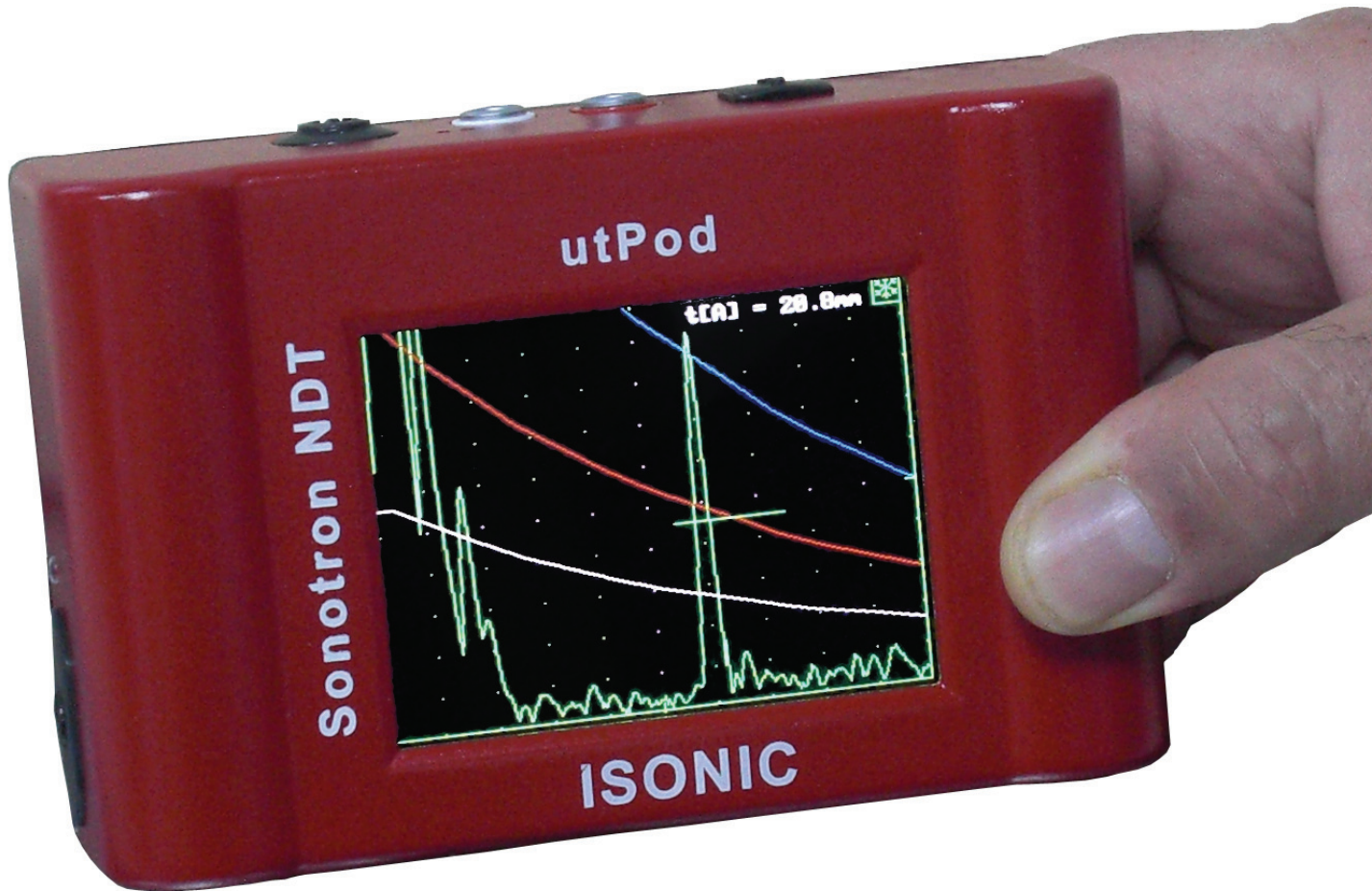


# ISONIC utPod

Ultra-Portable Multi-Purpose  
Ultrasonic Testing Instrument



**Personal 400 g pack of advanced technology comprising:**

Top Performance Flaw Detector  
All-Functional A-Scan Thickness Gauge  
Simple Corrosion Gauge  
Comprehensive Data Logger  
Fully USB Controllable



**Sonotron NDT**

4, Pekeris str., Rabin Science Park, Rehovot, 76702, Israel  
Phone:++972-(0)8-9311000 Fax:++972-(0)8-9477712  
[www.sonotronndt.com](http://www.sonotronndt.com)

## One Hand Inspection

For the first time operator may hold the instrument and scan the material using one hand only – this makes rope access and similar inspection jobs much safer and reliable



## Miniature dimensions and lightest weight ever

**ISONIC utPod** delivers full functionality of the top performance ultrasonic detector such as

- Bi-polar square wave pulser with tunable pulse duration and amplitude (up to 300 V pp) and boosted leading / falling edges enhancing ultrasound penetration for various materials characterized either by high or low grain, sound attenuation, and the like
- 100 dB analogue gain / 0.2 ... 25 MHz bandpass / 100 MHz sampling rate
- 32-Taps FIR band pass digital filter with controllable lower and upper frequency limits
- Analogue performance A-Scan with no range limit for RF display mode
- Up to 2 kHz pulse repetition frequency
- Multi-curve DAC, DGS / TCG
- 2 independent gates
- Automatic evaluation including trigonometric functions, thickness and curvature correction, etc
- AWS / API defect evaluation
- And more... (see technical data page)



## Touch Control

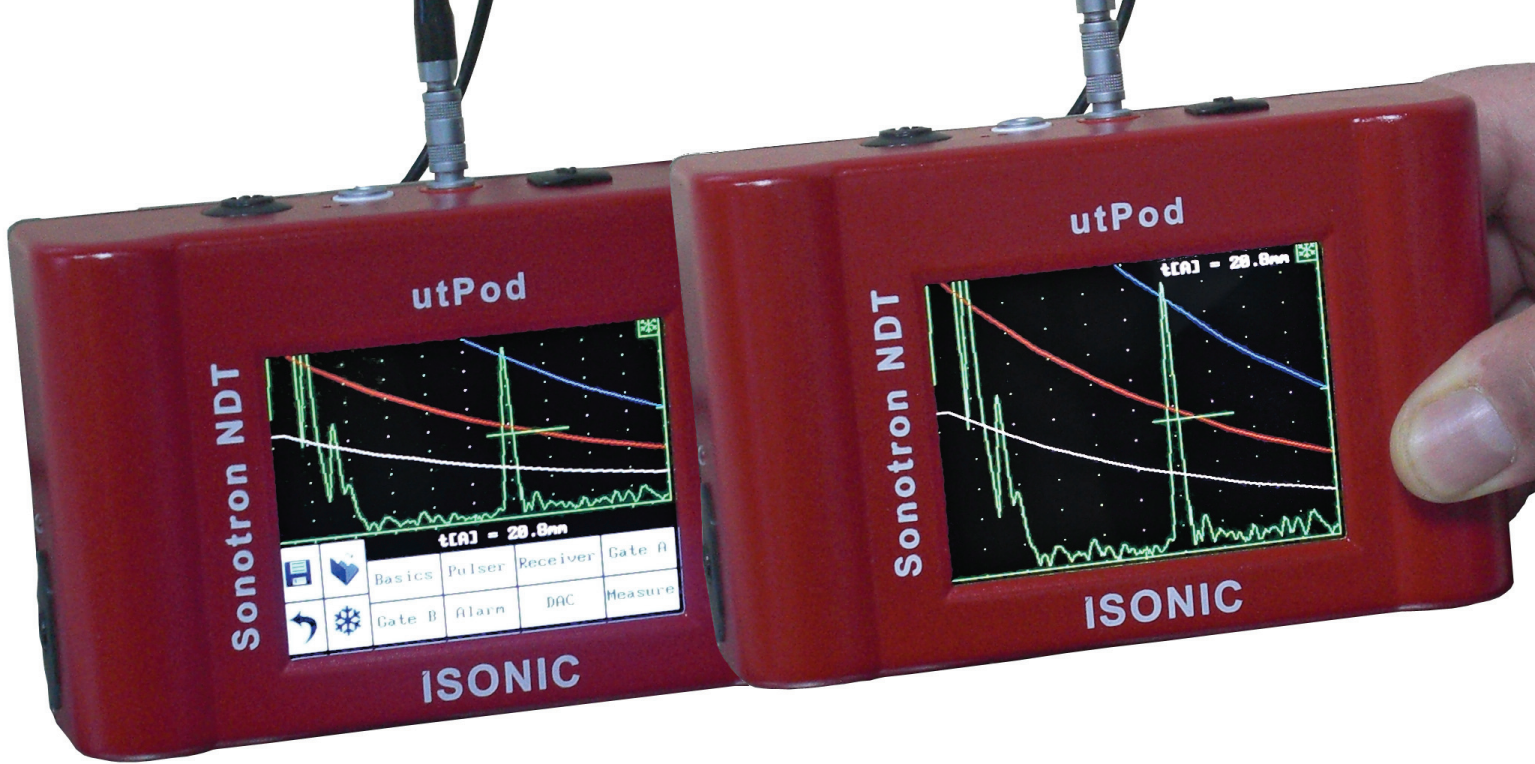
**ISONIC utPod** is controlled through highly intuitive user interface provided on the high definition sun readable touch screen

## Simple Corrosion Gauge

- Dual element probe operation
- Automatic gain / initial pulse control
- 100 MHz sampling rate

## All-functional Thickness Gauge

- Dual / Single element probe operation
- Multiple back wall echo technique with delay line single element probe for high precision measurements
- A-Scan
- Min/Max
- Differential
- 100 MHz sampling rate
- Variety of calibration and zeroing techniques



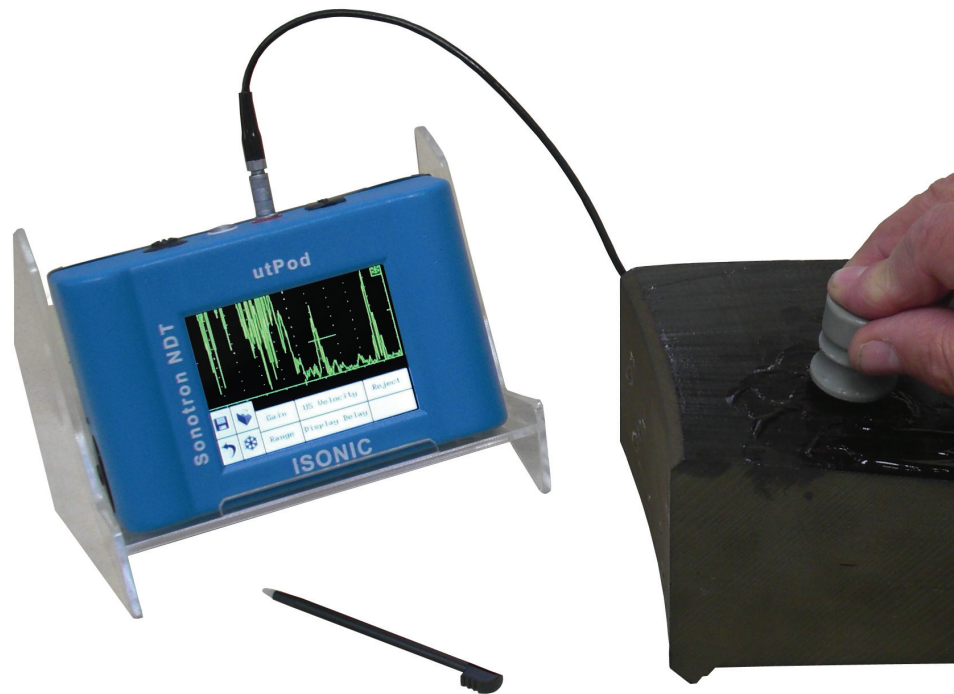
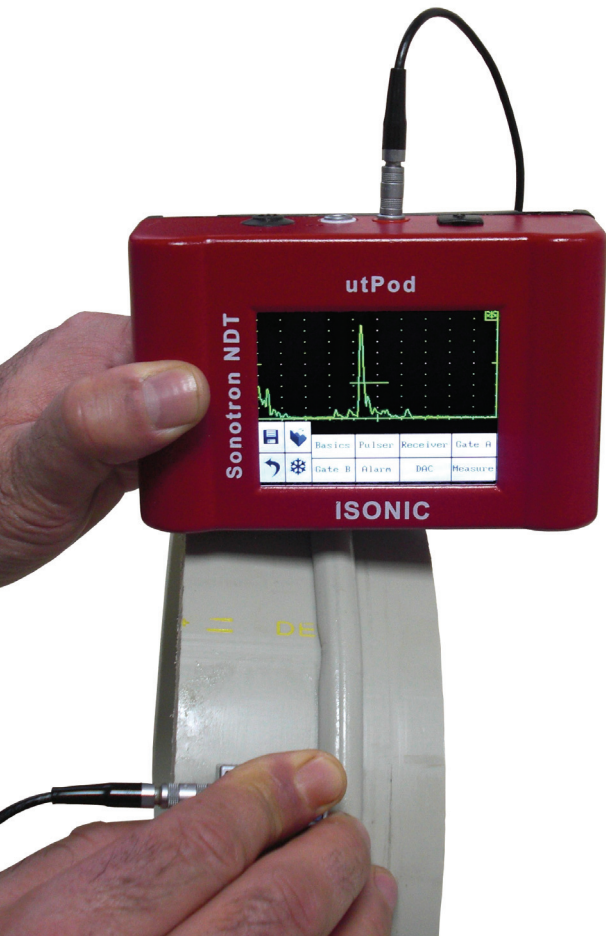
## Zoom A-Scan

Simple double click on the A-Scan expands it to the full screen area / returns to the combined A-Scan / Control Menu View

## "Goose Neck" Fixture

This optional adaptor has been designed to ensure positioning of the instrument on any surface and allows the operator to optimize the instrument location and viewing angle freeing both hands for probe manipulation, holding onto ladders, etc





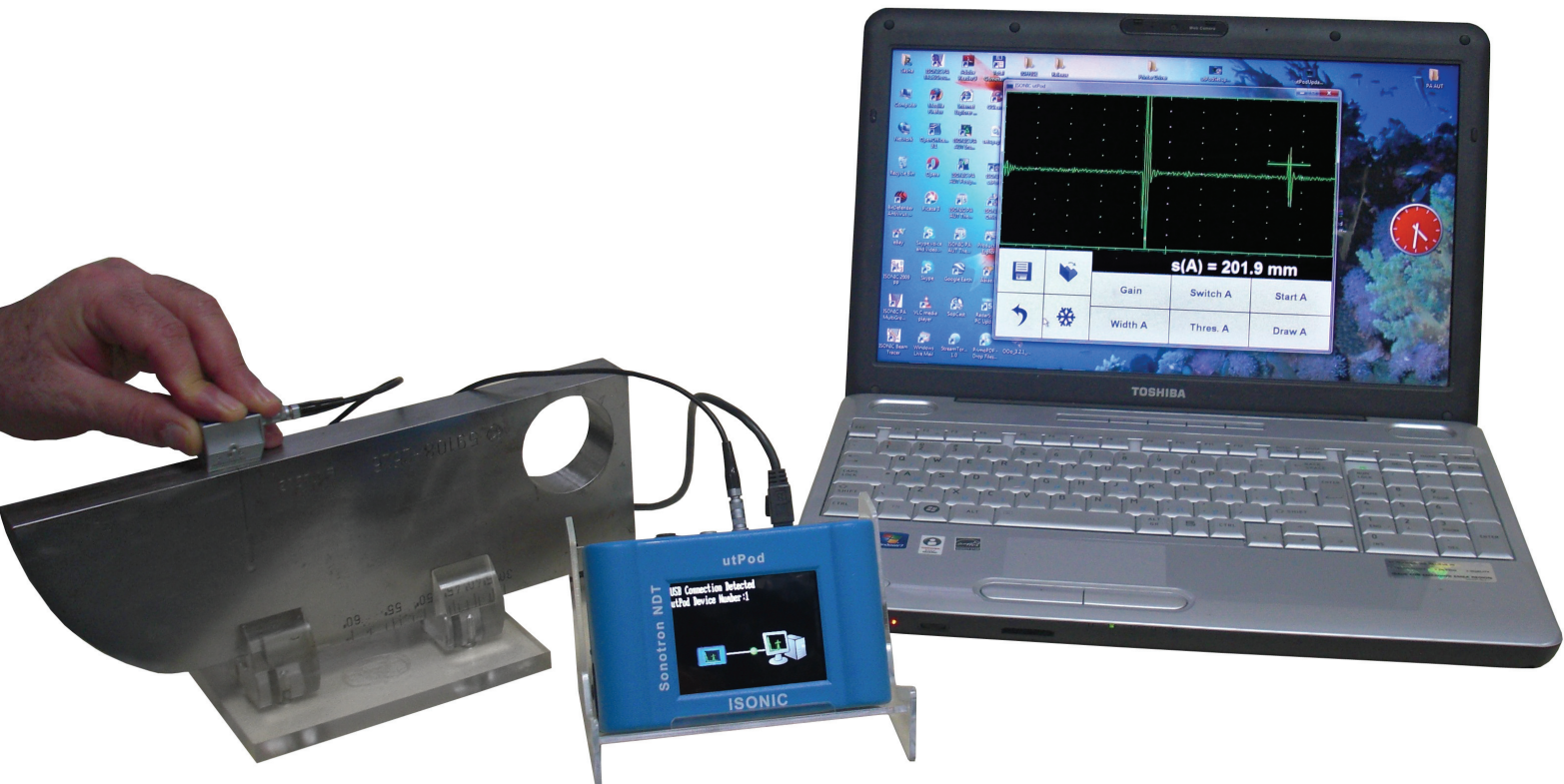
## Inspection Applications

With its wide bandpass and powerful pulser **ISONIC utPod** is applicable for wide variety of applications such as inspection of welds, composites, HDPE, other plastics, and many others



## Data Logger

**ISONIC utPod** data logger may be activated for all three modes of operation: flaw detection, corrosion gauging, thickness gauging allowing arrangement of the evaluation results along with corresponding A-Scans into a database file organized as either 1D (linear), 2D (X, Y), 3D (X, Y, Z), or 4D (X, Y, Z, retake) array



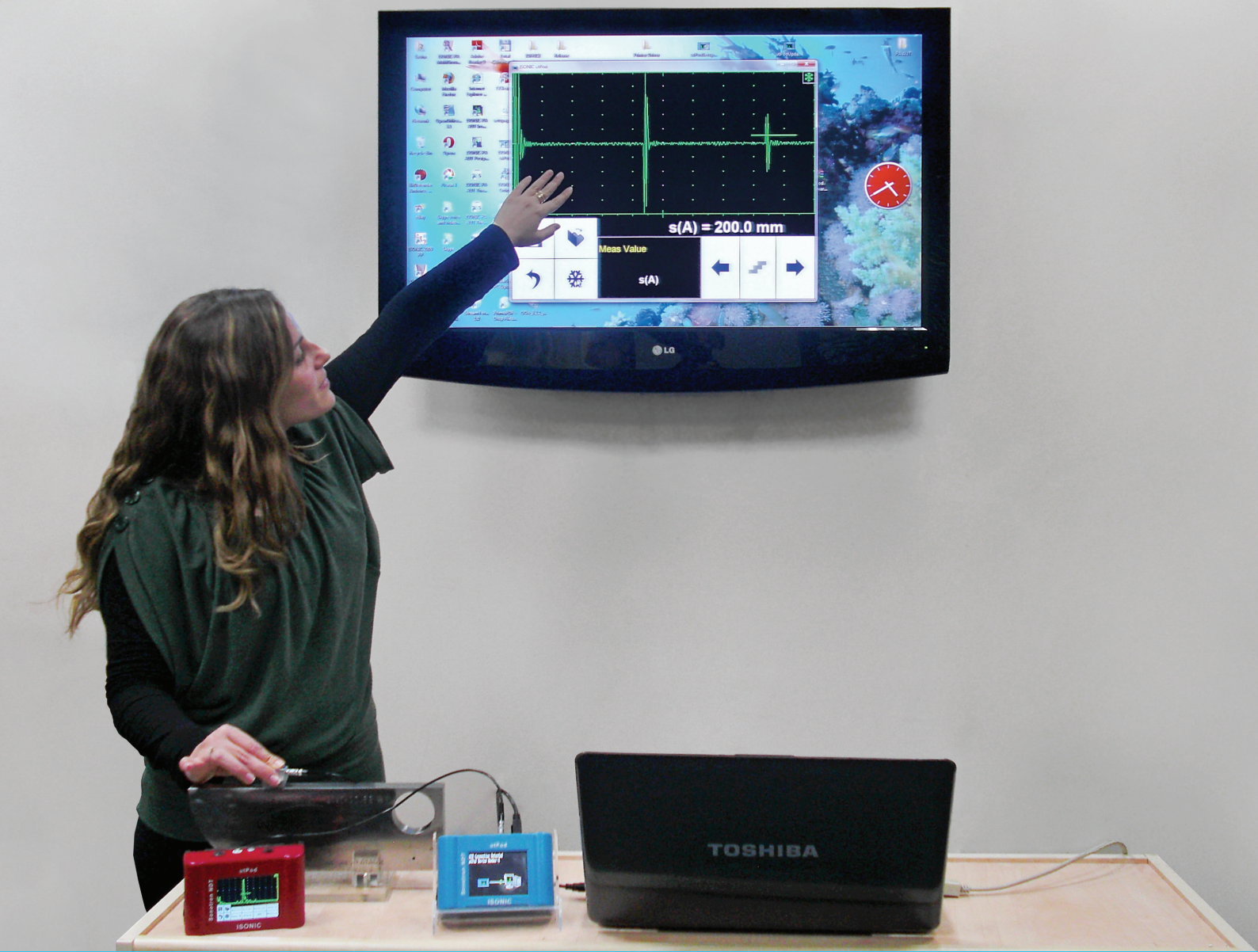
## Connection to the Computer

On connection to the computer via USB port **ISONIC utPod** is recognized automatically and becomes fully controllable by mouse and keyboard. This allows performing of instrument operation enjoying comfort of friendly graphic interface and live A-Scan on the computer screen provided by **ISONIC utPod for PC** software. This extremely useful utility delivered with every **ISONIC utPod** unit at no additional cost carries a number of important features such as transfer data and setup files to / from the instrument, data logger files processing, generating of editable comprehensive inspection reports in MS Word<sup>®</sup> format, hard copy print, etc

## Other Important Features

- High Color Resolution QVGA screen – 3.2" Active Matrix LCD with an embedded PICASO-GFX2 graphics controller
- Built-in horn and virtual lamps on the screen to alarm the defect indications
- 2 on-board rechargeable long durability Li-Ion batteries





## UT Level I, II Training Class In A Single Case

- Six units with cables and typical probes
- Direct control from computer through USB port / large screen projection
- Comprehensive Training Syllabus
- Attractive pricing policy



## Technical Data

Initial Pulse Type:	<b>Bipolar Square Wave Pulse</b>
Initial Transition:	<b>≤5 ns (10-90%)</b>
Pulse Amplitude:	<b>Smoothly tunable (12 levels) 60 V ... 300 V pp into 50 Ω</b>
Pulse Duration:	<b>50...600 ns for each half wave synchronously controllable in 10 ns step</b>
Modes:	<b>Single / Dual</b>
PRF:	<b>15...2000 Hz controllable in 1 Hz resolution</b>
Gain:	<b>0...100 dB controllable in 0.5 dB resolution</b>
Advanced Low Noise Design:	<b>81 μV peak to peak input referred to 80 dB gain / 25 MHz bandwidth</b>
Frequency Band:	<b>0.2 ... 25 MHz Wide Band</b>
Digital Filter:	<b>32-Taps FIR band pass with controllable lower and upper frequency limits</b>
Ultrasound Velocity:	<b>300...20000 m/s (11.81...787.4 "/ms) controllable in 1 m/s (0.1 "/ms) resolution</b>
Range:	<b>0.5...7000 μs controllable in 0.01 μs resolution</b>
Display Delay:	<b>0...3200 μs controllable in 0.01 μs resolution</b>
Probe Angle:	<b>0...90° controllable in 1° resolution</b>
Probe Delay:	<b>0 to 70 μs controllable in 0.01 μs resolution - expandable</b>
Display Modes:	<b>RF, Rectified (Full Wave / Negative or Positive Half Wave)</b>
Reject:	<b>0...99 % of screen height controllable in 1% resolution</b>
DAC / TCG:	<b>Theoretical – through keying in dB/mm (dB/") factor as used for AWS evaluation, inspection of highly attenuative materials, and the like Experimental – through recording echo amplitudes from variously distanced equal reflectors, up to 40 points 46 dB Dynamic Range, Slope ≤ 120 dB/μs, Available for Rectified and RF Display</b>
DGS:	<b>Standard Library for 18 probes / expandable</b>
Gates:	<b>2 Independent Gates</b>
Gate Start and Width:	<b>Controllable over whole range of A-Scan time base settings in 0.1 mm /// 0.001" resolution</b>
Gate Threshold:	<b>5...95 % of A-Scan height controllable in 1 % resolution</b>
Signal Evaluation – Digital Readout:	<b>19 automatic functions / expandable; curved surface / thickness / skip correction for angle beam probes; material velocity and probe delay auto-calibration for all types of probes; AWS / API evaluation</b>
Freeze:	<b>Freeze All / Freeze Peak</b>
Data Storage Capacity:	<b>At least 100000 sets including calibration dumps accompanied with A-Scans</b>
Internal Flash Memory:	<b>2 Gigabytes</b>
Output:	<b>USB – calibration and data files transfer to / from PC, generation of inspection reports in editable format and hard copy / full control by PC</b>
Screen:	<b>3.2" High Color Resolution QVGA Sun-Readable Active Matrix LCD with an embedded PICASO-GFX2 graphics controller</b>
Controls:	<b>Touch Screen</b>
Power:	<b>On-board Li-Ion Rechargeable Battery, 6-10 hours continuous operation depending on mode of use Mains - External AC/DC converter / charger 100-240 VAC, 40-70 Hz, auto-switch</b>
Housing:	<b>IP 67 rugged plastic case</b>
Dimensions:	<b>130×84×42 mm (5.12"×3.31"×1.65")</b>
Weight:	<b>400 g (0.88 lbs) - with battery</b>
Hardware Warranty:	<b>12 months</b>
Firmware Warranty:	<b>Lifetime free update with the latest version available for free access at <a href="http://www.sonotronndt.com/support.htm">www.sonotronndt.com/support.htm</a></b>
<b>ISONIC utPod for PC</b>	<b>Lifetime free update with the latest version available for free access at <a href="http://www.sonotronndt.com/support.htm">www.sonotronndt.com/support.htm</a></b>
Software Warranty:	<b><a href="http://www.sonotronndt.com/support.htm">www.sonotronndt.com/support.htm</a></b>
Available in three colors:	<b>Blue, Red, Black</b>