

Toneburst Pulser- Receiver TBPR1000

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Product Features

- ▶ No couplants or surface preparation
- ▶ EMAT Pulser-Receiver system for Guided-Waves
- ▶ Battery powered, built-in ADC, computer control
- ▶ Semi-automated data acquisition and signal analysis available with Sonemat's software

The TBPR1000 is a mains or battery powered EMAT toneburst pulser-receiver system, including a high-gain receive amplifier suitable for pitch-catch or 2-channel guided wave measurements in the frequency range 20kHz to 1MHz.

Controllable via the front panel or serial connection, the TBPR1000 can be setup with Sonemat's software to operate in a semi-automated data acquisition and signal analysis mode.

Applications

Guided waves can achieve greater inspection ranges than conventional UT methods as they utilise the component structure as a waveguide. They provide greater coverage throughout the thickness of the structure and ability to inspect hidden or inaccessible regions of the test structure, such as rails, pipelines, storage tanks, pressure vessels.



- Lamb, Rayleigh, SH, Torsional wave probes
- Corrosion Monitoring, under pipe supports
- Weld defect inspection
- Surface inspection (Rayleigh)
- Rail track or rail wheel stress
- Boiler Tube Inspection

Feature	Description
Frequency Range	20kHz – 1Mhz
Max. Pulse Width	200µs
Number of Cycles	Max. number of cycles is limited by the Max. Pulse Width
Rate (Pulse Repetition Frequency)	<p>0.1Hz – 30 Hz in 0.1 Hz steps. Rate is automatically limited by the duty cycle where:</p> $Rate_{max} = \frac{Duty\ Cycle_{max}}{\frac{Cycles}{Freq.} + Time_{setup}}$ <p>Max. Duty Cycle is 0.0005 and Setup Time is 34µs</p>
ADC	Picoscope 2000 series via serial output (Type B)
Trigger Source	Internal trigger
Receiver Gain	80dB
Output Impedance	50Ω
Power Input	220–250V, 50Hz AC – UK/Europe/China Mains Power Supply
Battery	Rechargeable NiMH battery pack (10 x D), 12V, 5.0Ah
Enclosure Dimensions	270 x 100 x 270 mm (W x H x D)
Weight	4.3kg
Water Ingress Rating	IP 2.0
Impact Rating	IK08

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