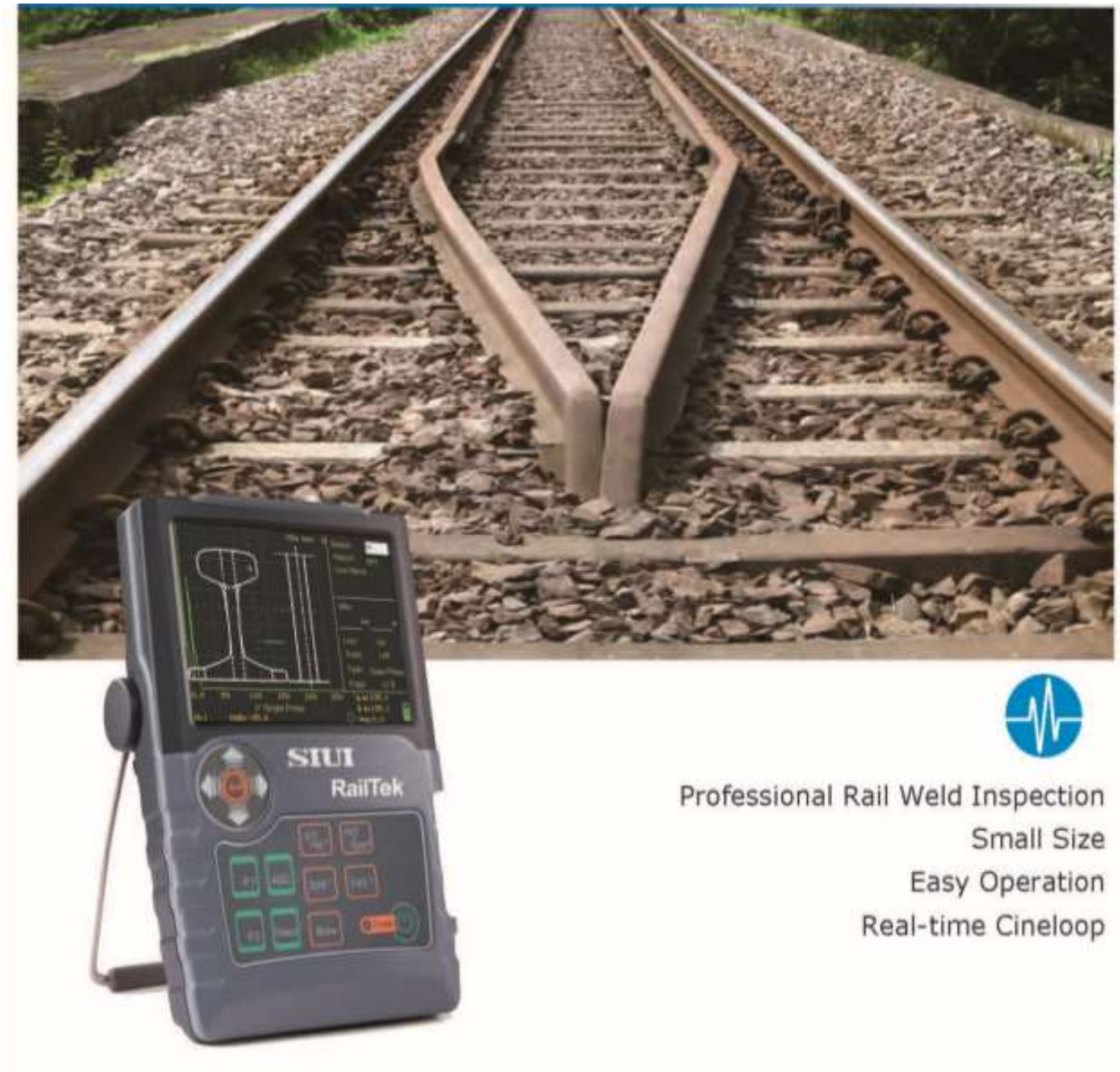
NDT Supply.com, Inc.

7952 Nieman Road
Lenexa, KS 66214-1560 USA

SIUI Digital Ultrasonic Flaw Detector for Rail Joint Inspection

RailTek



Phone: 913-685-0675
Fax: 913-685-1125

sales@ndtsupply.com
www.ndtsupply.com

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Portable, Easy-to-Use, Reliable

New Generation General-Purpose Digital Flaw Detector for Rail Weld Joints

The **RailTek** ultrasonic flaw detector for rail weld joint is the latest digital portable ultrasonic rail testing machine with powerful function and easy operation, which is the first choice for rail weld joint inspection.

- Compact & Portable: The whole unit weighs (battery included) is approximately 2.5 pounds (1.2kg), making it very suitable for field work.
- Up to Seven Ultrasonic Probes can be connected: The system can connect up to seven probes for weld joint inspection with one key switch for achieving quick inspection on different parts of rail head, rail waist and rail foot.
- Easy Operation: There are just a few concisely-defined keys, easy to operate with only one hand.
- Low Power Consumption: The configured Li-polymer battery can support up to 7-hour continuous operation.
- Strong Performance: High defect inspection rate can satisfy precise rail joint inspection.
- Dynamic Recording: Real-time Cineloop.

Superior Features:

- Max. sampling rate 240MHz; Measurement resolution 0.1 mm.
- User-friendly report with quick label for defect properties, position and testing process, enabling easy post-analysis and determination.
- 20-500Hz PRF with 10 steps adjustable: avoids reverberation signals during flaw detection.
- B scan images can be acquired by scheduled scanning.
- Measure crack height by edge peak echo method and image freeze function.
- The DAC curve works with echo compare function, making echo quantification of different distances and amplitudes more convenient.
- 5.7”high brightness TFT LCD. The system has the smallest size and lightest weight among flaw detectors with 5.7” size LCD.
- Different color schemes can meet the requirements of different application environments and habits.

* EN--12668-1 and ASTM E317-1 compliant

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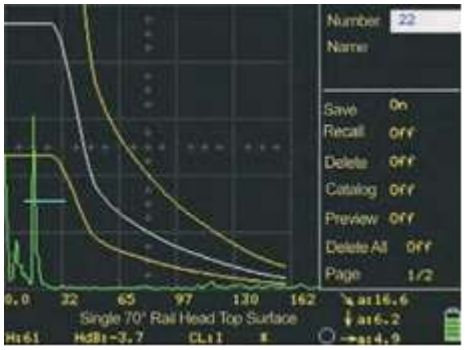
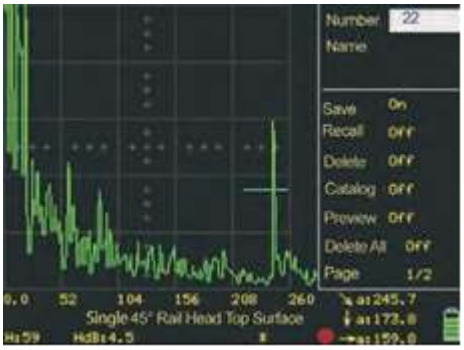
Single 70° Angle Probe



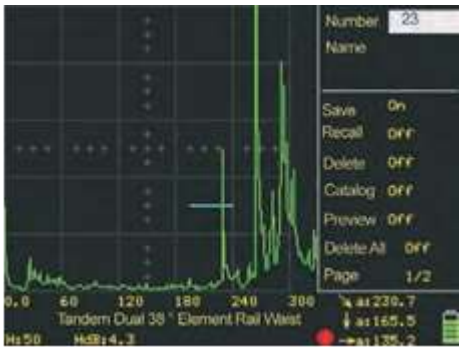
- Use primary wave to scan rail tread and rail side for making DAC curve on No.1-5 SDH in B area of GHT-5 calibration block with single 70° angle probe.
- The picture shows a flaw echo in the rail head

Single 45° Angle Probe



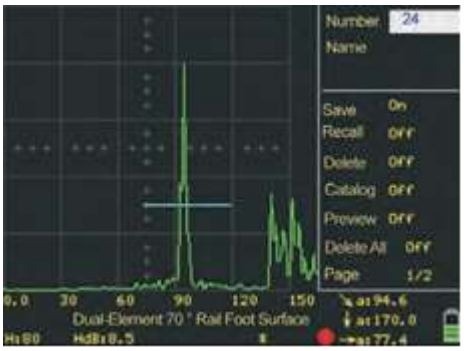
- Use primary wave to scan forward and reverse from rail tread to rail waist with single 45° angle probe.
- The picture shows a flaw echo in the rail foot.

Tandem Dual-Element Angle Probe



- Use a pair of tandem placed 38° angle probes with a crawler to scan the rail waist.
- The picture shows an echo from No. 5 FBH in GHT-1a calibration block.

Dual 70° Angle Probe



- Put a pair of 70° angle probes on left and right sides of the rail foot for scanning the triangle area of the rail foot.
- The picture shows an echo from No. 5 FBH in GHT-1a calibration block.

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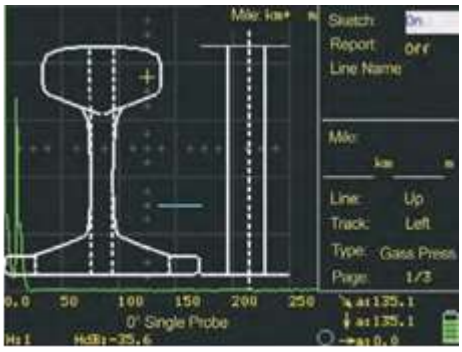
Reporting



On-site Application

- User-friendly report with quick labeling of defect properties, position and testing procedure, enabling easy post-analysis and determination.

RailTek Kit Includes:

- RailTek Main Unit (Lemo 00 connector)
- CD-92A Charger
- DC-92 Battery
- Normal Probe P2.5-20L (Lemo 00 connector)
- Angle Probe AFN2.5-812-70L (Lemo 00 connector)
- Angle Probe AFN2.5-1313-45L (Lemo 00 connector)
- Probe Cable
- MicroSD Data Storage Card (4GB)
- MicroSD Card Reader
- CD for Computer Data Processing Software
- System Bag
- Accessory Bag

Tandem Probe Crawler Includes:

- Tandem Probe Crawler RWS-D-K0.75 (including 2 pcs of 37˚ probe with Lemo connectors).

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Function	Unit	Specifications
Testing Index		
Attenuator Error	dB	Every 12dB ±1dB
Vertical Linearity Error	%	≤3
Dynamic Range	dB	≥32
Horizontal Linearity Error	%	≤0.5
Pulser		
PRF	Hz	10 steps (20-500Hz adjustable but subject to detection range, material velocity, pulse shift and probe delay.)
Damping		Low/ High
Receiver		
Operating Frequency Range	MHz	1-4/ 0.5-8
Reject	%	0 – 80
Gain Adjustment	dB	Range: 0 – 110; Adjustable steps: 0.5 / 2 / 6 / 12
Measurement		
Detection Range	mm	0 – 13000 （Longitudinal wave in steel ）
Thin Plate Resolution	mm	≤3 （with C5-10L probe）
Pulse Shift Range	mm	-10 – 1000 (Longitudinal wave in steel)
Auto Gain		Enabling the echo amplitude within the gate auto adjusted to a designated amplitude. Amplitude setup: 40% / 50% / 60% / 70% / 80% / 90% / 100%
Angle Measurement		Measure probe angle
Material Velocity	m/s	400 – 15000
Probe Zero	μs	0 – 200
Auto Calibration		For calibrating material velocity and probe delay. Calibration mode: Velocity and Zero
DAC Curve		For making, setting and applying DAC curves.
Gate		
Gate		One measure alarm gates. Gate mode: off / positive / negative
General Technical Specification		
Display Screen		5.7" high brightness TFT LCD, 320×240 pixels
Storage		500 data sets, including system setup, detection state, echo figures, etc.
Power Supply		Adapter or Li-ion battery; Adapter: in 100V–246V, DC out: DC9V–12V Battery:6.0V–8.4V
Battery Operating Time	h	≥7 （Backlight brightness dependent.）
Operating Temperature	℃	-20 – +50
Weight	kg	Approx. 1.2 （including battery）
Dimension	mm	152 × 240 × 52 (W×H×L)

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