



## MMX-7

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

- ▶ Powered by a 20MHz platform with ultra low power 10 bit digitizer.
- ▶ 1/8" VGA grayscale display (240 x 160 pixels). Screen Refresh rate of 25 Hz.
- ▶ Measure modes: (P-E) pulse-echo (flaws & pits) and (E-E) echo-echo (thru-paint).
- ▶ Adjustable gain option; high, med, or low in (P-E) mode, or automatic gain control (AGC) in (E-E) mode.
- ▶ Display views: Large Digits or B-Scan (cross section).
- ▶ Store up to 64 custom setups. Selection of factory setups included.
- ▶ High speed scan: 32 readings per second.
- ▶ Alarm feature: Hi and Lo limit options.
- ▶ Data Storage: 12,000 page capacity.
- ▶ Windows® PC interface software.
- ▶ Multiple language support.
- ▶ 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:

1/8in VGA grayscale display (240 x 160 pixels); viewable area 2.4 x 1.8in (62 x 5.7mm); EL backlit (on/off/auto invert).

## Ultrasonic Specifications

### Measurement Modes:

Pulse-Echo (flaws, pits).  
Echo-Echo (thru-paint).

### Pulser:

Square wave pulser with adjustable pulse width (spike, thin, wide).

### Receiver:

Manual or AGC gain control with 40dB range, depending on mode selected.

### Timing:

20 MHz with ultra low power 10 bit digitizer.

## Display

### Display Views:

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

**B-Scan:** Cross section view; display speed of 15 secs per screen.

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

**Bar Graph:** Indicates stability of measurement.

## Power Source

Three 1.5V alkaline or 1.2V NiCad AA cells.

Typically operates for 35 hours on alkaline and 10 hours on NiCad (charger not included).

Auto power off if idle 5 minutes.

Battery status icon.

## Measuring

### Range:

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

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

**Flaw Prove Up:** Basic mode using angle beam transducers.

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

### Velocity Range:

.0492 to .3936 inches/ms  
1250 to 9999 meters/sec

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

**Units:** English & Metric

## Transducer

### Transducer Types:

Dual Element (1 to 10 MHz).

Single Element (1 to 10 MHz) - converter cable required.

Locking quick disconnect LEMO "00" connectors.

Standard 4 foot cable.

Custom transducers and cable lengths available for special applications.

## Memory

### Data Structure:

Grid (alpha numeric)

### Cell contents:

12,000 readings, B Scan image & gauge settings for every reading.

**OBSTRUCT** to indicate inaccessible locations.

**Memory:** 16 megabit non-volatile ram.

## Features:

### Setups:

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

### Gates:

Single gate in pulse-echo mode, or single gate with holdoff in echo-echo mode; Adjustable threshold.

### Selectable Transducers:

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:

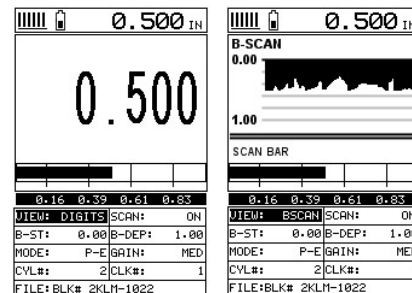
Takes 32 readings per second and displays the minimum reading found when the transducer is removed.

## Certification

Factory calibration traceable to NIST & MIL-STD-45662A.

## Warranty

2 year limited



Digits View

B-Scan View



MADE IN THE USA



**Ichisa Engineering (S) Pte Ltd**

Tel : (65) 6878 0608

Fax : (65) 6878 0609

Email : sales@ichisa.com.sg