

DRO Operation

Congratulations on your purchase of the Digital Readout (DRO) system. DRO provides precise focuser positioning using an easy-to-read LED display. The optical encoder is attached to the focuser drive shaft to detect very small movements of the focuser. When combined with an optional focus motor, unprecedented accuracy and speed is easily achieved. The most popular use of the DRO system is for accurately re-positioning the focuser between visual and CCD camera positions.



NGF-XTnM Focuser with DRO Attached (optional Smart Focus on Left)

Installation

If necessary, refer to the separate installation instructions for information on installing the optical encoder on your specific focuser model.

Operation

To operate the DRO, follow these instructions:

- 1) Plug the ends of the flat modular cable into the jacks on the focuser and the hand unit.
- 2) Turn the DRO Hand Unit power to the ON position. Use the DIM switch to select the best LED brightness level.
- 3) Adjust the focuser position by pressing the red in/out buttons. Notice that the top of the display shows a dot that moves from left to right to indicate on which side of zero the focuser drawtube is positioned (in or out from the initial position). If you wish to reset the display counter so that the current position is the initial or zero position, press the ZERO button.
- 4) At this point you can use the in/out buttons to position the focuser as desired. To adjust the motor speed, turn the gray knob, below the red in/out buttons, clockwise (faster) or counter-clockwise (slower). For extremely small focuser movements, quickly tap the appropriate in or out button. Quick tapping will allow you to make movements as fine as the display resolution.

The DRO system is powered by a standard 9-Volt battery (included). To replacing the battery, remove the four screws holding the cover, turn the unit upside down and remove the back plate. We recommend using an alkaline battery for longer life. The auxiliary 1/8" mono jack can be used to power a focuser as if you were using a standard hand unit, completely bypassing the DRO electronics.

The DRO will accurately display your focuser drawtube position. However, extraneous factors, such as temperature changes, can alter the focal plane. For this reason, some variation should be expected between observing sessions.

JMI Telescopes
