# **ScanMaster** Train Rail Ultrasonic Inspection Systems

### SFB-50 SERIES RAIL INSPECTOR



State-of-the-art ultrasonic inspection systems for detection, evaluation and documentation of flaws in train rail

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### SYSTEMS HIGHLIGHTS

- Affordable, high performance
- Towed or car mounted integrated, multi-channel computerized solutions
- 45 km/hr (27miles/hr) test speeds at full multi-channel performance with a return-to-defect to within 20 cm (8 inches)
- 32 programmable gates per channel, provides real-time B-scan images of rail longitudinal cross-sections
- *Easy –to-use, single-screen control from a single operator console*
- Real-time defect detection and evaluation
- Off-line analysis and processing of stored and archived data
- Full test result documentation and archival for periodic monitoring of defect growth rates





## **PRODUCT DESCRIPTION**

Introducing the SFB-50 Series	<b>SFB-50</b> is a modular; computerized ultrasonic data acquisition and evaluation system, developed for high-volume digital data acquisition, imaging and evaluation of in-service train rail flaws.
Ultrasonic Instrumentation and software	<b>SFB-50</b> combines the multi-gate hardware capability of the <b>ScanMaster upi-100</b> ultrasonic instrument with the application-specific <b>ScanMaster Software</b> for data acquisition, imaging and evaluation.
SFB-50 architecture	Using standard computerized client-server designs; <b>SFB-50</b> can be setup to simultaneously handle up to four <b>upi-100</b> ultrasonic instruments.
Data acquisition technique	32 contiguous hardware gates per <i>upi-100</i> channel provide high-speed acquisition amplitude and time of flight data over the volume of the inspected rail.
On-line B-scan imaging	<b>ScanMaster's</b> software-generated longitudinal B-scan provides a real-time image of indications for each ultrasonic channel.
Operator control	Includes service car installed control and ultrasonic signal monitors, keyboard and mouse.
Image storage & evaluation of indications	On-line archiving of B-scan data for each active channel. Data evaluation can be on or off-line, based on pattern recognition of single or composite longitudinal B-scan images of indications. Fully documented inspection results with the capability for advanced flaw evaluation based on digital pattern recognition of longitudinal B-scan cross-sections.
Number of inspection channels	Up to 16 ultrasonic channels per rail. Simultaneous firing of all channels.
Track Inspection resolution	3.0mm per channel at 45km/hr (27miles/hr).
Position tracker	Encoder-based positioning. Automatic or manual position resets at periodically placed position markers. Tracking accurate to 200mm.
Remote data processing	Optional LAN based remote data processing and analysis station linked to operating console.
Inspection documentation	Standard documentation tools include: • Printer • On-screen operator notes • Screen captures and storage of A-scans in Set-up mode • PCX formatted image captures of all screen displays for storage and hardcopy.

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Post processing evaluation

**On-line scanning** 

\* Specifications are subject to change without notice.

Corporate Offices

ScanMaster Systems (IRT), Ltd. 5B Ha'Nagar St., Neve Ne'eman B 45800 Hod Ha'Sharon, Israel Phone: 972-9-7475400 Fax: 972-9-7475444 e-mail: <u>sales@scanmaster-irt.com</u> Web site: www.scanmaster-irt.com IRT•ScanMaster Systems, Inc. 319 Garlington Road, Suite B4 Greenville, SC 29615, USA Phone: (864) 288-9813 Fax: (864) 288-9799 e-mail: <u>irtinc@irtscanmaster.com</u>



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