EFW
Quick Guide

Thank you for purchasing a ZWO Electronic Filter Wheel (EFW). This manual will introduce you to your EFW and prepare you for the first use. Please take the time to thoroughly read this Quick Start Guide and if you have any additional questions, please contact us at info@zwoptical.com

Introduction

Electronic filter wheels (EFW) are filter wheels used with mono cameras for astrophotography. ZWO offers several configurations depending on the filter size and number of filters used. A ZWO EFW simply requires a USB connection for use and power. You may control it from a variety of hosts such as PC or Arm Linux or Android smart phone.

Four configurations of the ZWO EFW are currently available:

- 5 Position: Accepts 1.25" or 31mm Filters
- 5 Position: Accepts 2" or 51mm Filters
- 7 Position: Accepts 36mm Filters
- 8 Position: Accepts 1.25" or 31mm Filters

Installation of Filters

1.25" & 2" size mounted filters: *(Please note that filters must be less than 7mm in thickness (not including the threads) and threads must be less than 3mm in thickness.)*

- Remove the screws securing the back cover and remove the back cover.
- Set the wheel on a flat surface with the face down.
- Screw the filters into the threaded wheel positions.
- Replace the back cover and tighten the screws.

For 31mm, 36mm & 51mm unmounted filters: (Please use the M2 screws and washers to fix the filters, which are included in the package.)

- Remove the screws securing the back cover and remove the back cover
- Set the wheel on a flat surface with the face down.
- Place filters onto the filter positions.
- Use the included M2 screws with washers to secure the filters in place.
- Replace the back cover and tighten the screws.

Connecting ZWO EFW to Camera

You can connect your camera to the EFW with a 1.25" nosepiece or simply thread it directly to the M42 interface. Please pay attention to the direction of EFW when you connect to the ZWO ASI 1600 camera to ensure that the filters are as close to the sensor as possible to minimize the chance of vignetting.

Driver installation

ZWO EFW are designed as a USB HID device (like a keyboard or mouse) so you only need to install the ASCOM driver for use.
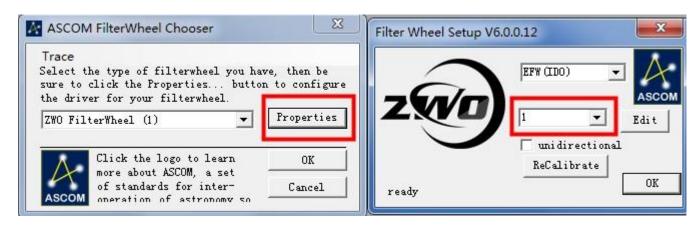
Download and install **EFW ASCOM driver** from our website or install from the CD-ROM that is included with your EFW. *Important: Make sure you install the ASCOM platform first.*

Please install ASCOM Platform first:

ASCOM Platform 6.2

ASCOM Platform 6.3

EFW filter wheel ASCOM Driver: ZWO EFW ASCOM Setup V1.0.0.12

Most astro imaging software supports the ZWO EFW through ASCOM, such as Sharpcap, Firecapture, MDL, SkyX, SGP, APT, etc…You can also operate the EFW through the ASCOM dialog window.

Please read our ZWO EFW Software Manual to learn more about how to use it with various software and operating systems.

https://astronomy-imaging-camera.com/manuals/

Trouble shooting common problems with your EFW:

1. **My EFW tries to move but gets stuck and cannot arrive at the right position.**

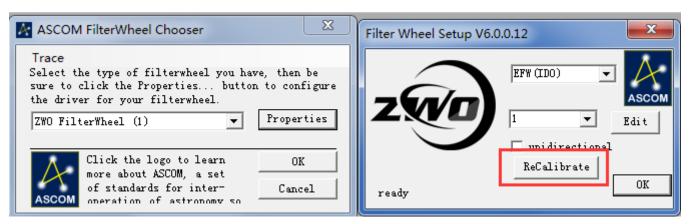   1) Filter is too thick: Filters (not including the threads) must be less than 7mm in thickness and threads must be less than 3mm in thickness.
   2) The M2 screw used to secure the filter is too long and causes the wheel to jam.
   3) The M42 thread of the scope or the camera is too long and protrudes into the filter wheel, hitting the filter or wheel, causing it to jam.

2. **My EFW spins but never stops, or stops at the wrong position.**

   ZWO EFW uses an infrared sensor to check wheel position.   If the sensor malfunctions, you can usually resolve by recalibrating the EFW in the ASCOM driver. Simply click "ReCalibrate" in ASCOM driver interface. It can take up to 60 seconds to perform this action.

If this does not resolve your problem, contact us at: info@zwoptical.com

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