

# RAILSCAN 125

## ULTRASONIC FLAW DETECTOR



**TRANSFLECTIVE COLOUR TFT DISPLAY**

**RAIL BOTTOM DEPTH MEASUREMENT**

**VIDEO OUTPUT ENABLING HEAD UP DISPLAY**

**100 A-SCAN MEMORIES & 2000 THICKNESS READINGS FOR TUNNEL SURVEYS**

**KEYLOCK FACILITY TO PREVENT ACCIDENTAL ALTERATION OF CONTROLS**



**NETWORK RAIL APPROVED**

**2.5 KG INCLUDING BATTERY**

**NEW XENOY CASE SEALED TO INHIBIT WATER INGRESS**

**UP TO 11 HR BATTERY LIFE**

**HELP FUNCTIONS**

**OPTIONAL SDMS WINDOWS SOFTWARE**

**2 YEAR WARRANTY**

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## ULTRASONIC FLAW DETECTOR

<b>Test Range:</b>	5mm to 10000mm (0.2-400in) at steel velocity. Variable in 1,2,5 sequence, or continuously in 1mm (0.05in) increments.	<b>Units:</b>	Metric (mm) or inches (in). Select from menu
<b>Velocity:</b>	1000 to 999.999m/s continuously variable.	<b>Gate Monitor:</b>	Two gates for echo monitoring and thickness measurement. Start and width adjustable over full range of unit. Bar presentation. 0.6 second delay on Gate 2 triggering. Gate 1 fixed for positive triggering & Gate 2 is fixed for negative triggering
<b>Probe Zero:</b>	0 to 999.999 $\mu$ s, continuously variable.	<b>A-Scan Memory:</b>	Maximum of 100 waveforms stored with complete panel settings. Waveforms may be recalled on display, printed or transferred via RS232 serial interface.
<b>Delay:</b>	Calibrated delay from 0mm to 5000mm in 0.1mm steps at steel velocity (0-200in. in 0.05in steps).	<b>Panel Memory</b>	20 stores for retaining calibrations
<b>Gain:</b>	0 to 110dB. Adjustable in 0.5, 2, 6, 14 and 20dB steps. Direct access to gain control at all times.	<b>Thickness Logging:</b>	Storage for 2000 thickness readings configured into Block/Location/Number. Calibration settings stored with each Block. Maximum number of Blocks is 14. Unlimited Location/Number values, maximum combination of 2000 readings. Readings may be reviewed, edited and printed as required.
<b>Test Modes:</b>	Pulse echo and transmit/receive.	<b>Special functions:</b>	<b>Display Freeze</b> for capturing current A-Scan image. <b>Peak Memory</b> for echodynamic pattern determination in accordance with BS3923 <b>Help Key</b> For instant operator guidance on using the Railscan 125.
<b>Pulser:</b>	Fixed square wave pulser 100ns duration at 5MHz and 250ns at 2.5Mhz	<b>Keylock Facility:</b>	Prevents accidental alteration of parameters after setting
<b>P.R.F.:</b>	Fixed at 1000 Hz	<b>Outputs:</b>	Full bi-directional serial interface to transfer parameters, thickness readings and waveform memories. Composite video, full PAL or NTSC compatibility. Alarm output for external bleeper on a AUX connector
<b>Video Update Rate:</b>	60Hz (NTSC Mode); 50Hz (PAL Mode).	<b>Power</b>	Lithium Ion battery pack 14.4V, 5.0 Ampere-hours, gives 8 hours duration from a fully charged pack. Indication of low battery status. Recharge time is two hours.
<b>Rectification:</b>	Full wave	<b>Charger:</b>	Universal mains input 90 to 260 volts A.C.
<b>Frequency Range:</b>	Two narrow bands centered at 2.5 MHz & 5 MHz	<b>Transducer Sockets:</b>	BNC or LEMO (factory option)
<b>System Linearity:</b>	Vertical $\pm$ 1% Full Screen Height (FSH) Amplifier Accuracy $\pm$ 0.1dB. Horizontal $\pm$ 0.4% Full Screen Width (FSW).	<b>Environmental</b>	To IP67
<b>Reject:</b>	None	<b>Temperature:</b>	Operating -10 to +55°C. 14 to 131° F -20 to +70° C. -4 to 158° F (survivable) Storage -40 to +75° C. -40 to = 167° F
<b>Display:</b>	Colour TFT: Display area 103 x 77 mm (4.05 x 3,03 in) 320 x 240 pixels. A-Scan area 255 x 200 pixels, 8 colour options and variable brightness.	<b>Size:</b>	255 x 145 x 145mm (10.0 x 5.7 x 5.7in)
<b>Measurement Modes:</b>		<b>Weight:</b>	2.5 kg with Li-ION Cells.
<b>Mode 1</b>	Signal monitor	<b>Supervisor Mode</b>	SDMS controls panel memories and A-Scan memories
<b>Mode 2</b>	Depth and amplitude of first signal in gate.	<b>SDMS</b>	Software package which allows the transfer of memory storage to Windows based software packages for report writing. Windows 95, 98 and NT operating systems.
<b>Mode 3</b>	Echo-to echo distance measurement.		
<b>Mode 4</b>	Trigonometric display of beam path, surface distance and depth of indication.		
<b>Mode 5</b>	T-Min mode for holding minimum thickness reading. Resolution to 0.01mm (0.001in) for distance measurement, or 1% FSH for amplitude measurement. Large display of measurement at top of A-Scan display. Measurement mode selectable between peak and flank.		
<b>Railtrack Approval Certificate</b>	<b>Certificate Number: RT/18/0430</b>		

**Sonatest is the leading European manufacturer of Ultrasonic Flaw Detectors, Thickness Gauges and Transducers. The Railscan 125 is covered by a comprehensive 2 year warranty and is manufactured under a quality system approved by British Standards Institute to ISO 9002.**

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