

NDT

NDT INTERNATIONAL, INC.

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MFD500 Portable Ultrasonic Flaw Detector



KEY FEATURES

- Master-slave menu, shortcut key and digital swiftly knob.
- With digital color TFT LCD display, it can choose the background color and wave color according to the environment. And the LCD brightness also can be set freely by yourself.
- Designed with high performance security-guarantee battery module, with easy removal. It can be charged independently. The large capacity, high performance Lithium-ion battery module allows the instrument to be used continuously for more than 8 hours,
- With its small size and light weight, the instrument can be hold by one hand. It is durable and can be used in many industrial applications.

RANGE

0 to 400 inches (0 to 9999 mm) in steel; range selectable in fixed steps or continuously variable.

PULSER

Spike excitation with low, middle and high choices of the pulse energy.

Pulse Repetition Rate: manually adjustable from 10 to 1000 Hz.

Pulse width: Adjustable in a certain range to match different probes.

Damping: 100 Ω , 200 Ω , 400 Ω selectable to meet different resolution and sensitivity need.

Probe work mode: Single element, dual element and through transmission;

RECEIVER

Real-time sampling at 160MHz - high enough speed to record the defect information.

Rectification: Positive half wave, negative half-wave, full wave, and RF

DB Step: 0dB, 0.1 dB, 2dB, 6dB step value as well as auto-gain mode

ALARM Audible and visual (LED)

MERMORY

Up to 100 configuration channels with instrument operating parameters plus DAC/AVG curve.

Stored configuration data can be easily previewed and recalled for quick, repeatable instrument setup. Total 1000 datasets can be stored with all instrument operating parameters plus A-scan.

All the configuration channels and datasets can be transferred to PC via USB port.

FUNCTIONS

Peak Hold: Automatically searches for peak wave inside the gate and hold it on the display.

Equivalent diameter calculation: find out the peak echo and calculate its equivalent diameter.

Continuous Record: Record the display continuously and save it to the memory inside the instrument.

Defect Localization: Localize the defect position, including the distance, the depth and its plane projection distance.

Defect Sizing: Calculate the defect size

Defect Evaluation: Evaluate the defect by echo envelope.

DAC: Distance Amplitude Correction

AVG: Distance Gain Size curve function

Crack measure: Measure and calculate the crack depth

B-SCAN: Display the cross-section of the tested material.

REAL-TIME CLOCK

COMMUNICATION USB2.0 high-speed communication port

SPECIFICATIONS

Range: 0 to 400 inches (0 to 9999 mm)

Bandwidth: 0.5 to 15 MHz

Material Velocity: (1000 to 9999 m/s)

Dynamic Range: $\geq 32\text{dB}$

Vertical linear error: $\leq 3\%$

Horizontal linear error: $\leq 0.2\%$
Resolution: $> 40\text{dB}$ (5P14)
Sensitivity Leavings: 60dB (flat-bottomed deep hole 200mm Φ 2)
Rejection: 0 to 80% Linear
Noise level: $\leq 10\%$
Power supply: DC 9V; lithium batteries work for 4 to 8 hours or more
Ambient temperature: -20 to + 50 °C
Relative Humidity: 20 to 95% RH
Overall dimensions: 10.5" H x 6.8"W x 2.44"D (263 × 170 × 61 mm)

Manufactured by Mitech Instruments, Beijing, China

MFD500 Standard Configuration

No.	Item	Quantity
1	Main Instrument	1
2	Straight Beam Probe	1
3	Angle Probe	1
4	Probe Cable (BNC-BNC)	1
5	Battery Module	1
6	Power Adapter (Charger)	1
7	Support Pillar	1
8	Operation Manual	1
9	Instrument Case	1
10	Datapro Software	1
11	USB communication Cable	1

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