



## ULTRASONIC FLAW DETECTOR MFD800C



### Product Overview

MFD800C intelligent digital ultrasonic flaw detector, Mitech concentrated years meticulously developed main product. Unique design, sophisticated manufacturing, convenient operation, powerful function, It takes many advantages in one unit. It had received customers' favored since its inception. It can test, orient, evaluate and diagnose various flaws such as crack, lard, air hole in workpiece' s interior swiftly and accurately without any destruction. With full digital 640X480 TFT LCD display, it can select the operating interface style and the LCD brightness according to environment. With humanizing interface design, the waveform show delicately. It can find the defects clearly in full screen. Single hand capable for holding operation, the curve making, probe calibration and other conventional operation can be completed automatically. Core processor CPU with 400M main frequency, it can complete the complex run quickly and realize intelligent defect analysis. Low power design with large

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capacity and high performance lithium ion battery module, it can work more than 10 hours continuously. Full English master-slave menu, emphasizing on user experience, collecting shortcut keys, digital shuttle rotary wheel, cross menu three operating way in one body, customer with different habits can operate it freely. It supports many languages. Its waterproof, oil proof, dustproof function can achieve IP65 protection level. It is the necessary professional precision instrument for defect detection, quality control, on-line safety monitoring and life evaluation in fields of oil, chemical, metallurgy, shipbuilding, aviation, railways and so on.

## Technical Parameters

- Range: 0 to 9999 mm, at steel velocity
- Material Velocity: 1000 to 15000 m/s
- Display Delay: -20 to 3400  $\mu$ s
- Probe Delay/Zero Offset: 0 to 99.99  $\mu$ s
- Sensitivity Leavings: >62dB (flat-bottomed deep hole 200mm $\Phi$ 2)
- Resolution: >40dB (5P14)
- Noise Level:  $\leq$ 8%
- Test Modes: straight, angle, dual element and thru-transmission
- Pulse: Tunable Square Wave Pulse
- Pulse Repetition Frequency ranges from 10 Hz to 1000 Hz
- Pulse Energy: 200V, 300V, 400V, 500V, 600V selectable
- Bandwidth (amplifier bandpass): 0.2 to 20 MHz
- Gate Monitors: Two independent gates controllable over entire sweep range
- Rectification: Positive half wave, negative half wave, full wave, RF
- System Linearity: Horizontal:  $\pm$ 0.2% FSW, Vertical: 0.25% FSH, Amplifier Accuracy  $\pm$ 1 dB.
- Reject (suppression): 0 to 80% full screen height
- Units: Inch or millimeter
- Transducer Connections: BNC or LEMO
- Power Requirements: AC Mains 100-240 VAC, 50-60 Hz
- Overall Dimensions: 280H $\times$ 220W $\times$ 70D mm
- Relative Humidity: (20 ~ 95)% RH
- Power Supply: DC 9V
- Operating Temperature: -10 $^{\circ}$ C to 50 $^{\circ}$ C
- Storage Temperature: -30 $^{\circ}$ C to 50 $^{\circ}$ C

## Features

### Gate Alarm

Gate position, gate width and gate height can be adjustable at will. The B gate can choose to set wave-getting alarm OR wave-losing alarm. The beep in gate and LED light can be alarmed or closed (the LED light alarm is very effective under the noise environment)

### Data Storage

The instrument is built with mass storage, the data and files will not be lost because of instrument power breakdown. The storage contents included channel parameters, waveform pictures and the combination

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parameters of various types of probes and instruments as well as set testing standards for each industry freely. It can save 10000 pictures of detecting echo signals and parameters. It can realize to save, read and transfer the data via the USB port.

### **Video Recorder**

Screen scenes can be captured as movie files. More than 15 hours movie can be saved to the inside memory. They can be re-played using the instrument or the PC software delivered with the instrument.

Video Recorder is useful in many situations, convenient for those who want to analyze the probing activities later.

### **Real Time Clock**

The instrument clock keeps running tracking the time.

### **Communication**

High Speed USB2.0 port

Two USB modes can be selected: U-DISK and U-BRIDGE. In U-DISK mode, the instrument acts as a USB flash disk when connected to PC. Configuration files, saved pictures and recorded movies can be copied to PC when possible. In U-BRIDGE mode, the instrument exchanges data with DataPro Software.

The DataPro software helps manage and format stored inspection data for high-speed transfer to the PC. Data can be printed or easily copied and pasted into word processing files and spreadsheets for further reporting needs. New features include live screen capture mode and database tracking.

### **Battery**

Internal rechargeable Li-ion battery pack rated 7.2V at 8800 mAh

10 hours nominal operating time depending on display brightness

8-10 hours typical recharge time

### **Functions**

- Semiautomatic two point calibration: Automated calibration of transducer zero offset and/or material velocity
- Flaw Locating: Live display Sound-path, Projection (surface distance), Depth, Amplitude,
- Flaw sizing: Automatic flaw sizing using AVG/DAC, speeds reporting of defect acceptance or rejection.
- Digital Readout and Trig. Function: Thickness/Depth can be displayed in digital readout when using a normal probe. Sound-path, Surface Distance and Depth are directly displayed when using angle probe.
- Both the DAC and the AVG method of amplitude evaluation are available.
- Curved Surface Correction Feature
- Crack Height Measure Function
- Weld Figure Feature
- Magnify Gate: spreading of the gate range over the entire screen width
- Video Recording and Play
- Auto-gain Function
- Envelope: Simultaneous display of live A-scan at 60 Hz update rate and envelope of A-scan display
- Peak Hold: Compare frozen peak waveform to live A-Scans to easily interpret test results.
- A Scan Freeze: Display freeze holds waveform and sound path data

- B Scan display feature

## Configuration

	No.	Item	Qty	Remarks
Standard config.	1	Main unit	1	With full digital TFT LCD Display
	2	Straight Beam Probe	1	4 MHz, $\Phi$ 10
	3	Angle Beam Probe	1	4 MHz, 8 mm $\times$ 9 mm, 60°
	4	Probe Cable	1	Q9-C5, or optional C9- C5
	5	Battery Module	1	8.8 amp hour (MB-03)
	6	Power Adapter	1	
	7	Supporting pillar	1	
	8	Attached files	1	Used for manual
	9	Datapro Software	1	
	10	USB Cable	1	MUSB01
	11	Power Cable	1	
	14	ABS Case	1	
Optional config.	1	Protective Cover and straps for Main Unit		
	2	Dual-crystal Straight Probe	1	

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