

## MVX A/B Scan Ultrasonic Thickness Gauge

- ▶ The physical size, weight, and display resolution are just a few of the benefits of the **MVX**.
- ▶ The adjustable square wave pulser provides the flexibility necessary for both high resolution and penetration requirements.
- ▶ The **MVX** is equipped with multiple viewing options to provide users with a complete set inspection tools: (RF waveform, +/- Rectified waveform, Time based B-Scan, and Large Digits).
- ▶ The A-Scan rectified mode is commonly used for detecting flaws/pits in pulse-echo mode and measuring through paint and coatings in echo-echo mode.
- ▶ The time-based B-Scan feature of the **MVX** displays a cross section of the test material. It is commonly used to display the profile of the bottom surface of the test material.
- ▶ Built in hardware AGC gain control for through paint measurements in multi mode operation.
- ▶ The variety of calibration options is just one more example of **MVX's** overall versatility.
- ▶ The **MVX** has the ability to store 64 custom user defined setups. All factory setups can be selected, edited and saved to any setup location.
- ▶ **MVX** is equipped with an alphanumeric data logger to provide increased versatility for those custom reporting needs.
- ▶ The built-in transducer types offer increased linearity between transducers.
- ▶ The high speed scan feature speeds up the inspection process by making 32 measurements per second. Remove transducer from the test material, and display the minimum measurement scanned.
- ▶ Use the visual alarm to set hi and lo limits for applications requiring specific tolerances. If the actual thickness value is above or below the limits, a red light is illuminated.
- ▶ Use the find feature to locate the detection point, while automatically adjusting the display to bring the signal into view.
- ▶ **MVX** also comes complete with our Windows® PC software for transferring data to and from a PC.
- ▶ 2 year limited warranty

# THE MVX 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 backlit (on/off/auto).

## 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  
8 bit digitizer.

## Certification

Factory calibration traceable to national standards.

## Warranty

2 year limited

## 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

### 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 0.1 to 4.0 inches (2.54 to 102 millimeters). Range will vary +/- depending on the thickness of coating.

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

### Velocity Range:

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

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

**Units:** English & Metric

## Display

### Display Views:

**A-Scan** Rectified +/- (flaw view)  
RF (full waveform view)

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

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

**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 pages of memory (alpha numeric storage).

### Page contents:

1 reading and 1 waveform per page.

OBSTRUCT to indicate inaccessible locations.

### 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:

### 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.



A S O N A T E S T P L C G R O U P C O M P A N Y

Distributed by:



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