

CELESTRON

FOCUS MOTOR

For SCT & EDGEHD

#94155 - Setup Guide

The focus motor is compatible with all Celestron SCTs from 6" to 14" in aperture that have been produced since the year 2006; it is not compatible with 5" SCTs or older models. It is also compatible with all EdgeHD telescopes, the RASA 8, and the Celestron 7" Maksutov-Cassegrain.

This setup guide will guide you through installation and basic operation of the focus motor. The full instruction manual can be downloaded from the focus motor page at celestron.com.

PARTS LIST

1. Focus Motor Assembly
2. Cover Plate, 6" through 9.25" Fig.1
3. Cover Plate, 11" & 14" Fig.2
4. Adapter Sleeve
5. Adapter Sleeve Screw
6. Set Screw
7. AUX Cable
8. Hex Key
9. Wrench
10. Screwdriver

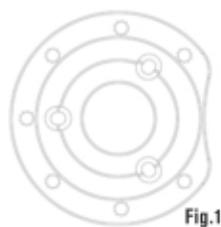


Fig.1

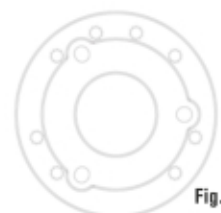
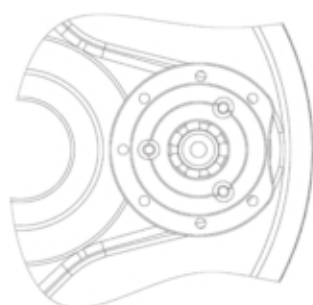


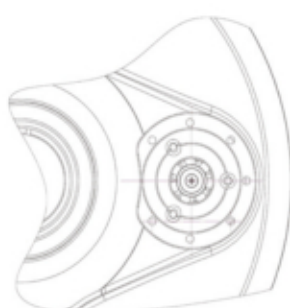
Fig.2

INSTALLATION

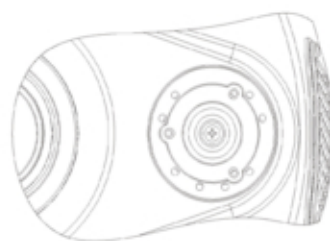
1. Remove the rubber cover from the telescope's focuser knob. If you cannot simply pull it off, use a flat head screwdriver or other tool to pry off the rubber cover.
2. Loosen and remove the 3x screws on the cover plate of the focuser.
3. Carefully remove the cover plate.
4. Identify which one of the two supplied cover plates is for your size optical tube as indicated in the parts list.
5. Orient the new orange cover plate for your size optical tube as shown below.



6" and 7"

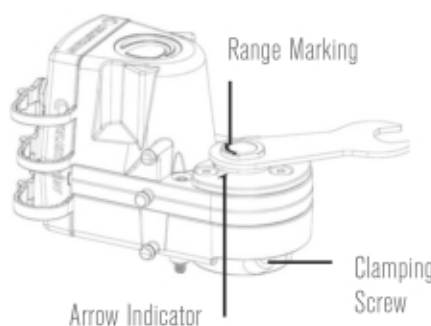


8" and 9.25"



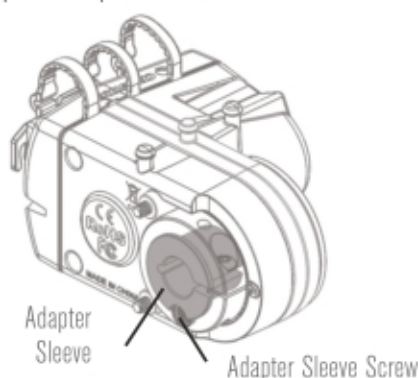
11" and 14"

6. Reuse the 3 screws previously removed to install the new orange cover plate in place of the old one.
7. Check to see if the arrow indicator on the motor housing is pointing within the "range" marking on the rear of the motor coupling. If it isn't, rotate the motor coupling using the supplied wrench as shown until the arrow points within the range. This allows access to the motor coupling's clamping screw after the motor is installed on the focuser.

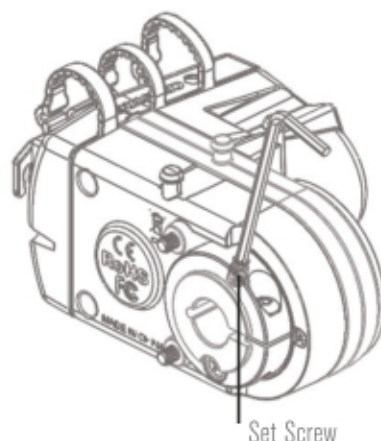


8. Loosen the focus motor's clamping screw a few turns using the supplied hex key.

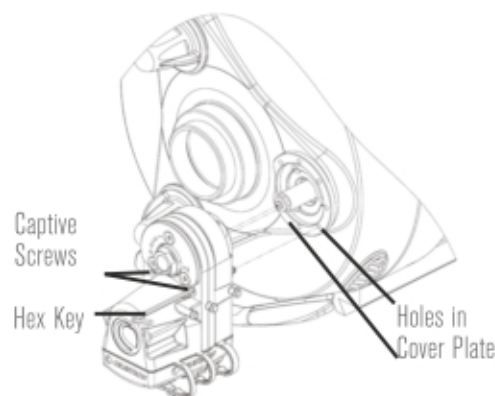
9. **FOR 6" THROUGH 9.25" TELESCOPES ONLY:** Install the adapter sleeve into the focus motor. Use the supplied adapter sleeve screw to secure the sleeve.



10. **FOR 6" THROUGH 9.25" TELESCOPES ONLY:** Install the set screw into the threaded hole in the focus motor's clamping collar using the supplied hex key. Do not tighten the set screw yet, only thread it in a few turns.



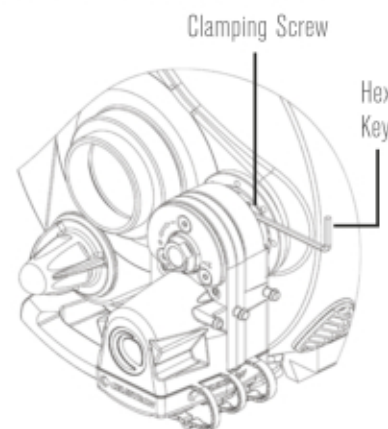
11. Place the focus motor onto the brass focuser knob. Orient the motor as shown below. Make sure the two captive screws in the focus motor line up with the two holes in the orange cover plate as shown.



12. Use the provided hex key to tighten the 2 captive screws. Alternate between tightening each of the screws until they are fully engaged with the cover plate.

13. **FOR 6" THROUGH 9.25" TELESCOPES ONLY:** Tighten the set screw that was installed in step 10. If you need to rotate the motor coupling to gain better access to the set screw, use the wrench as indicated in step 7.

14. Tighten the focus motor's clamping screw using the hex key until fully tightened. If you need to rotate the motor coupling to gain better access to the clamping screw, use the wrench as indicated in step 7.



NOTE: If the focus motor interferes with camera installation, the motor mounting orientation can be rotated. This can be done by using the other mounting holes in the cover plate's perimeter (step 11), or by rotating the entire cover plate (step 5).

POWERING THE FOCUS MOTOR

There are three ways to power the focus motor:

1. Use a Celestron computerized mount. Connect the AUX port on the focus motor to an AUX port on the mount using the supplied cable.
2. Use a USB3 port or a USB2 port that provides at least 900 mA. Connect the focus motor with a USB A-to-B cable (not included). Use a high quality cable, or the motor may not receive enough power.
3. Use a DC power source able to supply at least 1A. Connect the power source to the 12V DC jack on the focus motor using a 5.5mm/2.1mm cable that is tip positive.

CONTROLLING THE FOCUS MOTOR WITH A CELESTRON HAND CONTROLLER

If using a Celestron mount and plugged into an AUX port, the focus motor can be controlled from the mount's hand controller. Either the NexStar+ hand controller (requires firmware version 5.30+) or the StarSense hand controller (requires firmware version 1.19+) can be used. If your firmware is not up to date, use the Celestron Firmware Manager (CFM) program available at celestron.com/CFM to update it. The link will download the program automatically. The focus motor controls can be found in the hand controller by pressing the MENU button and selecting "Focuser."

CONTROLLING THE FOCUS MOTOR WITH A COMPUTER

If using a Celestron mount and plugged into an AUX port, connect the hand controller to the computer using a USB A-to-mini B cable (not included). One end of the cable is connected to the USB mini B port on the bottom of the hand controller, the other end is connected to the computer. Once connected, you can use most any third-party astronomy software that has focuser control by using the Celestron Unified ASCOM mount driver (download from ascom-standards.org).

If connected directly to a computer through the focus motor's USB port, use the focus motor with third-party astronomy software by using the Celestron Focuser USB ASCOM driver (download from the focus motor page at celestron.com).

Celestron also offers free Windows PC software that controls the focus motor without the need for an ASCOM driver. The simple Celestron Focuser Utility Program can be downloaded from the focus motor page at celestron.com. The focus motor can also be controlled with the Celestron PWI program.

For more information, download the full instruction manual from the focus motor page at celestron.com

FCC NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This product is designed and intended for use by those 14 years of age and older.

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