

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 of 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 thru-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 thru-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 alpha-numeric 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

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 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.

