

Digital Ultrasonic Flaw Detector for Rail Weld



RailTek 2 is a portable ultrasonic flaw detector for rail inspection. Compatible with different probes and crawler, it can be used for inspecting rail weld and flaws in rail head, rail web and rail base.

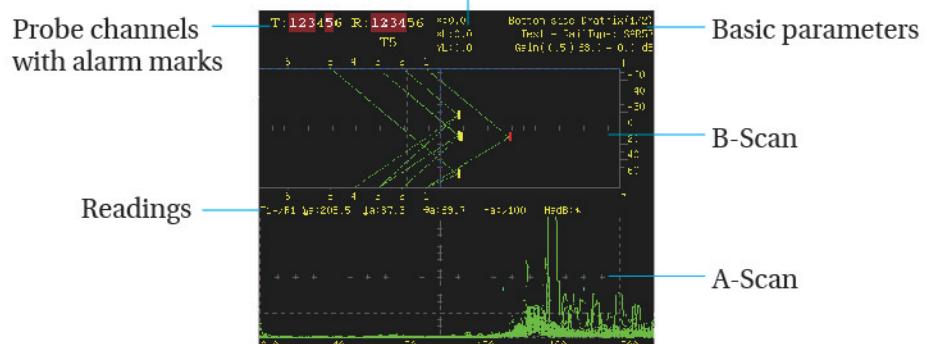
Superior Features

- Extendable connectors
- Various user-friendly keys
- Customized rail type setup
- Support tandem matrix compound scanning
- Advanced software for calibration, testing and measurement

● Clear and Logical Software Interface



Single channel display



All channels display

● Tandem Matrix Compound Solution



Tandem scanning crawler



Combined probe channels

- Tandem scanning for vertical cracks.
- P/E mode for vertical, oblique cracks and volume flaws in rail base.
- 0° dual-element probe and P/C mode for coupling monitoring.



Overlay

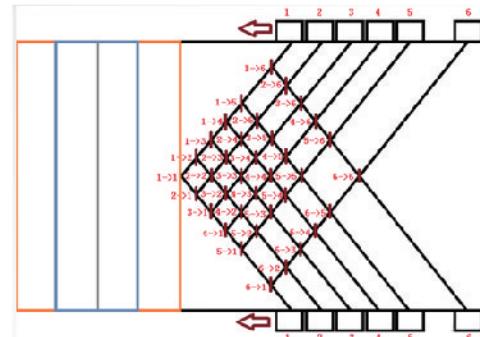


Colors corresponds to different probe channels.

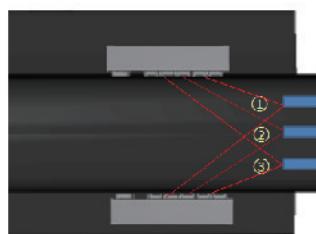
● Dual Matrix Solution

Dual matrix probes:

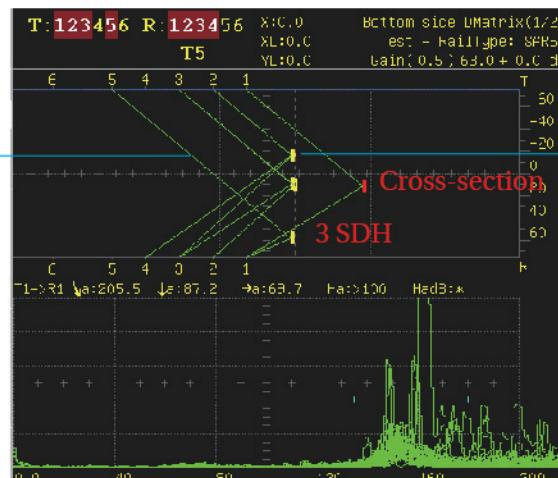
- K-type dual matrix scanning mode, suitable for testing rail head and rail base.
- Probes 1 to 6 transmit in turn, and is received by each receiving probe six times, thus forming 36 transmit and receiving modes.



Sound beam simulation



3 SDH



Colors corresponds to different echo amplitude.

Technical Specification

General Technical Specification

Display Screen	5.7" high brightness TFT LCD, 640x480 pixels
Dimension (WxHxL)	161 x 248 x 103 (mm)
Weight	Approx. 1.9kg (including a battery)
Language	English
Peripheral port	2 USB ports, SIM card port, Ethernet port
Encoder Connector	1pc (4-core)
Battery Operating Time	≥8h
Internal Storage	16G; 500 data sets
Power Supply	DC 12V (external power supply); 7.4V (battery)
Operation Temperature	-25°C ~ +50°C
Storage Temperature	-20°C ~ +60°C
Certifications	ISO22232-1

Technical Specification

Testing Index	
Attenuator Error	Every 20dB ± 1 dB
Time Base linearity	$\leq 0.5\%$
Amplitude Linearity	$\leq \pm 2\%$
Pulser	
PRF	Single/ dual-element probe channels: 20~1000Hz Matrix channels: 20~3000Hz step 10Hz (subject to transmit pulse width)
Damping	200/1000 Ω , 2 levels
Receiver	
Reject	0~90%, step 1%
Gain	0~110dB, step: 0.5/1/2/6/12dB
Detection Range	0~13000mm, min. display range 5mm, min. step 0.1mm
Pulse Shift Range	-25~10000mm, min. step 0.1mm
Auxiliary Function	Coordinate switch(sound path/depth/horizontal), freeze, auto gain(40%-100%, step:10%), peak envelop, wave compare, zoom, gate expansion, screenshot, cineloop, wave filling, rail type selection(38/43/50/60/70 kg/m), weld I-shape mark(auto/manual), B-Scan image, GPS, camera record, WIFI
Material Velocity	200~20000m/s, min. step 1m/s
Probe Zero	0~1000us, min. step 0.01us
Calibration	Velocity and Zero; Probe angle; Encoder
Curve Function	Single/ dual-element probe channels: DAC, PAC Matrix channels: Sensitivity compensation curve
Gate	
Gate	Gate Start: -25~13000mm, min. step 0.1mm Gate Width: 0.1~13000mm, min. step 0.1mm Gate Thresh: 10~90%, step 1%

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