



# OPERATING THE H-SERIES PHOTODIODE RECEIVERS

## OPERATING THE H-SERIES PHOTODIODE/AMPLIFIER

**POWER SUPPLY:** A bipolar power supply is required,  $\pm 6\text{VDC}$  to  $\pm 15\text{VDC}$ , 20mA. This means a +V, central/common ground and a -V connection - 3 wires total, to pins 6, 7, & 8 on the D-sub connector. The power supply pins should be bypassed physically close to the amplifier module. Double check wiring prior to turning on power. Improper /reverse wiring will damage the unit.

**GAIN SELECT:** The unit is supplied with a switch which provides a 10:1 HI/LO gain function. "UP" position is HI; "DOWN" position is LO gain. Consult the individual data sheet for specific values. The adjustable gain units have a single-turn control potentiometer which adds another x1 to x10 variable gain following the first stage. Clockwise rotation of the pot increases the gain.

**AMBIENT LIGHT:** Because of the high gains involved, the unit must be shielded from ambient background light during operation. Measurement errors and/or saturation can result from improper shielding.

**OUTPUT CONNECTION:** The signal output is thru a BNC connector (or BNC terminated cable in the case of the 2-color and adjustable gain units) located on the back of the module.

### **CAUTION: LARGE AREA TE-COOLED DETECTORS**

The large area (10mm devices) have significantly larger thermal mass than the smaller detectors. Cool-down takes longer, and it is recommended that the set point is not below  $-25$  degrees C. When using the PS/TC-1 controller the red light may begin to blink during cooldown prior to reaching setpoint. This will change over to stable when the set temperature is reached.