

# NDT

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## MMX-7 Multi-Mode Thickness Gauge with B-Scan



The Model **MMX-7** is a dual element multi-echo (thru paint) gauge with large digit numeric and B-Scan displays and Data Logger.

Pulse-echo Mode for flaw and pit measurement and Multi-Mode (Echo-Echo mode) to measure through and eliminate paint and coatings. Built-in automatic gain control.

Time based B-Scan feature displays a cross section of the opposite surface allowing inspectors to see the contour of the back surface.

Selectable low, medium, and high multiple gain settings offer the inspector the additional punch power for materials that are hard to penetrate.

Store up to 64 custom setups. Factory setups are included for common applications.

Alpha-numeric data logger to provides increased versatility for custom reporting needs and stores up to 12,000 measurements.

Built-in transducer types offer increased linearity between transducer frequencies and diameters.

High speed scan feature provides a better representation during the scanning process, by making 32 measurements per second. Remove the transducer from the test material to display the thinnest measurement found during strip scan.

Use the visual alarm to set Hi and Lo limits to alert inspector when the measurements are out of tolerance.

Windows PC software to transfer data to and from a PC, view B-Scans and general measurements, set break-points, view statistics, and export files into excel.

2 year limited warranty

## MMX-7 Specifications

### Physical

Weight: 13.5 ounces (with batteries).

Size: 2.5 W x 6.5 H x 1.24 D inches (63.5 W x 165 H x 31.5 D mm).

Operating Temperature: -14° to 140°F (-10° to 60°C).

Keyboard: Membrane switch with twelve tactile keys.

Case: Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed).

Data Output: Bi-directional RS232 serial port. Windows® PC interface software.

Display: 1/8 in. VGA grayscale display (240 x 160 pixels). Viewable area 2.4 x 1.8 in. (62 x 45.7mm).  
EL backlight (On/Off/Auto).

### Ultrasonic

Measurement Modes: Pulse-Echo (flaws, pits) and Echo-Echo (thru-paint)

Square wave pulser.

Receiver: Selectable low, medium or high gain in pulse-echo mode. AGC gain control in echo-echo mode.

Timing: 20 MHz with ultra low power 8 bit digitizer.

### Power Source

Three 1.5V alkaline or 1.2V NiCad AA cells. Typically operates for 150 hours on alkaline and 100 hours on NiCad (charger not included.)

Auto power off if idle 5 min. Battery status icon.

### Measuring

Pulse-Echo Mode Range: (Pit & Flaw Detection) measures from 0.025 to 9.999 inches (0.63 to 254 mm).

Echo-Echo Mode Range: (Thru Paint & Coatings) measures from 0.050 to 4.0 inches (1.27 to 102 mm).  
Range will vary depending on the thickness of coating.

Resolution: +/- .001 inches (0.01 mm)

Velocity Range: .0492 to .3936 in/Microsecond (1250 to 9999 Meters/Sec)

Calibration: Single and Two point calibration option, or selection of basic material types.

Units: English & Metric

### Display

#### Display Views:

Large Digits is Standard thickness view. Digit Height: 0.400 in (10mm).

B-Scan Cross sectional view. Display speed of 15 seconds per screen.

Scan Bar Thickness 6 readings per second. Viewable in B-Scan and Large Digit views.

Repeatability Bar Graph Bar graph indicates stability of reading

Data Logger (Internal): 12,000 measurements and B-Scans (alpha numeric storage).

Memory: 16 megabit non-volatile ram.

### Transducer:

Transducer Types: Dual Element (1 to 10 MHz).

Locking quick disconnect "00" LEMO connectors. Standard 4 foot cable.

Custom transducers and cable lengths available for special applications.

### Features:

64 custom user-definable setups. Factory setups can also be edited by the user.

Selectable transducer types with built-in dual path error correction for improved linearity.

Alarm Mode: Set HI and LO tolerances with audible beeper and visual LEDs.

Fast-Scan Mode takes 32 readings per second and displays the minimum reading found when the transducer is removed. Display continuously updates while scanning.

### Certification:

Factory calibration: traceable to national standards.

### Standard Kit Contents:

MMX-7 instrument, 1/4" diameter x 5.0 MHz dual element transducer on 4 foot long cable, (3) size AA Alkaline Batteries, 4 oz. plastic bottle of Ultrasonic Couplant, Operation Manual, Serial Interface Cable, Data Management Software, Hard-shell Carrying Case and Certificate of Calibration.