



FocusLynx QuickSync MEF Installation

Step-by-Step Instructions for Installing the QuickSync MEF Motor Assembly to your Takahashi MEF Micro-Edge Focuser.

The QuickSync MEF (formerly QuickSync FSQ) motor assembly fits directly in place of the coarse and fine focus knobs on the right side of the Takahashi MEF dual-speed manual focusers. The gold knob on the QuickSync FSQ will attach to the smaller diameter shaft of the pinion assembly and allow fine manual focus when the motor is disengaged. Coarse manual focus can usually be accomplished by disengaging the motor and adjusting the coarse silver focus knob on the opposite side of the focuser.



Note: The QuickSync MEF model is compatible with the Takahashi MEF focusers with the black fine focus knob which are made in Japan. If you have the silver fine focus knob U.S. made version contact Optec to order our #19765-US motor.

Package Contents

Confirm the contents of your QuickSync FSQ motor package. The package should contain the following:

- QuickSync FSQ motor assembly
- Cat-5e Ethernet cable
- Tool kit including 1/16", 7/64", and 1.5mm hex keys



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If you've purchased the QuickSync FSQ as part of the FocusLynx package you will also have the following items:

- FocusLynx control hub
- 12VDC power supply with cord
- USB/Serial cable
- Cat-5e Ethernet cable

The second Cat-5e Ethernet cable is for a network connection using the Network port on the bottom of the FocusLynx hub. This cable and the Ethernet cable included with the QuickSync FSQ are interchangeable with any Cat-5e or better cable.

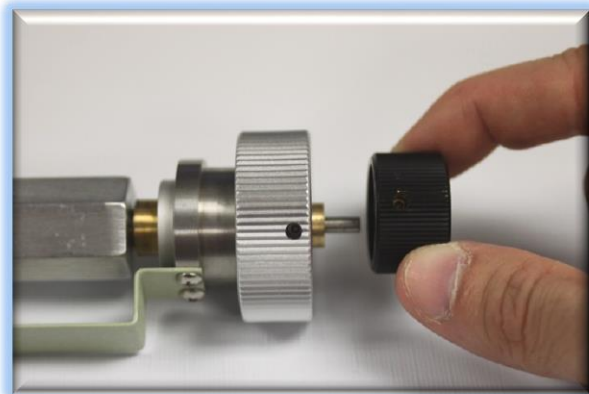
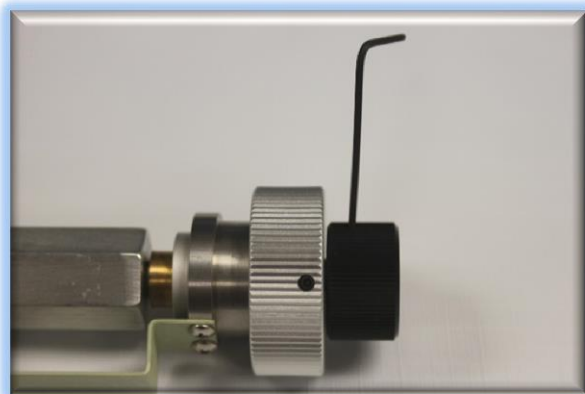


Installation Procedure: Step-by-Step

Note: The installation photos use a sample focus knob assembly

Step 1 - Remove Fine Focus Knob

Remove the stock black fine focus knob using the 1.5mm hex key.



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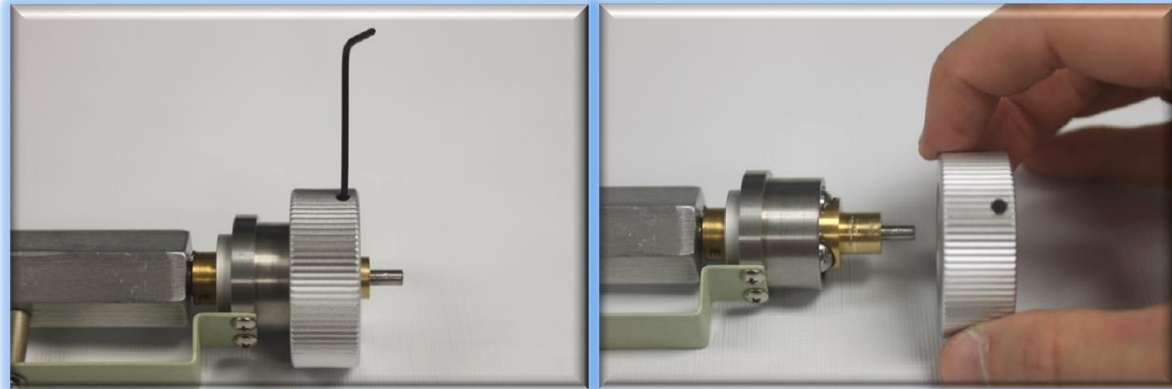


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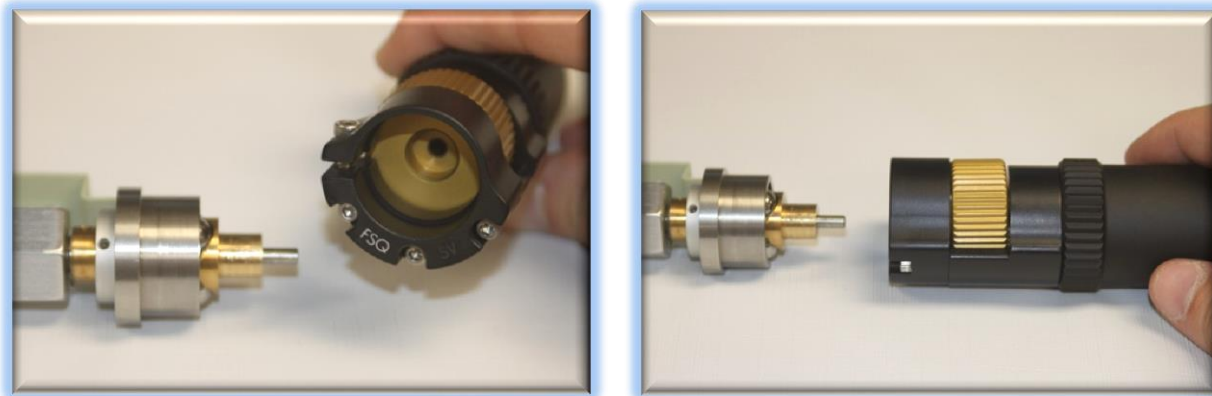
Step 2 – Remove Coarse Focus Knob

Remove the larger stock silver coarse focus knob using the 1.5mm hex key.



Step 3 – Attach QuickSync MEF

Slide the QuickSync MEF motor assembly onto the pinion assembly. Use care to locate the gold focus knob onto the small shaft. Loosen the setscrew in the gold knob if needed. The fit will likely be snug. Use a gentle back and forth motion to slide the motor assembly on the shaft and then locate the clamp onto the stainless housing.



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Step 4 - Orient Clamp

Rotate the motor assembly so that the knob will be easily accessible for your thumb during operation. Ensure the clamp is pushed firmly onto the stainless housing before tightening. Use the 7/64" hex key to tighten the clamp onto the stainless housing. Ensure the knob can move freely.



Step 5 - Tighten and Adjust

Center the gold fine focus knob in the slot and use the 1/16" hex key to tighten the setscrew against the small shaft. Rotate the coarse focus knob on the other side to test and confirm the fine gold knob moves freely.



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Step 6 – Test Clutch Mechanism

Roll the motor cover up to engage the clutch of the motor assembly. Ensure the engagement is tight for best performance.



Your QuickSync MEF motor is now ready for configuration for use with the FocusLynx Control hub.

The FocusLynx dual-focus controller is described in detail on Optec's website:

<https://www.optecinc.com/astronomy/catalog/focuslynx/index.htm>

The very latest FocusLynx drivers are available for download directly from the Optec website:

<https://optecinc.com/astronomy/downloads/focuslynx.htm>.

FocusLynx is ASCOM Alpaca compatible for cross-platform compatibility. FocusLynx includes the Alpaca drivers along with our Windows-based **FocusLynx Commander** interface program. Use FocusLynx Commander to configure your QuickSync MEF motor for auto-focus software available through ASCOM client programs such as *FocusMax*, *Maxim D/L*, *TheSky X*, *Sequence Generator Pro* and, of course, Optec's [FocusLock](#) software.

FocusMax is available through CCDWare - <http://www.ccdware.com/products/focusmax/>

Maxim D/L is copyright Diffraction Limited - <http://diffractionlimited.com/product/maxim-dl/>

TheSky X is offered by Software Bisque - <http://www.bisque.com/>

Sequence Generator Pro is available through Main Sequence Software - <https://www.mainsequencesoftware.com/>



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FocusLynx Software Setup

Your QuickSync MEF motor is now installed. Consult the **FocusLynx Quick Start Guide** to install the FocusLynx Commander software. Once installed, you will need to configure the FocusLynx Commander for your new QuickSync MEF motor. Configuration in FocusLynx Commander will also configure the ASCOM driver.

FocusLynx Commander Focuser Type selection

Select the **QuickSync Hi-Speed** Focuser Type option first. If you find the pinion assembly is slipping try the **QuickSync Hi-Torque** setting. With stepper motors, speed and torque typically work inversely. That is, higher speeds will usually result in lower torque. If you find your pinion assembly continually slips contact Optec support (support@optecinc.com). You may need to slightly tighten the internal tension nut inside Takahashi MEF pinion assembly. See the Takahashi [MEF Tension Adjustment page](#) for details on tuning your MEF focuser.

If the motor begins to stall you may hear a buzzing or chattering sound. First, try the **QuickSync Hi-Torque** selection. In cases where there is exceptional friction in the pinion assembly you may need to loosen the internal tensioning nut slightly. Alternatively, you may try selecting the **FeatherTouch / MicroTouch Hi-Torque** setting which operates the stepper motor at an even slower rate. This setting is designed for the unipolar motors in the original Micro-Touch and Feather Touch Motor assemblies shown below, but will also work well with the bi-polar motor used in the QuickSync FSQ assembly. Contact Optec support (support@optecinc.com) if your focus motor cannot be adjusted without slippage or stalling.

Sync the QuickSync position

With FocusLynx Commander running and connected to the QuickSync motor, manually set the focuser near the center of travel. Re-engage the motor and enter 32,767 in the box next to the Sync button. Press **Sync** and wait a few seconds. Test the In and Out movements to ensure proper operation.

NOTE: For some very long travel focusers you may wish to set the MaxPos to a value greater than 65,535 to utilize the full focuser travel range. Fortunately, you will find that you will only need a few hundred steps to maintain focus once it has been achieved.



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