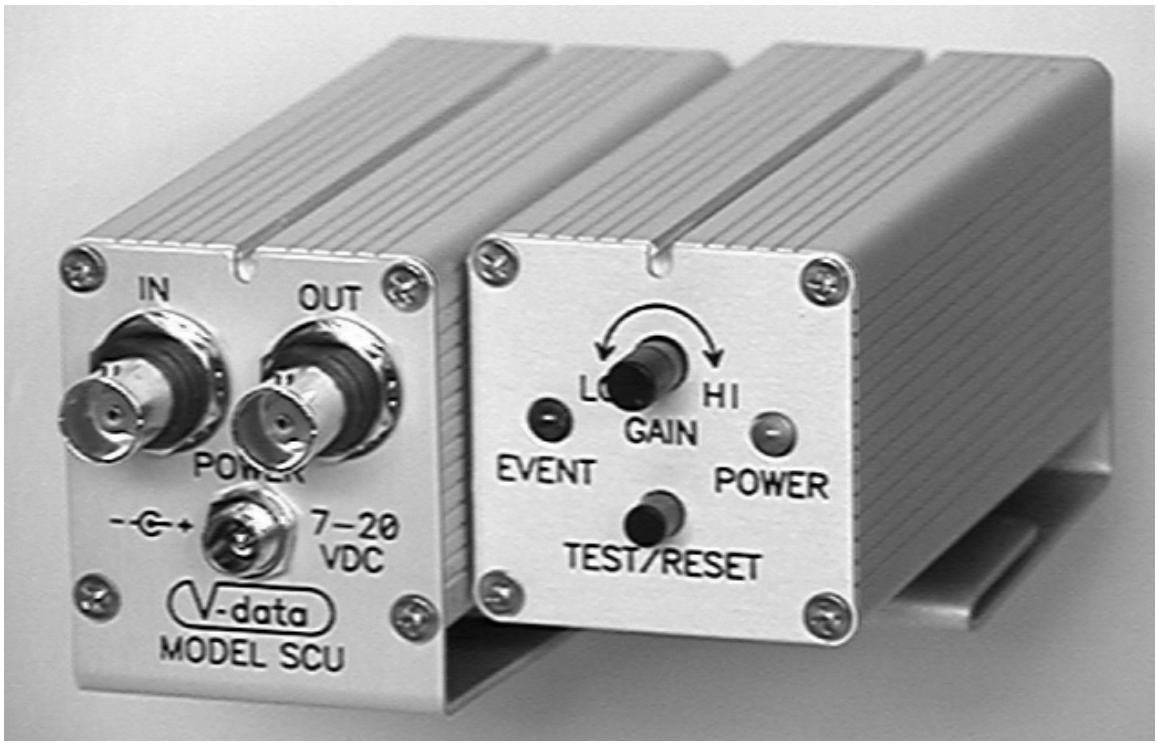
SIGNAL CONDITIONING UNIT



Rear and Front Views

General

The Signal Conditioning Unit (SCU) is designed for use with V-data's Light Event Detector (LED). The SCU provides power to the LED and processes the return signal to provide a jumper-selectable variety of output pulses for compatibility with all types of user equipment. The SCU has jumper selection of automatic reset and manual reset modes. The front panel has a gain control pot, test/reset switch, and indicators for power and event. The enclosure for the SCU is identical to that of the LED and has a ¼-20 captive nut for tripod mount. The SCU is 3 ½ "L x 1 ¾ "W x 2" H and weighs ½ pound.

See Reverse Page for Additional Specifications

Ordering Information

Price: $825.00
Terms: Net 30 or MasterCard/Visa, Shipping Prepaid in USA

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V-data

Signal Conditioning Unit (SCU) Operation

The input to the SCU is connected to a variable resistor pull-up to 5VDC. At "LO" gain the pull-up is 1K ohms, and at "HI" gain the pull-up is 11K ohms. A device such as the Light Event Detector (LED) is powered by a normally small current flow through the pull-up resistance. Whenever an event is detected the LED conducts a temporary high current which pulls the input voltage down to near ground level and activates a CMOS Schmidt trigger also connected to the input. The output of the Schmidt trigger is processed to give a 5 millisecond output pulse and an Event Indication. An internal jumper selects between Automatic and Manual Reset Modes. In the Automatic Reset Mode each event produces a 0.5 second Event Indication as well as an output pulse. In the Manual Reset Mode an event produces an output pulse and the Event Indicator latches on preventing further events until reset by the Test/Reset switch. In the Automatic Reset Mode the Test/Reset switch generates a momentary Event Indication and output pulse with each activation. In the Manual Reset Mode the Test/Reset switch alternately sets and resets the Event Indicator producing a output pulse each time the indicator is set. An internal jumper allows selection of a positive output pulse or a negative "closure type" pulse. When a positive pulse output is selected an internal jumper allows programming the amplitude of the pulse at 1, 5, 12, or 15 volts into a 50 ohm load. Unloaded, the output will be about 10 % higher. The output pulse amplitude will be limited to 2 volts less than the voltage available at the power input jack. The supplied 12VDC adapter actually provides 17VDC under a light load so can deliver a 15 volt pulse output. The SCU can be powered down to 7VDC but the 12 and 15 volt output pulses will be limited by the available power input voltage. An SCU with internal jumper set to "NEG" for a closure output will drive up to four SCU inputs to achieve multiple outputs from one detector. Another way to achieve multiple outputs is to "tee" two SCUs to one LED. Two LEDs can also be "teed" to one SCU. The SCU will not be harmed by a continuous output short circuit to ground.

Other Related V-data Products

Light Event Detector, Model LED

Produces a trigger for high speed cameras and event time capturing equipment by detecting rapid changes in light.

Video Encoder/Decoder, Model VED-I

Annotates video with precision time from either IRIG-B timecode or GPS input. Captures and displays event times to milli-second accuracy. Directly compatible with the Light Event Detectors.

IRIG-B Timecode Generator, Model GTP

Generates IRIG-B timecode synchronized to internal GPS receiver. Directly compatible with the VED-I.