

ECHO FD
PORTABLE
ULTRASONIC
FLAW DETECTOR

Ultrasonic inspectors have long asked for 3 key items when it comes to portable ultrasonic flaw detection; low cost, easy to use and long battery life.

ECHO FD meets all these requirements and then some.

ECHO FD is a portable, hand-held ultrasonic flaw detector capable of performing the majority of your flaw detection needs at an extremely low price.

ECHO FD is capable of being your everyday flaw detector for weld inspections, delaminations, disbonds and more.

ECHO FD comes standard with 2 independent gates, DAC, AWS, API 5UE, B-scan software and 2 Gb of datalogging memory, 13 hour battery life with internal rechargeable batteries. **ECHO FD** also allows for one hand operation with a simple, intuitive user interface all for the price of equal or less than you are paying for your high end thickness gages.

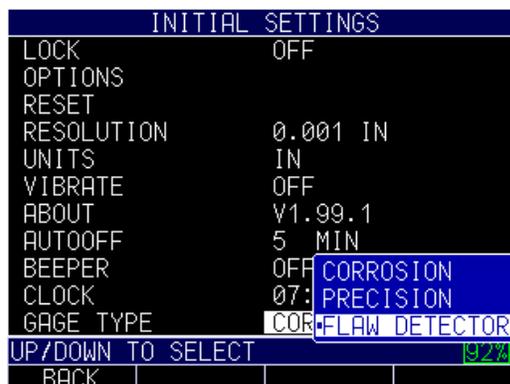
Mechanically the **ECHO FD** has been designed from the ground up to offer the latest in ergonomic design. **ECHO FD** has a convenient rubber boot with stand, 4 point chest harness, padded strap and even a finger hole for the ultimate in instrument balance. We even designed in the ability to use a magnetic pipe stand. All keys can easily be reached with your thumb and the keys are raised rubber keypad with superior tactile feedback. The "F" keys light up for alarm and charging conditions.

ECHO FD also allows for one hand operation with a simple, intuitive user interface and long battery life.



Features

- Fast, 60Hz update rate
- 2 independent gates
- 5 unique display formats
- One-hand operation
- 13 hour battery life
- Made In the USA



Allows user to toggle amongst flaw detection as well as corrosion or precision thickness gaging if field upgradeable options are enabled.

ECHO FD is ideal for a wide variety of applications and industries:

- Weld inspection
- De-laminations
- Porosity
- Disbond
- Forgings
- Castings
- Refining
- Power generation
- Oil and gas
- Pipeline inspection
- Tank inspection
- Thickness surveys
- Inspection companies

Specifications ECHO FD

Display: 3.5" TFT, 320 x 240 pixels (¼ VGA) sunlight readable color display with display update rate of 60 Hz. Under all test conditions

Backlight: Light Emitting Diode (LED) backlight. Includes variable light intensity

Package: Designed for IP67 rating, custom, splash-proof, high impact plastic with illuminating rubber keypad for go/no-go testing

Operating Temperature: -4 to 122F (-20 to 50C)

Transducer Connectors: (Lemo 00)

Bandwidth: .5-30 Mhz (-3dB)

Pulsar: Tunable Square Wave (1-25 MHz), spike

Mode: Pulse-Echo, dual, thru

Measurement Rate: 60 Hz

Pulsar Voltage: 30, 60, 90 120V

Range: .400" in full scale to 23" for steel velocity

Zoom: Zooms gate 1 width to minimum range capability

Delay: 0-23" (23" minus the range)

Zero Offset: 0-5000 µsec.

Vel: .025 in/µsec-.6 and metric equivalent

Weight: 1.15 lbs with internal rechargeable batteries

Battery Life: 13 Hrs.

Battery Type: 3.7V li Ion and alkaline tray option

Charger: 5V, 2 amp output, 100-240 VAC, 50-60 Hz Input

Rubber Boot: Custom boot to protect the unit with chest harnesses, padded strap with built in stand

Gain: 0-90db in .1db increments

Linearity: Per ASTM E317-15 (1% on vertical axis, .5% on horizontal axis)

USB2: 2 way communication, acts as input for battery re-charge

Alarm: Dynamic change of color and vibrate on alarm for echo in gate, echo above DAC positive or negative gate and minimum depth alarm

Datalogger: 2Gb std, expandable to 32Gb of removeable micro SD card memory: file types linear, 2D 2D with custom point, 3D 3D with custom point, boiler with and without waveform storage options.32 character file name and 20 character longer I.D. strings

Stored Setups: Storage and recall of 2700 calibration and set-up files

Data XL: Interface program to send and receive files to and from PC. Displays thickness with ID in Microsoft Excel

Peak Hold: Holds curve of ECHO envelope with live echo. Peak on, Peak hold, Peak off

Freeze: Freezes for data storage and waveform viewing analysis

Waveform: Filled or outline

Gates: 2 independent gates, adjustable gate start, width, level and alarm type (positive, negative, minimum depth). Can be set to peak or edge detection for each gate

Auto Cal: 2 point calibration, cal zero and cal velocity of thin and thick

Display Special Functions: 5 display modes for varying A-scan size plus A and B scan simultaneously

Rectification: RF, Full Wave, Half +, Half -, RF

Units: Inches, mm or µsec

Languages: English, French, Spanish, Italian, Portuguese, German, Slovak, Swedish, Russian, Chinese, Japanese, Czech, Finnish, Hungarian

Angle Beam: Displays all three leg components, angular distance, surface distance and depth accounting for leg correction to correct for beam index point of wedge

Angle: 0-85 degrees in 1 degree increments including 0, 30, 45, 60 and 70 as pre-set choices

Reject: 0-85% FSH, completely linear with vertical indication bar

Measurement Types: Single, dual, thru transmission, angle beam, delay lines, contact, immersion, echo to echo, dry couple

Bluetooth: Optional

Standard Inclusions: ECHO FD including 2 GB SD card, li-ion battery, battery charger, transport case, manual with Data XL, USB cable, DAC, AWS software, API 5U, 2 gates, B-Scan, 2oz bottle of couplant and rubber booth with padded wrist strap and stand

Software Options: Corrosion module, floating gate, precision module, pipe curvature correction.

Hardware Options: Magnetic wheel encoder, power bank, alkaline battery tray, spare battery, foot switch, test blocks, cables, probes, couplant, and magnetic pipe stand

RHOS Compliant

CE Certified

Made in USA



Danatronics Corporation, 150A Andover St., Suite 8C, Danvers, MA 01923
Tel: 978-777-0081 • Fax: 978-777-3798 • www.danatronics.com