

Shoestring Astronomy

Guide Port Cabling

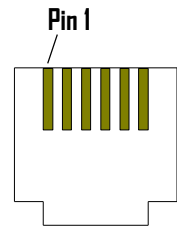
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Many telescope mounts are capable of autoguiding, or can be modified to add this capability. Unfortunately, there is no standardized interface that all manufacturers (or even within a single manufacturer) use for this function. However, most mounts do use a de-facto standard that for lack of a better name is referred to as ST-4. This refers to a popular model of autoguider from Santa Barbara Instrument Group (SBIG), the ST-4.

ST-4 interfaces use a modular-style connector and jack similar to telephone cabling, but they are different. Telephone cabling is referred to as RJ-11 and it uses four wires, and a six position connector that only has contacts in the middle four positions. ST-4 style guide ports use a modular cable called RJ-12 that uses six wires, and a six position connector that has contacts in all six positions.

ST-4 style guide ports (sometimes referred to as autoguide ports or CCD ports) look like the diagram shown to the right. The pins are connected as:



- Pin 1: Usually not connected, but this may be power pin on some mounts
- Pin 2: Common (ground)
- Pin 3: RA+
- Pin 4: Dec+
- Pin 5: Dec-
- Pin 6: RA-

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 guide port 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 mount 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.

