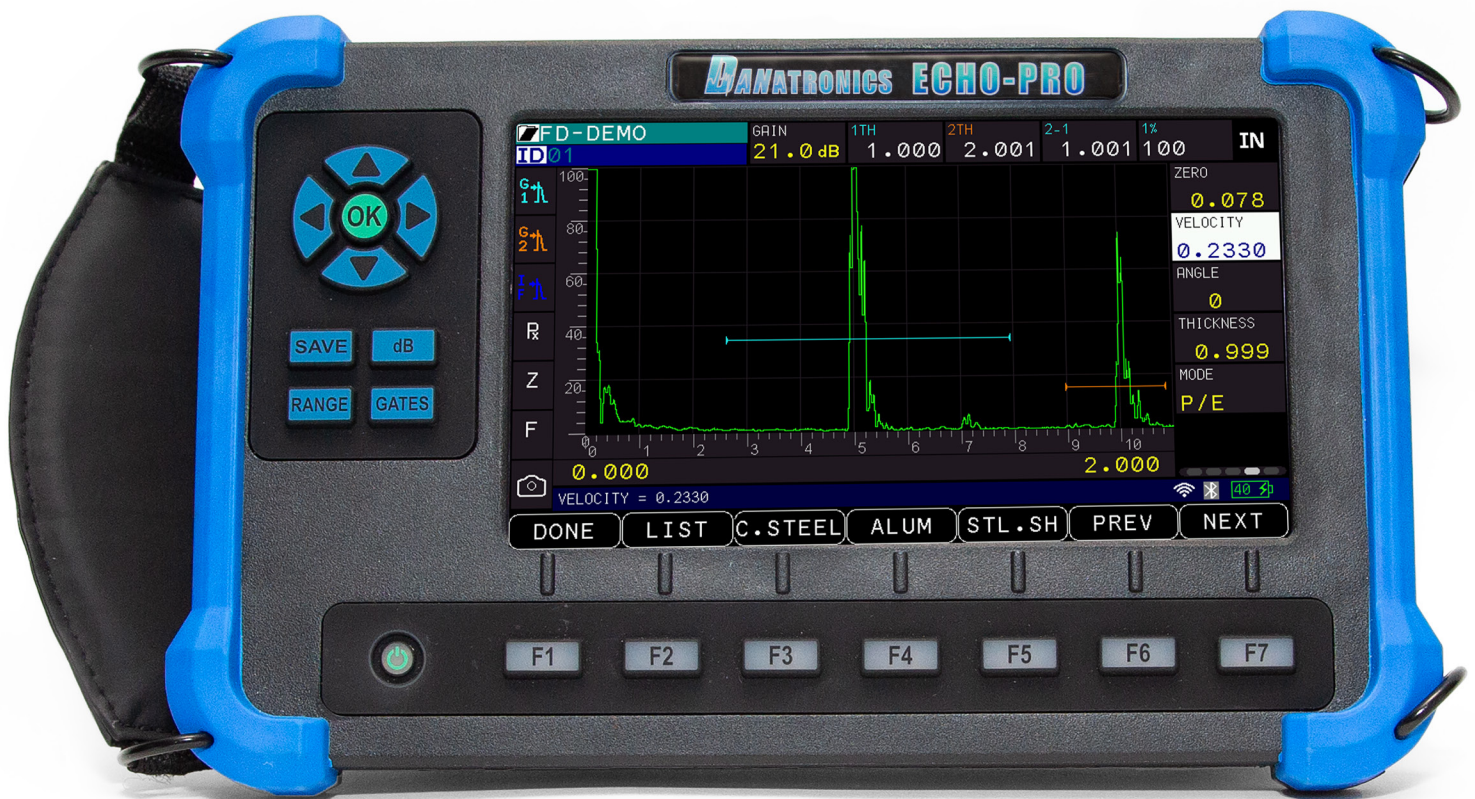


ECHO PRO

Ultrasonic Flaw Detector



- Hybrid touch screen and keypad operation
- 600V Pulser
- Flawview

- Brightest Display on the Market
- 14 Hour Battery Life
- IP67 Rated
- Made in the USA

Next Generation Flaw Detection, Made Easy

Danatronics ECHO PRO represents the latest generation of portable ultrasonic flaw detectors, built on over 70 years of digital ultrasonic expertise. Designed for speed, accuracy, and ease of use, these instruments combine advanced performance with simple, intuitive controls for reliable inspections in the field or on the shop floor.

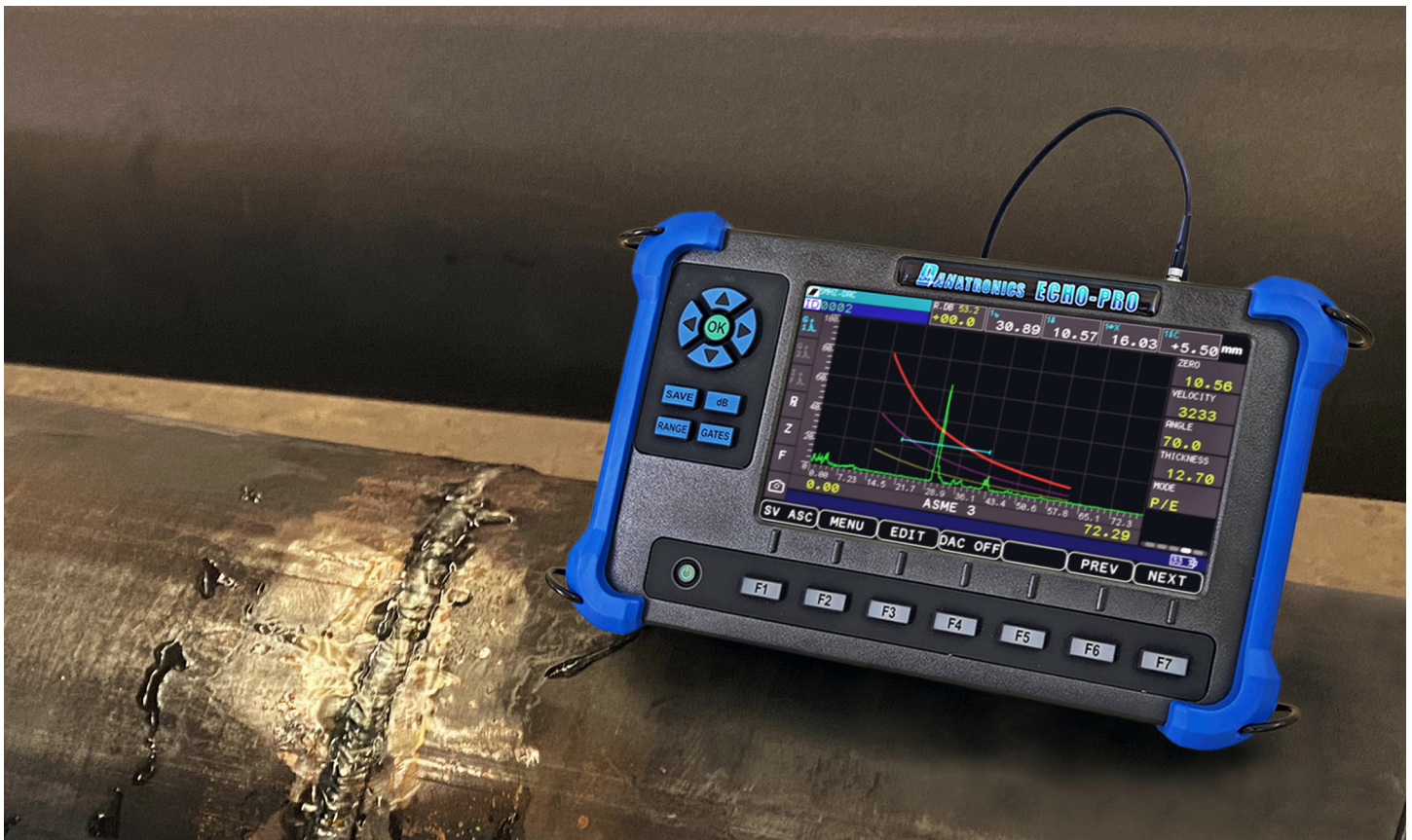
Our flagship ECHO PRO model comes equipped with a full range of standard features, including a built-in datalogger with seamless Excel® export, 2 gates, AWS, API 5UE, DAC, a high-output 600 Volt pulser, and up to 14 hours of continuous battery life. Advanced capabilities such as damping, digital filters, analog and alarm outputs, Wi-Fi, and Bluetooth® are included, with optional enhancements such as interface gates, floating and tracking gates, extended range, and back echo attenuation available to meet specialized needs.

New to the ECHO PRO is FlawView, a real-time visualization feature that helps distinguish between actual flaws and geometry related signals, reducing errors and improving decision-making. Picture looking inside the part as a side view and real time see where the

ultrasonic reflections are coming from...it can't get easier than that!

For users who need a streamlined solution, the ECHO PRO B delivers the same dependable flaw detection performance in the same custom package with a bright display, 2 gates, DAC, TVG and AWS and the piece of mind to know you can quickly and easily upgrade your ECHO PRO B to a full ECHO PRO to add features like datalogger and FlawView. The B model is an ideal choice for applications where essential features and cost-effectiveness are the priority.

Whether you choose the feature-rich ECHO PRO or the straightforward ECHO PRO B, both models are engineered to provide fast, accurate, and dependable ultrasonic inspections in a rugged, portable design.



ECHO PRO Features

- Compatible with a wide variety of Danatronics and common competitors dual and single element transducers
- Change color and VIBRATE on alarm (ideal for inspections in loud environments)
- 10-14 hour battery life with hi-capacity rechargeable battery
- DAC/TVG Standard
- AWS, API5UE
- DGS
- Flawview
- PRF Control
- Back Echo Attenuator
- 600V Pulser (400V max for ECHO PRO B)
- Floating and Interface Gate
- Extended Range
- Inches, mm or μ Sec
- Multiple languages
- micro SD card standard expandable to 32 GB
- Datalogger interfaces with Microsoft Excel™
- Designed for IP67
- Software options are field upgradable and can be added remotely

ECHO PRO Standard Inclusions

The ECHO PRO unit with 7" sunlight readable touch-screen display includes 2 independent gates, DAC, TVG, and AWS software, datalogger, b-scan, enclosure includes protective rubber corners with built in stand and padded hand strap, microSD card, rechargeable Li-ion battery, AC adapter with power cord, USB-C cable, plastic carrying case, couplant, Data XL interface program to export saved readings to p.c. (Microsoft Excel), ASTM E317-15 calibration certificate

ECHO PRO B Standard Inclusions

The ECHO PRO B unit with 7" sunlight readable touch-screen display includes 2 independent gates, DAC, TVG and AWS software, enclosure includes protective rubber corners with built in stand and padded hand strap, microSD card, rechargeable Li-ion battery, AC adapter with power cord, USB-C cable, plastic carrying case, couplant, Data XL interface program to export saved readings to p.c. (Microsoft Excel), ASTM E317-15 calibration certificate

ECHO PRO Software Options

Software options are all field upgradeable

Floating Gate

Floating gate allows the gate to float vertically from -1 to -18 dB for consistent edge depth thickness readings and echo to echo thickness measurements

Interface Gate

Interface gate allows the user to accurately track and measure the distance to a variable interface

Back Echo Attenuator

Back wall attenuator allows for independent gain control of the backwall echo signal

Datalogger

Allows for the use of single element transducers along with up to 2,700 stored application setups with 1 micron resolution (0.0001" or 0.001mm).

B-Scan

B-Scan displays a cross sectional view of the material. Encoded -Bscan also available

Flawview

Interactive view of the tested component

Extended Range

Extended Range increases the display range to 227"-544"

Bluetooth

Allows ECHO PRO to export data such as a thickness reading or file to DataXL Mobile

Wifi

Ability to communicate over WiFi

Corrosion Module

Ultrasonic corrosion gage using primarily dual probes, A and B-scan, echo to echo, datalogger

Precision Module

Ultrasonic precision gage (1 micron resolution) using single element probes, A and B-scan, echo to echo, datalogger

Flaw Sizing

Our range of flaw sizing tools and software gives inspectors the precision, flexibility, and confidence needed for critical evaluations. From industry-standard techniques such as DAC, AWS, DGS, and TVG to cutting-edge visualization tools like our own FlawView. Each solution is designed to meet a specific inspection challenge and deliver accurate, reliable results. FlawView, DAC, TVG and DGS curves can be saved into memory for future use and called up for a quick setup change.

Flaw Sizing Software

Integrated flaw sizing features include:

DGS

Distance Gain Size (DGS): Relates the amplitude of the echo from a reflector to that of a flat bottom hole, side drill hole or back at the same depth or distance and amplitude accounting for near field. A wide variety of commonly used DGS probes with their associated curves are conveniently pre-programmed into your ECHO PRO!

API5UE

American Petroleum Institute (API) code for Ultrasonic Evaluation of Pipe Imperfections. API5UE sizes flaws by referencing a known flaw to create a Peak Curve, then showing how the scanned discontinuity relates to that curve.

FlawView

FlawView introduces a smarter way to interpret inspection results by giving operators a clear, interactive view of the tested component. Its customizable side view images can model a wide range of shapes and weld types, including curved profiles and complex joints. Paired with real-time visualization, FlawView makes it easier to tell the difference between an actual defect and a harmless geometric feature helping to reduce unnecessary rework and improve decision making. Flaw view can also be used in split screen mode to see A scan and flawView simultaneously.

FlawView takes inspection analysis to the next level with interactive scan planning and real-time data visualization. Capable of modeling complex geometries, FlawView helps distinguish between genuine flaws and geometry-related signals, reducing false calls and unnecessary repairs. When used alongside our other sizing techniques, it adds an extra layer of clarity and efficiency to your inspection process.

TVG

Time Varied Gain (TVG) adjusts instrument gain to 80% screen height so the echo amplitude of a given reflector is displayed at a constant display height regardless of the distance to the reflector. Echo height can then be adjusted via the gain control.

DAC

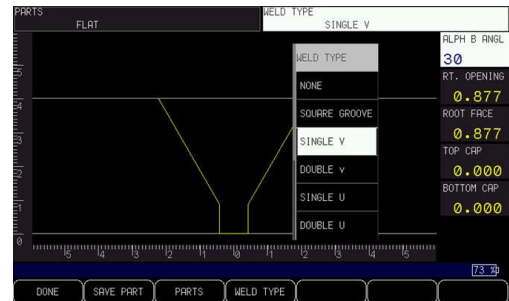
Distance Amplitude Correction (DAC) Adjusts for signal amplitude as a function of time and plots a visual curve to show the relationship. Available curves include: ASME, ASME-3, JIS and Custom

AWS D1.1

Ameican Welding Society (AWS) code for D rating. Once calibrated, turning on AWS software displays the A, C and D calculations



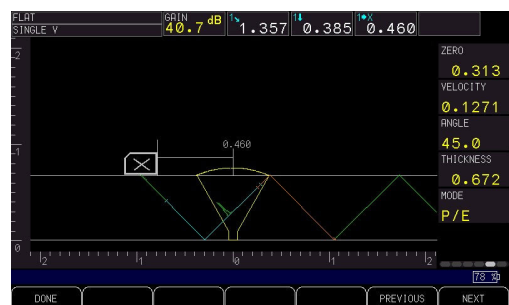
Edit and and select part type



Edit Weld type



Split Screen - A-Scan and FlawView



Full Screen FlawView

Data XL, Data XL Mobile and Data XL PRO

At Danatronics we believe managing your saved data should be simple. As such, every flaw detector includes a free interface program we call Data XL available for download on our website.

Data XL

Data XL is the link to your computer. It's what you use to transfer data too and from your ECHO PRO to your computer.

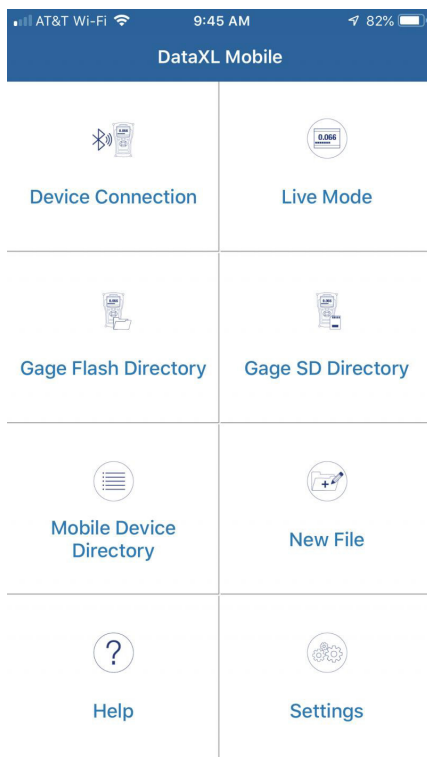
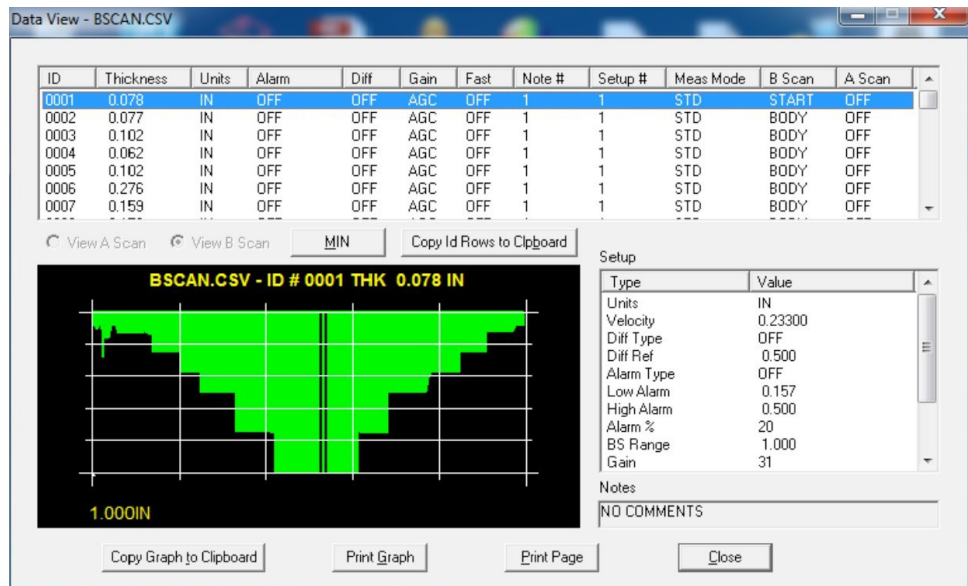
Data XL saves readings to .csv files that can be used in any spreadsheet program such as Microsoft Excel or Google Sheets. It's also used to update products to the latest version of software. New features are always being released, keeping your ECHO PRO updated ensures you're taking advantage of everything ECHO PRO has to offer

Data XL PRO

DataXL Pro (pictured right) is a super charged, paid, version of our popular DataXL Program. DataXL Pro can be used to display both A-Scan and B-Scan images of your readings on your computer. DataXL Pro can also be used to interface with Ultrapipe. DataXL Pro is available as both an individual user license and as a site license for your entire team. as such as Microsoft Excel or Google Sheets.

Key Features

- Write custom batch programs
- Simple double click the file to be transfer and Microsoft Excel™ with all i.d.'s and readings are displayed• Create file and send them to the ECHO PRO
- Merge files using Data XL
- Saved stored application setups can be sent to the ECHO PRO or multiple ECHO PRO units to ensure reliability and repeatability
- Update firmware (latest version of operating software is available on our website)
- Send Bit Maps (screen shots) to further document your inspections



Data XL Mobile

DataXL Mobile (pictured left) allows ECHO PRO flaw detectors to export data such as thickness readings or files to another device via internal bluetooth. Compatible with both iOS and Android phones and tablets, DataXL Mobile streamlines the transfer of information wherever you are. In live mode, the app goes a step further by displaying real-time thickness readings straight on your mobile device for added convenience in the field.

DataXL Mobile for ECHO PRO is coming soon in the Apple store and Google Play Store.

Specifications ECHO PRO

General

Size: 9.9" x 6.16" x 2.50" (252 mm x 157 mm x 64 mm)

Weight: 3.6 lbs (1.63 kg) with internal rechargeable battery.
2.6 lbs (1.18 kg) without battery

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

Enclosure: Custom case with rubber over mold and padded hand strap, built in stand with variable angle, ¼-20 connector for magnetic pipe stand and 4 point chest harness optional

Battery Life: 10-14 hours (depending on parameters)

Battery Type: 7.2V, 13.6Ahr rechargeable lithium-ion

Battery storage Temperature: 32 °F to 122 °F (0 °C to 50 °C)

Power Requirements: AC Mains: 100-240 VAC, 50-60 Hz 1.4A max Input

Units: inches, mm or µsec

Communication: USB, Wi-Fi 2.0, Bluetooth, RS-232 (Optional)

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

Standard Inclusions (ECHO PRO B): Digital Ultrasonic flaw detector with 7" color sunlight readable touch screen display including: 2 independent gates, DAC, AWS software, enclosure includes protective rubber corners with built in stand and padded hand strap, microSD card, rechargeable Li-ion battery, AC adapter with power cord, USB-C cable, plastic carrying case, couplant, Data XL interface program, ASTM E317-15 calibration certificate

Standard Inclusions (ECHO PRO): Digital Ultrasonic flaw detector with 7" color sunlight readable touch screen display including: 2 independent gates, DAC, TVG and AWS software, datalogger with B-Scan, Bluetooth, Wifi, enclosure includes protective rubber corners with built in stand and padded hand strap, microSD card, rechargeable Li-ion battery, AC adapter with power cord, USB-C cable, plastic carrying case, couplant, Data XL interface program to export saved readings to p.c. (Microsoft Excel), ASTM E317-15 calibration certificate

Certifications: CE certified, RHOS compliant, designed for IP67, ASTM E317-15 calibration certificate included with gage

Warranty: Limited 2 year warranty under normal use on parts and labor for the unit. Optional Dan-A-Care to add up to 3 more years

Display

Display: 7" sunlight readable Multi-Touch display with Wide VGA (800x480 pixels)

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

Interface: Operate with multi- touch screen and/or keyboard - complete one-hand operation

Inputs/Outputs

USB Port: USB-C (Supports USB 2.0 On-The-Go (OTG), Power in to charge the unit, Display output)

RS-232 Port: Optional

Video Output: Wide VGA output via USB-C (Requires USB-C to HDMI cable)

Analog Output: 1 analog output, Selectable 1 V/10 V Full Scale, 4mA max

Alarm Output: 3 alarm outputs, 5 V TTL, 10 mA

Trigger I/O: Trigger input, 5V TTL; Trigger output, 5V TTL, 10 mA max

Encoder Inputs: 2-axis encoder input

Charger Input: 12V DC, 5A

Transducer Connectors: Dual LEMO 00

Measurement

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

Measurement Rate: 10 Hz -2k Hz adjustable

Range: 0.353" to 277" (8.96 mm to 7035.8 mm) @ 5,900 m/s (0.2320 in./µ) Optional extended range 554" (14071.6mm)

Zoom: Zooms gate 1 width to minimum range capability

Display Delay: -0.018" to 276.647" (8.96 to 7035.8mm) @ longitudinal velocity in steel

Zero Offset: 0-2387 µsec.

Velocity: 0.0250"/µs to 0.6000"/µs (635 m/s to 15240 m/s)

Alarm: Dynamic change of color and vibrate on alarm for echo in gate, echo above DAC positive, DAC negative, gate, minimum depth alarm and polarity change (phase reversal)

Peak Hold: Holds curve of ECHO envelope with live echo. Peak on, Peak hold, Peak off, peak pitch memory (audible chirp based on maximum echo amplitude)

Freeze: Freezes for data storage and waveform viewing analysis - ideal for high temperature measurements

Waveform: Filled or outlined

Angle Beam: Displays all three leg components, angular distance, surface distance and depth (automatically displayed once an angle is entered) accounting for leg correction to correct for beam index point of wedge, fourth measurement box is gate 1 amplitude

Refracted Angle: 0° to 85° in 1° increments including 0, 30, 45, 60 and 70 as pre-set choices

Gate (1, 2): Thickness, Soundpath, Projection, Depth, Amplitude, Time-Of-Flight, Min./Max. Depth, Min./Max. Amplitude

Echo-to-Echo: Standard Gate 2-Gate 1, Optional IF Gate Tracking

Corrosion Mode (Optional): Zero-cross measurement algorithm, V-Path correction, Single or Echo-to-Echo, Encoded B-scan

Precision Mode (Optional): Ultrasonic precision gage (1 micron resolution) using single element probes, A and B-scan, echo to echo, datalogger

Other measurements: Overshoot (dB) value for DGS/TVG, ERS (equivalent reflector size) for DGS/AVG, AWS D1.1/D1.5 A, B, C and D values, Reject Value, Echo to Ref dB values

Specifications ECHO PRO

Measurement - Flaw Sizing

Flaw Sizing: DAC, TVG, DGS (DGS optional for ECHO PRO B)

DAC points: Up to 50 points, 110 dB dynamic range

Special DAC modes: Custom DAC (up to 6 curves), 20-80% View

Curved surface correction (Optional): Standard OD or Bar correction for Angle Beam measurements

Curves: TVG/DGS

Pulser

Pulser: Tunable Square Wave (1-25 MHz) or spike

Pulse Repetition Frequency(PRF): 10- 2000 Hz in 10 Hz increments

Pulser Voltage: 50V-600V (50V to 400V for ECHO PRO B) in 5V increments

Pulse Width: Adjustable from 20 ns to 2,000 ns (30MHz-0.5 MHz)

Damping: 50, 63, 150, 400 Ω

Receiver

Gain: 0-110db in (.1db increments for 0-100db)

Max Input Signal: 20 V p-p

Receiver Input Impedance: 400 $\Omega \pm 5\%$

Receiver Bandwidth: 0.5 MHz to 25 MHz (-3 dB)

Filters: TBD

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

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

Resolution: 1% FSH, amplifier accuracy ± 1 dB

Reject: 0-80% FSH, completely linear with vertical indication bar

Amplitude Measurement: 0 to 100% full screen height with 1% resolution

Measurement Rate: Equivalent to PRF in all modes

Calibration

Auto Calibration: Velocity, Zero Offset, Straight Beam (First Backwall or Echo-to-Echo), Angle Beam (Soundpath or Depth)

Test Modes: Pulse Echo, Dual, or Through Transmission

Gates

Measurement Gates: 2 fully independent gates for amplitude and TOF measurements, Optional Interface gate

Gate Start: Variable over entire displayed range

Gate Width: Variable from Gate Start to end of displayed range

Gate Height: Variable from 2 to 95% full screen height

Alarms: Positive and Negative Threshold, Minimum Depth (Gate 1 and Gate 2)

Customizable Autoxx: Default Auto80 sets to 80% of FSH customizable from 40 to 95% FSH. Hot keys for 40, 60 and 80.

Gate Options: Floating, tracking and interface

Datalogger (optional for ECHO PRO B)

Datalogger: 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

Data storage: 100,000 IDs onboard, removable MicroSD card standard, expandable to 32Gb 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 setup files

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

Hardware/Software

Software Options: Corrosion mode, precision mode, datalogger, Oxide Scale, bluetooth, floating gate, tracking gate, interface gate, pipe curvature correction, backwall echo attenuator (BEA), extended range up to 554"(14071.6mm or 14.07M), Flawview, DGS, upgrade from ECHO PRO B to full ECHO PRO

Hardware Options: Magnetic wheel encoder, RS-232, heavy duty bail, spare battery, external charger, foot switch, test blocks, cables, probes, couplant, and magnetic pipe stand, heavy duty Pelican case, chest harness

		ECHO PRO Flaw Detector	PRO B Basic Flaw Detector
Item	Specification	ECHO PRO	ECHO PRO B
Measurement Gates	2 fully independent gates for amplitude and TOF measurements, Optional Interface gate	✓	✓
Damping	Adjusts amplitude of signal. 4 settings - 50,63,150 and 400 Ohms	✓	✓
Energy	Set the strength of the signal from 50-400 Volts in 5 volt increments (600V optional)	✓	✓
Locks	Locks settings so they can't be changed	✓	✓
Hybrid Operation	Ultrasonic corrosion gage using primarily dual probes, A and B-scan, echo to echo, datalogger	✓	✓
Drag	Pinch, Zoom and drag many features such as gates, delay, gain, and range	✓	✓
Stored Setups	Storage and recall of 2700 calibration and setup files	✓	✓
Autocal	Distance Amplitude Correction (DAC), ASME, ASME 3, JIS and Custom	✓	✓
AWS	Ameican Welding Society (AWS) code for D rating	✓	✓
DAC	Adjusts for signal amplitude as a function of time	✓	✓
TVG	Time Varied Gain - adjusts instrument gain so the echo amplitude of a given reflector is displayed at a constant display height regardless of the distance to the reflector	✓	✓
API5UE	American Petroleum Institue (API) code for Ultrasonic Evaluation of Pipe Imperfections	✓	○
DGS	Relates the amplitude of the echo from a reflector to that of a flat bottom hold at the same depth or distance	✓	○
Flawview	Interactive view of the tested component	✓	○
Curved Surface Correction	Standard OD or Bar correction for Angle Beam measurements	✓	○
600V Pulser	Maximum allowed energy setting (400V max for ECHO PRO B)	✓	○
PRF	Ability to adjust Pulse Repitition Frequency	✓	○
Bluetooth	For interface with DataXL Mobile IOS and Andriod App (requires hardware modification)	✓	○
WiFi	Ability to communicate over WiFi	✓	○
Filters	Allows broadband or narrowband settings to match the requirements of a given application	✓	○
Datalogger	100,000 IDs onboard, removable MicroSD card standard, expandable to 32Gb 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 setup files	✓	○
B-Scan (non-encoded)	Displays a cross section of the test piece	✓	○
B-Scan (encoded)	Displays a cross section of the test piece using the EZ Scan magnetic wheel linear access encoder	○	○
RS232	RS232 Port (requires hardware modification)	○	○
Floating Gate	Floats gate at -1 to -18dB for cosistent, 60 Hz update rate edge depth thickness readings	○	○
Interface Gate	Accurately track and measure the distance to a variable interface	○	○
Back Echo Attenuator	Allows independent gain control of the backwall echo signal	○	○
Extended Range	Increases the display range to 227"-544"	○	○
Corrosion Mode	Ultrasonic corrosion gage using primarily dual probes, A and B-scan, echo to echo, datalogger	○	○
Precision Mode	Ultrasonic precision gage (1 micron resolution) using single element probes, A and B-scan, echo to echo, datalogger	○	○
Oxide Scale	Simultaneously displays the thickness of the oxide layer and boiler tube thickness	○	○

○ = Software Options that are field upgradeable. Encoded B-scan requires encoder



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Tel: 978-777-0081 • Fax: 978-777-3798 • www.danatronics.com



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

INITIAL SETTINGS	
LOCK	OFF
OPTIONS	
RESET	
RESOLUTION	0.001 IN
UNITS	IN
VIBRATE	OFF
ABOUT	V1.99.1
AUTOOFF	5 MIN
BEEPER	OFF
CLOCK	07:
GAGE TYPE	COR
UP/DOWN TO SELECT	
BACK	

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

ECHO Series

Hand-Held Digital Ultrasonic Corrosion/Precision Thickness Gage and Flaw Detector



- Simple to Operate
- Hand Held
- Field Upgradeable Options
- IP67 Rated
- Corrosion, Precision, and Flaw Detection Modes
- Live A-scan
- Made in the USA

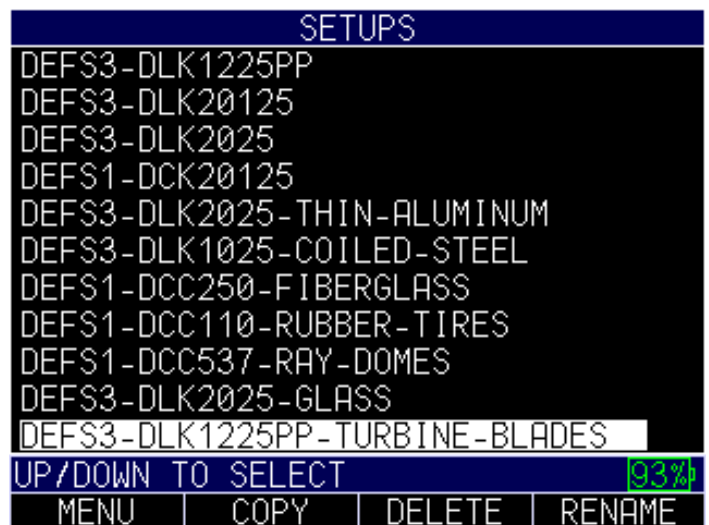
ECHO 7 Precision Thickness Gage

ECHO 7 precision hand-held ultrasonic thickness gages are designed for use with single element contact, delay line and immersion transducers to provide a wide thickness range and up to 1 micron resolution. ECHO 7 can save up to 2,700 custom applications setups allowing the operator to quickly and easily switch transducers and setups on the fly for unique and separate tasks.



Standard Features

- 0.006-23" range in steel
- 1 micron resolution (0.0001" or 0.001 mm)
- Single element, contact, delay line and immersion transducers (1-30 MHz)
- Store and recall up to 2,700 setups
- Multiple modes for challenging applications
- 30 Mhz bandwidth
- Square wave Pulser
- Zoom Auto Tracking
- Auto Phase Reversal Detection with alarm
- Supervisor and other locks



2,700 stored custom application setups.

Typical Applications

- Castings
- Turbine blades and wax molds
- Plastic parts including bottles, pipes, trays and toys
- Coil steel and automotive body panels
- Fiberglass and gel coatings
- Velocity verification for ductile and gray iron (Velocimeter)
- Aluminum, glass, ceramics, zinc, and more



ECHO 8 Corrosion and Precision Thickness Gage

ECHO 8 represents our most capable ultrasonic thickness gage combining both corrosion and precision thickness into one small instrument. Quickly switch transducers and “gage type” to essentially non-destructively measure any engineered material. The ECHO series can keep track of up to 2,700 stored setups, so switching from materials with different thicknesses and alarm values is simple.

Typical Applications

- Inspection Companies—all-purpose gage for measuring any engineered material thickness
- Airplane Inspection (thin aluminum, plastic windows, and rubber tires)
- Marine Surveyors (fiberglass & steel)



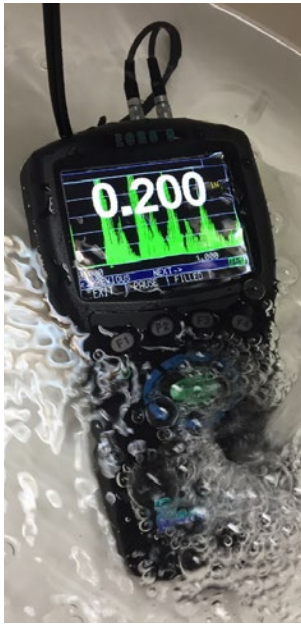
ECHO series in split screen A and B-Scan with optional EZ-Scan 6 magnetic wheel encoder

Standard Features

- Includes all features from the ECHO 7 and ECHO 9
- Switch from dual to single element transducers
- Switch resolution from .01” to .001” to .0001”
- Store and recall up to 2,700 applications setups
- Rechargeable batteries good for more than 24 hr.
- ECHO 8DLW includes custom rubber boot with stand



Environmentally Tough, Ergonomically Superior!



Environmentally Tough!

The ECHO series was designed from the ground up. With more than 85 combined years in designing, manufacturing and using hand held ultrasonic thickness gages, Danatronics left no detail uncovered. From its new case designed for IP67, to its easy to read sunlight readable 3.5" color display, you will find the ECHO series combines practical features with a simple, clean design built for years of field service and durability.

Ergonomically Superior!

With its new 3.5" sunlight readable display, The ECHO series offers many display formats to suit any age operator and reduce fatigue. So whether you want to view the largest possible numbers or would prefer more text on screen, ECHO has you covered.

ECHO is also perfectly balanced and makes holding it in one hand possible and simple, all keys can be reached you're your thumb...no clumsy joy sticks or second functions needed. There is even a world's first vibrate on alarm to inform the operator any pre-set thickness threshold has been tripped which is great for tired operators and testing in loud environments.



Hardware Options

- Rubber boot with built-in finger strap and bail (stand)
- Chest harness for rope access
- Magnetic wheel encoder
- Footswitch
- Remote power bank
- Magnetic pipe stand
- Heavy duty bail with variable angle adjustment and anti-slip base
- RS-232
- Bluetooth



Heavy duty bail



Chest harness for rope access



Magnetic pipe stand

Data XL and Data XL PRO

At Danatronics we believe managing your saved data should be simple. As such, we include with every thickness gage a free interface program we call Data XL. Data XL saves readings to .csv files that can be used in any spreadsheet program such as Microsoft Excel or Google Sheets.

Here are some advantages:

- Write custom batch programs
- Simple double click the file to be transfer and Microsoft Excel™ with all i.d.'s and readings are displayed
- Create file and send them to the ECHO
- Merge files using Data XL
- Saved stored application setups can be sent to the ECHO or multiple ECHO units to ensure reliability and repeatability
- Update firmware (latest version of operating software is available on the support tab of www.danatronics.com)
- Send Bit Maps (screen shots) to further document your inspections

Ultrapipe Interface

Echo interfaces with Ultrapipe and PSAIM software from Siemens.

DANATRONICS

ECHO 9

DESIGNED
FOR IP67

ECHO 9-YOU ASKED... WE LISTENED!

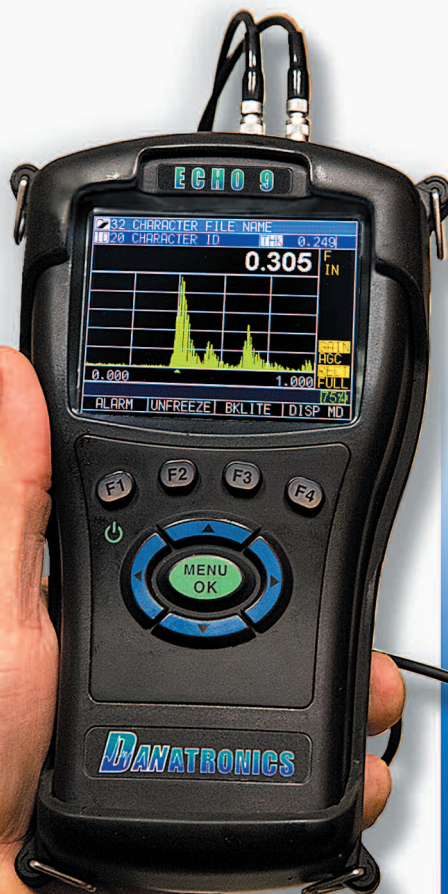
AS THE POPULARITY OF OUR HAND-HELD ULTRASONIC THICKNESS GAGES AND CUSTOMER BASE HAS GROWN, SO HAVE YOUR GREAT SUGGESTIONS TO REFINE OUR EXTENSIVE LINE; YOU ASKED AND WE LISTENED.

"I would like a bigger display" ... ECHO has a high resolution 3.5" color, sunlight readable display.

"I would like a longer filename, I.D. string and more memory" ... ECHO has a micro SD card with capacity of up to 32GB, 32 character file name and 20 character I.D. and Bluetooth.

"I would like on board, re-chargeable batteries" ... ECHO offers a high capacity, re-chargeable Li Ion battery as well as an optional convenient Alkaline tray.

"I would like to continue to buy from Danatronics as you are extremely responsive" ... As we grow, our commitment to immediate response and customer satisfaction remain the cornerstone of who we are. Our staff is fully committed to your complete satisfaction.



DANATRONICS
NDT

Made Easy

ECHO Series

Hand-Held Digital Ultrasonic Corrosion/Precision Thickness Gage and Flaw Detector



- Simple to Operate
- Hand Held
- Field Upgradeable Options
- IP67 Rated
- Corrosion, Precision, and Flaw Detection Modes
- Live A-scan
- Made in the USA

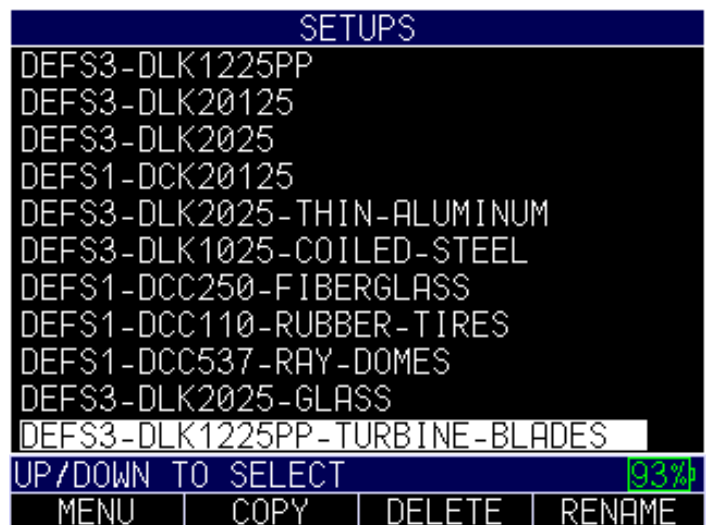
ECHO 7 Precision Thickness Gage

ECHO 7 precision hand-held ultrasonic thickness gages are designed for use with single element contact, delay line and immersion transducers to provide a wide thickness range and up to 1 micron resolution. ECHO 7 can save up to 2,700 custom applications setups allowing the operator to quickly and easily switch transducers and setups on the fly for unique and separate tasks.



Standard Features

- 0.006-23" range in steel
- 1 micron resolution (0.0001" or 0.001 mm)
- Single element, contact, delay line and immersion transducers (1-30 MHz)
- Store and recall up to 2,700 setups
- Multiple modes for challenging applications
- 30 Mhz bandwidth
- Square wave Pulser
- Zoom Auto Tracking
- Auto Phase Reversal Detection with alarm
- Supervisor and other locks



2,700 stored custom application setups.

Typical Applications

- Castings
- Turbine blades and wax molds
- Plastic parts including bottles, pipes, trays and toys
- Coil steel and automotive body panels
- Fiberglass and gel coatings
- Velocity verification for ductile and gray iron (Velocimeter)
- Aluminum, glass, ceramics, zinc, and more



ECHO 8 Corrosion and Precision Thickness Gage

ECHO 8 represents our most capable ultrasonic thickness gage combining both corrosion and precision thickness into one small instrument. Quickly switch transducers and “gage type” to essentially non-destructively measure any engineered material. The ECHO series can keep track of up to 2,700 stored setups, so switching from materials with different thicknesses and alarm values is simple.

Typical Applications

- Inspection Companies—all-purpose gage for measuring any engineered material thickness
- Airplane Inspection (thin aluminum, plastic windows, and rubber tires)
- Marine Surveyors (fiberglass & steel)



ECHO series in split screen A and B-Scan with optional EZ-Scan 6 magnetic wheel encoder

Standard Features

- Includes all features from the ECHO 7 and ECHO 9
- Switch from dual to single element transducers
- Switch resolution from .01” to .001” to .0001”
- Store and recall up to 2,700 applications setups
- Rechargeable batteries good for more than 24 hr.
- ECHO 8DLW includes custom rubber boot with stand



ECHO FD Flaw Detector

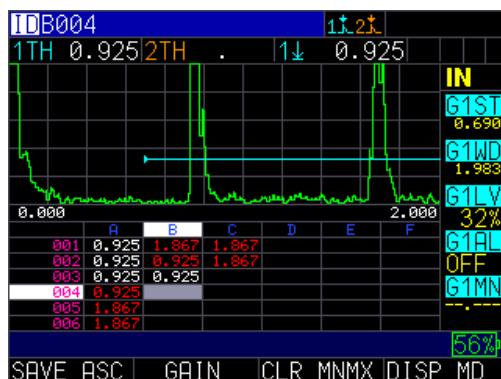


ECHO FD is the ideal instrument for portable applications such as rope access, storage tanks and bridges. ECHO FD offers the most ergonomically balanced unit on the market today allowing for easy left or right hand use with just one thumb to access all keys. Even operating the unit in complete darkness is simple. We are also the only manufacturer to offer changing of color while

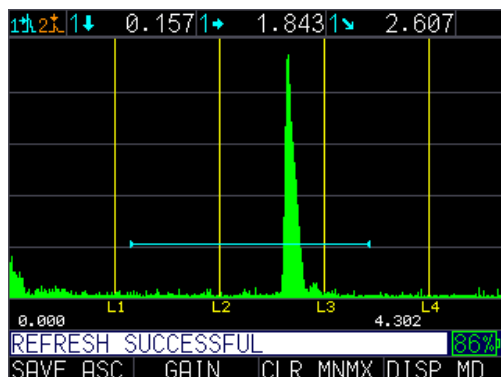
vibration on alarm for operation in loud environments.

The ECHO, when in flaw detection mode, is an everyday instrument capable of performing a wide variety of ultrasonic tests. You will be amazed at the many included standard features such as 2 independent gates, fast-60 Hz. display update rate, DAC, AWS, B-scan, Grid View and 2 GB of micro SD card memory as well as internal memory are all standard. Best of all, ECHO FD is designed and made in the USA so full factory support is only a call or click away.

ECHO FD offers a wide variety of unique and easy to use software features such as Grid View, Peak Pitch Memory, supervisor lock, floating and tracking gate, leg indicator, auto 80 FSH, triple DAC, 13 hour battery life,* AWS software, Reference Gain, echo to echo and Grid View to view A-scan and grid simultaneously.



Grid view



Leg indicator

Standard Features

- Peak Pitch Memory – changes the audible chirp when a probe's peak signal is determined
- Supervisor lock – allows the ability to lock parameters with a password to prevent accidental changes
- Floating and tracking gates – see software options
- Custom color pallet – allows changes to text, grid, background and more for easy viewing
- Auto 80, automatically places signal within the gate to 80 Full Screen Height (FSH)
- Triple DAC, allow the simple creation and storage of single, triple and Japanese (JIS) DAC curves
- Continuous 13 hour battery life under factory default settings
- AWS software, displays the D-rating along with A and C values in the 3 measurement boxes
- Reference gain...includes dB step to quickly add or subtract scanning gain such as 2 or 6 dB
- Echo to echo, ideal for measuring painted parts

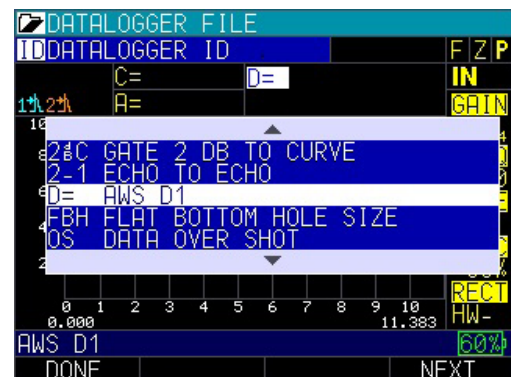
Additional Options

Floating gate: allows for 60 Hz. update rate while maintaining consistent thickness readings while floating the gate. This feature also includes tracking gate for echo to echo thickness readings as well as V-path correction for a variety of dual transducers.

Bluetooth: allows Bluetooth interface with Bluetooth devices set up to interface with ECHO.

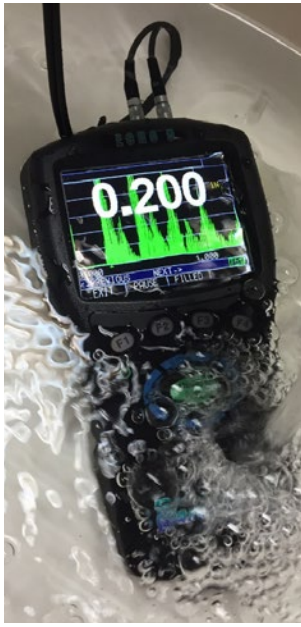


ASME DAC-3



AWS D-rating

Environmentally Tough, Ergonomically Superior!



Environmentally Tough!

The ECHO series was designed from the ground up. With more than 85 combined years in designing, manufacturing and using hand held ultrasonic thickness gages, Danatronics left no detail uncovered. From its new case designed for IP67, to its easy to read sunlight readable 3.5" color display, you will find the ECHO series combines practical features with a simple, clean design built for years of field service and durability.

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With its new 3.5" sunlight readable display, The ECHO series offers many display formats to suit any age operator and reduce fatigue. So whether you want to view the largest possible numbers or would prefer more text on screen, ECHO has you covered.

ECHO is also perfectly balanced and makes holding it in one hand possible and simple, all keys can be reached you're your thumb...no clumsy joy sticks or second functions needed. There is even a world's first vibrate on alarm to inform the operator any pre-set thickness threshold has been tripped which is great for tired operators and testing in loud environments.



Hardware Options

- Rubber boot with built-in finger strap and bail (stand)
- Chest harness for rope access
- Magnetic wheel encoder
- Footswitch
- Remote power bank
- Magnetic pipe stand
- Heavy duty bail with variable angle adjustment and anti-slip base
- RS-232
- Bluetooth



Heavy duty bail



Chest harness for rope access



Magnetic pipe stand

Data XL and Data XL PRO

At Danatronics we believe managing your saved data should be simple. As such, we include with every thickness gage a free interface program we call Data XL. Data XL saves readings to .csv files that can be used in any spreadsheet program such as Microsoft Excel or Google Sheets.

Here are some advantages:

- Write custom batch programs
- Simple double click the file to be transfer and Microsoft Excel™ with all i.d.'s and readings are displayed
- Create file and send them to the ECHO
- Merge files using Data XL
- Saved stored application setups can be sent to the ECHO or multiple ECHO units to ensure reliability and repeatability
- Update firmware (latest version of operating software is available on the support tab of www.danatronics.com)
- Send Bit Maps (screen shots) to further document your inspections

Ultrapipe Interface

Echo interfaces with Ultrapipe and PSAIM software from Siemens.

ECHO Series

Hand-Held Digital Ultrasonic Corrosion/Precision Thickness Gage and Flaw Detector



- Simple to Operate
- Hand Held
- Field Upgradeable Options
- IP67 Rated
- Corrosion, Precision, and Flaw Detection Modes
- Live A-scan
- Made in the USA

The Ultimate in Portable Ultrasonic Inspection

Our ECHO series represents a breakthrough in portable ultrasonic inspection. The ECHO series can quickly and easily switch from corrosion or precision thickness gaging, to flaw detector all offered in a rugged, custom package. The perfect size of fit and function! Hold the ECHO in your hand and you will agree no detail has been overlooked and the ergonomics are unmatched by any thickness gage in the industry! The new ECHO series comes in several configurations. ECHO 9 is our corrosion gage using dual transducers, ECHO 7 is our precision thickness gage with 1 micron resolution using single element transducers and ECHO 8 is the ultimate unit combining corrosion and precision thickness gage utilizing both dual and single element transducers. ECHO FD is our flaw detector.

ECHO series was designed specifically as a platform to allow the instrument total flexibility. What this means is you are never stuck with just a basic model, but rather, an instrument that can expand with you as your business and applications expand. The ECHO series is available in many configurations as listed in the models chart. An inspection company may be required to do every day thickness surveys requiring a live waveform and datalogger and also need to perform AWS weld inspection work; the model for you would be the ECHO 9FD allowing you to quickly and easily switch from corrosion to flaw mode in seconds. We also address a wide variety of features and budgets to meet your

every need. The platform allows for quick updating of software directly from the keypad so unlocking the unlimited potential of the ECHO platform is simply a few keystrokes away.

The ECHO series has a remarkable sunlight readable 3.5" color display, up to 32 GB of micro SD memory, built-in rechargeable high capacity Li Ion battery all packaged in a custom case designed for IP67 rating. ECHO Series can measure from 0.020" to 23" in steel in corrosion mode or as thin as 0.006" in steel when configured as a precision thickness gage.



ECHO 9 Corrosion Thickness Gage

Our ECHO 9 is our premier corrosion thickness gage with a wide thickness range, able to be used with a variety of dual transducers as well as a selection of single element and angle beam probes. Similar to our precision thickness gages, ECHO 9 can save and store 2,700 custom setups.

Typical Applications

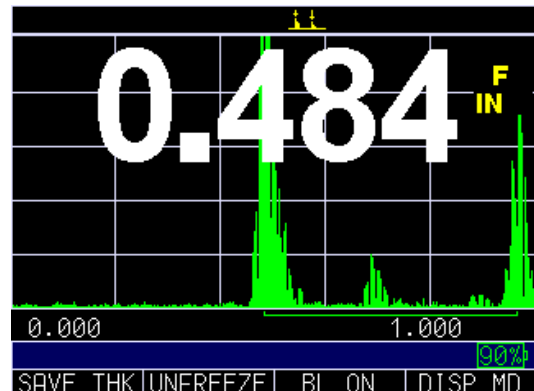
- Boiler tubes
- Pressure vessels
- Storage tanks
- Ship hulls
- Pipes
- Steel beams on bridges

Standard Features

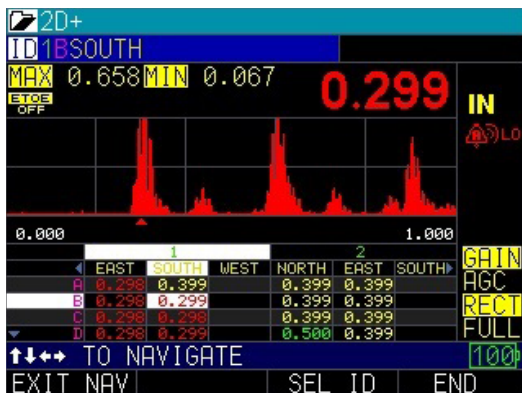
- Compatible with a wide variety of Danatronics dual and single element transducers
- Wide thickness range (.020" to 23" depending on gage type, material and transducer)
- Coating Thickness and substrate thickness displayed simultaneously on gage with live waveform using standard dual transducers
- High temperature probes available up to 950F/509C (intermittent use)
- Temperature correction
- File compare features shows old readings along with new readings for datalogger versions (real-time corrosion monitor)
- Available angle beam option
- Gridview
- Password lock
- Supervisor and other locks
- 2,700 stored setups
- Change color and vibrate on alarm



ECHO 9 – Base model includes Echo to Echo



ECHO 9W – Includes Waveform, Coating Thickness, Temperature Correction



ECHO 9DL – Includes Datalogger, B-scan, Temperature Correction. Gridview A-scan shown above.



ECHO 9DLW – Includes Waveform, Datalogger, B-scan, Coating Thickness, Temperature Correction, Rubber Boot

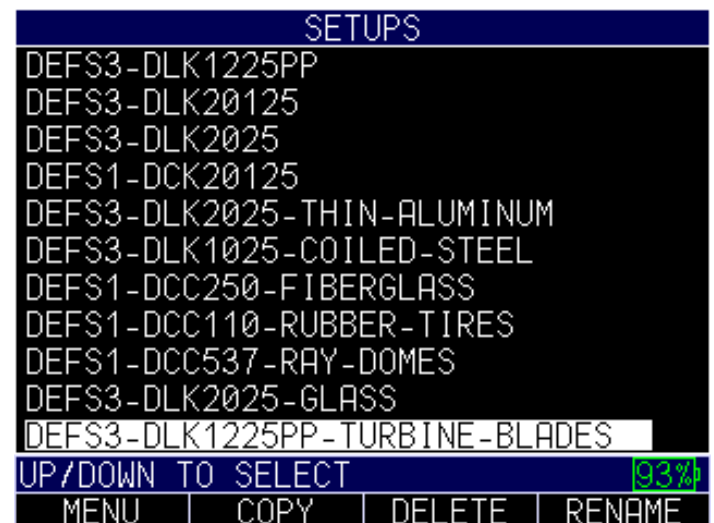
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- Castings
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ECHO FD Flaw Detector

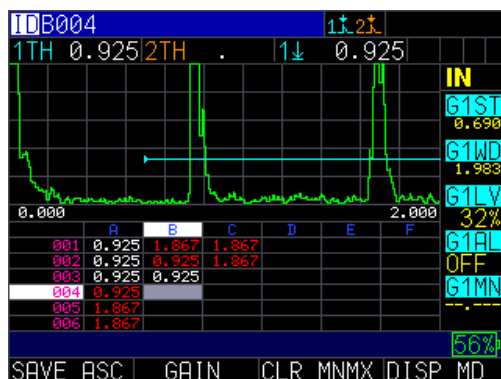


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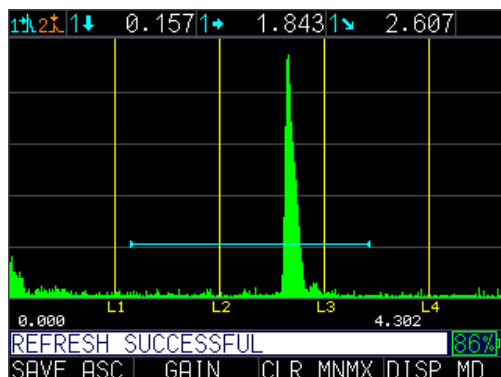
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Grid view



Leg indicator

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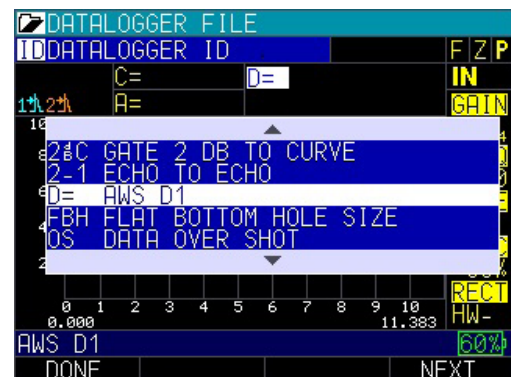
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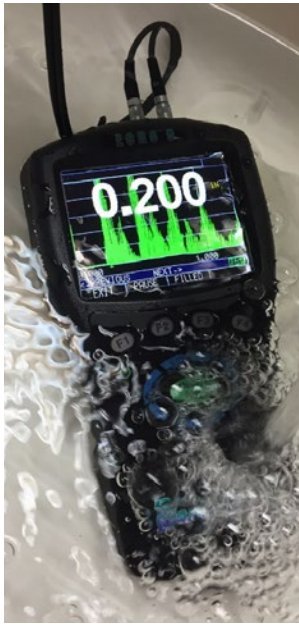


ASME DAC-3



AWS D-rating

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- Footswitch
- Remote power bank
- Magnetic pipe stand
- Heavy duty bail with variable angle adjustment and anti-slip base
- RS-232
- Bluetooth



Heavy duty bail



Chest harness for rope access



Magnetic pipe stand

Data XL and Data XL PRO

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Here are some advantages:

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Ultrapipe Interface

Echo interfaces with Ultrapipe and PSAIM software from Siemens.



AFFORDABLE EHC-03 ULTRASONIC THICKNESS GAGE



With more than 75 years of world-wide experience in ultrasonic design, Danatronics is pleased to welcome our EHC-03 to our corrosion thickness gage family. The EHC-03 is designed to accurately and non-destructively measure metal structures subject to corrosion.

The EHC-03 is packaged in our field proven IP54 case used in our popular EHC-09 series.

The EHC-03 represents a quality, ultrasonic thickness gage designed to provide years of

unprecedented measurements all at an entry level price. With the new Q-bar, even the most inexperienced operators can quickly determine if a thickness reading is stable. The EHC-03 offers a wide measurement range, two point calibration and even multiple on-screen languages. The EHC-03 is proudly made in the U.S.A. and has a 2 year warranty. Contact Danatronics for more details.

Specifications for EHC-03:

Size: 5" (127 mm) (L) x 3" (76.2 mm) (W) x 1.25" (31.75 mm) (H)

Weight: 8 OZ (.23 kg)

Thickness range: .040"-20" (1mm-508mm) in steel

Material Velocity Calibration Range:
0.0200 - 0.7362 in/ μ S
(0.508 - 18.699 mm/ μ S).

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

Battery life: Up to 50 hours (20 hours with backlight on)

Battery type: 2 "AA" Alkaline

Display: 128 X 64 Graphics LCD monochrome, sunlight readable

Language support: multi language of English, French, Spanish, Italian, Czech, German, Chinese Portuguese, Slovak, Finnish, and Hungarian

Q-Bar: graphic display that confirms measurement stability

Package: IP54 rated custom, splash-proof, high impact plastic with rubber keypad

Bandwidth: 0.5-20 MHz (-3dB)

Units: English/Metric/Microseconds

Backlight: Auto on with valid reading or keypress for 10 seconds

Optional Protective pouch: Custom molded pouch with wrist strap and belt clip

Transport case: Hard plastic with high density molded foam cut out for gage and most accessories

Freeze mode: Freezes display

Hold mode: Holds display to retain last thickness reading

Standard EHC-03 includes: Ultrasonic thickness gage, DKS-537 5MHz 0.375 inch diameter potted cable, operational manual, NIST traceable calibration certificate

Note: The EHC-03 is only available with the DKS-537 and is not field upgradeable

Warranty: Limited 2 year warranty on parts and labor for gage only under normal use

Typical Applications:

- Boiler Tubes
- Pressure Vessels
- Storage Tanks
- Ship Hulls
- Containers Home
- Oil Tanks
- Pipes
- Steam Lines
- Compressor Shafts

EHC-03 Additional Features:

- Affordable hand held ultrasonic thickness gage
- Measures .040"-20" of steel
- Simple to operate
- 2 point calibration
- Q-bar to confirm measurement stability
- On screen display of multiple languages
- IP54 rated case
- Made in USA



For more information, call us at
978-777-0081 or email
sales@danatronics.com
or visit **www.danatronics.com**
to arrange a demonstration.

EZ-Scan 6

Magnetic Wheel Linear Axis Encoder

EZ-SCAN 6 is a linear axis, magnetic wheel encoded scanner designed for manual B-scan applications up to 500°F (260°C). When combined with our ECHO Series hand-held ultrasonic corrosion gage/flaw detector, EZ-Scan 6 offers a portable and affordable solution to address your corrosion concerns.

This rugged, all aluminum constructed scanner with proprietary soft contact magnetic wheel system can smoothly scan on 3" OD pipe or greater and the spring loaded transducer will adjust to the surface, even over welds!

Longer scanner cables can be provided and easily changed utilizing our quick-change connectors.

Features

- Rugged aluminum construction
- Circumferential scans 3.5" OD pipe or greater
- Axial scans 3" OD pipe or greater
- Scans up to 500°F (260°C)*
- High resolution encoder (<0.001 per inch)
- Soft contact magnetic wheels
- Self adjusting spring loaded transducer
- Waterproof IP68 encoder
- Made In the USA

*Time base duty cycle



EZ-Scan 6 is ideal for a wide variety of applications

- | | | |
|--------------------|-----------|--------------|
| ■ Storage tanks | ■ Pipes | ■ Ship hulls |
| ■ Pressure vessels | ■ Bridges | ■ I-beams |



Compatible with some other ultrasonic flaw detectors

DANATRONICS ULTRASONIC THICKNESS GAGES... WE MEASURE UP!



For more information, call us at
978-777-0081 or email
sales@danatronics.com
or visit **www.danatronics.com**
to arrange a demonstration.

Danatronics introduces the first ever hand held ultrasonic precision thickness gages with **COLOR** A-Scan. The UPG-07DLCW is a hand held ultrasonic precision thickness gage designed to non-destructively measure most engineering materials with the greatest thickness range. So if you are measuring coil steel, fiberglass thickness on boats, titanium golf club heads, plastic bottles or even rubber tires . . . *put us to test, we measure up.*

The UPG-07 series is also available in multiple models with either monochrome or color from basic to fully loaded. All gages within a family are field upgradeable so if you need to turn on the B-Scan or datalogger in the future – *it is all right there even without the use of a computer.*

UNPRECEDENTED FEATURES INCLUDING:

- .0001 Resolution
- Live color A-Scan
- Vibration and color change on alarm
- Stored and recall of setups
- 30 Mhz. bandwidth
- Squarewave pulser
- Zoom auto tracking
- 100 K reading datalogger
- Multiple modes for challenging applications
- Gain, range and blanking adjustments
- Available in multiple models

