

Shoestring Astronomy

LXUSB Cabling

Revision 1.0

Copyright 2005, Shoestring Astronomy

DISCLAIMER

This document is intended to be a guideline only. Shoestring Astronomy will not be held responsible for any direct or consequential damage that may result while or from making this modification. This work will be done completely at the owner's risk.

Adding a Jack to Your Webcam

If you already have a modified webcam that uses a serial port or parallel port connector as shown on the Steve Chambers website, you will need to modify it to use an RJ-12 connector. There are two choices on how to do this. One option is to put an RJ-12 jack on your webcam and use a RJ-12 modular cable to go from the webcam to the LXUSB. The other option is to put an attached RJ-12 cable on your webcam, one end with the modular RJ-12 connector, the other end split apart and soldered directly into your webcam. RJ-12 jacks (LXJACK) and single ended RJ-12 cables with couplers (LXKIT1) are available from Shoestring Astronomy to support either option.

If you have not yet modified your webcam, then choose either the jack or singled ended cable option, and don't worry about a serial or parallel port connector.

If you choose to add the RJ-12 jack, connect it to your webcam as shown:

Pin 1: Usually not connected, but this may be power pin on some mounts

Pin 2: Common (ground)

Pin 3: Frame 2 Transfer

Pin 4: CCD Amp

Pin 5: Shutter

Pin 6: Frame 1 Transfer (Frame Transfer for SC-1 mods)

If you choose to add the attached cable, wire it in by wire color as shown:

White (Pin 1) – No connection

Black (Pin 2) – Common

Red (Pin 3) – Frame 2 Transfer

Green (Pin 4) – CCD Amp

Yellow (Pin 5) – Shutter

Blue (Pin 6) – Frame 1 Transfer (Frame Transfer for SC-1 mods)

The function of these signals is discussed on Steve Chamber's webpages at www.pmdo.com. For the SC1 modification, only the Frame Transfer is used. For the SC2 modification, all four signals are used.

Cabling Between the LXUSB and the Webcam Jack

With RJ-12 cables, the six wires are colored white, black, red, green, yellow, and blue. Because the cable is flat, the modular connector can be crimped onto the cable in two ways, white to pin one or blue to pin one. Furthermore, when connectors are placed at both ends of a cable, it can be done with pin 1 to pin 1, or pin 1 to pin 6.

If you build or buy a cable to work with the Shoestring Astronomy modified webcam interface products, you must be absolutely sure that it has pin 1 connected to pin 1, pin 2 to pin 2, etc. Otherwise, you risk the possibility of unpredictable operation and possibly damage to your webcam and your Shoestring adapter.

If you build/buy a cable, please make sure that **both** ends of the cable are wired as shown in the picture at the right. This view is with the connector lock tab facing away from you. Note carefully the color and order of the six wires.

