



User Guide

Luxxor® LXC Video Camera



Getting Started

The **Luxxor® LXC** may be configured to display images through a computer running Windows 10 or 7 via a USB 3.0 connection, or through an external monitor via an HDMI connection.

Configuration Switches:

There are four configuration switches located on the bottom of the **Luxxor® LXC**. The factory default setting for switches 1 to 4 is DOWN, UP, UP, DOWN, as shown below.



Switch functions:

- | | |
|-----------|---|
| Switch 1: | Up – HDMI Output
Down – USB Output |
| Switch 2: | Up – LED and shutter speed auto exposure
Down – Shutter speed only auto exposure |
| Switch 3: | Up – Normal Auto Exposure Setpoint
Down – Lower Auto Exposure Setpoint |
| Switch 4: | Up – Fixed Integration Time (shutter speed)
Down – Auto Exposure On |

The factory default switch configuration is set to:

- USB output
- LED Based Auto Exposure
(used with optional LXC-LED)
- Normal Auto Exposure Setpoint
- Auto Exposure On

Note: Switch settings are implemented when the LXC is powered on. Any changes to switch settings made while powered on require the LXC to be powered off and on again to take effect. Power is cycled by disconnecting the USB cable from the computer or the stand-alone power supply, waiting 5 seconds or so, and reconnecting the USB cable.

Using the Luxxor® LXC with a computer:

To use the LXC with a computer, software must be installed on the computer.

The LXC must be connected to a USB 3.0 port on the computer **before** installing the software. It will not work on a USB 2.0 port.

Connect the camera end of the USB cable ...



to the USB 3.0 socket on the camera.

Thread in the locking screws until snug – do not over-tighten.



Connect the other end to a USB 3.0 port on the computer.



Download the Video ToolBox Pro software at this link:

www.zarbeco.us/fas/download/luxxor.exe

Run the saved .exe file and follow the on-screen prompts.

You will need to input the **Registration Code** that is printed on the label on the front of this document.

(Note: On some computers, when starting Video ToolBox Pro for the first time, no camera image may be visible. If this happens, close Video ToolBox Pro, power cycle the LXC and restart Video ToolBox Pro.)

Operating instructions may be viewed by clicking on the Help button in the menu bar at the top of the screen.

Using the Luxxor® LXC with an HDMI monitor:

Set configuration switch 1 UP to enable HDMI output.

Connect the USB cable to the camera as described above.

Then connect the camera end of the HDMI cable to the HDMI socket on the camera.



Thread in the locking screw until snug – do not over-tighten.



Connect the other end of the HDMI cable to the monitor.



When used in HDMI mode, the LXC may be powered either by connecting its USB cable to a USB 3.0 port on a computer, or to the USB socket on the included AC adapter power supply. Connect the LXC to the monitor FIRST and to the power supply LAST, otherwise you may not get an image on the monitor.



Using the Luxxor® LXC with a borescope:

To use the LXC with a borescope, a coupler lens must first be attached to the camera.

The optional VC-25 coupler lens threads onto the C-mount threads of the LXC.



Connect the camera to your borescope. Pull back the grooved ring on the VC-25 and insert the borescope's eyecup into the coupler lens as far as it will go. Then release the grooved ring.



Using the Luxxor® LXC with the LXC-LED:

To use the optional LXC-LED light source with a Hawkeye® borescope:

(It may fit other borescopes with similar light stubs.)



Thread the LXC-LED onto the light stub of your borescope.

Plug the LXC-LED cable into the power jack on the bottom of the LXC.



Switch Settings and Exposure Control:



Switch 2:

When using the LXC-LED, configuration switch 2 should be set in the UP position. This enables the LXC to adjust both the LED brightness and shutter speed for autoexposure control.

When using any other light source, switch 2 should be set in the DOWN position. The LXC will then provide autoexposure control without adjusting the light source.

Switch 3:

When looking at images of highly reflective surfaces, it may help to reduce unwanted glare by setting switch 3 DOWN, which will darken the autoexposure setpoint somewhat.

Switch 4:

Switch 4 in the DOWN position enables autoexposure, as configured by switches 2 and 3.

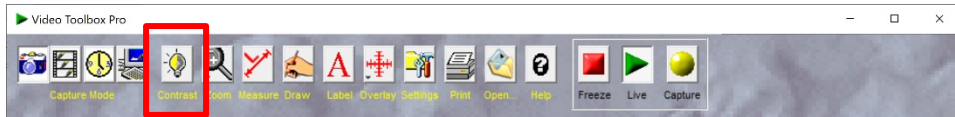
Switch 4 in the UP position disables autoexposure and puts the LXC in a fixed shutter speed mode (16msec integration time). Exposure is then controlled by varying the light source intensity. (The LXC-LED light source will not vary its brightness in this mode.)

Reminder – When settings are changed the camera must be powered OFF, then ON for them to take effect.

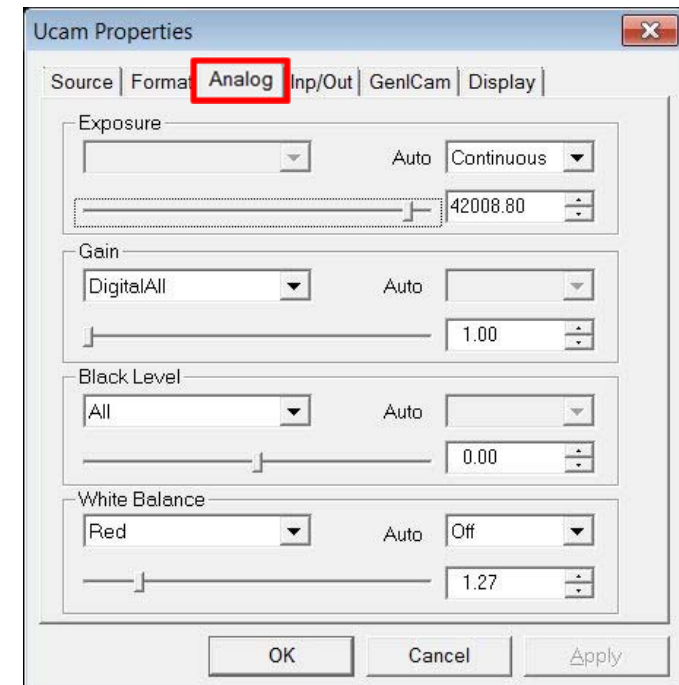
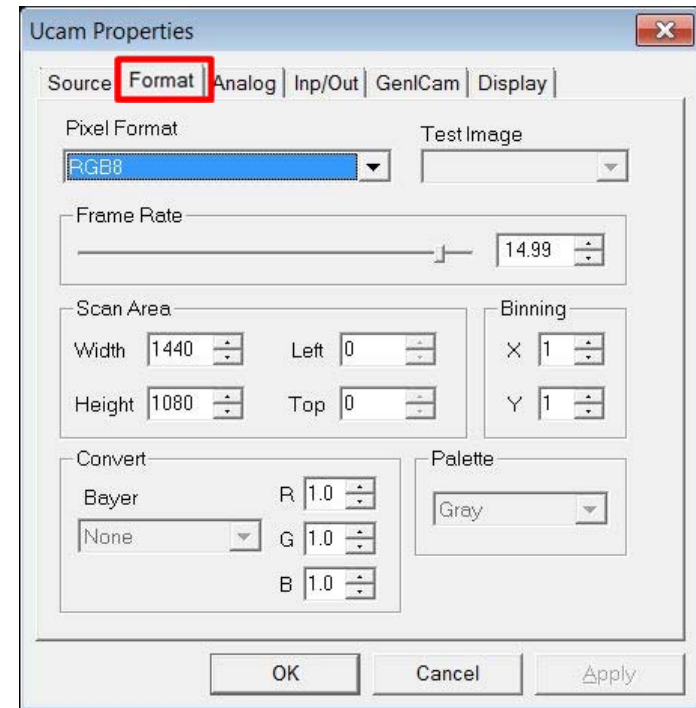
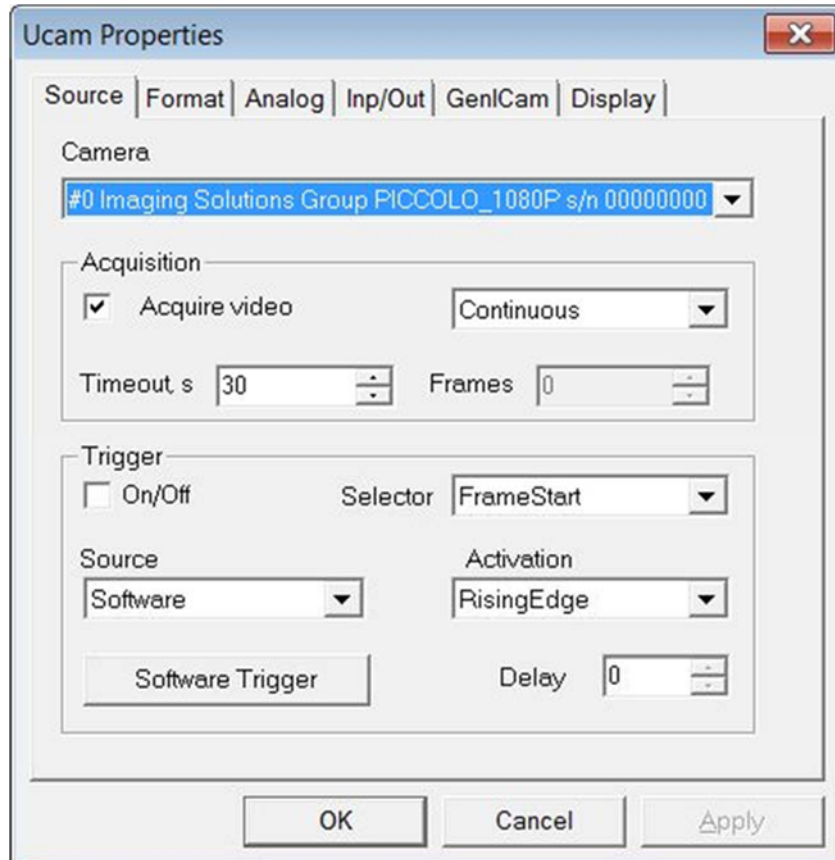
Troubleshooting in Video ToolBox

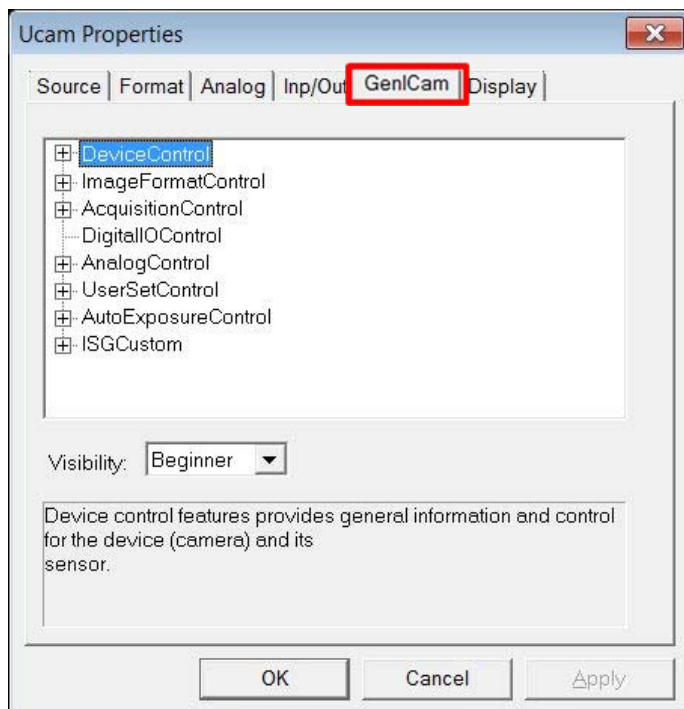
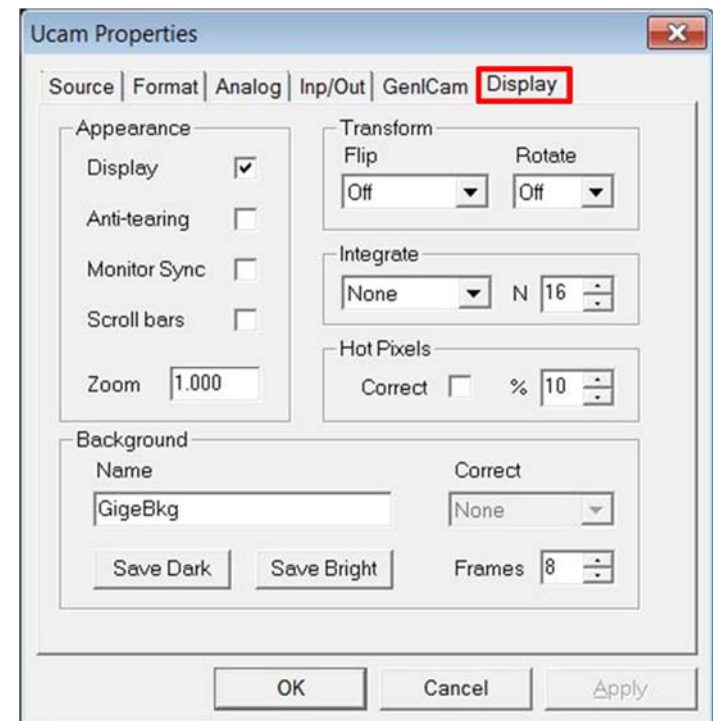
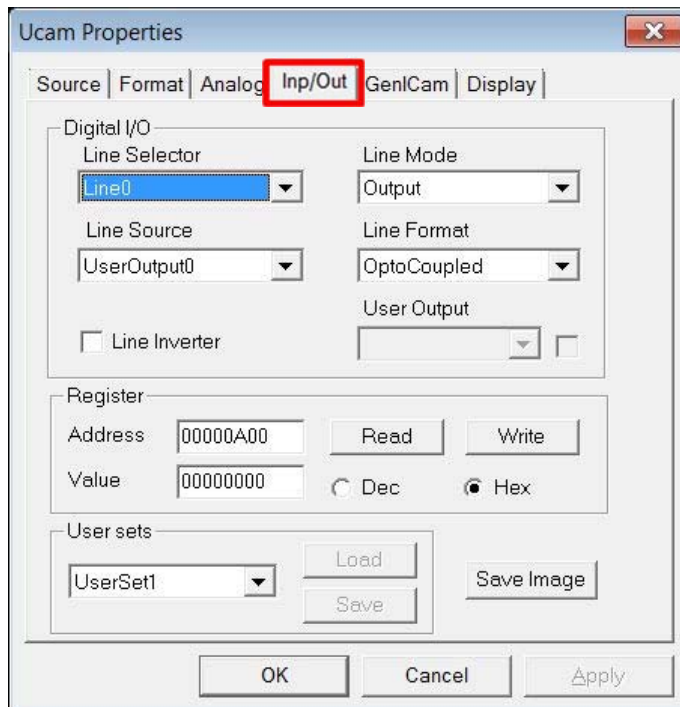
If there is a problem getting a viewable image in Video ToolBox, try the following:

Start Video ToolBox Pro, then press the CONTRAST button.



Flip through the tabs to compare the settings to the screens below. Adjust them to match these if needed.





Troubleshooting HDMI Mode

If there is a problem getting an image in HDMI mode: Power the camera OFF. Make sure all connections are secure and power the camera back ON. Sometimes the image will be lost if the HDMI cable is disconnected and reconnected with the power ON.

Luxxor® LXC Specifications

Sensor1/2.9", 1.4mp with IMX6 Image Processor
Effective Pixels1280 x 1084
Frame Rate 30fps
Video Output USB 3.0 and HDMI
Lens MountC-Mount
AGC Auto or Manual
Operating Temperature 32 to 104°F (0 to 40°C)
Storage Temperature -22 to +140°F (-30 to +60°C)
Dimensions 25 x 28 x 110mm (without coupler lens)
Mount 1/4-20 Tripod Thread
LED Integrated LED light source with auto exposure
Software Video Toolbox (Image & video capture & labeling)

Customer Service:

Should service of the equipment be required: Call Gradient Lens Corporation to obtain a return material authorization (RMA) number and shipping directions.

Telephone: 585.235.2620

Fax: 585.235.6645

E-mail: service@gradientlens.com

Toll Free: 800.536.0790 (in USA only)

Warranty

Gradient Lens Corporation warrants the Luxxor® LXC camera and LXC-LED light source to be free of defects in material and workmanship and to perform in accordance with the manufacturer's specifications when subject to normal use and service for a period of one year from the date of purchase. Gradient Lens Corporation will either repair or replace components found to be defective or at variance from the manufacturer's specifications within this time frame at no cost to the customer. It shall be the purchaser's responsibility to return the instrument to the authorized service center.

This warranty does not cover breakage or failure due to tampering, misuse, neglect, accidents, improper installation, modification, shipping, or to improper maintenance, service and cleaning procedures. This warranty is also void if the instrument is not used in accordance with the manufacturer's recommendations, or if required service is performed by anyone other than a Gradient Lens Corporation authorized agent. No other express or implied warranty is given.



This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1)
This device may not cause harmful interference, and (2) this
device must accept any interference received, including
interference that may cause undesired operation.



207 Tremont Street, Rochester, New York 14608

800.536.0790

Fax: 585.235.6645

www.gradientlens.com

info@gradientlens.com