



redrockmicro

HALO SOLO COMPLETE USER GUIDE



OVERVIEW

Solve the challenge of mastering focus with the Halo Solo Bundle

Especially designed for solo operators, Halo Solo Bundle delivers an affordable and accurate system that automatically tracks your subject and keeps them in focus so you don't have to. Halo Explorer gives you more autofocus options (such as hybrid focus and focus acquisition) while still delivering complete automatic focusing. When you want manual focus control, it's a fingertip away with the Navigator command module.

The Halo Solo Complete Kit utilizes 3 main components of the Eclipse ecosystem and a companion desktop app. Halo Solo can be used with a stand-alone cinema rig or the MoVI Pro system. At this time Halo Solo can only be used with prime lenses that include hard stops (zoom lenses and still photography lenses with floating focus rings are not currently compatible)

Navigator - Used to set up the Halo lens database and to control Atlas/Lens Motor.

Atlas - Moves the focus ring on your lens. Receives data input from Navigator and Explorer.

Explorer - Holds the lens database and transmits range information to Atlas/Lens Motor.

App - Used to set up focus points on your lens and store them in Explorer.

HARDWARE SETUP - CINEMA RIG

In order for Halo to operate correctly all components must be set up and connected properly. All direct communication during use is via the Eclipse Cables. Wireless communication is only for setup/programming.

1. **Explorer** - Explorer can be mounted in any position on your camera rig, but we recommend mounting it as close to the center of your lens as possible. We recommend mounting Explorer centered vertically below your lens.
2. **Atlas Lens Control Motor** - Attach Atlas to your rig (see [Atlas user doc](#) for more info). Using the P-Tap cable, connect Atlas to power. Using the 24" Eclipse Cable, connect the Atlas to the Explorer. For initial set up, we recommend that you do not engage the Atlas drive gear with your lens gear. Calibrate Atlas then rotate it off of your lens gear. Power to Explorer will be supplied through Atlas. Explorer can also be powered via Canon LP battery plate on the back of the Explorer unit.
3. **Navigator** - Connect Navigator your rig via the main clamp. Navigator also ships with a spacer that allows you to connect to a standard tripod pan handle. Using the 24" Eclipse Cable connect the Navigator to the Explorer. Navigator can also be powered with a Canon LP battery, however the Eclipse cable must be connected to operate the Halo System.

HARDWARE SETUP - MOVI PRO RIG

In order for Halo to operate correctly all components must be set up and connected properly. All direct communication is via the Eclipse Cables. Wireless communication is only for setup/programming.

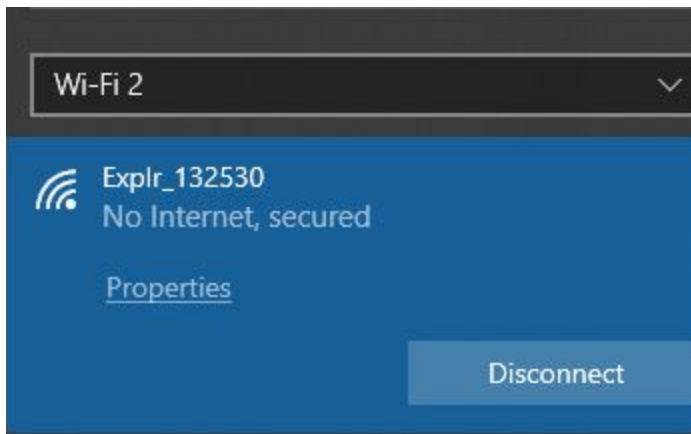
1. **Explorer** - Mount Explorer as close to the center of your lens as possible. We recommend mounting Explorer centered vertically below your lens. Explorer can be mounted in any position.
2. **Lens Motor** - Any lens motor that you use with MoVI Pro can be used with the Halo system. For initial set up, we recommend that you do not connect your lens motor directly to your lens. Calibrate your lens motor then rotate it off of your lens gear.
3. **Navigator** - Connect Navigator your rig. Using the 24" Eclipse Cable, connect Navigator to Explorer. Using the 6 pin MoVI Pro cable, connect Navigator to MoVI Pro Com 1 or Com 2. See [Navigator Movi Pro](#) setup doc for more info.

INITIAL SETUP - CINEMA RIG / MoVI PRO

Explorer requires setup before use. You must “initialize” each of your lenses. For initial setup we recommend setting up only one lens. Once you are familiar with the process, you can set up a maximum of 8 lenses.

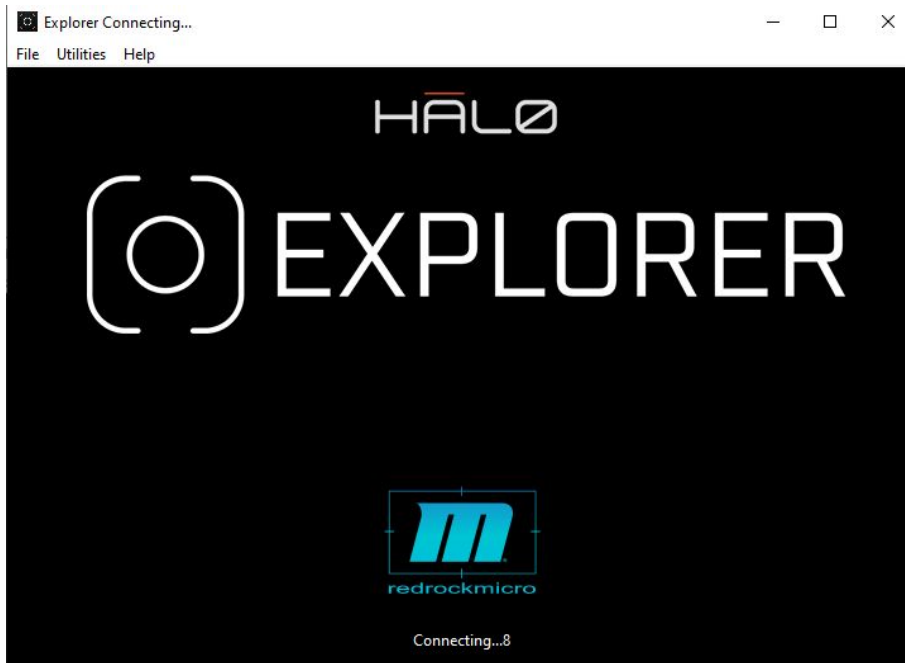
1. Download and install the Halo Explorer Lens Setup App. This app is distributed directly via our website but will eventually be available via the respective Windows/Mac app stores. Download [here](#) if you have not already. The app can simply be placed in any local folder on your computer. Wi-Fi is required to set up Explorer. Your Explorer will display “Explr_#####” as it’s SSID. The password for all Eclipse products is 12345678. Connect to Explorer’s access point and start the app. Note: If your only source of network access is Wi-Fi then once you are connected to Explorer you will not have normal network access. Explorer does not connect to the internet. Some operating systems will auto scan for Wi-Fi so if you remove power from Explorer you may have to reconnect to your Explorer’s Wi-Fi access point.

Access point connection.

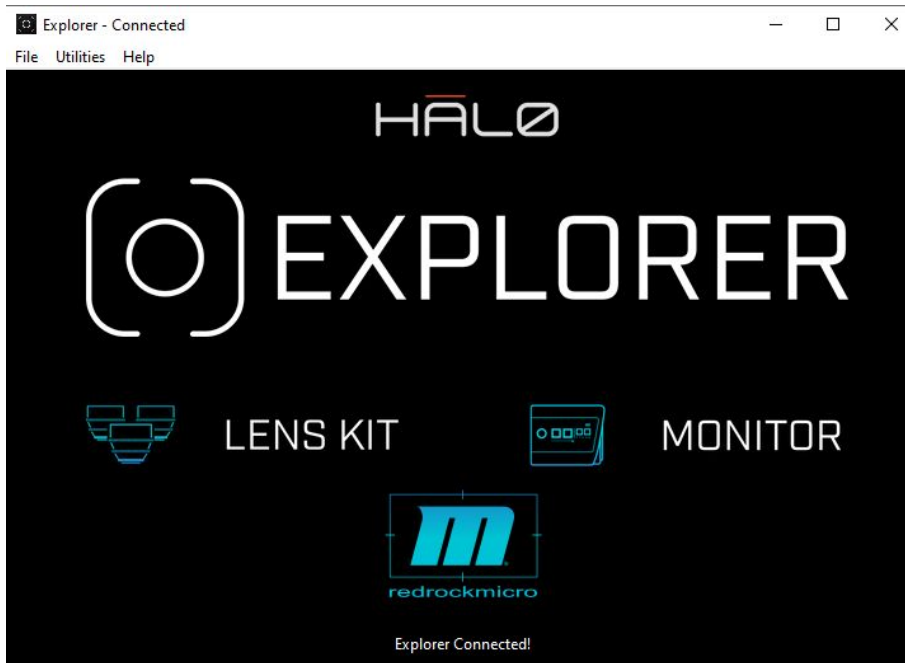


2. Run the app and note the status. (See images below) If you see the “Connecting...” message make sure Explorer is powered on and you are connected to it's Wi-Fi access point.

(Main screen - Not Connected)



(Main Screen - Connected)



3. Once connected, click on the Lens Kit icon to enter the lens setup screen. This screen will display some default data. All of the following can be found in the help menu/Motor Setup Section.
 - a. **Lens Name** - A general description of your lens. Use up to 16 characters to describe your lens. We recommend brand and focal length e.g. Canon 50mm but you can use anything you like e.g Brad's Lens 1.
 - b. **Focal Length** - Use your lens' focal length. Enter a whole number only. Do not enter "mm"
 - c. **F/T Stop** - This field is for reference only and is not stored in Explorer.
 - d. **Min Focus** - Enter your lens' minimum focus distance in inches. E.g 39 (39" = 3'3")
 - e. **Smoothing** - Smoothing is used in conjunction with Atlas' "Artistry" or MoVI Pro's "Damping" motor settings to produce smoother/slower or rapid focus pulls.
 - f. **INIT Button** - See next section
 - g. **Read Lenses Button** - Reads the stored lenses from Explorer
 - h. **Save Kit Button** - Saves the lenses currently displayed on the screen to a local database.
 - i. **Load Kit Button** - Loads a saved kit onto the screen (Does not send to Explorer)

(Lens Setup Screen)

	Lens Name	Focal Length	F/T Stop	Min Focus	Smoothing	
Lens 1	1 EMPTY	18	2.4	39	5	INIT
Lens 2	2 EMPTY	28	2.4	39	5	INIT
Lens 3	3 EMPTY	35	2.4	39	5	INIT
Lens 4	4 EMPTY	50	2.4	39	5	INIT
Lens 5	5 EMPTY	85	2.4	39	5	INIT
Lens 6	6 EMPTY	100	2.4	39	5	INIT
Lens 7	7 EMPTY	135	2.4	39	5	INIT
Lens 8	8 EMPTY	150	2.4	39	5	INIT

Read Lenses
Load Kit Save Kit

Close

Explorer Connected!

4. **INIT Lenses** - Each lens must be initialized. Initialization consists of setting the minimum focus point and the maximum focus point. Using Navigator you will rotate your lens to its minimum focus point then its maximum focus point. Press the "INIT" button to start the process. As long as you are still connected to Explorer you should see a value in the "SET MIN FOCUS" column. In general most lens' minimum focus point is greater than zero. So even though you can move your lens past its minimum focus distance to get to zero, Explorer is looking for the value that matches the "Min Focus" value. So if your lens' Min Focus is 12, rotate your lens to the "12" mark.

Initializing a Lens

- a. Fill out all appropriate data
 - b. Press "INIT"
 - c. Rotate your lens to the minimum focus distance. Press "SET MIN"
 - d. Rotate your lens to the maximum focus distance. Press "SET MAX"
 - e. Once "SET MAX" is clicked all lenses will be processed and sent to Explorer.
- Note: SET MIN FOCUS value needs to be the smaller number. If you are moving towards the minimum focus point and the number is increasing you will get a warning message and the record will not be saved. In this case set the motor direction to either forward or reverse or move the motor to the other side of the lens. The forward/reverse setting can be found in the Atlas menu or in the motor setup menu on MoVI Pro.*

(Init Lenses)

Lens Database					
	Lens Name	Focal Length	F/T Stop	SET MIN FOCUS	SET MAX FOCUS
Lens 1	1 EMPTY	18	2.4	00889	63000
Lens 2	2 EMPTY	28	2.4	39	5

Buttons: SET MIN (highlighted), INIT

(Sending Lenses)

Explorer Connected to Version: 02.02

File Utilities Help

Lens Database					
	Lens Name	Focal Length	F/T Stop	SET MIN FOCUS	SET MAX FOCUS
Lens 1	1 EMPTY	18	2.4	39	5
Lens 2	2 EMPTY	28	2.4	39	5

Buttons: Sending..., INIT

INITIAL USE

Once you get your first lens setup and sent to Explorer you will see the lens name displayed on Explorer above the distance data, the distance marker below the distance data, and the smoothing setting on the lower right corner (05). You may have to scroll to find your lens. Press up or down on the Explorer's joystick to scroll lenses.

("TEST LENS 1")



1. **Activate Halo** - With your lens motor off your lens gear, roll focus to 50% on the Navigator screen which represents the center of the focus travel. Activate Halo by pressing the center button below the display on the Navigator. The Navigator will display the Halo logo and the Eclipse Lights (LED's) will indicate blue. If you are using Atlas, Atlas will also indicate blue (Halo mode). As soon as you activate Halo, your lens motor will move to the distance indicated by Halo. Since you are off the lens you will not be able to confirm the location.

(HALO Active)



2. **Test Halo** - Place a flat object in front of Explorer to confirm the lens motor responds to the distance information, also take this time to confirm motor speed/response to make sure you are familiar with how your lens motor responds to feedback from the Explorer. If you feel the motor moves too fast or too abruptly adjust the motor Artistry/Damping settings.
3. Once you are familiar with the system you can engage the lens motor with your lens gear.
 - a. Disengage Halo by pressing the center button below the display on the Navigator.
 - b. Engage your lens motor.
 - c. Re-calibrate your lens motor.
 - d. Engage Halo.
 - e. Place a flat object in front of Explorer to test motor movement.

SYSTEM USAGE

Once you are familiar with how the Halo system functions you can fine tune your setup and begin normal usage. In this section we will cover laser calibration, offset calibration, lens selection, display orientation, and system modes. Halo has 4 modes: On (Auto Focus), Focus Acquisition, Hybrid, and Off (Manual Focus).

1. Auto Focus - This mode uses the distance data full time to track your subject.
2. Focus Acquisition - This mode uses distance data to momentarily move your focus mark to your subject. Once acquired, Halo is disengaged and the acquired focus mark is maintained. You can continue to track your subject manually.
3. Hybrid - This mode uses distance data to momentarily move your focus mark to your subject. When disengaged the lens motor will move focus to the current focus mark.
4. Off - Focus tracking is fully controlled by the operator via the Navigator.

Laser Calibration

Since Explorer cannot be mounted directly in the center of your lens the operation will need to know the orientation and position of the LIDAR laser. The laser will be offset to the left or right, top or bottom of your lens. Your system ships with 2 reticles that are similar to the crosshairs on your viewfinder or monitor. If you are using an external monitor we can use the reticles to view the offset of the laser to make framing your subject more intuitive.

1. With Explorer mounted in the best location possible on your rig, frame a typical shot then engage the red visible aiming laser by pressing and holding the left button below the Navigator's display. Release when the laser activates. It will automatically turn off after 10 seconds. Be sure to use all precautions associated with lasers. Never point it directly at the human eye, etc...
2. Using your external monitor aim the laser at the furthest focus point in your shot. Place the reticle on your monitor directly on the point where the red aiming laser is visible. The reticles are non-adhesive glass cling style so they are reusable and will not damage your monitor screen.
3. Placing the reticle where the laser is pointing is key to success when framing and keeping your subject in focus.

(Aiming Laser Active)

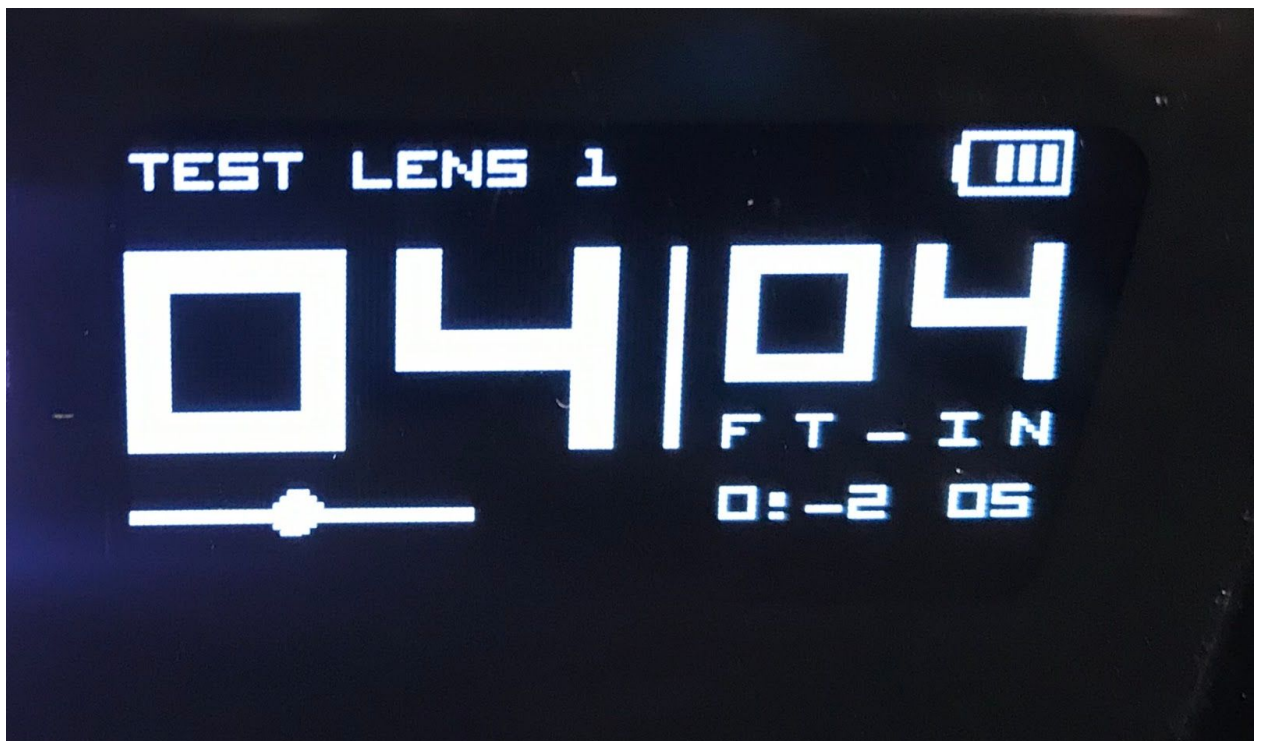


Offset Calibration

Since Explorer cannot be mounted directly in the center of the lens exactly centered on the camera's film plane we may have to create an offset. Here's how to set the film plane offset with the Halo Solo Complete System.

1. With Explorer mounted in the best location possible, engage Halo. Set a known focus point e.g set a subject at 3 feet if your lens has a 3 foot indicator.
2. Rotate the "Select/Set" wheel on the side of Navigator up or down until your lens and Explorer read the same. The offset is indicated in the lower right corner of the Explorer's display next to the smoothing indicator. (-2)

(Film Plane Offset)



Lens Selection

Explorer can hold up to 8 lenses in its local memory. Once you have downloaded a lens you must select it. Press up or down on the Explorer's joystick to scroll to the desired lens. Make sure not to engage Halo until you confirm the selected lens is the lens that is mounted.

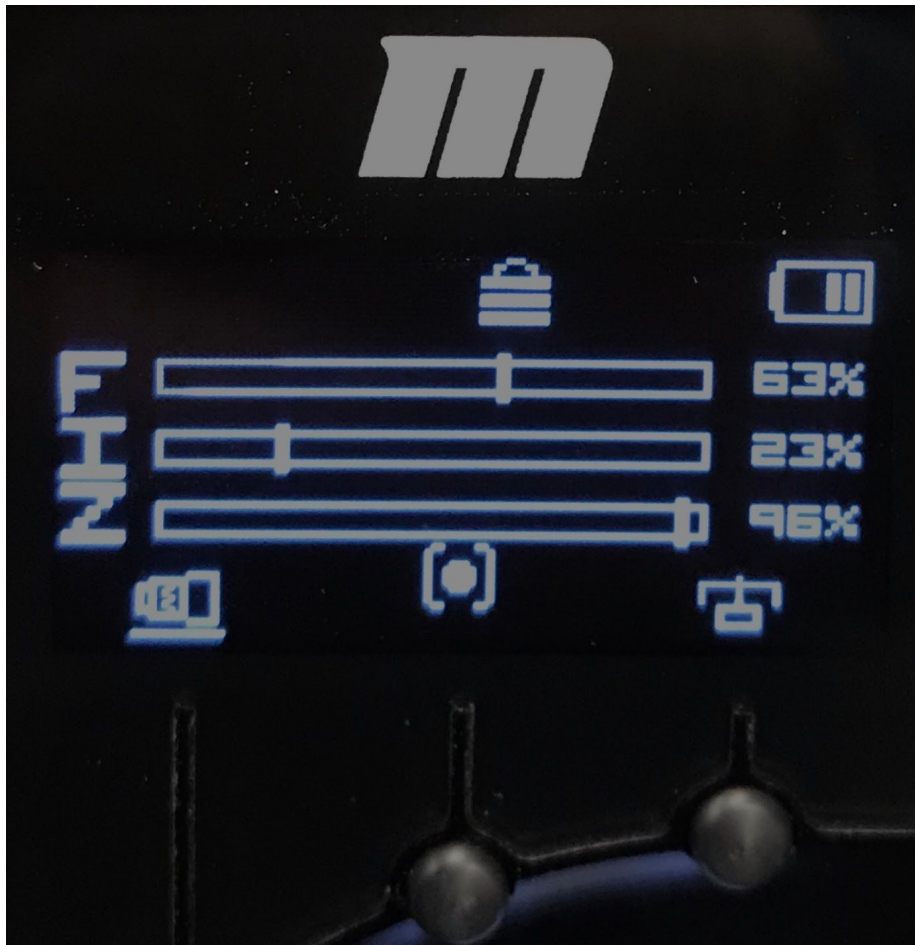
Display Orientation

If mounting Explorer upside-down is necessary the display can be rotated by pressing in and holding Explorer's joystick. Once the display has rotated release the joystick. Repeat to rotate again.

Auto Focus

Auto focus mode tracks your desired subject full time. Once Halo is engaged the lens motor will continually move the focus mark based on the distance data from Explorer. All Eclipse Lights (LED's) and Navigator will indicate when Halo is active.

1. To engage auto focus mode, press and release the center button below Navigator's display. This button will also be indicated by the Explorer logo. If you don't see the logo, check your cabling, reboot the system.
2. To disengage auto focus mode, press and release the center button below Navigator's display.
(Configured Explorer Detected)



FOCUS ACQUISITION

Focus acquisition mode allows the operator to quickly and accurately acquire a new focus subject then automatically switch back to manual focus mode.

1. Disengage Navigator's focus lock. This switch is located below the focus knob on Navigator. Slide it down to disengage.
2. Activate Halo by partially ($\frac{1}{2}$ press) pressing the ACTION button on Navigator. The focus motor will move to the point indicated by Explorer.
3. Release the ACTION button. The focus motor will not move and the operator can manually focus from the new focus point.
4. To test: Move to a close focus point then aim Explorer to a further point. Activate Halo ($\frac{1}{2}$ press). Release ACTION.

HYBRID FOCUS

Hybrid focus mode allows the operator to use Halo temporarily then return to manual focus. Imagine an automatic rack focus or a similar focus move.

1. Make sure Navigator's focus lock is engaged. It will be indicated by a lock icon near the center top of Navigator's display.
2. Partially press ($\frac{1}{2}$ press) and hold Navigator's ACTION button. This will engage Halo and move the focus mark to match Explorer's distance readout.
3. Release the ACTION button and the focus motor will return to the previous focus mark.

MORE ABOUT EXPLORER LENS SETUP APP

Lens Kits

The Explorer Lens Setup Desktop App (mobile coming soon) allows you to setup and maintain a database of your lenses. Even though Explorer can hold 8 lenses, you can set up and maintain as many lenses as needed locally.

Save Kit

1. Create and initialize up to 8 lenses. Note: Each time you initialize a lens all of the lenses on the screen will be sent to Explorer. Please remember to not engage Halo with the incorrect lens selected. This may damage the lens gear or the lens motor drive gear.
2. Click the “Save Kit” button. You will be prompted to name the file and select a location to store that file.

Load Kit

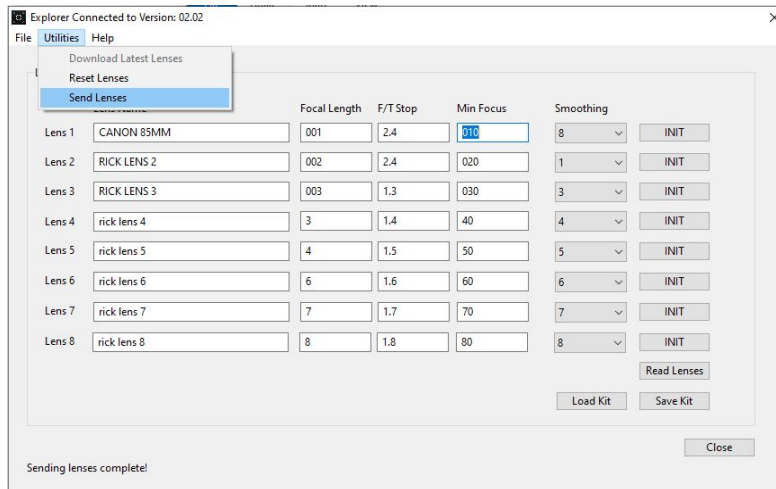
1. If you have saved a kit, you can load it by clicking on the “Load Kit”
2. Once the kit is loaded you can send it to the Explorer, however make sure the rigging has not changed. Make sure the lens is mounted in the same location as it was initialized. If you are unsure, please use the INIT process to confirm. *Note: If lens motor mounting or you are using a mix of lenses that move in opposite directions use “L” or “R” (Left or Right) or “F” or “R” (Forward or Reverse) in the lens name e.g. Canon 85mm R.*

Other Functions

There are a few other utilities within the app. Send Lenses, Reset Lenses and Read Lenses.

1. Send Lenses - Select “Send Lenses” from the Utilities Menu. This feature will send the lens kit data that is currently loaded and visible on the screen. In the event that you have to send the lenses again, renaming lenses for example, there is a send lenses function in the utilities menu. Use this function only if you have initialized your lenses.

(Sending Lenses)



2. Reset Lenses - Select “Reset Lenses” from the Utilities Menu. This function loads a default dataset. Use this function to simply reset the data on your screen.
3. Read Lenses - By clicking on the “Read Lenses” button you can read back the lens data stored in Explorer. This is helpful for troubleshooting of for using multiple PC’s to manage one Explorer.