

OptiTron2 instruction manual

OptiTron2 is our second generation of EFF(electronic follow focus) This is the first (technically the second gen) professional device that connects with auto focus motors built into DSLR lenses and, instead of a gear /Follow Focus(external motor) combination seamlessly integrates with the lens and the camera system for accurate, repeatable, smooth and responsive lens control of focus and aperture.

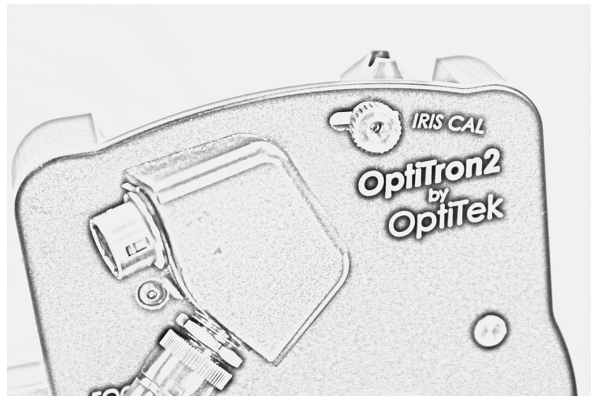
It features:

Default remapping of the very limited focus rotation on AF lenses to nearly full rotation(320 degrees) of the focus knob. This provides precision needed to follow focus on today's high resolution sensors 4K and beyond

Easy rotation direction switch for left and right side mounting.

Easy remapping of custom user defined focus range to full rotation of the knob (see below) for even more precision needed for macro, super critical focus work.

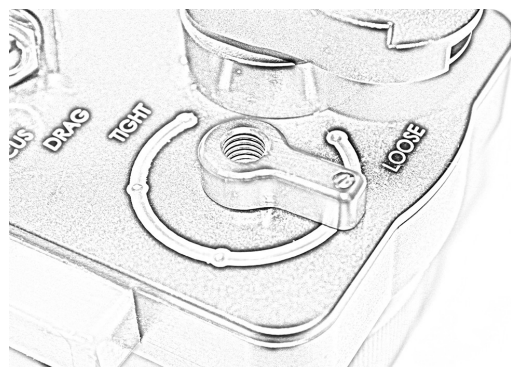
Adjustable iris scale for monitoring aperture position on the OptiTron2



Backlit aperture and focus control for night time /dark environment use

Easily and quickly adjustable tension of the focus knob to suit the individual focus puller preference.

The "focus drag" lever under the battery cage lets you adjust tension on the focus knob. Five steps from Loose to Tight.



The marking ring snaps on, is back lit at all times. There is an index line at 12 o'clock position. The iris slider has a marking strip for felt pen. The marking strip is adjustable so the scale once marked can be reused for different lenses.

The OptiTron2 accepts voltage from 7-17VDC It uses 2W of power. The battery is detachable. Do not use the battery if the OptiTron2 is plugged in the MarkII (or MarkIII) Sony Canon ProLock-i adapter. The battery is only needed in the wireless configuration.

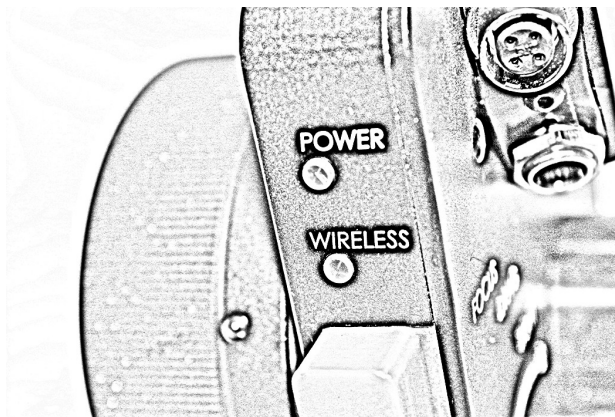
Power up the unit. Hold down the power button for 1-2 sec until the focus knob back light LEDs light up.

Upon powering up there may be 2-5 second auto calibration procedure. It depends on the lens. Do not press any buttons just wait for the LEDs (ESC and Wireless) stop blinking.

Slightly move the focus knob to initialize and calibrate the focus.

The unit is ready to use!!!!

Wireless will turn the wireless function on/off.



"ESC" button allows you to reset the unit . Always better to just power cycle.

"ESC" and "RANGE" pressed simultaneously (after brief LED blink) toggle between CW and CCW direction for the knob from CF(close focus) to Infinity.



**The range button allows for setting custom in/out focus points and remaps them to the whole turn. Here is how it works:
for example**

You are working table top so you only need from 2"-3" range but need to control the focus closely so you want the whole turn on the knob to go from 2' to 3' only instead of the default CF to infinity

- 1. press the range button Led (below the range button) starts blinking quick Turn the focus knob to focus the lens to 2' (or set the focus to 2' first and press the range button twice in sequence)**
- 2. press the range button again the LED starts blinking slower turn the focus knob to refocus the lens on 3'**
- 3. press the range button again the LED stays on solid (no blinking) Done!!! Now the full turn on the knob from end to end will only move the lens focus between 2' and 3' with a lot more precision.**
- 4. To exit back to default (full turn on OptiTron = full focus range on the lens from CF to infinity) The LED below the "RANGE" button will turn off.**

Appendix 150429

Wireless receiver (OTRx)

The wireless receiver is a small light weight device that connects with your existing OptiTron2 and allows remote control of lenses with ultra low latency and high precision and repeatability.

Setup:

- 1 attach the supplied battery in the cage to the OptiTron2**
 - 2 turn on the OptiTron2**
 - 3 Turn on the wireless function on the OptiTron2 (the wireless light will be blinking red)**
 - 4 connect the OTRx to the mount adapter (CPL-iFZ2, 3) via the supplied Hirose to Hirose coiled cable.**
 - 5 After both LEDs – on the wireless receiver and the Optitron (Wireless turned green) stay on solid it is ready to use!!!**
- First time pairing (only needed when new OTRx is purchased separately or shipped separately)**
after point 4 above the LEDs keep blinking
press the pairing button next to the LED on the OTRx
The LED will start blinking rapidly and the LEDS on the OT2 will light up sequentially.
Press F1 and release. The LEDs will stabilize after few seconds
Pairing complete!!!

appendix 150429-1

Initial focus and iris encoder calibration

Only perform when mechanically disturbed (dropped) and not controlling the lens smoothly- completely (iris does not open, close on several lenses, focus does not reach close, Inf position on several lenses)

Turn on the unit

make sure the wireless is in off position (blinking green)

hold down the Range button (both Range and ESC LEDS light up) and press the F1 button

release- the leds light sequentially (to the left)

turn the knob all the way CCW

press "range" again (Leds going to the right)

turn the focus knob CW all the way

Press "range" again (Leds to the left with "wireless" red)

Slide the iris slider to the left all the way

press "range" again (leds "traveling" to the right again with the wireless LED red) slide the aperture control slider all the way to the right.

Press "range" again

All set!!!

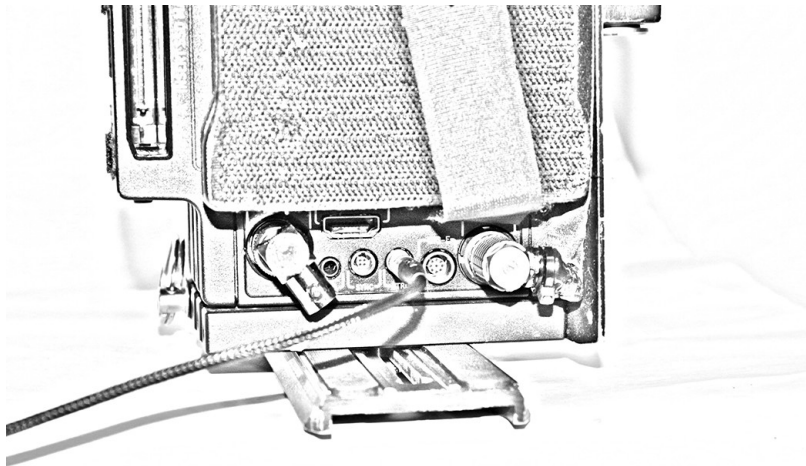
Now power cycle the unit.

Appendix 150512

RED notes:

OptiTron2 with Red requires external power. We provide d-tap power cable. The same power cable works with the wireless receiver in the wireless mode while the OptiTron2 is powered by the attached battery (see Appendix 150429)

Plug the Hirose data cable plug into the Optitron and the Lemo end into the control port.



OptiTron2 can be hot plugged or powered up prior to camera power up. It makes no difference. In the wireless mode the same data cable is plugged into the OTRx (wireless receiver) The control port (serial port) needs to have the REDLINK Command Protocol activated in the menu (menu->settings-> setup ->communication->serial->REDLINK command protocol)



FAQ

1. unit does not power on
 - Hold down the power button until the orange focus backlight goes on.
 2. Unit is on, "range LED is blinking, no control over lenses
 - press ESC key so the unit goes back to default setting
 3. can't reach full range on the focus or focus is erratic
 - check that the lens is mounted properly and locked
 - calibrate the OptiTron2 encoders (see "initial iris and focus calibration")
- Wireless operation FAQ**
4. no control from OptiTron
 - Is wireless on on the OptiTron (Wireless LED solid green or blinking red)
 - was Optitron on with the wireless on when the Receiver was plugged in?
 - pair the two (see first time pairing)
 5. OptiTron will not power up
 - is the battery charged? (test with the test button on battery)
 - is it plugged in correctly? (check the plug(voltage with multimeter if possible) and the pin in the OptiTron socket (carefully spread the halves to improve the contact)
 6. Custom remapping results in erratic lens focus
 - In and out points reversed – turning CCW towards infinity you need to input the in-point (2' per our example) first and out point second. If you OT2 direction is turning CW towards infinity you need to input your out point (3' per our example) first and the in point (2') next

appendix 150501

RED specific FAQ

6. OptiTron/wired/wireless not working

-is Redlink protocol active in the Control port? (menu->settings-> setup ->communication->serial->redlink command protocol)



-is the lens properly mounted? (lens info in the upper left corner of the touch LCD)



-did you wait on the camera to fully boot up before starting to turn the focus knob(sometimes need to reboot if OptiTron2 prematurely started)