

### FEATURES

- Ability to drive long coax cables
- Wide bandwidth 500 kHz to 30 MHz (20kHz optional)
- Compact
- Amplifiers up to 4 channels
- Adjustable gain with potentiometers
- Channels independent of gain adjustment
- Rugged designed for extreme environments
- High signal-to-noise ratio
- Powered by a 9V battery or an AC adapter
- Wide input voltage range of DC power supply
- Input protection for high-voltage transients
- User-specified connectors



### DESCRIPTION

PREAMP2 is a wide band, low noise, multi-channel pre-amplifier for ultrasonic inspections and acoustic emission tests. In ultrasonic inspections, especially for the TOFD method, tandem probes and FAST transducers with long coax cables, the ultrasonic signals are usually weak. Thus, additional gain and signal-to-noise enhancement are necessary for optimum signal acquisition. In acoustic-emission test systems, it is also necessary to amplify low-signal amplitude events and the ability to drive long cables connected to remote sensors.

US Ultratek PREAMP2 pre-amplifiers are equipped in two different sets of dimensions. The dimensions of the compact module are 3" x 2" x 1". With the 9V battery option, which still provides up to 4 channels of amplifiers, the dimensions are 4<sup>5</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>4</sub>" x 1". Each amplifier is independent from others, and the individual gains can be easily set by adjusting the potentiometers. All the input and output connections are protected from high voltage transients such as transducer excitation pulses. The output of the PREAMP2 is capable of driving long coax cables over 300 feet (100 meters).

PREAMP2 uses wide DC power supplies from 5VDC to 26VDC.

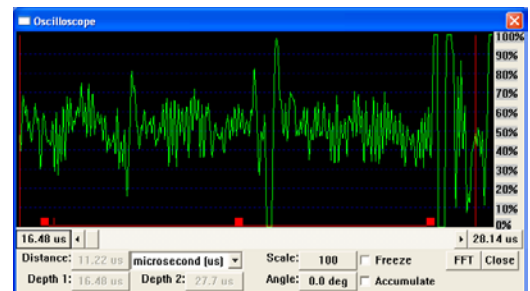
PREAMP is designed to work in any set of environmental conditions, including high humidity and extreme temperatures. The unit is sealed and waterproof, allowing it to function in wet environments as well.

### PART NUMBER (Add 9V at the end of the part number for battery module)

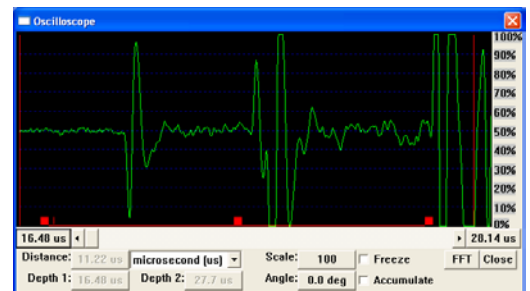
One channel:	PREAMP2-A	Three channels:	PREAMP2-C
Two channels:	PREAMP2-B	Four channels:	PREAMP2-D

### SPECIFICATIONS

<b>Dimensions</b>	Compact module: 3" x 2" x 1" 9V battery module: 4.6" x 2.75" x 1"
<b>Power Supply Range</b>	5VDC to 26VDC (6VDC to 13VDC recommended)
<b>Power Consumption</b>	PREAMP2-A: 13 mA    PREAMP2-B: 26 mA PREAMP2-C: 39 mA    PREAMP2-D: 52 mA
<b>Input Voltage</b>	0.5V p-p
<b>Input Coupling</b>	AC coupled
<b>Output Voltage</b>	±1.1V minimum
<b>Band Width (-3dB)</b>	0.5 MHz to 30 MHz (20 kHz optional)
<b>Gain Range</b>	10 to 60dB
<b>Temperature Range</b>	-40°C to 60°C
<b>Signal to Noise Ratio</b>	67 dB
<b>Humidity</b>	20% to 90% for 9V module 20% to Condensing otherwise
<b>Options</b>	BNC, LEMO 00 or SMB connectors AC power adapter 9V battery module 1 to 4 channels



15 MHz TOFD Transducers without a Pre-amplifier



15 MHz TOFD Transducers with a Pre-amplifier