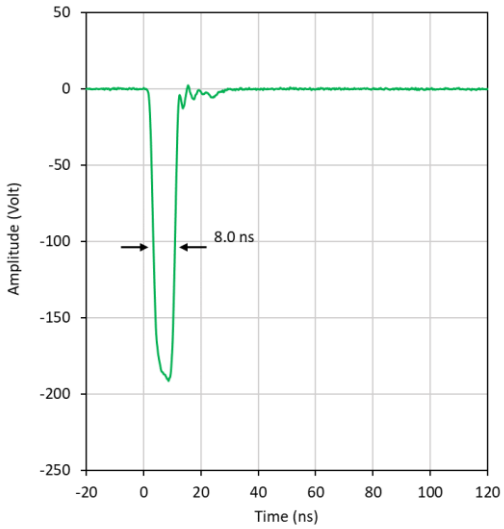
Broadsound Corporation

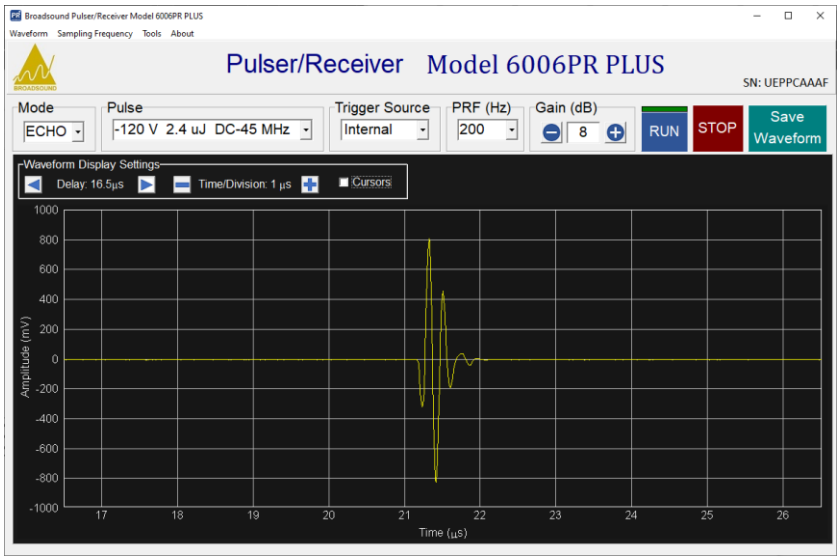
Pulser/Receiver 6006PR PLUS

- 14 sets of unipolar pulses are available.
- Fast pulse rise time and pulse fall time.
- The bandwidth of each pulse is fully characterized.
- Both the source impedance of pulser and the input impedance of receiver match to the 50-ohm coaxial cable to minimize signal reflection from the transducer.
- Supporting acoustic transducers with center frequency ranging from 0.5 MHz to 35 MHz.
- Embedded 8-bit analog to digital converter with 48 MHz, 80 MHz, or 240 MHz sampling frequency to acquire the received signal.
- Real-time received signal display.

Broadsound Pulser/Receiver 6006PR PLUS is a computer controlled ultrasonic pulser/receiver, which can be used in a variety of applications, such as the transducer characterization, research and development of ultrasonic non-destructive testing, material characterization, and biomedical research. The Windows-based control panel application and an application programming interface (API) are provided to enable development of custom software. Furthermore, the Pulser/Receiver 6006PR PLUS can acquire the received signal in real time without the need for an additional oscilloscope.



The waveform of the pulse setting: [-190 V, 5.0 µJ, DC–50 MHz] which is a negative going pulse at a 50 Ω load.



Windows-based control panel of Pulser/Receiver 6006PR PLUS

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Pulser/Receiver 6006PR PLUS

Specifications of 6006PR PLUS

PULSER

Pulse type	Negative-going unipolar pulse
Pulse settings at a 50 Ω load	1) -25 V, 0.1 µJ, DC–20 MHz 2) -45 V, 0.4 µJ, DC–30 MHz 3) -75 V, 1.0 µJ, DC–35 MHz 4) -120 V, 2.4 µJ, DC–45 MHz 5) -190 V, 5.0 µJ, DC–50 MHz 6) -190 V, 11 µJ, DC–25 MHz 7) -190 V, 15 µJ, DC–20 MHz 8) -190 V, 20 µJ, DC–15 MHz 9) -190 V, 25 µJ, DC–12 MHz 10) -190 V, 30 µJ, DC–10 MHz 11) -190 V, 35 µJ, DC–9 MHz 12) -190 V, 40 µJ, DC–8 MHz 13) -190 V, 45 µJ, DC–7 MHz 14) -190 V, 50 µJ, DC–6 MHz
Rise time	< 2 ns
Fall Time	< 4 ns Typ. (amplitude -190 V)
Mode	Pulse echo (ECHO) or through transmission (THRU)
PRF (internal)	100 Hz, 200 Hz, 500 Hz 1 kHz, 2 kHz, 5 kHz, 10 kHz (10 kHz is available for pulse energy < 40 µJ)
PRF (external TTL)	0 kHz ~ 10 kHz
Output impedance	50 Ω

RECEIVER

Input range	± 1 V
Output range	± 1 V
Bandwidth	0.6 MHz ~ 40 MHz
Gain	-28 dB ~ +70 dB
Noise	25 μV_{RMS} /191 μV_{PP}
Through Trans. Isolation	Typically 61 dB at 10 MHz
Input impedance	50 Ω
Output impedance	50 Ω

WAVEFORM DIGITIZER

Sampling frequency	48 MHz, 80 MHz, and 240 MHz
Resolution	8 bits
Input range	± 1 V
Memory size	260 kB

GENERAL INFORMATION

Input / Output	T/R, R, RCVR Out, External Trigger In, Sync Out: BNC female connectors
Control Interface	USB 2.0
Power Requirement	100~240V AC, 50/60 Hz
Dimensions	W 395 mm x D 306 mm x H 115 mm
Weight	5.5 kg

Conformances

EN 61326-1, EN 61010-1, EN 55011, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, USA FCC part 18.