



Sonic 1200M Flaw Detector

FEATURES

- New Foreign Object Debris (FOD) free and anti-marring case design
- Lightweight, 3.8 lbs. (1.72 Kg)
- Selectable Spike/Square Wave Pulsar
- Interface Sync (Sweep and Gate)
- Rep rate increased to 4 kHz
- 0.5 & 3.5 MHz Narrow Band Tuned Receiver
- Display Persist
- Display Average
- Customer interchangeable displays:
 - Hi-Brite Electroluminescent
 - Monochrome Liquid Crystal
 - Color Liquid Crystal
- VGA output for heads-up display or external monitors and projectors
- Single Li-Ion operation or optional remote battery packaging
- 10+ hour battery run time
- PowerLink™ Technology - automatic transducer recognition and instrument set-up
- 24 hour loaner guarantee

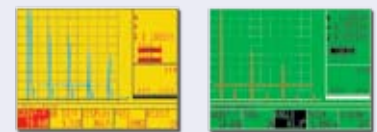
ULTRASONIC FLAW DETECTOR

The Sonic 1200M, designed for the United States Air Force, is an advanced lightweight digital ultrasonic flaw detector incorporating our exclusive modular display design for simplicity of operation. It has various innovative design features such as an uncluttered keypad, rotating Smartknob™, customer interchangeable displays, and PowerLink™ technology making it extremely simple and intuitive to operate.

The Sonic 1200M (NSN: 6635-01-530-7826) incorporates all of the advanced features of the Sonic 1200HR+, including high resolution thickness gauging with readings down to 0.0050 inches, Distance Amplitude Correction (DAC),

dual flaw gates, data logging of up to 5000 readings, narrow band receiver for enhanced signal to noise ratios, PowerLink™ transducer recognition, VGA output to heads-up display or monitor, and tunable square wave pulsar.

Additionally, the Sonic 1200M includes a interface following gate for immersion and bubbler applications, selectable negative spike pulsar/tunable square wave pulsar for the ultimate in resolution and power, display average, display persist, 4 kHz pulsar repetition rate, and new Foreign Object Debris (FOD) and anti-marring case.



Thickness

Angle Beam



Reference Memory

B-Scan (Optional)



DAC
(Distance Amplitude Correction)



SONIC 1200M SPECIFICATIONS*

PULSER

Type: Selectable, spike or square wave

Pulse Width: 15 to 1000 ns

Pulse Voltage: Selectable 300/150 volts

Damping: 25, 50, or 200 ohms

Modes: Selectable single (pulse echo), dual, or through transmission

RECEIVER

Frequency Band: 0.3 to 20 MHz

Tuning: Selectable 0.5, 1, 2.25, 3.5, 5, 10, 15, Wideband (0.3 - 20 MHz), Highpass (3 - 20 MHz)

Gain Control: 0 to 110 dB

Control: Continuous adjustment in selectable 0.1, 0.2, 0.5, 1.0, 2.0, 6.0, 12 dB

Linear Reject: 0 to 80% full screen

Modes: RF, fullwave, half+, half-, full-wave filtered: 10, 5 and 2.25 MHz

GATES

Functions: Dual flaw gates. Gate 1 time of flight, or amplitude detection, flaw alarm. Gate 2 amplitude detection, flaw alarm or time of flight for echo-to-echo mode. Gate 1 selectable IP or IF sync

Indicator: Flashing LEDs and horn

Peak Amplitude: Peak amplitude of gated signal in percent of screen height

RF Gates: Positive logic requires that a signal cycle of either polarity cross a gate level; negative logic requires that no signal cross a gate level.

TIME BASE

Range: 0.048 to 296 inches (1.23 to 7511 mm) of steel (0.418 to 2560 μ s)

Delay: -1.16 to 185 inches (-29 to 4.7 mm) of steel (-10 to 1600 μ s)

Velocity: 0.025 to 0.600 in/ μ s (635 to 15240 m/s) horiz. linearity +/- 1% of full screen

Pulse Rate: Selectable maximum; 50 Hz steps, 50 to 4000 Hz, limited by range and pulser settings

THICKNESS

Range: 0.005 inches (0.127 mm) up to the maximum display range setting

Modes: IP - Gate 1, IF to Gate 1, Gate 1 to Gate 2

Trigger Modes: Peak or edge

Trig. Functions: Angle beam calculations, curved surface correction

Angle: 0° - 90° in 0.1° increments

DISPLAY FEATURES

Signal: Hollow or filled

Screen Freeze: On command, currently displayed signal is frozen

Waveform Recall: Select and display stored waveform

Peak Hold: Displays peak amplitude with active signals under peak signal

A-scan Storage: Up to 100 A-scan waveforms may be stored for playback or printout

A-scan Security: Read-only selection prevents accidental erasure of A-scans

Update Rate: 60 Hz

Persistence: Adjustable from 0.1 to 10.0 seconds in 0.1 second steps

Display Average: Selectable 2, 4, 8 and 16 frames

ADDITIONAL FEATURES

VGA Output

RS-232: DB-9P connectors

Analog Output

PowerLink™: Automatic transducer recognition and application setups. Transducer identification on printouts

Program Storage: Up to 200 test setups (additional 100 setups with A-scan storage)

Clock, Calendar: Time and date information stored and printed with each waveform

Languages: Selectable - English, Spanish, French and German

Software: Windows-based FlawMaster™

GENERAL

Dimensions: 9.5" L x 5.5" W x 3.5" D (241 mm x 140 mm x 89 mm)

Weight: 3.8 lbs (1.7 kg)

Display: Customer-Interchangeable QVGA (320 x 240 pixels) monochrome backlit liquid crystal display (LCD), color LCD, or Hi-Brite EL display

Operating Temperature: -4° to 140° F (-20° to 60° C)

Storage Temperature: -40° to 176° F (-40° to 80° C)

POWER

DC: One Li-Ion battery, optional external D-Cell battery pack

AC: 90 264 volt, 50-60 Hz mains

Battery Operating Time: 10+ hours

Humidity: Safe operation in exposure to Class 3 temperature/humidity environments (5 to 95%)

Classification: Based on Class 2 specifications from the MIL-PRF-28800F

Altitude: Maximum operating and non-operating altitude - 15,000 ft. (4600 m)

Hazardous Area Operation: Safe operation in explosive atmosphere as defined by Class I, Division 2, Group D, as found in the National Fire Association Code (NFPA 70), Section 500, and tested using MIL-STD-810E, Method 511.3, Procedure 1

DAC

Type: Segmented, 25 selected points

Gain: 40 dB, total of gain and DAC limited to 110 dB maximum

Display: Selection of multiple curves showing compensation: single curve at signal level (0 dB), three curves at +6 dB, 0 and -6 dB levels, four curves at +6 dB, 0, -6 dB and -14 dB levels, DAC compensated echoes only, single curve with DAC compensated echoes

Reference Memory: Recall waveform displayed simultaneously with active signal

Data Logging: 5000 readings

OLYMPUS

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