



FEATURES

- Laptop computer for field inspection
- Windows applications with user-friendly interface
- Pitting, corrosion, lamination, and crack detection
- Real-time A-scan and oscilloscope display
- Real-time TOFD, A, B and C-scan corrosion and flaw mapping display
- Real-time averaging to measurement gates
- A-scan recording for offline re-creation of C-scans
- Unique gate settings for each A-scan
- Easy data analysis and flaw sizing
- 3D display for better prospective view
- High-resolution scanner for pipes and flat surfaces
- Automatic report generation
- Support for foreign languages
- Free one-year software upgrades
- Optional mouse scanner for pipe elbow and reducer scanning
- Fully battery operated

DESCRIPTION

UltraScan-5L is an ultrasonic inspection and analysis system that includes:

- Inspection scanner
- Laptop computer with USB 2.0 pulser/receiver and high-speed digital to analog converter instrument

The system includes four applications: TOFD (time of flight diffraction) imaging, thickness mapping, X-axis flaw mapping, and Y-axis flaw mapping. The user interface includes A-scan, B-scan, C-scan, signal scope, real time mini-scope, 3-D display, and a control panel. Under the data analysis mode, the user can re-create the C-scan display by altering gate settings. Each A-scan retains its own unique gate settings. The user can generate a 3-D display of a C-scan instantaneously.

The system also generates a report with the following contents:

- A cover page including the project title and the report generation date
- A table of contents listing file descriptions and page numbers for each file
- Project information including project name, directory, start time, end time, project descriptions, and inspection log
- The B-scan and C-scan maps with user-defined scales
- TOFD images

The software is designed to simplify operating procedures; for example, the system automatically detects the attached scanner and sets up the appropriate parameters. It also supports any language supported by Windows — the program windows, message boxes, and hard-copy reports can be displayed in any language.

The MT scanner is an X-Y coordinate scanner which is used to inspect flat surfaces and pipes. The minimum diameter of pipe can be as small as 2 inches. Their magnetic wheels are ideal for quick setups on steel materials. Our optional scanner tracks can be used to inspect non-magnetic materials, using four suction cups to attach the scanner to the material to be inspected. The HS100 scanner is a single axis scanner, but it can also be used to generate C-scan maps. The scanners include portable TOFD, miniature TOFD, and deluxe TOFD for wide range inspection conditions.

UltraScan-5L is the best system for weld inspections. The computer battery can last up to 6 hours. The system and a μ TOFD scanner can fit into a small, durable and water-proof brief case.

Other accessories include a coupling kit and custom cable lengths. The coupling kit consists of a water compressor, tubing, a Y connector, and a flow control valve. The 100-foot and 200-foot cables are built with differential line drivers and receivers which ensure encoder signal strength.

SPECIFICATIONS

Computer ThinkPad Laptop computer, 1.5GHz CPU
 512 MB RAM
 40 GB Hard Disk
 1024x768 Display or better
 Color TFT Display
 LAN / USB / Battery up to 6 hours
 Power input: 100/220VAC 50/60 Hz

Maximum C-scan Data Point Thickness Map: 4,175,000
 Flaw Map: 835,000 up to 10 flaws per data point

Sampling Rate 50, 25, 12.5, 6.25 MHz

Data Resolution 8 bits

Memory 8K samples

Scan Speed up to 8 inches/second

Rectifications RF, Full, +half, or -half

Transducer Mode single or dual

Case Durable water-proof carry case

Scanner Resolution
MT Scanner
 X Axis: 0.002685 inch (0.0682 mm)
 Y Axis: 0.004027 inch (0.10228 mm)

HS100 (mouse scanner)
 0.00314inch (0.08 mm)

TOFD Scanner 0.003 inch (0.08 mm)

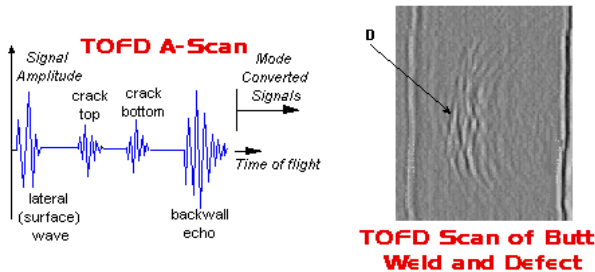
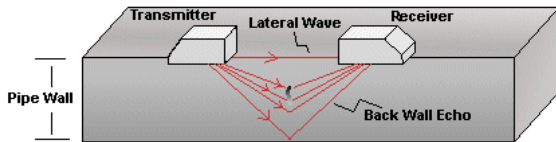
Scan Range
 MT Scanner with 17" arm:
 13.5" x 2815' (240 mm x 858 m)

MT Scanner with 26" arm:
 23.5" x 2815' (590 mm x 858 m)

Mouse Scanner: 82,943" (2096 m)
 TOFD Scanner: 2745'

Test Pipe Diameter
 MT Scanner: $\geq 2"$ (50 mm)

Options
 Coupling kit
 100' long cable
 200' long cable
 Add-on wheels for pipes with small diameters
 Scanner tracks
 Mouse scanner for elbow & reducer inspection



Corrosion Mapping / HIC Inspection A, B, and C Scan (below)

