



### Features

- New Foreign Object Debris (FOD) free and anti-marring case design
- Lightweight, 3.8 lbs (1.72 Kg)
- Selectable Spike/Square Wave Pulser
- Interface Sync (Sweep and Gate)
- PRF up to 4 kHz
- 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

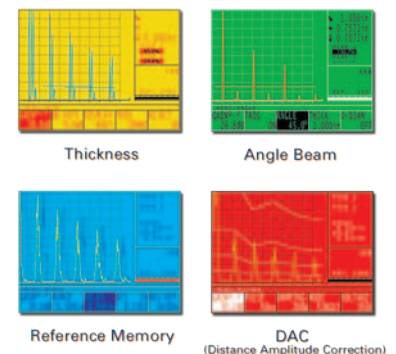
## Ultrasonic Flaw Detector

The Sonic® 1200M is an advanced lightweight digital ultrasonic flaw detector incorporating our exclusive modular display design. It has various innovative design features such as a simple 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 pulser.

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



# Sonic 1200M Specifications\*

## General

Dimensions	241 mm x 140 mm x 89 mm (9.5 in. L x 5.5 in. W x 3.5 in. D)
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
Languages	Selectable - English, Spanish, French and German
Operating Temperature	-4 °F to 140 °F (-20 °C to 60 °C)
Storage Temperature	-40 °F to 176 °F (-40 °C to 80 °C)
DC	One Li-Ion battery, optional external D-Cell battery pack
AC	90 to 264 volt, 50-60 Hz mains
Battery Operating Time	10+ hours

## Environmental Ratings

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 10, 5 and 2.25 MHz 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

## 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	Standard
RS-232	Standard
Analog Output	Standard
PowerLink™	Automatic transducer recognition and application setups.
Program Storage	Up to 200 test setups (additional 100 setups with A-scan storage)

## Pulser

Type	Selectable, spike or square wave
Pulse Width	15 to 1000 ns
Pulse Voltage	Selectable 150/300 volts
Damping	25 ohms, 50 ohms, 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-, fullwave filtered: 10, 5 and 2.25 MHz

## Calibration

Display Range	0.048 in. to 296 in. (1.23 to 7511 mm) of steel (0.418 to 2560 μs)
Measurement Range	0.005 inches (0.127 mm) up to the maximum display range setting
Delay	-1.16 in. to 185 in. (-29 to 4.7 mm) of steel (-10 to 1600 μs)
Velocity	0.025 to 0.600 in/μs (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
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° to 90° in 0.1° increments

## 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.

## 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
Reference Memory	Recall waveform displayed simultaneously with active signal
Data Logging	5000 readings

OLYMPUS NDT INC. is ISO 9001 and 14001 certified.

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