CTS-9006

Digital Ultrasonic Flaw Detector

Peak Memory

Auto Calibration

Weld Groove Profile

Abundant Options

SIUI

Portable, Easy-to-Use, Reliable
——New Generation General-Purpose Digital Flaw Detector

**Compact & Portable:**The whole unit weight (battery included) is approx. 1.2kg, suitable for aloft and field work.

Easy to Use: There are just a few concisely-defined keys, easy to be operated with only one hand.

Environmental Protection: This system is designed based on IP65 standard, suitable for complex industrial flaw detection environment.
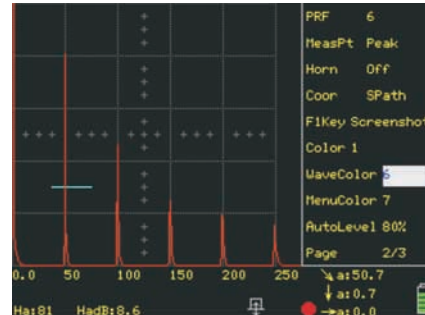
Super-low Consumption: The configured Li-polymer battery can support up to 7-hour continuous operation.

Strong Performance: High resolution and penetration, achieving precise flaw detection from thin plates to large forged pieces.

Superior Features
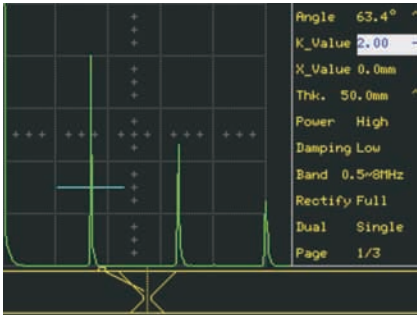


Weld groove profile function

Up to 11 kinds of waveform colors for selection

- Max. sampling rate 240MHz; Measurement resolution 0.1mm.
- Operating frequency range: 0.5~10MHz.
- 20 ~ 2000Hz PRF (step: 20Hz): avoid reverberation signals during flaw detection.
- The AGC (auto gain control) function, together with peak echo and image freeze function, help quickly identify the flaw highest echo, enabling efficient flaw detection.
- The AVG/DGS curve can make three curves of different equivalent values with one known flat-bottom hole or large flat-bottom echo.
- The DAC curve works with echo compare function, making echo quantification of different distances and amplitudes more convenient.
- The 5.7" color TFT LCD of wide viewing angle, high brightness and high definition delivers every clear detail.
- Peak memory function facilitates quick scanning and measurement on workpieces.
- Probe angle (K value) measuring function.
- Three different color schemes can meet the requirements of different application environments and habits.
- Up to 300 sets of curve and waveform can be saved for various workpieces and flaw detection standards.
- Support up to 9 kinds of language.
- AWS D1.1/D1.5, API and TCG functions are optional.

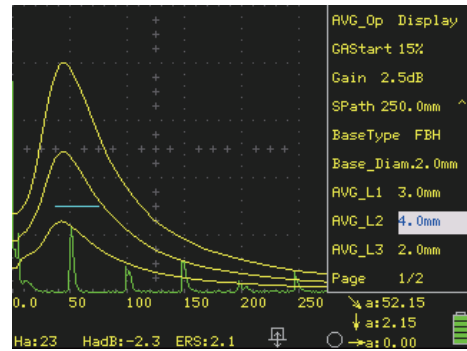* EN-12668-1 and ASTM E317-1 compliant

Application Examples

Detection on Large Forged Pieces
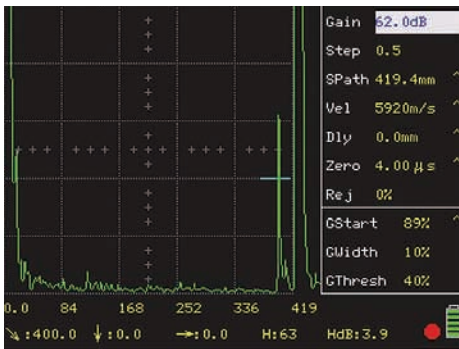
- The large detection range and high sensitivity surplus meet the requirements of detection on large forged pieces or coarse crystal materials.
- This picture shows an echo from a 400mm Φ 2 flat-bottom forged test block.
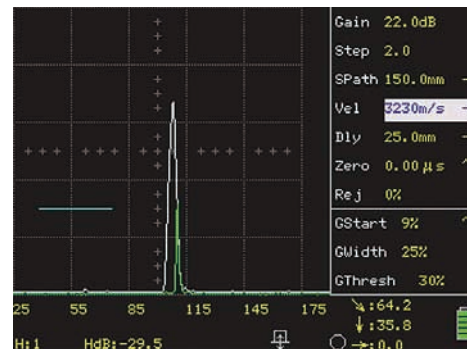
AVG/ DGS Curve

- Three curves of different equivalent values will be auto created by taking a known flat-bottom hole or large flat-bottom echo for reference.

DAC Curve
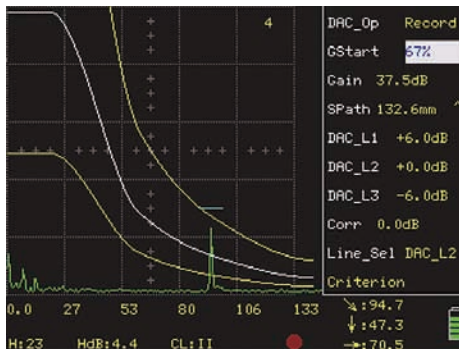
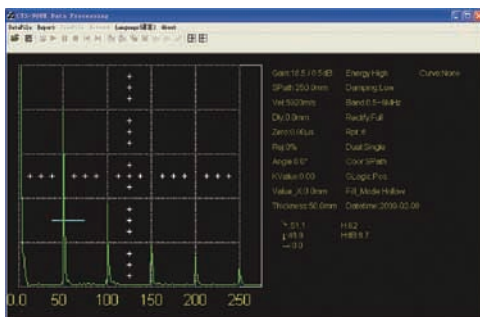- The DAC curve function brings easier and more convenient flaw evaluation.

Peak Memory

- Refresh the highest echo within the screen range automatically, completing flaw positioning quickly.

Data Storage

- Detection echoes, curves or parameters may be losslessly stored to a PC via the USB port, facilitating report editing and data management.

On-site Application

- CTS-9006 inspect weld.

Specifications

Function	Unit	Specifications
Testing Index		
Attenuator Error	dB	Every 20dB ±1dB
Vertical Linearity Error	%	≤3
Dynamic Range	dB	≥32
Horizontal Linearity Error	%	≤0.5
Pulser		
PRF	Hz	20~2000Hz, step: 20Hz
Damping		Low /High, ,2 steps (1000Ω/50Ω)
Receiver		
Operating Frequency Range	MHz	0.5~10, with steps of 1-4/ 0.5-10
Reject	%	0 ~ 80
Gain Adjustment	dB	0 ~ 110, with steps of 0.5 / 2 / 6 / 12
Measurement		
Detection Range	mm	0 ~ 13000 (Longitudinal wave in steel)
Display Delay	mm	-10 ~ 1000 (Longitudinal wave in steel)
Rectify		Positive, Negative, Full, Filter
Auto Gain		Enabling the echo amplitude within the gate auto adjusted to a designated amplitude Amplitude setup: 40%/ 50%/ 60%/ 70%/ 80%/ 90%/ 100%
Angle Measurement		Measure probe angle
Material Velocity	m/s	400 ~ 15000
Probe Zero	µs	0 ~ 200
Auto Calibration		For calibrating material velocity and probe delay. Calibration mode: Velocity and Zero/ Velocity/ Zero
DAC Curve		For making, setting and applying DAC curves, up to 8 curves
AVG / DGS Curve		For making, setting and applying AVG / DGS curves
Screenshot		Print the system screen as an image and output to a USB disk
Parameter Output		Save the screen measurement parameters to a USB disk
Peak Memory		Display waveform envelope
Freeze		Freeze screen waveforms
USB Port		Save the system internal data sets to a USB disk via the USB port
Gate		
Gate		Gate Start: 0~109% Gate Width: 1~109% Gate Thresh: 10~90%
General Technical Specification		
Display Screen		5.7" high brightness TFT LCD, 320 x 240 pixels
Measure Unit		Inch/ mm
Storage		300 data sets, including system setup, detection state, echo figures, etc.
Language		Up to ten kinds of language for selection, including English, Japanese, French, Spanish, Russian, German, Polish, Hungarian, Turkish, Portuguese
Power Supply		DC 12V (external power supply); 7.4V (battery)
Battery Operating Time	h	≥ 7 (Backlight brightness dependent. The brightness will be adjusted automatically according to environment temperature.)
Operating Temperature	℃	-10~40
IP Code		IP65
Weight	kg	Approx. 1.2 (including battery)
Dimension	mm	152 × 240 × 52 (W×H×L)

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