



Electronic Inline Automatic Focuser With *iLock*TM Technology

Instruction Manual

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Introducing the most versatile inline auto focuser: the iOptron iAFS™ focuser with *iLock™* technology! Utilizing a lead worm movement is the key to the iAFS focusers patented design; this method passively locks it at the exact position when movement is stopped, maintaining focus for most any sized payload even as the instrument angle is changed. The iAFS incorporates three movement control modes, USB (computer control), on board directional buttons (for powered manual adjustments) and a manual focus wheel to override the motorized adjustment. Other features include a built-in temperature sensor, dual USB-C ports, solid all metal body, fingerprint resistant surface, 0.6 micron resolution, and position limiters to prevent over runs. It comes standard with a 2 inch visual back, and optional telescope adapters to fit various OTAs are available. The iAFS focusers will be available as the iAFS2 two inch model and the iAFS3 three inch version.

Features:

- High precision stepper motor with position over-run protection
- Built-in temperature sensor
- Built-in CAA
- Quiet, smooth operation
- Compact and lightweight
- Zero backlash
- Dual USB-C port for computer connection and firmware upgrade
- ASCOM and INDI compatible
- Manual adjustment (powered or unpowered)
- Position memorizing during power off
- Compatible with most OTAs with proper adapter

Package includes:

- 1X **FA20** iAFS2 2" auto focuser w/ 2" visual back
or 1X **FA30** iAFS3 3" auto focuser w/ 2" visual back
- USB-C cable

Accessories:

P-FA20-CA	iAFS2 camera adapter M48X0.75
P-FA20-M0800	iAFS2 telescope adapter Askar/65PHQ and other M80X1
P-FA20-M0835	iAFS2 telescope adapter Celestron/C11 and other M83.5X1.5
P-FA20-M0900	iAFS2 telescope adapter GSO/RC6,RC8 and other M90X1
P-FA30-CA	iAFS3 camera adapter M68X1
P-FA30-M1170	iAFS3 telescope adapter GSO/RC10,12,14,16 and other M117X1

Others are coming.....

iAFS Parts



Attach Focuser to Scope

1. Select a proper telescope adapter, such as *FA20-M0900* for RC6 telescope.



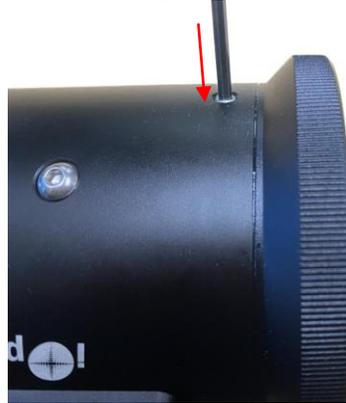
2. Install telescope adapter. First, back out three (3X) Position Screws and the Locking Screw on the iAFS body.



Next, insert OTA Adapter (*FA20-M0900 shown*) into the focuser body.



Thirdly, thread 3 Position Screws all the way in, then back out a quarter turn or so. The OTA adapter can be rotated freely but can not be pulled out from the focuser body.



3. Thread the focuser onto the OTA (RC6 is shown here). Turn the adapter ring to secure the iAFS onto the scope.



4. Tighten the Locking Screw to lock the focuser. Release the Locking Screw to adjust the focuser angle. Finally tighten three Position Screws after angle adjustment.

Attach Camera Adapter

1. If a visual back is used, thread it onto the focuser camera end.



2. If an optional camera ring (P-FA20-CA or P-FA30-CA) is used, thread it onto the focuser camera end.



There are three grub screws for fine angle adjustment between the focuser and an accessory, such as a filter wheel. A thread conversion adapter may be needed.



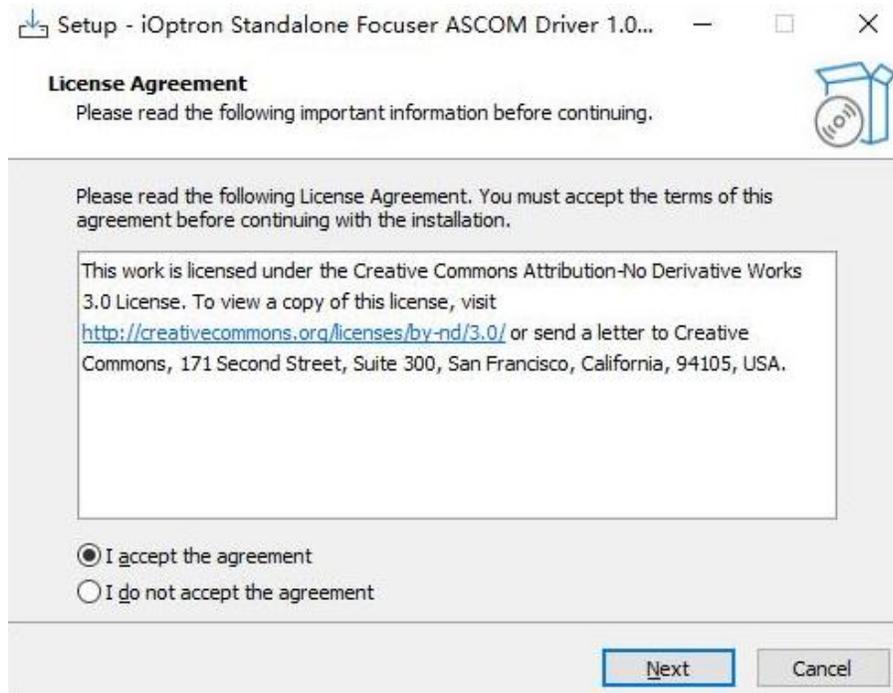
Adjust iAFS

1. Connect to a 5V power source via USB port, such as a SmartPhone charger.
2. Press arrow button to move the focuser forward or backward.
3. Short press the button for fine adjustment.
4. Turn the **Manual Focusing Knob** to adjust the focus, powered on not powered.

Connect to a Computer

1. Download and install USB-Serial PL2303 VCP driver
2. Download and install the **iOptron Focuser ASCOM Driver Installer** from iAFS product page and install it.

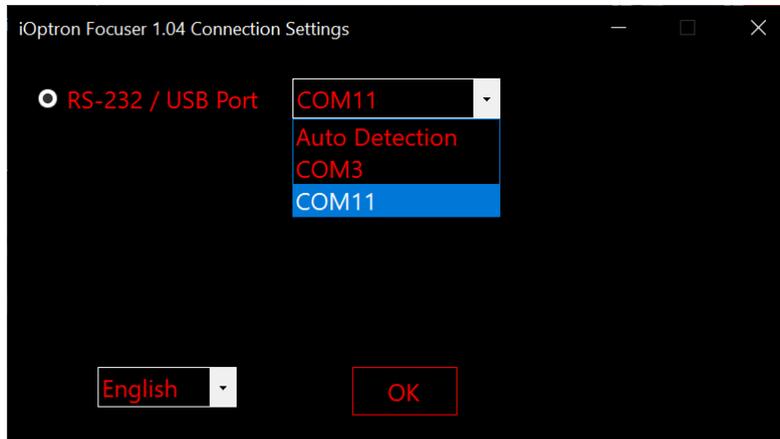
https://www.ioptron.com/v/ASCOM/iOptron_Focuser_ASCOM_DriverInstaller.exe



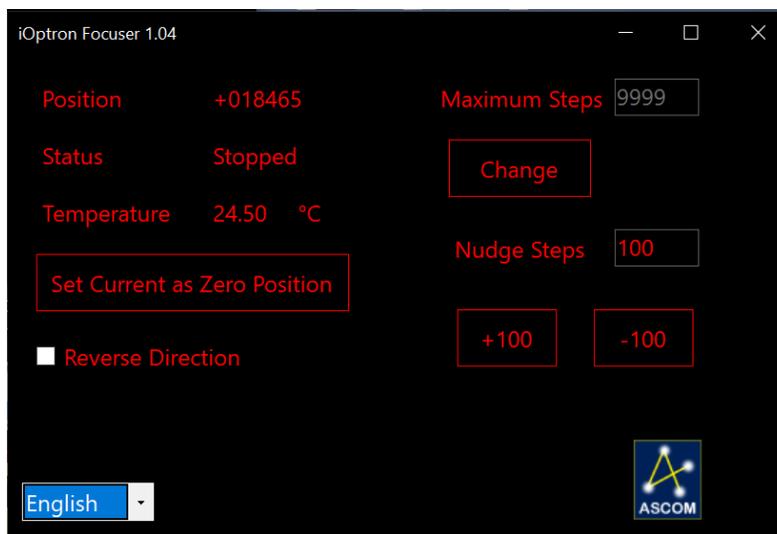
3. Connect any one of the focuser USB2.0 port to a PC USB port using included USB-C cable. The focuser will get the power from the USB port.
4. Click **iOptron Standalone Focuser** icon located on your computer desktop to launch the focuser.



5. Connect the focuser by either "Auto Detection" or select a COM port. Click OK.



6. After the focuser is connected and a control interface is launched, you now can control the focuser.

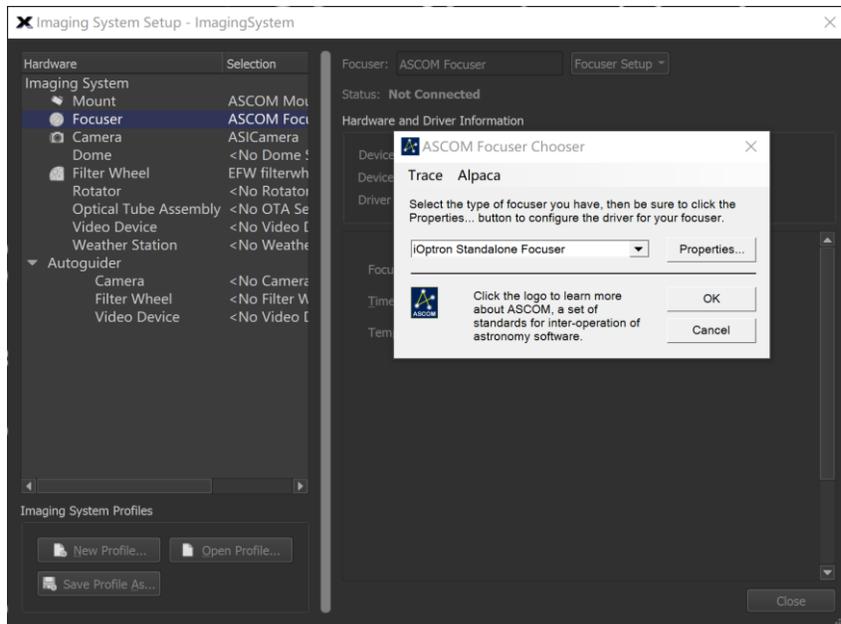


Set how many steps you want the focuser to move in **Nudge Steps**, here is 100 steps. Press **+100** or **-100** button to manually move the focuser forward or backward.

You also can set up the **Maximum Steps** by click on **Change** button.

The other functions are self-explained.

7. When using an imaging software, choose “**iOptron Standalone Focuser**” from Image Software ASCOM Focuser setup menu to connect the iAFS to the Imaging Software.



Specification:

Part Number	FA20	FA30
Product Name	iAFS2	iAFS3
Focuser Size	2"	3"
Dimensions	90.5X106X82mm	94X133X108mm
Weight	783g	1062g
Clear Aperture	51mm	68mm
Maximum Payload	5kg	6kg
Drawtube Travel Distance	30mm	
Focusing Resolution	0.6um	
Power/Communication Port	Type-C USB2.0 port X2	
Drive Train	Stepper motor with belt reduction	
Computer Control	Yes (ASCOM and INDI)	
Automatic Focusing	Yes	
Motorized Focusing Button	Yes	
Manual Focusing	Yes (with override)	
Temperature Sensor	Yes (built-in)	
Camera Angle Adjustment	Yes	
Warranty	One year limited	