



MTC

OPTICS

VIPER CONNECT SERIES *USER'S MANUAL*

— edition 1 —

VIPER CONNECT • 3-12x32 • 4-16x32

FOREWORD

Congratulations on investing in an MTC Viper Connect riflescope which will give you years of accurate, trouble-free shooting.

Manufactured to MTC Optics' exacting brief, Copperhead scopes incorporate cutting edge technology in their design brief and have been built using state-of-the-art manufacturing processes.

Model shown: Viper Connect 4-16x32



Features include:

- **Glass-etched reticle**
Design exclusive to MTC Optics
- **Edge-to-edge multi-coated lenses**
Bright, clear picture quality
- **Side parallax adjustment**
Eliminates parallax error and assists in range-finding
- **10-metre minimum focus**
Suitable for airgun use and ultra-close-range shooting
- **Reticle illumination**
Assists with tricky background and lighting scenarios
- **30mm body tube**
More substantial build quality and light transmission
- **Flip-up front lens cover**
Fast and practical protection when in the field
- **Fully water, fog and shock proof**
Increases longevity of the scope
- **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:** When mounting your Viper Connect riflescope, use only top-quality mounts. Fitting it to your rifle with cheap, low-quality mounts is false economy. Besides not maintaining zero and potentially creating misalignment with the bore, improper scope mounts may even mark or damage the scope.*

BEFORE STARTING

Please familiarise yourself with the layout of your new MTC Viper Connect scope, and the terminology used in this manual.

Model shown: Viper Connect 3-12x32



- | | |
|--|------------------------------|
| 1. Objective lens | 6. Scope body tube |
| 2. Elevation turret
(secured with turret cap) | 7. Zoom ring (magnification) |
| 3. Windage turret
(secured with turret cap) | 8. dioptre adjustment |
| 4. Parallax adjustment | 9. Eye-bell |
| 5. Reticle illumination rheostat | 10. Flip-up lens cover |
| | 11. Cant indicator |

CARE AND MAINTENANCE

MTC's 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

Use mounts with 30mm diameter rings that are high enough to clear the magazine and ensure the objective (front) bell does not touch the barrel, but allow a comfortable head position when taking aim. MTC make a dedicated mount for the Connect series as well as a reach forward adjustable mount. Wherever possible one of these mounts should be chosen.

Set the eye relief by positioning the scope on the rifle (or adjusting the scope position within the mounts) so that you see a sharply-defined sight picture. **Important: Do not use on large calibre rifles with a heavy recoil, otherwise injury to your brow may occur during the firing cycle.**

Adjust the primary focus (dioptre) to sharpen the crosshair. Look at an uncluttered background and then turn the fast-focus 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. Note: Do not worry about the sharpness of the target at this stage. That will be focused by adjusting the parallax sidewheel (secondary focus).

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 access the elevation and windage turrets remove the screw on turret caps (figures 1/1a). After zeroing - see opposite - the vernier can be set to a “0” reference. Without allowing the vernier to move, remove the central screw so the vernier can be lifted off its seat and moved to the “0” position (figures 2/2a/2b). Replace the vernier and lock screw. Finally replace the turret caps.

Figures 1/1a: accessing elevation and windage turret adjustments



Figure 2: MTC's Connect Mount

Figure 3: MTC Reach forward/back adjustable mount
- designed for use with the Viper Connect



Zeroing-in

Initially, set a target at 15 yards (or bore sight the scope) and, aiming at a specific mark, shoot a few shots to observe the point of impact (POI). Do not compensate your aim during these initial shots, even if the shots do not strike where you intend them to. This initial group is to see how the sights need adjusting.

After you have fired a few shots and established a group on the target, adjust the elevation and windage adjusters in the direction that the POI needs to shift in order 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).

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 that your rifle is zeroed, set the turret vernier rings to their "0" mark (see figures /1a).

Running out of elevation turret adjustment

MTC ships its scopes from the factory with the elevation (top) and windage (side) turret 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 midpoint, 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.

If the POI is a long way below the horizontal crosshair, use adjustable mounts or shim the cradle of the rear mount.

Tip: Use a strip of silver foil, folded to greater thickness if necessary, as a shim. You could also use a strip of old 35mm camera negative. However, do not use adhesive tape as this can cause the scope to move within the mounts when the temperature changes. Never shim the scope more than 0.3mm.

AMD2 Reticle

The second-generation Advanced Mil Dot (AMD2) reticle is suitable for all airguns and firearms as its multi-stadia design provides a multitude of aiming reference marks for holdover, hold under and wind allowance (figure 4). Its design is based around milliradian spacings. A milliradian is known as a 'MIL' and 1 MIL = 3.6" at 100 yards (7.2" @ 200yds; 1.8" @ 50yds etc).

On the Viper Connect, the reticle is situated in the second focal plane (SFP) and the reticle remains the same size whatever the magnification is set to.

When the scope's magnification ring is set to the higher powers, the AMD2's multi-stadia design can also be used for range-finding (*refer to section '**Parallax focusing**'*).

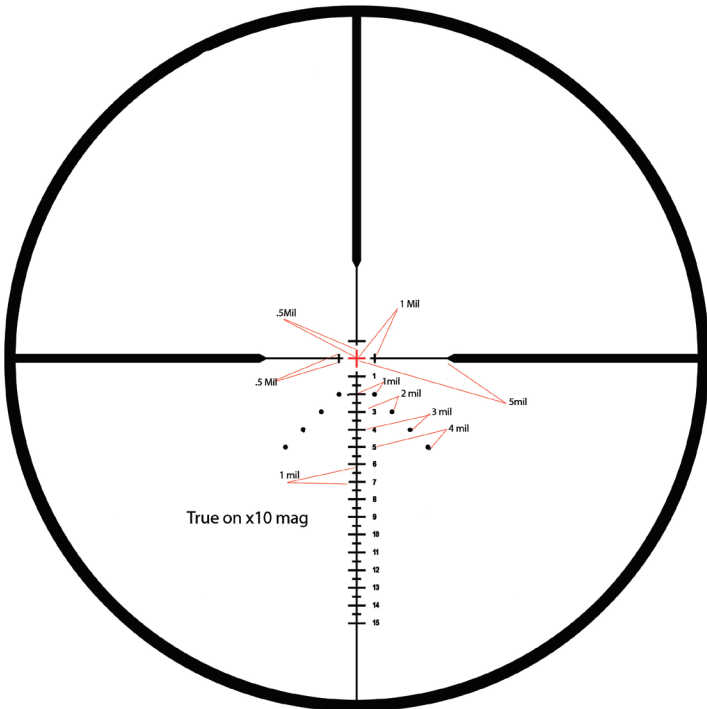


Figure 4: MIL markings of the MTC Optics AMD2 Reticle

Crosshair illumination control

When shooting in tricky lighting conditions (e.g. targets in low light, or against high contrast or dark backgrounds), the crosshair can be illuminated in red.

To illuminate the crosshair, turn the rheostat ring located on the parallax sidewheel turret from '0' (off - black) to the required brightness level (*see figure 6*). Return to position '0' when the illuminated reticle is not required to preserve battery life.



Figure 5: The CR2032 battery, accessed by unscrewing the rheostat cover

The rheostat is powered by a CR2032 battery, accessed by unscrewing the rheostat cover (figure 5).

The Viper Connect 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-to-scope alignment. It is more prominent at closer ranges. 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 the parallax, look at the target through the scope and, using the parallax side adjuster, move 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 parallax side adjuster fine focuses the sight picture, the distance vernier on the side adjuster can also serve as a rudimentary range-finding guide (figure 6).*



Figure 6: Turn the parallax side adjuster to ensure the target is at its sharpest. This will ensure any parallax error has been eliminated. The distance vernier can also be used as a rough range-finding guide.

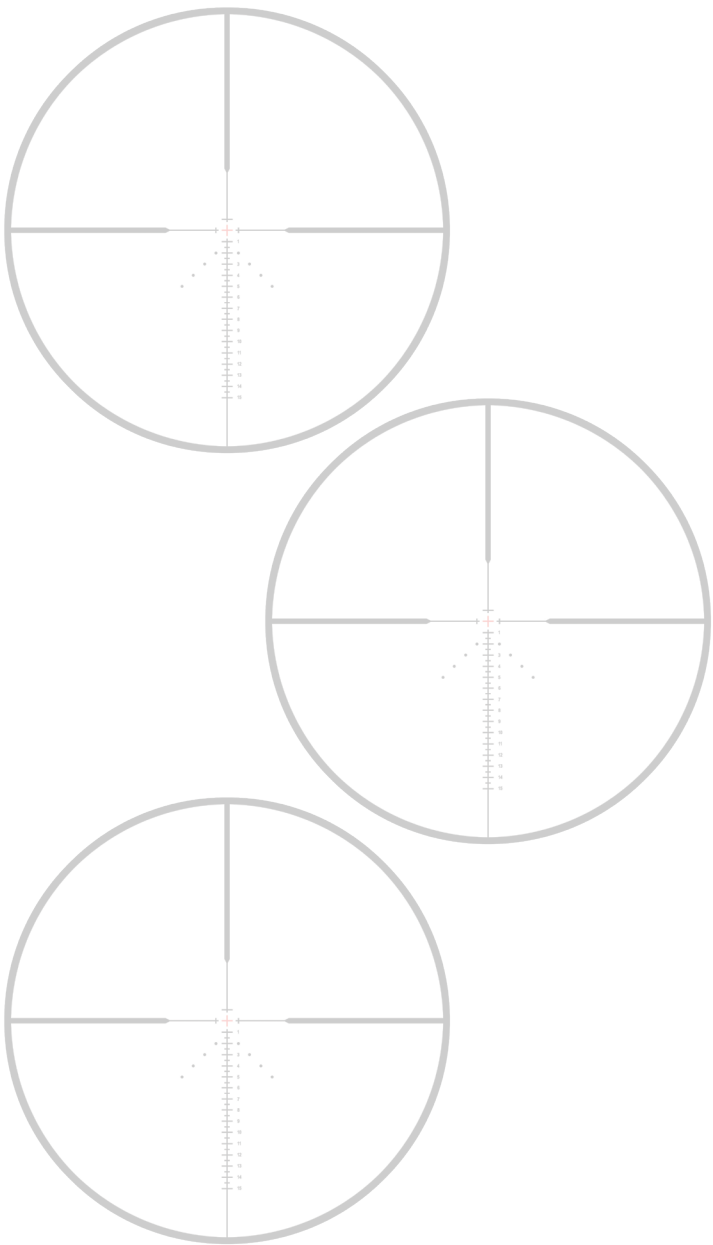
TECHNICAL SPECIFICATIONS

For the latest specifications on your Viper Connect visit:

<https://mtcoptics.com/viper-connect>

USER NOTES

Use these images to mark your aiming points



Enter your click adjustments here:

<i>Range</i>	<i>Clicks</i>	<i>Range</i>	<i>Clicks</i>	<i>Range</i>	<i>Clicks</i>
10m	_____	80m	_____	150m	_____
15m	_____	85m	_____	155m	_____
20m	_____	90m	_____	160m	_____
25m	_____	95m	_____	165m	_____
30m	_____	100m	_____	170m	_____
35m	_____	105m	_____	175m	_____
40m	_____	110m	_____	180m	_____
50m	_____	115m	_____	185m	_____
55m	_____	120m	_____	190m	_____
60m	_____	125m	_____	195m	_____
65m	_____	130m	_____	200m	_____
70m	_____	135m	_____		
75m	_____	140m	_____		

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[illegible]

WARRANTY



- MTC Optics guarantees that MTC Optics rifle scopes are free from defects in materials and workmanship
- The standard warranty is intended for the original purchaser and is valid for a period of five years. By registering online, the warranty is extended to life
- The warranty commences on date of sale, shown on the sales receipt
- The original receipt must be/have been provided for the purposes of a warranty claim
- Scopes should be used as outlined in this User Manual
- Other than signs of intended use, scopes should not show any evidence of having been tampered with, or been abused in any way in a manner not in keeping with the purpose for which it was designed
- The original owner is responsible for returning the scope to MTC Optics (see below). The company reserves the right to charge return postage

Exclusions

- Damage, whether accidental or due to misuse, is excluded from the terms of the warranty
- Where a scope cannot effectively be repaired under a legitimate warranty claim, MTC Optics will provide a replacement scope, not a refund
- In the case of obsolete scope models requiring replacement, an alternative model of at least equivalent specification and value will be substituted

For Warranty Service

- Initially contact your place of purchase. They will return to MTC Optics/local agent and advise the action to be taken
- If dealer support is not available, please contact **support@mtcoptics.com** prior to returning the scope to the address opposite. You are responsible for the cost and security of this return
- After receipt of a returned scope, MTC Optics will contact you within 48 hours (weekends and holidays excluded) and keep you informed of the status of your warranty claim



WARRANTY DETAILS

Register your warranty online here:
<https://mtcoptics.com/warranty/>

Alternatively, fill out the details below and send to:
Warranty Registration,
MTC Optics
Unit 3, Raleigh Hall industrial Estate,
Eccleshall,
Staffordshire
ST21 6JL UK

Customer Name:

Customer Address:

Customer Email:

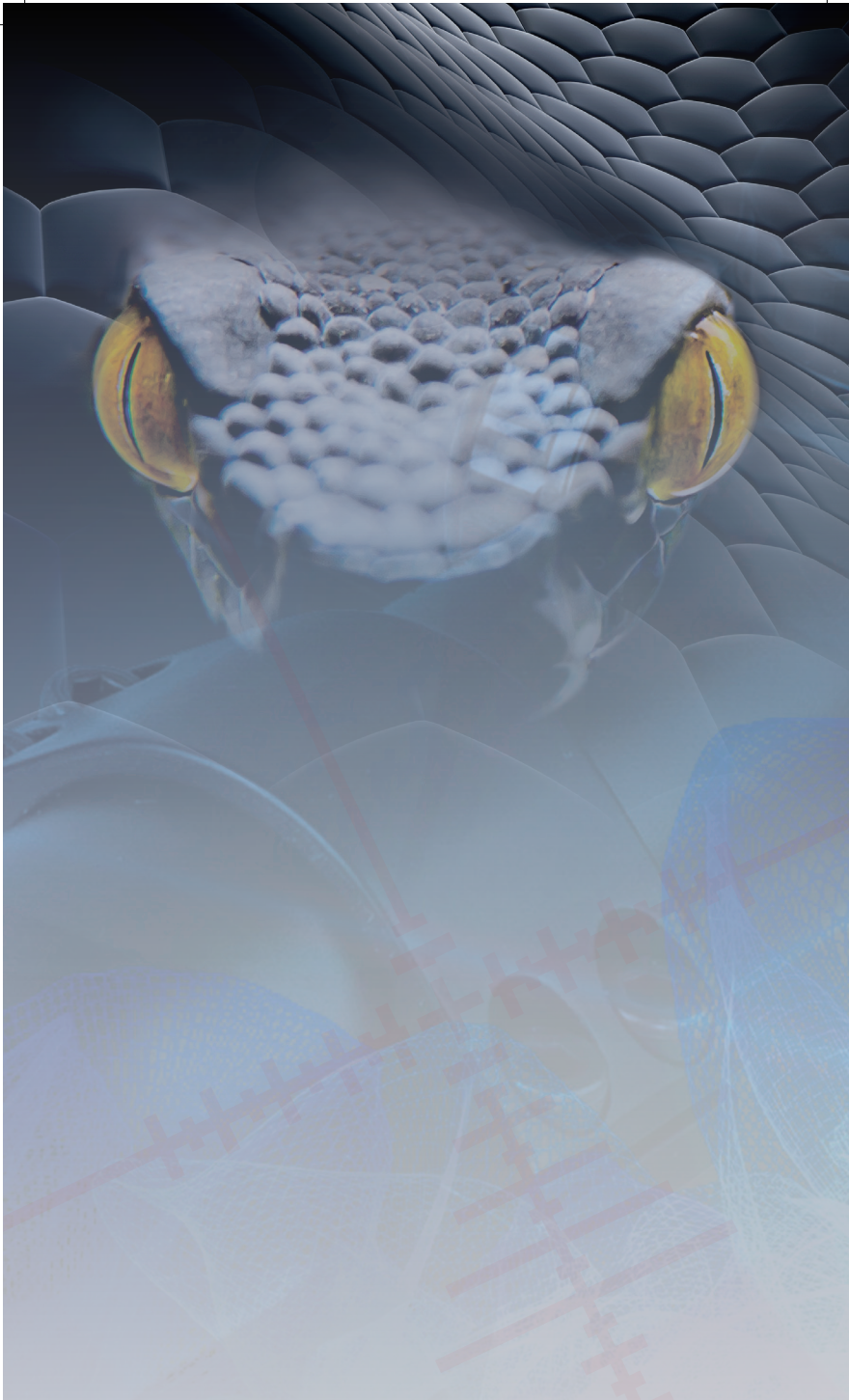
Date of Purchase:

Dealer Stamp/Details:

Model:

Serial Number:

Once completed, email to office@mtcoptics.com
or post to:
*Warranty Registration
MTC Optics
Unit 3, Raleigh Hall industrial Estate,
Eccleshall,
Staffordshire
ST21 6JL
United Kingdom*



www.mtcoptics.com | support@mtcoptics.com

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While every effort is taken to ensure the accuracy of the information in this instruction manual, MTC Optics Ltd or their agents cannot be held responsible for errors or omissions. Products are continually updated and specification may change without notice. E&OE.

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