so with extreme care to avoid scratching or damaging their expensive coatings. Use a camera-quality 'puffer brush' to blow off excess dirt, which should then be gently brushed away. Should any dirt remain, put a drop of alcohol-based cleaning fluid on a lint-free cloth and lightly rub the area in a circular motion. Do not apply excessive pressure as this could damage the lens surface and invalidate the warranty.

Should you have any questions, please contact your local MTC Optics supplier, or MTC directly via e-mail: support@mtcoptics.com

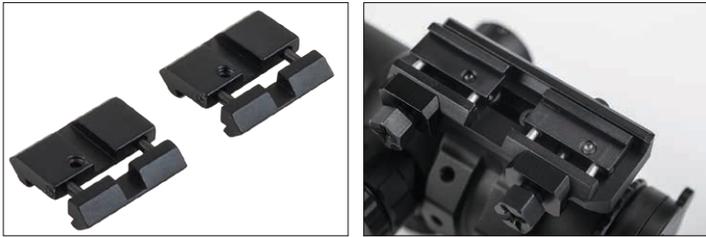
WARNING

NEVER LOOK DIRECTLY AT THE SUN OR ANY BRIGHT LIGHT THROUGH YOUR SCOPE - PERMANENT EYE INJURY OR EVEN BLINDNESS CAN RESULT

USING THE SCOPE

Mounting the scope to the rifle

The mounts supplied with the SWAT Prismatic series fit Picatinny type receivers. For receivers with narrower (11mm) dovetails, use the supplied step-down adapters (figures 1/1a).



Figures 1/1a: Use the Picatinny-to-11mm mount adapters on rifles with narrower dovetails

Set the eye relief by positioning the scope on the rifle (or adjusting the body position within the mount) so that you see a sharply-defined sight picture – the Prismatic range features a short eye relief to maximise the scope's ultra-wide field-of-view.

Important: Do not use on large calibre rifles with a heavy recoil, otherwise injury to your brow may occur during the firing cycle.

If necessary, adjust the dioptre to sharpen the crosshair. Remove the rubber concertina eye-cup to access the focus ring and, looking at an uncluttered background, turn the ring to get the sharpest definition of the reticle). *Tip: Do not look through the scope for more than a few seconds at a time when setting up the focus, and never look at the sun.* Replace the eye-cup after adjustment.

Ensure the vertical crosshair is perpendicular to the ground by aligning it with a vertical edge – use a plumb line if necessary. Avoid canting (leaning) the rifle during this process – aligning the action with a spirit level will help in this respect.

Turret operation

To unlock the turrets in order to adjust them, pull the vernier out. Press the turret back in to lock it (figures 2/2a). After zeroing - see opposite - set the vernier to "0" by loosening the grub screws; this will allow the vernier to freely rotate (figures 3/3a/3b). Fully tighten the grub screws afterwards.

Figures 2/2a: Locking and unlocking the external adjustment turrets



Figures 3/3a/3b: Loosen the turret grub screws to freely rotate the vernier to the "0" position

Zeroing-in

Initially, set a target at 15 metres and, aiming at a mark, shoot three shots to observe the point of impact (POI). Adjust the elevation and windage adjusters in the direction the POI needs to shift to strike where the central crosshair is. For example, if the group strikes the target low and right of your aiming point, adjust the elevation turret in the direction marked 'U' (Up) and the windage turret in the direction marked 'L' (Left). One turret 'click' will move the POI 10mm at 100m, 5mm at 50m, 2.5mm at 25m etc. When the group is roughly centre, move the target to your usual shooting distance (known as 'zero') and repeat the process to fine-tune the POI. *(Tip: Carry out zeroing in windless conditions.)* When you are happy your rifle is zeroed, set the turret vernier rings to '0' - see figures 3-3b.

MTC ships scopes from the factory with the adjusters in the mid-point position, but you should always check that they are set in the middle before zeroing your scope on a rifle for the first time. If, with the scope's elevation adjustment turret set to its mid-point, the initial POI is a long way below or above the central crosshair, you will need to alter the angle of the scope in the mount using the mount's integral tilt adjustment facility. Angle the front of the scope 'down' if the POI is a long way below the horizontal crosshair; angle the front of the scope 'up' if the POI is a long way above the central crosshair.

To alter the tilt angle, loosen the two bolts under the mount clamp and then slide the upper part of the mount fore or aft as required. Use the vernier on the side of the mount as a reference, and ensure the bolts are always fully tightened after making adjustments (figures 4/4a). *Tip: Make only small adjustments - one or two graduations on the vernier - at a time.*



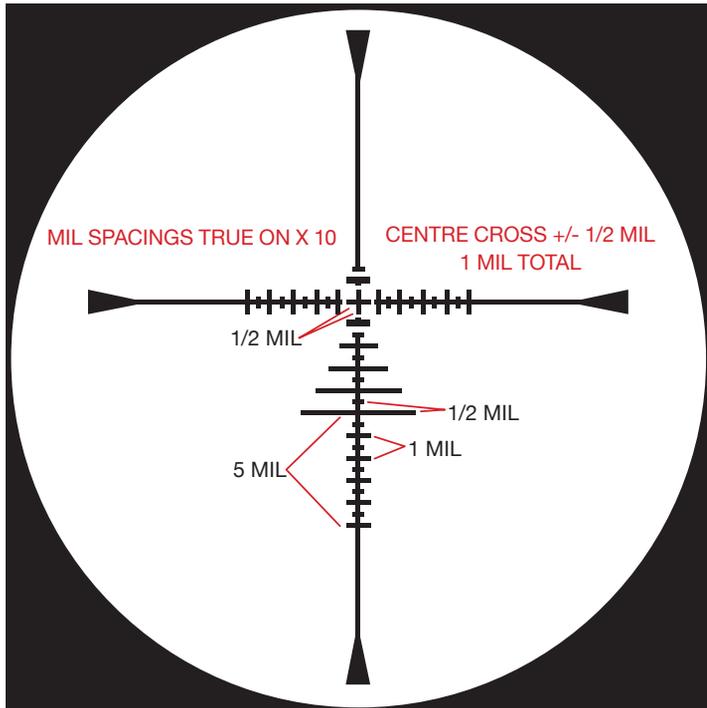
Figures 4/4a: The mount's 'tilt' screws are located under the clamp. Loosen both bolts, adjust the tilt angle and re-tighten. Use the vernier on the side of the mount base as a reference

The Crosshair

MTC's SWAT series of Prismatic riflescopes feature second-generation Small Calibre Ballistic (SCB2) reticle (see figure 5). The SCB2 reticle provides a multitude of aiming reference marks for holdover, holdunder and windage, making it suitable for all airguns and firearms.

The SCB2 reticle is based around milliradian spacings. A milliradian is known as a 'mil' and 1 MIL = 10cm at 100m (20cm @200m; 5cm @50m etc). Or 3.6" @100 yards; 7.2" @200 yards; 1.8" @50 yards etc. The reticles' graduations can also be used for accurate mil-based range-finding - information provided online at www.mtcoptics.com.

Figure 5 : MIL markings of the MTC Optics SCB2 crosshair



Crosshair illumination control

For tricky lighting conditions, the scope's crosshair can be illuminated in red. To turn it on, push the centre button located in the middle of the parallax side turret (refer to figure 8). The brightness intensity of the crosshair's illumination can be changed by short-pressing the button. The rheostat is powered by a CR2032 battery, accessed by unscrewing the rheostat cover on the side turret (figure 7).



Figure 7: The illuminated reticle battery is housed in the side parallax turret

Parallax focusing

The SWAT Prismatic series of scopes allows for parallax error to be corrected when shooting targets at varying distances. Parallax error is the apparent shift of the crosshair in relation to the target, caused by inconsistent eye alignment to the scope. It is more prominent the closer the range. Ideally, the scope's parallax should be set to the target's exact distance before shooting to eliminate the possibility of aiming errors.

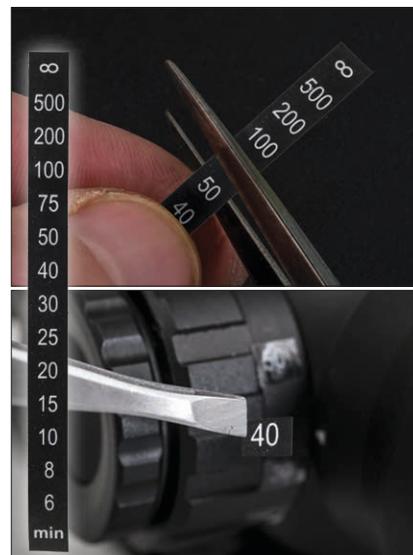
To set parallax, look at the target through the scope and, using the side parallax turret, adjust the sight picture's focus until the target looks at its sharpest. *Tip: The crosshair's primary focus should have first been set for your eye's dioptre - refer to section 'Mounting the scope to the rifle'.*

Always shoot with a sharp sight picture to ensure parallax error has been eliminated. *Tip: Because the SWAT's parallax adjusting turret fine-focuses the sight picture, the distance vernier on the side turret can also serve as a useful range-finding guide. A set of stick-on numbers is provided to allow you to set your own range markers that are correct for your needs and eyesight (figure 8a).*



Figure 8: Turn the parallax adjustment turret to view the target at its sharpest. This will also ensure any parallax error has been eliminated

Looking through the scope at a target of measured distance (eg 40 yds/m), slowly turn the parallax side turret until the target appears at its sharpest focus.



Cut out and stick the appropriate adhesive label marker (eg '40') onto the side turret so that it corresponds with the ◀ reference mark on the scope body. Using tweezers will help. Repeat for all the distances most relevant to your shooting scenarios.

Figure 8a:

TECHNICAL SPECIFICATIONS

Model	SWAT 12x50	SWAT 10x30
Length	156mm	123mm
Weight	460g	300g
Tube diameter	42mm	34mm
Magnification range	12x, fixed	10x, fixed
Objective lens diameter	50mm	30mm
Eye relief	17.3mm	14mm
Dioptre adjustment	+/-4	+/-4
Field of view @ 100m	28m	32m
Parallax range	6m - infinity	6m - infinity
Turret click adjustment	0.1 MIL (1cm @100m)	0.1 MIL (1cm @100m)
Clicks per turret revolution	42	42
MILs per turret revolution	6	6
Reticle style	SCB2	SCB2
Reticle illumination	Yes. Separate on/off and brightness control	Yes. Separate on/off and brightness control

Please refer to MTC's official website for full and latest specifications:
www.mtcoptics.com



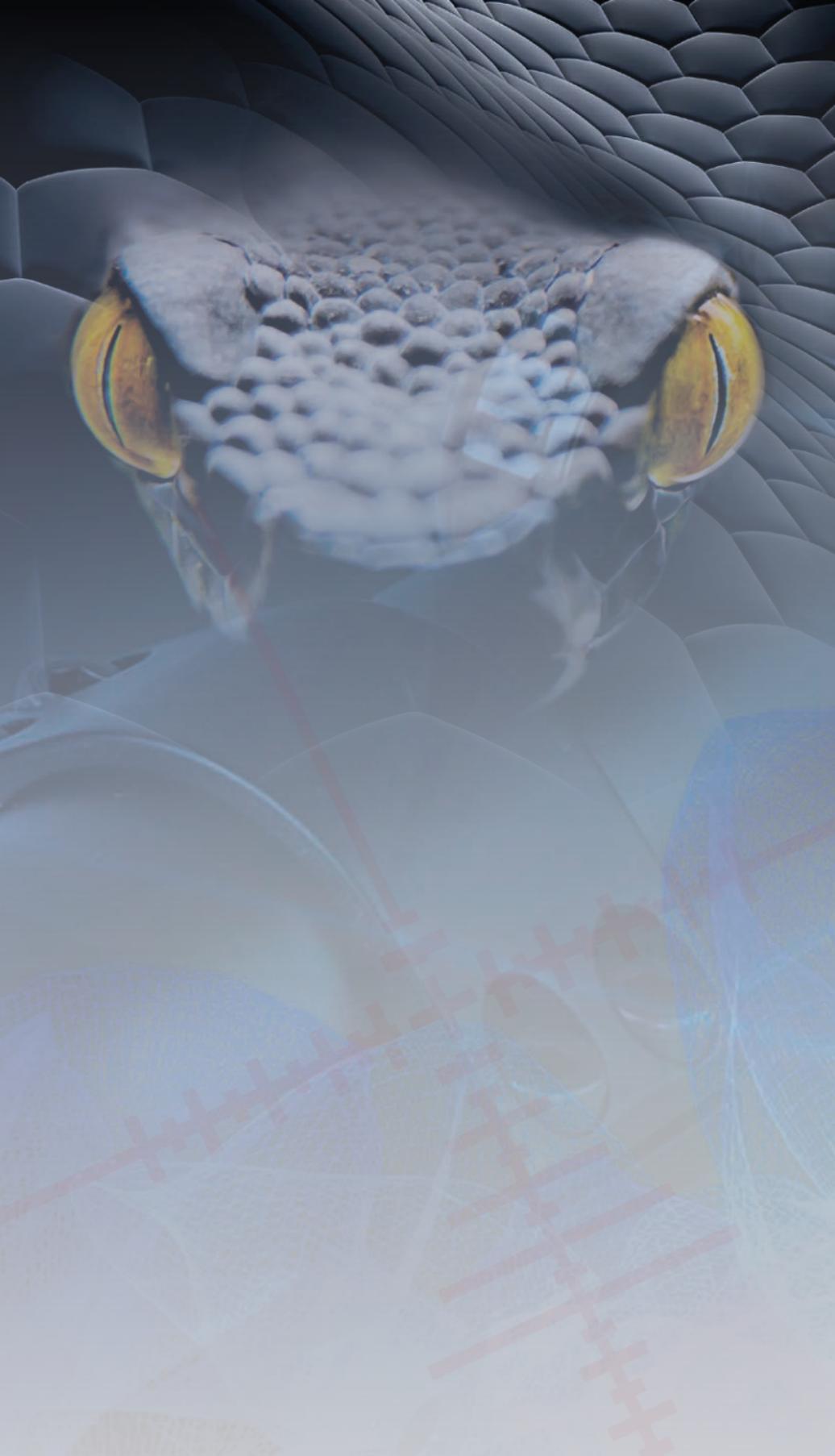
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The completed Guarantee Registration (overleaf) should be returned to the following address:

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!! Remember to include a copy of the original receipt !!
 Alternatively, registration can be completed online at:
www.mtcoptics.com
 (A copy of the original receipt will be required.)



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