

## Preamplifiers:

The preamplifier product line consists of 6 different products. Each amplifier offers unique characteristics that make it particularly well suited for the indicated application. Multiple channel units are available upon request. Models for balloon applications are also available.

### ***LN-6B Preamplifier***

#### **Features:**

- Well suited for Ge:Cu, Si:Zn, & Si:B detectors
- Selectable feedback resistors
- Selectable gain

Designed for low to medium impedance detectors such as Ge:Cu, Si:Zn, and Si:B which produce large signals in response to infrared signals. Input impedance is 10 M $\Omega$  and noise referred to the input is less than 5 nV/Hz<sup>1/2</sup>. Frequency response is nominally 10 KHz.

The standard unit features 4 selectable feedback resistors in a TIA configuration. Gains of 2 and 10 are provided. Power for the LN-6B is derived from a separate 110V/220V ac operated supply (included).

#### **Ordering Information**

EA-LN6B

### ***LN-6C Preamplifier***

#### **Features:**

- Well suited for bolometer applications
- Low noise
- Cooled first stage

High input impedance (1000M $\Omega$ ) low noise (5nV/Hz<sup>1/2</sup> typical at 20 Hz) preamplifier ideal for most cooled detectors requiring voltage-mode amplification. Switchable gain of 200 or 1000 with frequency response to 100 KHz. Convenient battery operation and bias switching are provided.

First amplifier stage is located on the cold work surface near the detector. Microphonics, stray capacitance, and other problems associated with long leads and high impedance are minimized with this system. Remote first stage operating power is as low as 0.3 mw. Applications include bolometer systems operating at 0.3K (He3) as well as 1.8K and 4.2K.

#### **Ordering Information**

EA-LN6C

### ***ULN-6 Preamplifier***

#### **Features:**

- Well suited for Hot e<sup>-</sup> & HgCdTe detectors
- Ultra low noise (1.5 nV/Hz<sup>1/2</sup> typical at 20 Hz)
- Frequency response to 800 kHz

Ultra low noise voltage mode amplifier with 1000 M $\Omega$  input impedance. Typical noise is less than 1.5 nV/Hz<sup>1/2</sup>. Switchable gain of 200 or 1000. Convenient battery operation.

#### **Ordering Information**

EA-ULN-6

### ***LN-6H Preamplifier***

#### **Features:**

- Well suited for Ge:Cu
- Broad frequency response
- High Speed

High-speed amplifier with frequency response from 1 Hz to greater than 10 MHz. Input noise at 1 KHz is less than 10 nV/Hz<sup>1/2</sup> and input impedance is 10 M $\Omega$ . Detector bias monitoring and switching provided. This amplifier is well-suited to high speed detectors such as Ge:Cu. Operated off of an ac supply.

#### **Ordering Information**

EA-LN6H