



# Installation Instructions FW5-STX / FW7-STX Filter Wheel

## **SBIG Imaging Systems**

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Never “hot plug” the filter wheel as this may damage the camera port– be sure to connect the cable with the power turned OFF

The installation procedure for the FW5 and FW7 filter wheel is basically the same.

1: Make sure the filter wheel is not connected to the camera and is unplugged.

2: Place the filter wheel on a flat surface.

Tools needed:

- cotton gloves
- 7/64th hex key wrench (supplied)
- Phillips screwdriver

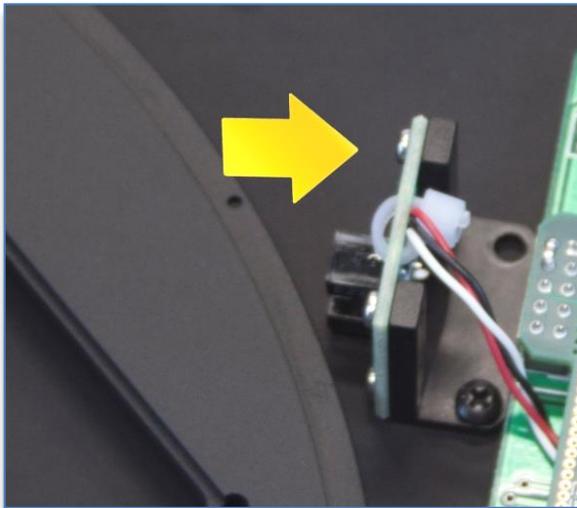
3: Remove the cover of the filter wheel housing (the side with the protruding motor cover) by removing the six screws indicated below (using supplied 7/64th hex key wrench).



4: Remove one Phillips screw from the optical sensor bracket. Pivot the sensor away from the carousel.

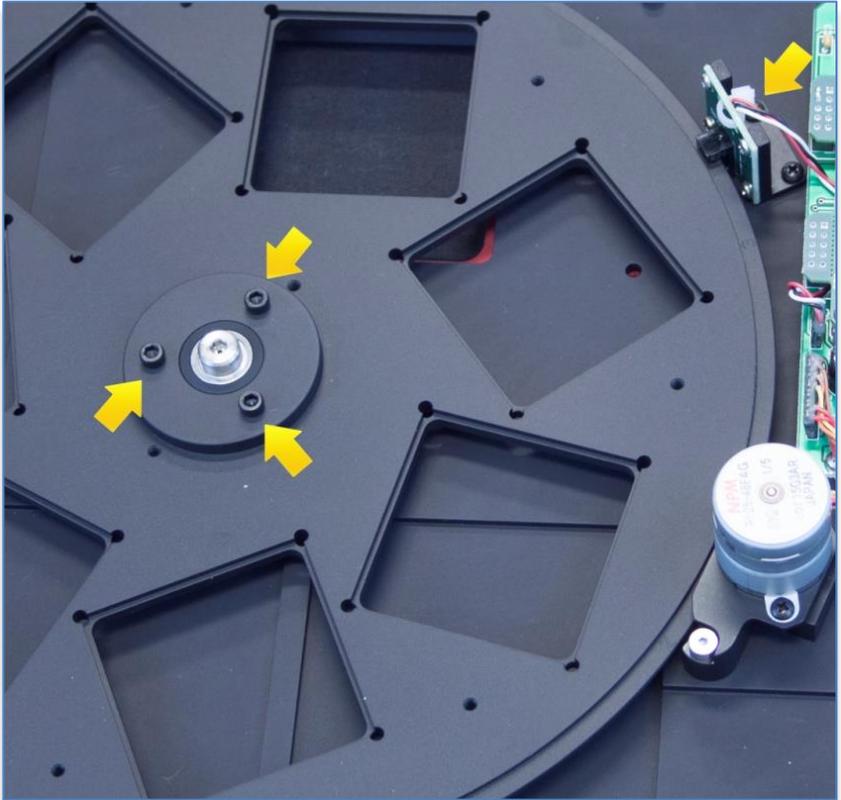
**Note:** Please move the optical sensor even if you are only changing filters. The pressure of the screwdriver on the carousel may be enough to break the optical sensor.

**WARNING:** Failure to move the sensor will result in the sensor being damaged, which will void your warranty.



5: Make sure the optical sensor has been moved outwards so it cannot be broken by the following step. If the sensor is still positioned as shown in the photo below it WILL be broken.

To remove the carousel, remove the 3 hex screws from the carousel hub using a 7/64th hex key wrench.



6: Now lift the carousel off the hub and away from the sensor, taking care not to damage the optical sensor.



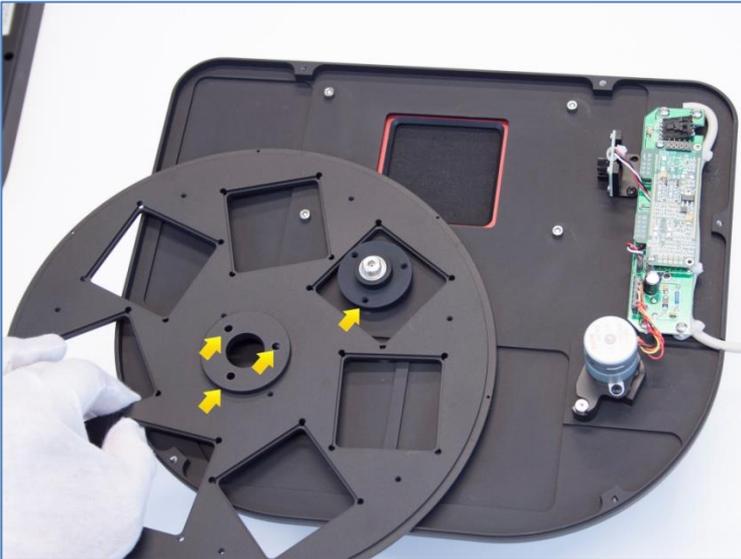
7: Align the filter wheel body holes with the outer holes of the camera.



8: Install the 4 hex head screws.



9: Reinstall the Carousel by aligning the bolt holes on the carousel relative to the bolt hole alignment on the spindle hub. Once the carousel has been inserted onto the hub insert the 3 cap head screws to secure the carousel.

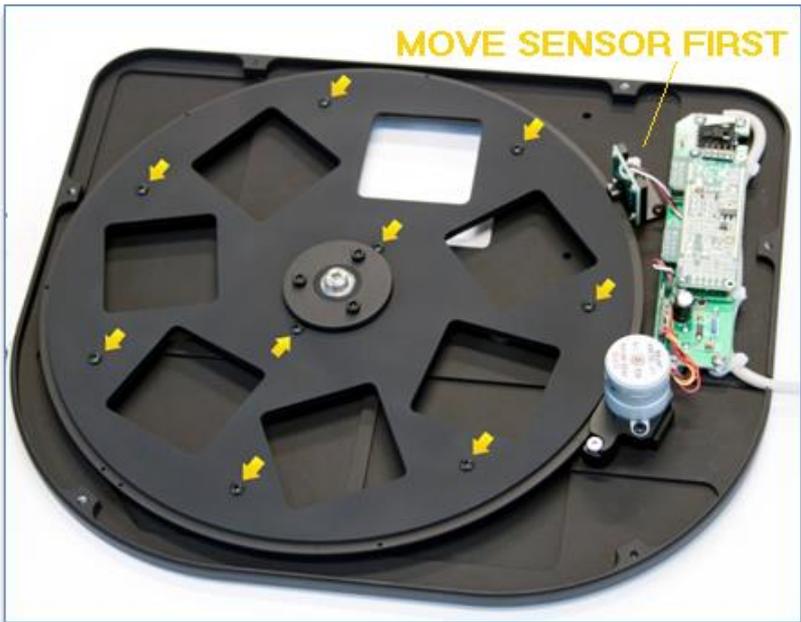


## INSTALLLING FILTERS

10: To install the filters, the filter press plate must be removed.

**BEFORE PROCEEDING** – make sure the optical sensor has been pivoted away from the wheel. Removing the screws with the optical sensor installed may damage it.

Remove the 9 Philips head screws around the carousel indicated below.



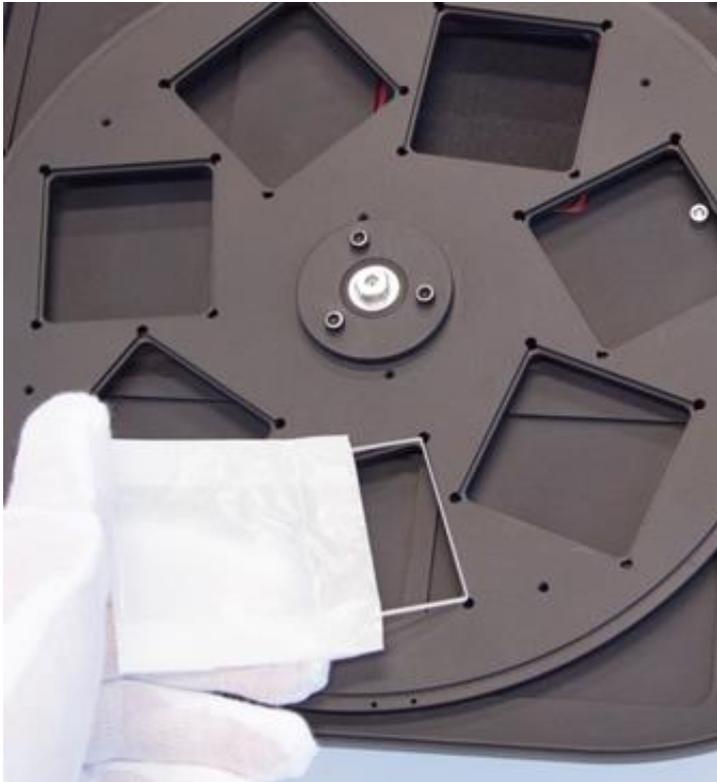
11: Remove the press plate from the carousel.



12: After press plate removal install each filter wearing clean cotton gloves

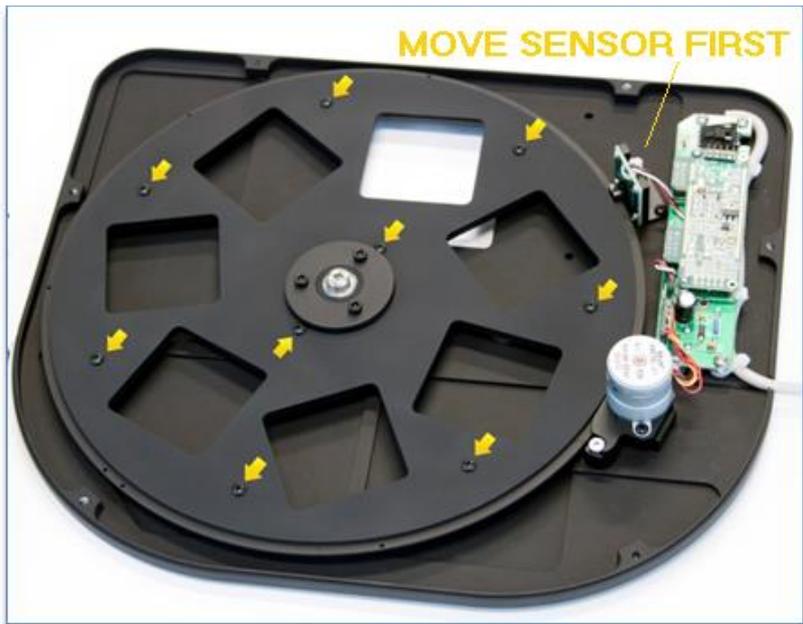
Gently insert the filters. Note that each position is numbered. The numbers match the filter positions in your software. Make sure all filters are all seated flat against the carousel.

Please be sure to install all your filters. The individual filters are heavy, so if you do not have a full set it is best if the filters are balanced around the carousel as much as possible.

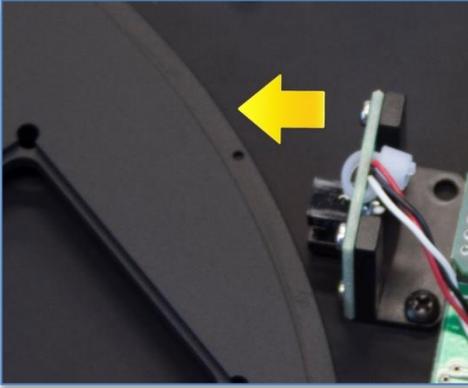


13: Attach the press plate and tighten it down enough that all filters are held in place, but not so much that you risk cracking a filter. Only light pressure is needed to prevent the glass from rattling. They do not need to be clamped tightly.

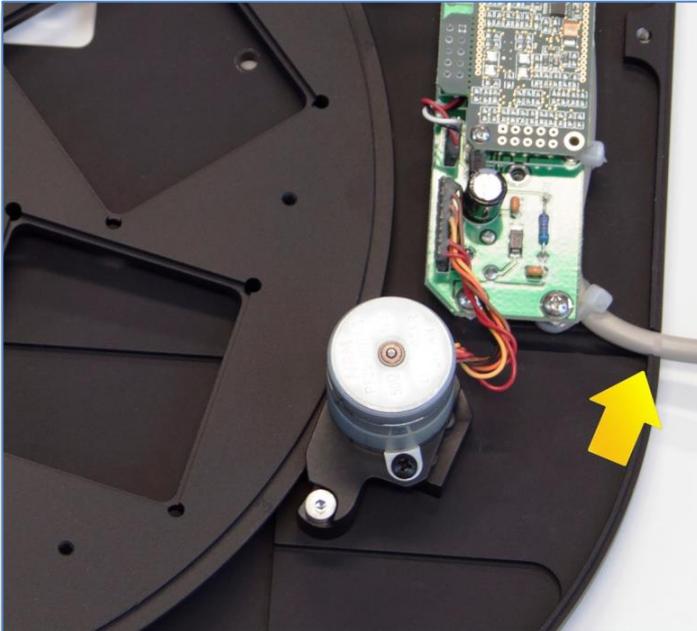
**Note:** we do not recommend shipping the wheel with the filters installed.



14: Pivot the optical sensor back into its proper position and insert the Phillips screw.



15: Before reinstalling the housing cover make sure the cable is placed in the slot to avoid pinching the cable.



16: Reattach the cover of the filter wheel housing.



17: Attach the telescope coupling that you removed from the camera, with the shims in the appropriate locations. (The camera was supplied with a sheet indicating the shim positions.)

18: At this point electrically attach the wheel to your camera (pigtail to the I2C port) and then power the camera up.

**Please do not “hot plug” the filter wheel as this may damage the camera port – be sure to connect the cable with the power turned OFF.**



The filter wheel does not require a separate power source. Upon power up it should rotate at least one full turn. The filters are indexed with tiny silver magnets on the carousel; the start-up position is indicated by two magnets. After initialization the second magnet of the pair of magnets should be under the sensor.

19. Your control software should be set to talk to the “SBIG Universal” wheel, or for older software the CFW-9 setting will work. Cycle through a few filter positions to make sure everything is working properly.