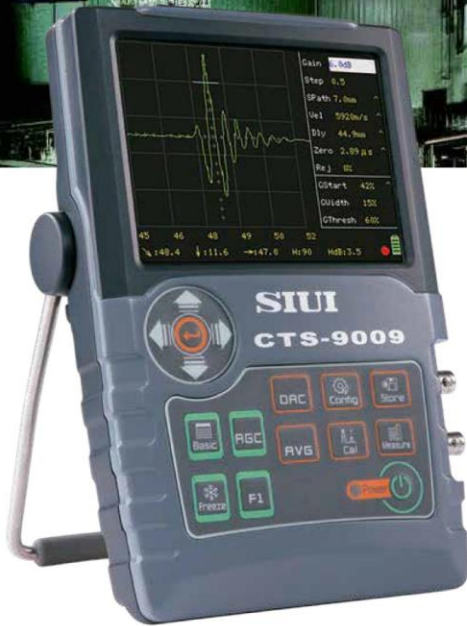**FGJ**
FARHAN GOSTAR JOONOB

CTS-9009

Digital Ultrasonic Flaw Detector

SIUI
CTS-9009

Small Size

Low Consumption

High Performance

Easy Operation

Multi-Purpose

Lightweight

SIUI

DIGINDT.IR

CTS-9009

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

Compact & Portable: The whole unit weight (battery included) is approx. 1.15kg, 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 (Optional IP67) 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.

Complete Functions: Cineloop,probe frequency measurement, curved surface correction, RF display, USB storage, amplitude B-scan, AWS D1.1/D1.5, API 5UE evaluation standard.

Superior Features

- Max. sampling rate 240MHz; Measurement resolution 0.1mm.
- Featured with AWS D1.1/D1.5 and API 5UE evaluation standards.
- The gate magnifier function magnifies the echo area within the gate to the whole screen display.
- Ethernet communication: Achieving real-time communication with a PC and remote control.
- The convenient and useful probe echo frequency measure function enables the users to know the probe center frequency quickly, resulting in more precise flaw detection evaluation.
- Operating frequency range: 0.5~15MHz, highlighting advantages of high sensitivity and broadband.
- 20 ~2000Hz PRF with 10 steps adjustable: avoid reverberation signals during flaw detection.
- Measure crack height by edge peak echo method.
- RF (Radio Frequency) echo display: good to thin-wall material measurement, academic research or qualitative analysis.
- 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 DAC curve works with echo compare function, making echo quantification of different distances and amplitudes more convenient.
- Three different color schemes can meet the requirements of different application environments and habits.
- Up to 500 sets of curve and waveform can be saved for various workpieces and flaw detection standards.
- Support up to 9 kinds of language.
- Thickness measurement function available.
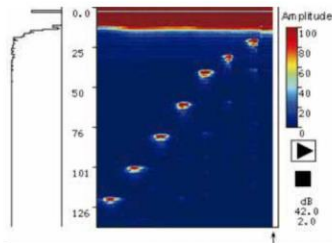
B-Scan function
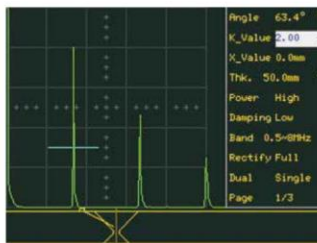
Weld groove profile function
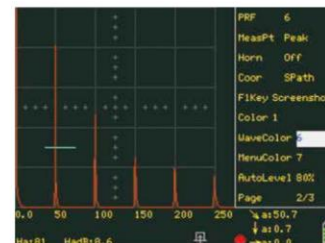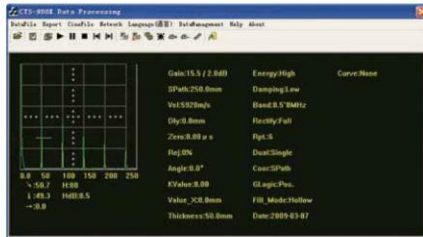

Up to 11 kinds of waveform colors for selection
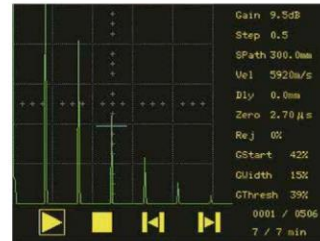
*EN-12668-1 compliant

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Data Storage

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

Dynamic Cineloop

- Replay up to 7 minutes continuously of waveform display and system operation process.
- The cineloop can be divided into 7 parts (one minute each part) for reviewing 1500 frames (frame by frame).

Probe Frequency Measure
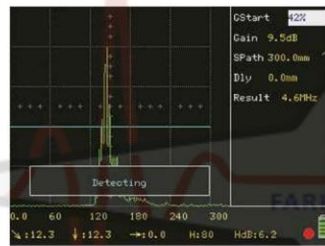
- The probe center frequency can be measured precisely by capturing echoes.
- Perform the measurement on any amplitude echo within 500mm range with one keystroke only.

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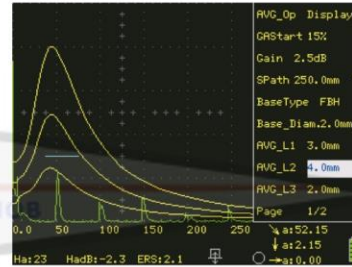
- Three curves of different equivalent values will be auto created by taking a known flat-bottom hole or large flat-bottom echo for reference.

Detection on Large Forged Pieces
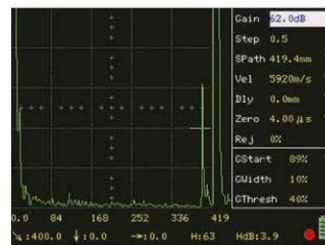
- The maximal detection range is 5000mm. It is suitable for detection on large forged pieces or coarse crystal materials.
- This picture shows an echo from a 400mm Φ2 flat-bottom forged test block.

RF Echo
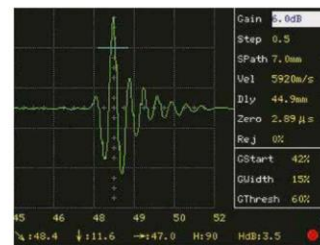
- Display original waveforms, especially suitable for R&D purpose in qualitative and spectrum analysis on echo signals.

Function	Unit	Specifications
Testing Index		
Attenuator Error	dB	Every 12dB ±1dB
Vertical Linearity Error	%	≤3
Dynamic Range	dB	≥36
Horizontal Linearity Error	%	≤0.5
Pulser		
PRF	Hz	20~2000Hz,step:20Hz
Damping		Low /High
Receiver		
Operating Frequency Range	MHz	0.5~15, with 10 steps of 1-4/ 0.5-8/2-15/1/2.5/4/5/10/13/15
Reject	%	0 ~ 80, step:1
Gain Adjustment	dB	0 ~ 110, with steps of 0.5 / 2 / 6 / 12
Measurement		
Detection Range	mm	0 ~ 13000 (Longitudinal wave in steel)
Thin Plate Resolution	mm	≤3 (with a C5-10L probe)
Pulse Shift Range	mm	-10 ~ 1000 (Longitudinal wave in steel)
Rectify		Positive, Negative, Full, Filter, RF
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
AWS D1.1/1.5		Calculate probe echo frequency with FFT
API 5UE		A quantitative method for calculating flaw depth based on American Petroleum Institute (API) Recommended Practice 5UE
Curved Surface Correction		For depth and horizontal distance correction when testing circular tubes with an angle probe. Correction mode: inner arc/ outer arc
Crack Height Measurement		Measure crack height by edge peak echo method with an angle probe
Thickness Measurement		To achieve thickness measurement function
B Scan		Acquire B-scan images by amplitude B-scan method
Gate Magnifier		Magnifies the echo within the gate to the whole echo area
Screenshot		Print the system screen as an image and output to a USB disk
Peak Memory		Display waveform envelope
Freeze		Freeze screen waveforms
Peak Echo		Record waveforms including the highest echo
USB Port		Save the system internal data sets to a USB disk via the USB port
Cineloop		Up to 7-min echo record function
Ethernet Port		Real-time communication with a PC (Host) and remote control
Gate		
Gate		Gate mode: off/ positive/ negative/ positive with alarm/ negative with alarm
General Technical Specification		
Display Screen		5.7" high brightness TFT LCD, 320 x 240 pixels
Measure Unit		Inch/ mm
Storage		500 data sets, including system setup, detection state, echo figures, etc.
Language		Up to nine kinds of language for selection, including Chinese, English, Japanese, French, Spanish, Russian, German, Portuguese, Polish
Power Supply	V	12DC(external power supply); 7.4(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)