GE
Measurement & Control

USM Go+

Small but mighty. All you expect from an ultrasonic flaw detector, packed in a handheld.

Introducing the new USM Go+ that takes field inspection NDT to the next level. Light, handy and controlled by an intuitive arrow-keypad, it has the latest industrial electronics under the hood and offers excellent ultrasonic performance which allows for reliable detection of defects located just below the surface of the test piece.

USM Go+ When design and technology shake hands

Best of both worlds

The USM Go+ ultrasonic flaw detector offers you the performance and features of a tabletop ultrasonic detector in a small, ultra-portable handheld instrument weighing less than 2 pounds (907 grams) for maximum portability in the field. Its ergonomic design, useful features and big performance are the result of carefully listening to the experience of the people in the field who, through their everyday practice, know best what it takes to do a good job.

What a field NDT operator needs is:

• *An instrument you can use with one hand*

The USM Go+ is the ideal device for portable ultrasonic testing. It comfortably fits in the palm of your hand or pocket of coveralls for ease of use and transport. It's the perfect tool for operation in confined spaces, areas with difficult access or other difficult environments.
Actually, you operate it with one hand, thanks to the arrow-keypad, which allows for intuitive navigation and fast and precise adjustments. That comes in handy, when you need your other hand to adjust the probe or just hold on to a ladder. Are you left-handed? No problem, use the 'flip' function to adapt the instrument to your hand.

• *A robust, heavy duty device*

Its molded rubber casing makes the USM Go+ the sturdy instrument you need in the sometimes harsh conditions 'in the field'. It is dust and waterproof to IP67 and has been tested according to military standards.

• *The biggest and brightest screen in its class*

The 108mm x 64,8 mm screen (zoomed mode) with best in class 800 x 480 pixel resolution offers optimum echo dynamics and separation. Moreover, it is exceptionally bright so you can easily read the image even in full sunlight. On the other hand, when working in the dark, you can reduce the brightness to reduce eye fatigue and conserve battery life. An integrated stand allows you to optimize the viewing angle, when the instrument is desk or bench mounted.

• *Outstanding UT performance*

Equipped with state-of-the art technology, the USM Go+ takes UT performance in handheld instruments a step further. The excellent near surface resolution enables you to detect flaws located just under the surface of the test piece with a high degree of reliability.
A wide Pulse Repetition Frequency range allows you to use the USM Go+ at low PRF to inspect forged parts without any "ghost" echoes and to inspect welds at high PRF when fast scanning speed is required.

• *A tool that boosts your productivity*

Ultra-portable, easy-to-handle, intuitive operation, high performance - the USM Go+ is your plug & play tool that will give your productivity a boost the moment you start using it.

Other key features & benefits

- A-Scan video recording up to 8 minutes allows live reporting and playback of an entire inspection sequence for review by more qualified personnel (e.g. Level III)
- Truly ambidextrous instrument with flip function of the display and functionality of the rocker switches.
- AUTOANG (Auto Angle) feature calculates the refracted angle of an angle beam wedge and utilizes it for Trigonometic flaw location projections
- A standard USB connection allows for data to be downloaded from the flaw detector for further analysis or storage.
- The instrument's 2 GB memory can be easily exchanged by SD cards up to 16 GB.
- Reports are produced in jpeg or bmp format so there is no need for special reading software.
- Backwall Echo Attenuator (BEA) helps to find very small defects, improving detectability.
- Automatic Gate Threshold for the 2 gates ensuring accurate measurements made under the same conditions.

A wide range of applications

The USM Go+ has been designed to provide flaw detection capability in inspection situations throughout the industrial and process spectrum, from aerospace to power generation and from the automotive sector to the oil and gas industry.

Weld Inspection:

- Trigonometric projections with curvature correction.
- AWS D1.1 sizing
- DAC/TCG
- DGS
- Color Leg

Inspection of Forgings and Castings:

- Manual PRF adjustment
- Phantom echo indicator
- DGS
- Backwall Echo Attenuator (BEA)

Inspection of rails:

- High PRF (up to 2000 Hz)
- Lightweight: 850 g (1.87 lb.)
- Small size and ergonomics

Inspection of Composites:

- RF Display
- 2 gates with B-start triggered with echo in gate A
- TCG correction with high slope 120 dB/µs
- Reflector depth indicated in layer

For more demanding applications:

- Narrow band filters
- Low noise digital amplifier
- Square wave pulser

Technical Specifications of USM Go+	
Display	5 inch, 800 x 480 pixels, 108 x 65 mm (W x H), >200 cd/m²
Size (W x H x D)	175 x 111 x 50 mm
Weight	850 g with battery
Protection class	IP 67
Operating temperature	0 – 55 °C
Battery	Li-Ion, rechargeable, 6 hours operation time
Power adapter / charger	100 – 240 V AC, 50/60 Hz
Probe connector	2 x Lemo-00 (T/R)
PC interface	Mini USB
Memory card	SD-Card 16 GB max
Reporting	Test report and A-Scan screen shot on SD-Card, Video recording of A-Scan
Pulser	120 – 300 V, 30 – 500 ns, flank < 10 ns, Spike, Square wave option
Puls Repetition Frequency	15 – 2000 Hz
Damping	50 and 1000 Ohm
Receiver	110 dB dynamic, 0.5 ~ 18.5 MHz analog bandwidth
Filter	BB 1-5 MHz, 2,25 MHz, 4 MHz, 5 MHz, 10 MHz, 13 MHz, 15 MHz
Gates	A and B independent, B triggered by A, C option
Units	mm, inch, µs
Options	AWS sizing tool (AWS D1.1), DAC 16 points according to EN 1712, EN 1713, EN 1714, ASTM E164, TCG 110 dB dynamic, DGS sizing tool according to EN 1712, EN 1713, EN 1714, ASTM E164, Data Logger, 3rd gate C, Square Wave Pulser
Compliance	EN 55011,EN 61000-6-2: 2011, EN 12668, ASTM E 1324, E317, ANSI/NCSL Z 540-1-1994, MIL-STD 45662A, MIL-STD 2154

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