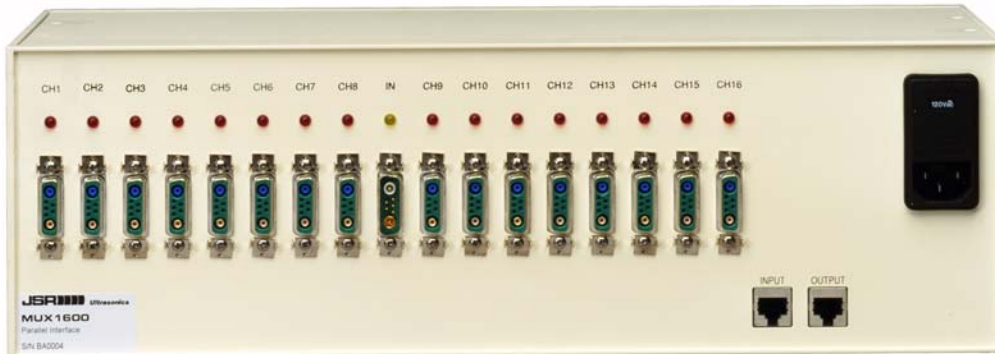


# MUX1600

## Ultrasonic Multiplexer



(Rear view of MUX1600)

### Features

- Operates with JSR Ultrasonics DPR500 compatible remote pulsers.
- Connects 1 to 16 remote pulsers to a single DPR500 pulser/receiver channel.
- 400 MHz receiver bandwidth.
- Easy to use and operate through an available parallel port on a control computer.
- Will operate remote pulsers and transducers connected up to 30 m away.
- Supports both pulse/echo and through mode signal transmission.
- Channel select LED indicators on rear panel.
- Rack mountable.

### Description

The MUX1600 is a multiplexer accessory for the DPR500 ultrasonic pulser/receiver and remote pulsers. This instrument enables the connection of up to 16 DPR500 compatible remote pulsers to a single DPR500 receiver channel.

Each remote pulser is connected to one of the sixteen MUX1600 channels. The MUX1600 is then connected to one of the DPR500 pulser/receiver remote pulser connections. Received signals from the selected remote pulser channel are transferred through the MUX1600 to the DPR500 receiver for further processing.

The MUX1600 connects to an available parallel printer port on a host computer. The four lower bits of the 8 bit parallel port select one of the 16 channels on the MUX1600 to be the active channel. When active, a channel allows a remote pulser to be identified,

configured, and triggered. All other channels and remote pulsers remain inactive when they are not selected.

The DPR500 provides high voltage to operate the remote pulsers through the MUX1600. Each remote pulser can operate in pulse/echo mode or through mode for those pulsers with through mode capability.

### Applications

- Flaw detection and mapping in pipe and plate.
- Evaluation of single and multiple layer materials.
- Thickness measurements of metallic and non-metallic objects.
- Weld inspection.
- Void detection in solid and hollow parts.
- Tank wall thickness measurements.

# MUX1600 Specifications

**Channels**

Maximum 16, individually controllable

**Gain**

-1 dB

**Phase**

0° (noninverting)

**Input Impedance (Channel RF In)**

50Ω

**Bandwidth**

DC to 400 MHz (-3 dB)

**Output Impedance (RF Out)**

50Ω

**Multiplexed Signal Output Voltage**

± 0.5 V into 50 Ω

**Multiplexer to pulser/receiver connection**

DPR500 compatible D-style connector

**Multiplexer to remote pulser connection**

DPR500 compatible D-style connector

**Multiplexer to computer connection**

DB-25 to RJ45 Adapter

**Power Requirements**

100 to 240 Volts AC, 50 to 60 Hz

**Power Consumption**

10 Watts

**Dimensions**

6.0" x 5.25" x 17" (l x h x w)

**Weight**

9.0 lbs. (4.1 Kg)

**Operating Temperature**

0 to 50° C

**Operating Humidity**

0% to 80% RH (non-condensing)

**Warranty**

One (1) year

**Computer Interface**

PC parallel printer port

**Channel Selection**

Determined using lower 4 bits of 8 bit parallel printer port byte

**Technical Notes:**

Note 1. The remote pulsers do not have to be identical but they do need to have identical high voltage specifications because all remote pulsers will receive the high voltage provided by the DPR500 pulser/receiver. **WARNING: Applying a voltage that exceeds the specification of a remote pulser could damage the pulser.**



(Front view of MUX1600)



Note: Specifications are typical, at 25° C.

Specifications are subject to change without notice.

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JSR Ultrasonics, A Division of Imagilent  
3800 Monroe Avenue, Pittsford, NY 14534 USA  
Tel: +1 585 264 0480 Fax: +1 585 264 9642

[www.imagilent.com](http://www.imagilent.com)

E-mail: [imagilentinfo@imagilent.com](mailto:imagilentinfo@imagilent.com)