

Digital Ultrasonic Flaw Detector

CTS-9005



Eye Catching Design

Complete Functions

Reliable Quality

Easy Operation

Compact Size

SIUI



CTS-9005

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

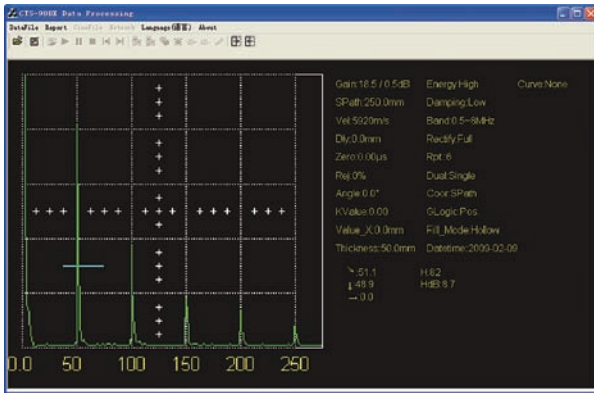
- ⊕ Max. sampling rate 240MHz; Measurement resolution 0.1mm.
- ⊕ Operating frequency range: 0.5~10MHz.
- ⊕ 20~2000Hz (step: 20Hz): avoid reverberation signals during flaw detection.
- ⊕ The AGC (auto gain control) function for efficient flaw detection.
- ⊕ The AVG/DGS curve works with echo compare function, 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 compliant

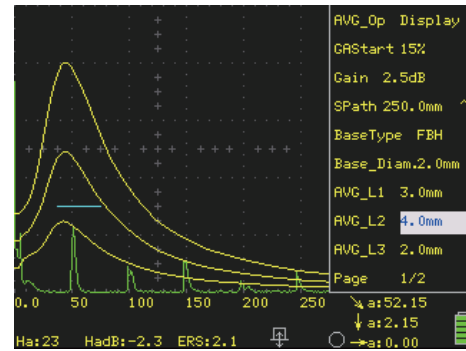
Application Examples

Data Storage



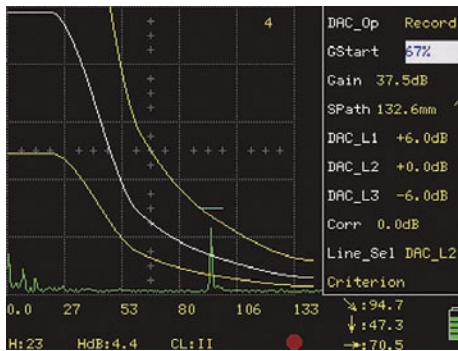
☛ Detection echoes, curves or parameters may be losslessly stored to a PC via the USB port, facilitating report editing and data management.

AVG/ DGS Curve



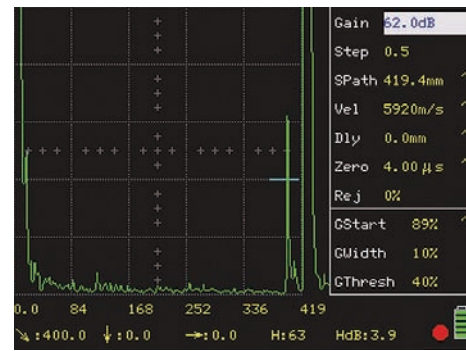
☛ Three curves of different equivalent values will be auto created by taking a known flat-bottom hole or large flat-bottom echo for reference.

DAC Curve



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

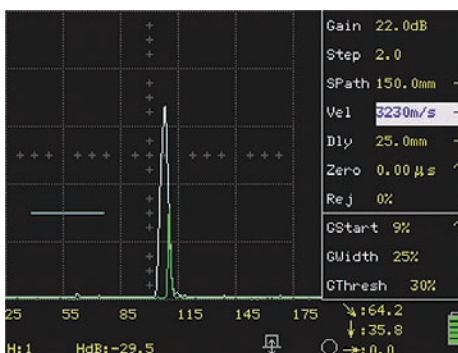
Detection on Large Forged Pieces



☛ 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 Φ 2 flat-bottom forged test block.

Peak Memory



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

On-site Application



| Function | Unit | Specifications |
|--|--------------|--|
| Testing Index | | |
| Attenuator Error | dB | Every 12dB \pm 1dB |
| Vertical Linearity Error | % | \leq 3 |
| Dynamic Range | dB | \geq 32 |
| Horizontal Linearity Error | % | \leq 0.5 |
| Pulser | | |
| PRF | Hz | 20-2000Hz, step: 20Hz |
| Damping | | Low /High |
| Receiver | | |
| Operating Frequency Range | MHz | 0.5-10, with 7 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 | μ s | 0 - 200 |
| Auto Calibration | | For calibrating material velocity and probe delay. Calibration mode: Velocity and 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 |
| 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: 0-109% 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 nine kinds of language for selection, including Chinese, English, Japanese, French, Spanish, Russian, German, Portuguese, Polish |
| Power Supply | V | 12 DC (external power supply); 7.4 (battery) |
| Battery Operating Time | h | \geq 7 (Backlight brightness dependent. The brightness will be adjusted automatically according to environment temperature.) |
| Operating Temperature | $^{\circ}$ C | -10-40 |
| IP Code | | IP65 |
| Weight | kg | Approx. 1.2 (including battery) |
| Dimension | mm | 152 x 240 x 52 (WxHxL) |

SIUI

Shantou Institute of Ultrasonic Instruments Co., Ltd.

Add: #77, Jinsha Road, Shantou 515041, Guangdong, China
 Tel: +86-754-88250150 Fax: +86-754-88251499
 E-mail: siui@siui.com Website: http://www.siui.com

