

# Digitally Controlled Pulsar/Receiver



## Features

- digital control of pulser/receiver features and functions
- interchangeable remote pulsers
- low noise receiver
- 200 MHz standard receiver bandwidth, optional bandwidths to 500MHz

## Description

The DPR200 is a digitally controlled high bandwidth ultrasonic pulser/receiver. Applications include high resolution thickness gauging, acoustic microscopy, materials analysis and characterization, and transducer evaluation. Digitally controllable instrument function include gain, attenuation, pulse repetition rate, and trigger source.

Communication between the DPR200 and host computer is provided by an interface and which occupies a single expansion slot in an IBM XT, or AT Compatible personal computer.

A menu driven standard control program provides control of attenuator, PRF oscillator, trigger source, and optional amplifier gain select. Instrument settings can be maintained after the control program is exited.

C language source code drivers are provided to allow control of the DPR200 with user developed programs.

The DPR200 utilizes JSR interchangeable remote pulsers. A variety of remote pulsers are available to suit a wide range of transducer frequencies and energy requirements.

**JSR**  **Ultrasonics**

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## Specifications

### Pulsar Control

**Pulsar Trigger Control** Internal or external (digitally selectable)

**Pulse Repetition Rate** Internal: 100-10000Hz (digitally selectable)  
External: 0-10000Hz

**Remote Pulsar High Voltage and Trigger** -600VDC with AC coupled positive pulser trigger supplied through front panel SHV series coaxial connector.

**Ext Trig Input** 3-15 volts

**Sync. Output Pulse** +1V min., 500 nsec into 50Ω

**Auxillary Power** Approx. -20 and +20 volts unregulated DC available at rear panel connector for remote pulsers and preamplifiers

### Host Computer

**Interface** Half slot 8 bit card for IBM PC XT or AT bus. Requires 4 sequential I/O port addresses. Base I/O port address is DIP switch selectable. Default base address: 0300 hex.

**Host/Instrument Cabling** 6' or 10' 37 conductor ribbon cable.

### Distributed by



### Receiver

**Bandwidth** .5-200MHz standard.  
Optional upper bandwidth limits from 10 to 500MHz.  
Optional internal fixed, or External BNC-BNC high pass or low pass filters are available.

**Gain** 28/49dB (standard)  
28/56dB (optional)

**Input Impedance** 50Ω

**Output Impedance** 50Ω

**Max. Output Power** 8dBm (approx. 1V pk-pk into 50Ω)

**Input Referred Noise** <100μV, 100MHz BW, 49dB gain  
<155μV, 200MHz BW, 49dB gain  
<155μV, 200MHz BW, 56dB gain  
(Measured with an HF series remote pulser and Belden 9310 foil shield RG-58 for Receiver connection)

**Attenuator** 0-60dB, digitally selectable in 1 dB steps

### Miscellaneous

**Power** 100/115/230VAC, 50/60Hz, 15W

**Dimensions** 17"W x 3.5"H x 12"D  
Rack mounting option available.

**Weight** 17lbs (7.7kg)

**Operating Temperature** 0 to 50°C