

opticon

MM3 Travelscopes

User Instructions and 30 Year Guarantee



MM31214

Models
50 GA ED
50 GA ED/45
60 GA ED
60 GA ED/45

Main Features & Specifications



- A Interchangeable eyepiece (not included).
- B Main focus wheel.
- C 8:1 fine focus wheel.
- D Tripod sleeve with +/- 90° rotation and large footprint tripod adapter socket with two 1/4" threads.
- E Objective lens.



Integrated rubber objective lens cover.

Specifications	50 ED	50 ED/45	60 ED	60 ED/45
Product Code	41150	41151	41152	41153
OG Dia (mm)	50	50	60	60
Close Focus (m)	2.5	2.5	3.5	3.5
Length (mm)	210	205	252	247
Weight (g)	595	605	720	729

Eyepieces

Eyepieces	• SDLv2	• HDF	• HR/HR2							
Product Code	40936M	40810M	40809M	40858M	40860M	40861M	40862M	40930M	40931M	40933M ¹
Magnification 50	12-36x	13xWW	18xWW	24xWW	45xWA	57x	12-36x	15xWA	20xWA	13-39x
Magnification 60	15-45x	17xWW	23xWW	32xWW	58xWA	72x	15-45x	20xWA	25xWA	16-48x
Eye relief (mm)	20-18	22	18	17	15	16	22-17	18	17	18-14

¹409275 eyepiece adapter required

Getting Started

Your MM3 travelscope will bring a new dimension to long range observation bringing far away subjects into clear and sharp focus.

1. To minimise image shake caused by the high magnification, the instrument should be supported using a suitable tripod or mount.
2. Connect the fieldscope to the tripod or mount using the tripod socket located on the underside of the tripod sleeve.
3. Make sure the eyepiece is attached securely. The retractable rubber eyecup should be used in the down position when wearing glasses. This ensures the maximum available field of view is obtained. Be sure to return the eyecup to the up position if you or anybody else wants to view without glasses.
4. To focus, locate the subject in the centre of the field of view and rotate the focus wheel until the subject comes into sharp focus. At high magnifications when depth of focus is shorter use the fine focus adjustment for greater accuracy.
5. If you are using a variable magnification or zoom eyepiece set the magnification to minimum when trying to locate your subject, only zooming once the subject is centred. With some eyepieces a small amount of refocusing may be required as the zoom is adjusted.

WARNING. Never under any circumstances use a fieldscope to view the sun. Doing so will cause serious damage to your eyes.

Waterproof Cases

Stay-on-the-Scope Waterproof in Black

Water resistant multi-layer padded cases individually designed to fit each model. Protects instrument while fitted to a tripod and in use. Includes removable end caps and adjustable carry strap.

Stay-on-the-Scope Waterproof in Green

As black models but supplied with a fully adjustable neoprene carry strap for extra comfort.



Care & Cleaning

To clean outer glass surface of the eyepiece and objective lens, gently remove excess dirt and dust using a compressed air device or blower brush. **Caution.** Hard and persistent rubbing of dirty surfaces can cause abrasive scratches on the surface of the glass which may distort viewing. Breathe on exposed glass surface and then wipe with an optical cleaning cloth (code 30277) in a circular motion until the surface is clean again. Do not attempt to dismantle the instrument as this will invalidate the guarantee.

Whenever possible store in a stable dry atmosphere away from moisture. For extra protection, use the gift box or one of the optional cases available.

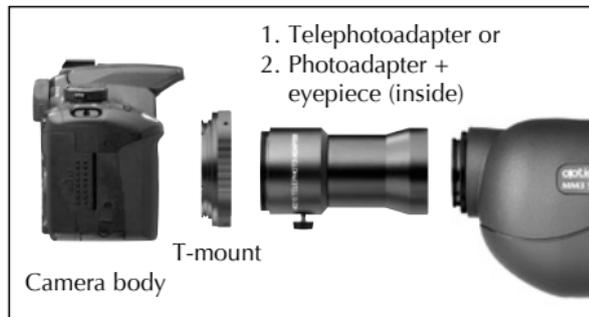
Telephotography

Telephotography using SLR cameras (digital or film) and compact system cameras. In this system the camera lens is substituted for the telescope + telephotoadapter or telescope + eyepiece + photoadapter. To convert MM3 models into a telephoto lens (MM3 50 530mm¹/f.10.6, MM3 60 700mm¹/f.11.7) you will need a 40215 telephotoadapter. Alternatively connect a suitable push fit photoadapter to your viewing eyepiece.² A T-mount is required to connect the assembly to the camera body.

Notes. Focusing is facilitated on the telescope. Camera may need to be operated in manual mode with shutter locks disengaged where necessary. The high magnification to aperture ratios result in slower shutter speeds compared with conventional telephoto lenses so choose an ISO setting of 400. For 35mm SLRs 400 ASA film is recommended. If possible use a cable release or remote control to reduce camera shake when operating the shutter.

¹ This is an approximate figure based on 35mm SLR cameras. DSLR/compact system cameras use different sized image sensors compared to 35mm so an equivalent telephoto conversion figure must be calculated separately.

² For information on push fit photoadapters visit our Digiscoping & Telephotography pages at www.opticron.co.uk



Digiscoping with digital compact cameras, camcorders and mobile phones

Shooting high magnification photos and video through your telescope is possible if you have a suitable camera, camcorder or mobile phone. To find out how suitable or not your device is for digiscoping, position it up to the viewing eyepiece and see if an image appears on the screen. You may have to position the unit a few mm away from the eyepiece and increase the zoom to get a full frame image.



The most suitable cameras are those with a lens diameter of 20mm or under and zoom range no greater than 5x. To get the best results you will also need to fit a low magnification wide angle eyepiece to your telescope or use a zoom eyepiece set at minimum.

To find out more about bespoke digiscoping kits and universal mounts and brackets visit the Digiscoping & Telephotography pages at www.opticron.co.uk or contact Sales on +44 (0)1582 726522.

Guarantee

Please keep this Guarantee Card in a safe place

Model:.....

Serial No:..... Purchase Date:.....

Dealer:

Opticron MM3 travelscopes are of a very high quality both in their performance and construction. We guarantee some parts in these instruments for up to 30 years under the following conditions:

- (i) In the case of defects attributable to faulty processing or materials, we will assume responsibility for the labour and material costs during the first 10 years after purchase. We reserve the right to decide whether defective parts should be repaired or replaced.
- (ii) During the next 20 years we will assume responsibility for material costs only, charging corresponding labour costs.
- (iii) We will accept no liability for damage caused by incorrect use or for any repairs or actions which have been carried out outside our firm.
- (iv) Rubberised coverings are excluded from the guarantee.

This guarantee is in addition and does not affect your statutory rights.

Registration

If you would like to register your purchase with us please visit www.opticron.co.uk and complete the online Product Registration Form.

Alternatively please telephone us during normal working hours on the numbers given. We will need the product name and serial number (if applicable), purchase date and outlet, your name and postcode.

Registration is voluntary and failure to register will not diminish your rights under the guarantee.

Privacy

Opticron takes your privacy seriously and we do not share personal information with other companies.

opticon

Address: Opticon, Unit 21, Titan Court, Laporte Way, Luton, Bedfordshire, LU4 8EF, UK

Phone: +44 (0)1582 726522 **Fax:** +44 (0)1582 723559 **Email:** sales@opticon.co.uk