CTS-9005

Digital Ultrasonic Flaw Detector

Eye Catching Design

Complete Functions

Reliable Quality

Easy Operation

Compact Size

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 Operation: 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

- Max. sampling rate 240MHz; Measurement resolution 0.1mm.

- Operating frequency range: 0.5~10MHz.

- 20~2000Hz (step: 20Hz): avoid reverberation signals during flaw detection.

- The AGC (auto gain control) function for efficient flaw detection.

- The AVG/DGS 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.

- 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.

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

Application Examples

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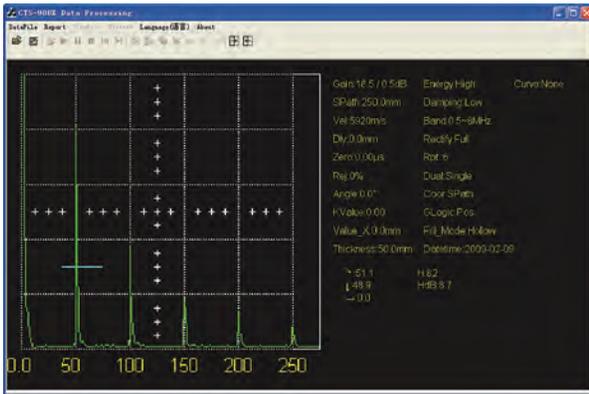
● Detection echoes, curves or parameters may be losslessly stored to a PC via the USB port, facilitating report editing and data management.

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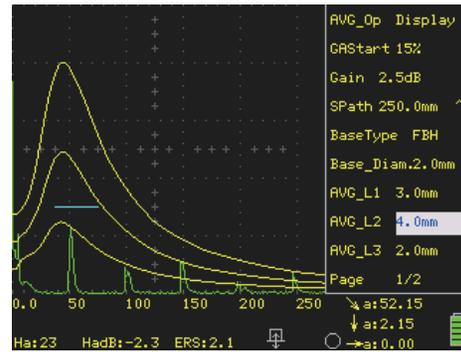
● Three curves of different equivalent values will be auto created by taking a known flat-bottom hole or large flat-bottom echo for reference.

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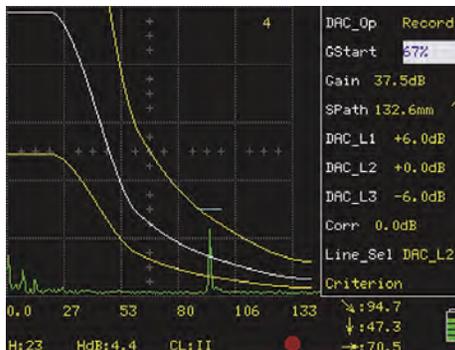
● The DAC curve function brings easier and more convenient flaw evaluation.

Detection on Large Forged Pieces
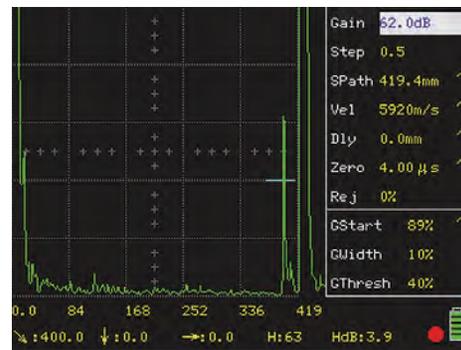
● The large detection range and high sensitivity surplus meet the requirements of detection on large forged pieces or coarse crystal materials.

● This picture shows an echo from a 400mm Φ2 flat-bottom forged test block.

Peak Memory
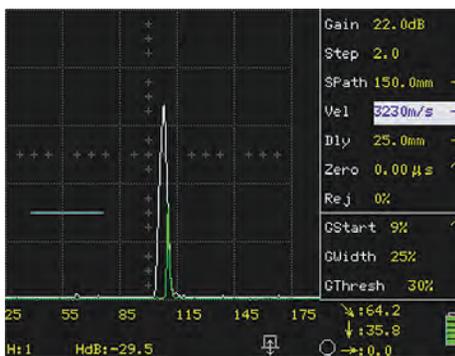
● Refresh the highest echo within the screen range automatically, completing flaw positioning quickly.

On-site Application

● CTS-9005 inspect shaft.

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/ 1/ 2.5/ 4/ 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: 80% / 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, Angle Measurement
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
Zoom		Screen waveform area zoom-in and zoom-out
Dual Probe		Single / Dual
USB Port		Save the system internal data sets to a USB disk via the USB port
Alarm		Off / On, enabling and disabling the buzzer alarm
Gate		
Gate		Two measure alarm gates. Gate mode: off / positive / negative. 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
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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