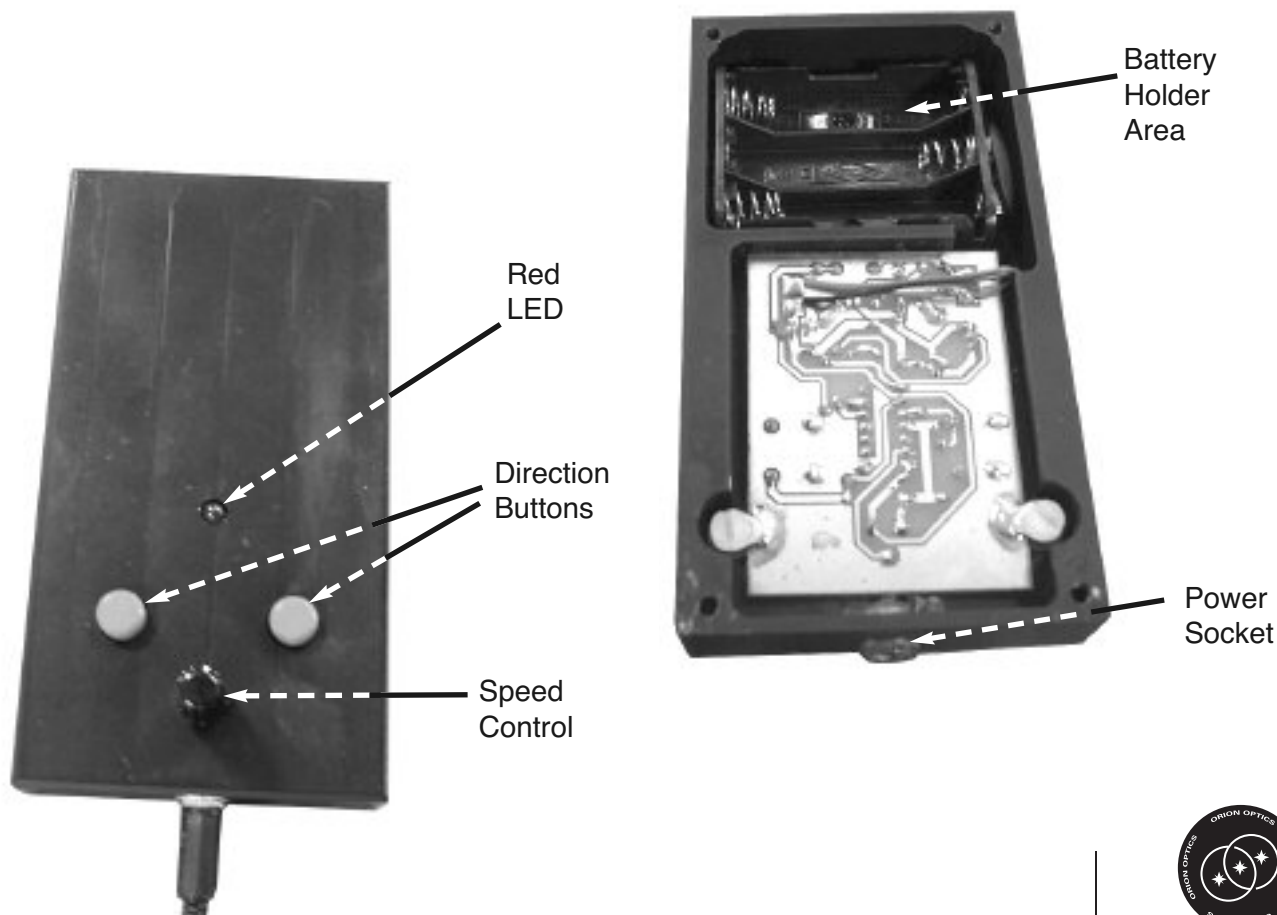


OC1-M 2" Motor Driven Crayford Focuser

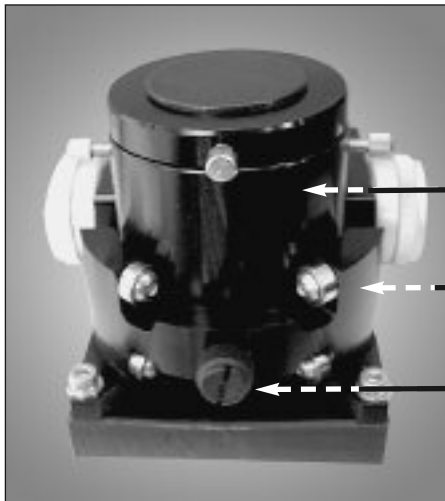
The Orion Optics UK electric focuser is a new concept in motor driven Crayford focus mounts. Typical systems have large, external drives and clutch mechanisms. They usually have a power button to turn on and off, making it easy to forget to switch off and drain the batteries. The OC1-M works on a completely new system.

Normal controllers for competing brands often use plastic boxes to hold the electronics and batteries, the OC1-M uses a quality, CNC machined, anodised aluminium box. Below are some identification photographs of the focuser and hand control unit and an itemised parts list relating to the drive system.

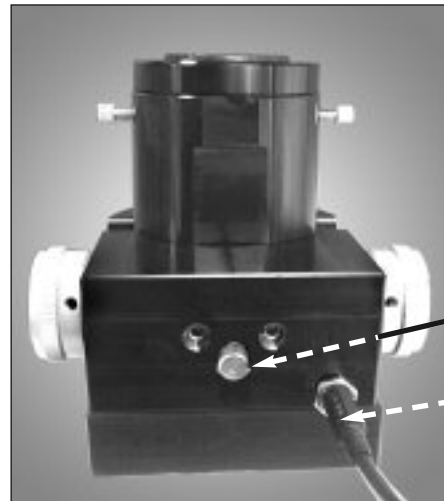
- 1 Focuser body
- 2 Draw tube
- 3 Power socket(s) One on focuser body, one on hand unit
- 4 Power lead
- 5 Hand controller
- 6 Knurled motor screw
- 7 Speed control knob
- 8 Direction button 1
- 9 Direction button 2
- 10 Battery compartment for 3 AA batteries (not supplied)
- 11 Spindle pressure screws
- 12 Locking screw



Set Up



Draw Tube
Focuser Body
Locking Screw



Motor Screw
Power Lead and Socket

To set up and use the focuser is relatively simple.

For this exercise it is assumed the focuser is fitted to your telescope.

- Step 1** Undo the knurled motor screw until it feels quite easy to turn. This takes the motor out of gear.
- Step 2** Insert 3 AA batteries into the hand controller by removing the 4 screws at the back of the unit. Replace the back and screws.
- Step 3** Plug the power lead into the focuser and the hand unit.
- Step 4** Ensure the Locking Screw is not tightened and quite free.
- Step 5** Press either of the Direction buttons and the Led will light up. If this does not occur, either there is a battery problem or, a malfunction in the unit.
- Step 6** Turn the Speed control Knob fully clockwise.
- Step 7** Gently tighten the Knurled motor screw whilst at the same time, gently rotating clockwise and anti-clockwise, a few degrees, one of the focusing knobs. This is to allow two nylon gears to mesh internally. If the focusing knob is not rotated, the gears could possibly not engage correctly and the drive will not work. When engaged correctly, there will be a definite point where there is a much higher resistance to turning this screw. **DO NOT OVERTIGHTEN THIS SCREW** or damage could occur to

internal parts.

You are now ready to use the OC1-M. Press either of the Direction buttons, the draw tube should be visibly moving. Release the button and press the other button, it will move in the opposite direction. Rotate the speed control about 90 degrees anticlockwise and try the buttons again. Practice for a few minutes to get accustomed to speeds. Don't forget here that when you have any equipment in your focuser, it will move slower than the focuser with no load on it. Another feature of the control box is, when you have set the slow speed to your needs, press either button, then, when holding it down, press the other. This overrides the slow speed and it will run at its highest speed. Pressing the two buttons in the opposite sequence will override the speed control in the opposite direction.

Heavy equipment used with the focuser may require additional pressure on the drive spindle to press harder on the draw tube. This is accomplished by tightening the two Spindle Pressure Screws lightly. These screws can be tightened significantly but, extreme over tightening can result in damage to the unit.

There is no need to either switch the control box on or off. It is designed to hibernate when not used for a few minutes. Pressing either Direction Button re-awakens the unit instantaneously. Battery life with this feature is extended and, if left in hibernation mode, quality batteries will last several years. To use the mount manually, just unscrew the Locking screw a few turns and gently rotate the focusing knobs until the spring loaded mechanism

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