

**FEATURES**

- Automated, portable inspection system for easy field inspections
- Carrying cases
- Scanning speeds up to 200 mm/second
- 16 - 32 Channels
- Circumferential and longitudinal single-pass scanning
- Zone discrimination for weld inspections
- Compliance with UT standards
- Real-time color graphic display and instant data analysis
- User-drawn weld section library
- Real-time coupling monitoring
- Accurate determination of weld defect location
- Characterization of defect types
- TOFD scans for improved detection and sizing
- Automatic data recording and complete report generation
- Sizing of defect accuracy to the depth of one zone (1-3mm)
- Accurate measurement of the defect length
- Support for color printers
- Support for foreign languages

DESCRIPTION

WeldScan 5 is an ultrasonic pipeline inspection system manufactured by US Ultratek, Inc., a company based in the Silicon Valley. The engineers and technical staff at US Ultratek have had over ten years of experience in automated UT inspections. The WeldScan 5 system is just one of US Ultratek's advanced automated UT systems.

Optional equipment includes:

- 300 watt scanner controller
- Scanner with a transducer carrier
- Coupling pump
- Portable computer or 19" rack mount computer with a high-speed analog to digital converter card, two ultrasonic pulser/receiver cards, and a 16- to 32-channel switching board

The system automatically controls the coupling pump and the scanner. The system controls the scanner using user-defined parameters, such as speed and direction. While scanning, the system records the ultrasonic signals simultaneously from two transducers and displays colorful real-time B-scans and TOFD. It also checks the coupling condition throughout the scan session and displays the status. As more data is collected and displayed, the display scrolls up so that the most recent data is always in view. When the scanner reaches the user specified destination, the system automatically turns off the coupling pump and stops the scanner.

After the scan is finished, the user can turn on the peak outline option, which draws the amplitude of the signal horizontally over the B-scan amplitude map. This gives the user a better prospective of the signal, making the analysis much easier. The user can mark a defect area of a channel by simply clicking the left mouse button and the selected area will be automatically saved.

An integrated third-party drawing software can be used to draw a defected section of the weld for each channel and each defect type. The system then prints the drawn defected section along with the defected area as marked by the user. The WeldScan 5 system generates a complete report for each project. The report includes:

- Cover page
- Table of contents

- Project information page
- Colorful data sheet with B-scan and TOFD for each scan
- Repair lists with defect location and size
- Defect drawings

The report can be printed out on any Windows-supported printer.

The WeldScan 5 system can be configured as a 19" rack-mount system or as a portable system with a portable computer and a scanner controller. The portable system is a great choice for inspections in fields not accessible to vehicles.

WeldScan 5 supports any language supported by Windows; the program windows, message boxes, and hard-copy reports can be displayed in any language.

SPECIFICATIONS

Pulse Voltage	-40V to -300V, 256 steps
Pulse Width	50 ns to 484ns, 256 steps
Damping	500Ω or 50Ω
Receiver Gain	0 dB to 80 dB in 0.01dB increments
DC Offset	-2.5V to 2.5V in 5mV increments
Low Pass Filter	All, 48MHz, 28MHz, 18MHz, 8.8MHz, 7.5MHz, 6.7MHz, or 5.9MHz
High Pass Filter	4.8MHz, 1.8MHz, 0.8MHz, or 0.6MHz
Waveform	Full rectify, +half rectify, -half rectify, or RF
Sampling Rate	100MHz, 50MHz, 25MHz, 12.5MHz
Resolution	8 bit
Memory Depth	256 kilo samples
Inspection Depth	0" to 9.5" in steel
Buffer Delay	0" to 38" in steel
Total Channels	16 to 32
Software	-Windows applications

- Real-time B-scan and TOFD display
- A-scan Mini Scope display for easy analysis
- Long file descriptions for easy recognition
- Project log file for user up to 64K characters
- Complete report generation
- User-drawn weld section with defects for each channel or for each defect type
- Colorful B-scan and TOFD prints with user-specified scale
- Hard copy repair list generator with accurate defect locations

Controller/Scanner

- 300 watts controller
- Up to 200 mm/second scan speed
- Automatic control from computer
- Various sizes of scanners for all pipe diameters

Portable Computer

- Pentium-III 800 MHz or faster
- 128 MB RAM
- 20 GB HD
- 8 MB video card
- 1024x768 active matrix LCD display
- External higher resolution monitor optional
- CD-ROM (CD Writer optional)
- Dimensions: 15.7"(W) x 12.6"(H) x 9"(D)
- Easy to use touch pad

Universal Power 110/220VAC 50/60Hz for all equipment

