Remote Pulsers

and Pulser/Preamps



When your application requires the transducer to be located at a distance from the receiver, or uses a transducer with a center frequency greater than 50 MHz, there are a number of significant performance advantages gained by minimizing the cable length between the pulser and the transducer. In these applications, remote pulsers and remote pulser/preamps exhibit outstanding performance, and provide substantial improvement in system flexibility. JSR Ultrasonics provides remote pulsers for all of our high frequency instrumentation.

Better Performance

Remote pulsers improve ultrasonic system performance. By using a short cable between the pulser and the transducer, cable reflections are reduced, and signal attenuation is minimized. There is also less opportunity for noise pickup and interference signals to be added to the ultrasonic signal when a short cable is employed. The net result is a lower distortion, stronger, clearer signal, with less noise and interference.

Greater Flexibility

Remote pulsers improve the flexibility of a system because they are interchangeable, thereby allowing a single receiver to handle a number of vastly different tasks. Switching tasks is as simple as changing pulsers. Using remote pulsers allows you to optimize each application by selecting the pulser that best fits the transducer. And because the pulser is located close to the transducer, the transducer can be located a long distance from the instrument without degrading system performance. This is especially important in scanning systems and in systems with low signal levels.

Custom Pulser Design

JSR Ultrasonics is proud of our proven heritage of helping OEM's and System Integrators enhance the performance of their systems. We invite you to bring your unique application to our attention.

JSR Ultrasonics

REMOTE PULSERS and Pulser/Preamp Specifications

Selecting the Correct Remote Pulser

Selecting the best remote pulser for your application is straight-forward. Determine which remote pulsers are available for your instrument, and see which pulser is appropriate for your transducer frequency. In some cases there will be more than one choice. Select the pulser whose performance characteristics (Fall Time, Pulse Amplitude, Pulse Width, or Energy) best match your needs.

Remote Pulsers for use with the DPR500 Dual Pulser/Receiver

	Fall Time	Maximum Pulse Width	Maximum Pulse Amplitude	PRF Range	Pulse Energy Range	Recommended Transducer Frequency
RP-U1	<1.1 ns	<1.4 ns	-230V	0-20 kHz	3-8 µjoules	>100 MHz
RP-H1	<2.6 ns	<6.5 ns	-185V	0-20 kHz (low energy) 0-10 kHz (high energy)	3-12 µjoules	40-165 MHz
RP-L1	<8.0 ns	<125 ns	-155V	0-5 kHz	3-316 µjoules	1-65 MHz

2.5 M CBL-200 Working Cable and 0.15 M CBL-100 Transducer Cable (SMB to Microdot) included. Extension cables and optional cable lengths available.
RP-H1 and RP-L1 have 2 energy settings, 4 damping settings, and a user-variable pulser voltage. RP-U1 has 2 pulse amplitude settings.
RP-H1 and RP-L1 have both pulse-echo and through transmission modes. RP-U1 is pulse-echo only.
Physical Dimensions: RP-U1 and RP-H1 are 3.2" L x 2.0" W x 1.14" H. RP-L1 is 3.2" L x 2.0" W x 1.5" H.

Remote Pulsers for use with the '002 series of instruments (DPR002, PR002A, and PRD002)

	Fall Time	Pulse Width	Pulse Amplitude	PRF Range	Pulse Energy	Recommended Transducer Frequency
UHF-RPPA	<1.1 ns	1.8 ns	-130 V	0-10 kHz	0.28 µjoules	>100 MHz
VHF-1.4HV	<1.4 ns	1.8 ns	-130 V	0-10 kHz	0.22 µjoules	>100 MHz
VHF-1.4	<1.2 ns	1.4 ns	-75 V	0-10 kHz	0.20 µjoules	>100 MHz
VHF-1.7	<1.2 ns	1.7 ns	-103 V	0-10 kHz	0.50 µjoules	>100 MHz
VHF-3.0	<1.2 ns	3.0 ns	-103 V	0-10 kHz	1.0 µjoules	75-170 MHz
VHF-5.6	<1.2 ns	5.0 ns	-103 V	0-10 kHz	1.3 µjoules	50-100 MHz
HF-4.5	<2.5 ns	4.0 ns	-175 V	0-10 kHz	4.5 µjoules	60-125 MHz
HF-6.5	<2.5 ns	6.5 ns	-185 V	0-10 kHz	6.0 µjoules	35-80 MHz
HF-9.5	<2.5 ns	9.5 ns	-185 V	0-10 kHz	9.0 µjoules	25-60 MHz
HF-14	<2.5 ns	14.0 ns	-185 V	0-10 kHz	15.0 µjoules	15-40 MHz

Standard cable length is 2.5 M w/ BNC connector. Optional cable lengths available.
10-100 Ω damping via screwdriver adjustable trim pot. HF-14 has a fixed 50 Ω resistor.
Physical Dimensions: 1.5" W x 2.0" L x 1.5" H
Pulse-Echo or Through Transmission modes. Optional BNC-BNC blocking capacitor accessory recommended for Through Transmission.

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Note: Specifications are typical, at 25° C.
Specifications subject to change without notice.

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