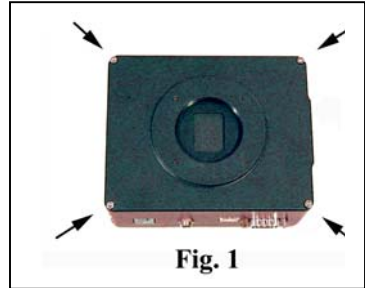
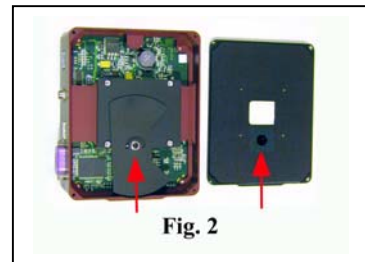


1. Installing the FW5-8300 / FW8-8300 Filter Wheel

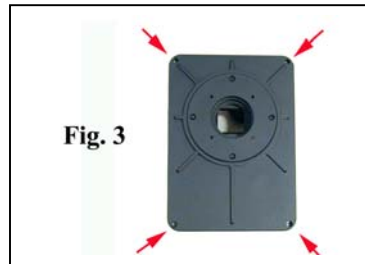
Remove the front plate of the ST-8300 Camera by removing the 4 socket head screws in the corners of the front plate. **Figure 1.**



Note the position of the round cut-out inside the front plate that allows for the height of the shutter spindle. **Figure 2.** You will need to orient this cover the same way in the event that you should remove the filter wheel and replace the camera's front cover. There is a similar cut-out in the filter wheel back plate that will replace this front cover and it must be oriented the same way.

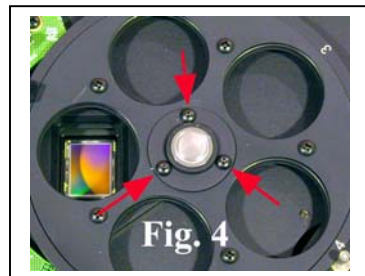


Set the camera front plate aside and save the four socket head screws. You will use them to attach the filter wheel.



Remove the front cover of the filter wheel by removing the four Phillips head screws in the recessed holes in the four corners of the cover. **Figure 3.**

Remove the filter carousel by removing the 3 button head screws closest to the center of the carousel with a 1/16 hex wrench. **Figure 4**



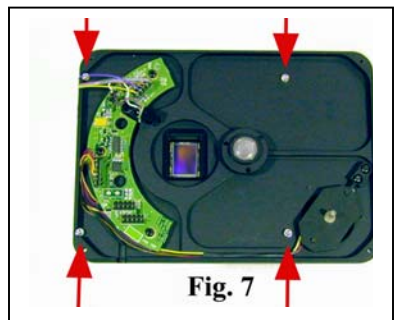
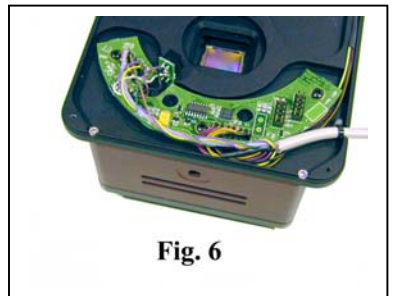
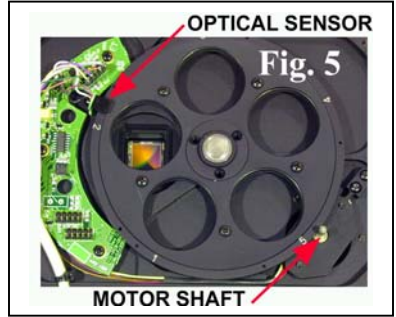
Lift the carousel from the central bearing being careful of the optical sensor at the edge of the carousel.

Once free of the central bearing, tilt the carousel slightly to slide it away from the optical sensor. **Figure 5.** Removing the carousel exposes two of the four mounting holes. The other two are already exposed.

Place the filter wheel back plate with its curved electronics board onto the ST-8300 camera so that the end of the filter wheel with the curved electronics board is flush with the side of the camera body that has the two long vents and the 1/4-20 threaded tripod mounting hole. **Figure 6.** The camera side of the filter wheel's back plate has a slight relief the same shape as the opening of the camera body so it should naturally slip into place once you get it close. Check the orientation. The filter wheel motor cover should be on the same side of the camera as the SBIG logo.

Use the 4 socket head screws that you removed from the front plate in step 1 to attach the filter wheel back plate to the camera body. **Figure 7.**

Replace the filter carousel with the white numerals facing up. First insert one edge of the carousel into the optical sensor and then seat the carousel on the central shaft. Orient the 3 screw holes around the central bearing so that they are aligned with the three holes in the carousel as it is seated. Once fully seated with one edge resting firmly against the motor shaft and one edge in the optical sensor, fasten the carousel with the 3 button head screws to hold the carousel in place.



2. Installing Filters

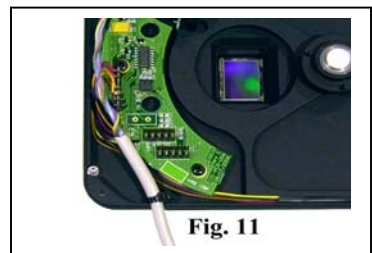
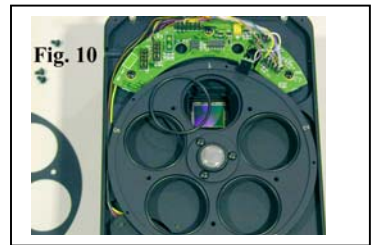
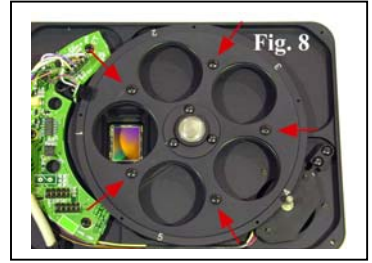
Start by removing the 5 Phillips head screws around the middle of the carousel (8 screws on the FW8-8300). **Figure 8.**

Remove the filter retainer. If there are any o-rings in the filter cells, remove them as well. **Figures 9 and 10.**

Drop 36mm round unmounted filters into the empty cells. Place the o-rings on top of the filters if you are using filters that are 1mm - 2mm thick, but leave them out if you are using filters that are 3mm - 5mm thick. Note that the carousel is marked for each filter position 1-5 (or 1-8). You can arrange the filters any way you like. The default in CCDOPS, starting with position 1 is: Red, Green, Blue, Clear and Lunar. You can change these to any designation you like. Keep in mind that CCDOPS will default to position 4 at startup assuming you wish to start with the clear filter.

When all the filters are installed, replace the filter retainer and secure it with the 5 (or 8) Phillips head screws. **Do not tighten these screws more than is necessary to keep the filters from rattling in their cells. Over-tightening may damage the filters.**

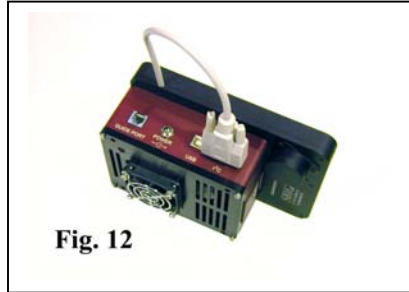
Replace the filter wheel's front cover being careful to tuck in any loose wires so that they are not pinched and check that the cable retainer is tucked inside the bottom cover to prevent the cable from being pulled out the slot. **Figure 11.**



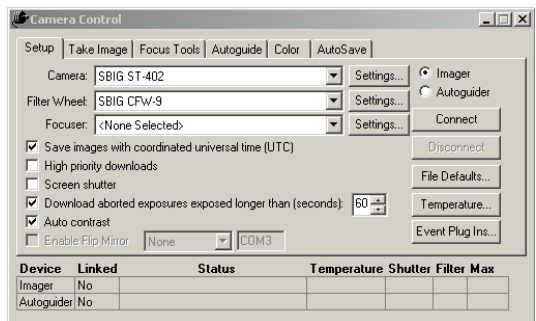
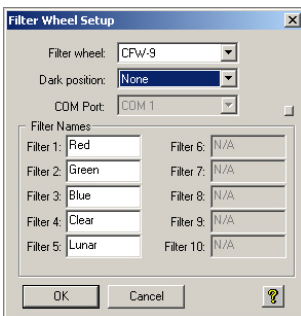
3. Setting Up the Filter Wheel

If you have not already done so, before proceeding you must install the software and camera drivers on your computer following the instructions in the ST-8300 operating manual.

After the drivers have been installed on your computer, plug the short pig-tail into the ST-8300's I²C port. **Figure 12.** Start CCDOPS, plug in power to your camera, and attach the USB cable from the camera to your computer.



Once you establish a connection with the camera, go to the Filter Menu in CCDOPS and select Filter Set Up and then select the CFW9 filter wheel as shown in the screen shot at left. (The FW5-8300 uses the same electronics and commands as the CFW9 filter wheel). If you are using CCDSoftV5 select the camera as "ST-402" and filter wheel as "CFW9" as shown in the screen shot below.



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