

## INTRODUCTION

- **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 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.



## TOP FEATURES

- Max. sampling rate 240MHz; Measurement resolution 0.1mm.
- Operating frequency range: 0.5~15MHz, at least 65dB detection sensitivity surplus.
- 20~500Hz PRF with 10 steps adjustable: 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 curve can make three lines 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.

## APPLICATION

### Data Storage

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

### DAC Curve

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

### AVG Curve

- Three lines 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 large detection range and high sensitivity surplus meet the requirements of detection on large forged pieces or coarse crystal materials.

## SPECIFICATIONS

Function	Unit	Specifications
Attenuator Error	dB	Every 12dB $\pm$ 1dB
Vertical Linearity Error	%	$\leq$ 3
Dynamic Range	dB	$\geq$ 30
Detection Sensitivity Surplus	dB	$\geq$ 65 (with a 2.5Z20N probe)
Far-field Resolution	dB	$\geq$ 26
Horizontal Linearity Error	%	$\leq$ 0.5
Noise Level	%	$\leq$ 10 (1~4MHz)
Operating Frequency Range	MHz	1~4 / 0.5~15
PRF	Hz	10 steps (20~500Hz adjustable but subject to detection range, material velocity, pulse shift, probe delay, etc.)
Thin Plate Resolution	mm	$\leq$ 3 (with a 5C10N probe)
Detection Range	mm	0 ~ 13000 (Longitudinal wave in steel)
Pulse Shift	mm	-10 ~ 1000 (Longitudinal wave in steel)
Probe Zero	$\mu$ s	0 ~ 200
Material Velocity	m/s	400 ~ 9999
Damping		Low /High
Reject	%	0 ~ 80
Rectify		Positive, Negative, Full, Filter
Gain Adjustment	dB	0 ~ 110, with steps of 0.5 / 2 / 6 / 12
DAC Curve		For making, setting and applying DAC curves
AVG Curve		For making, setting and applying AVG curves
Screenshot		Save the system screen as an image and output to a USB disk
USB Storage		Save the system internal data sets to a USB disk via the USB port
Gate		Gate mode: off / positive / negative / positive with alarm / negative with alarm
Storage		300 data sets, including system setup, detection state, echo figures, etc.
Auto Gain		Enabling the echo amplitude within the gate auto adjusted to a designated amplitude Amplitude setup: 40% / 50% / 60% / 70% / 80% / 90% / 100%
Peak Memory		Display waveform envelope
Peak Echo		Record waveforms including the highest echo
Freeze		Freeze screen waveforms
Auto Calibration		For calibrating material velocity and probe delay. Calibration mode: Velocity and Zero / Velocity / Zero
Angle Measurement		Measure probe angle

<b>Display Screen</b>		5.7" high brightness TFT LCD, 320 x 240 pixels
<b>Operating Time</b>	h	≥7
<b>Operating Voltage</b>	V	9~12 DC (external power supply); 6.0~8.4 (battery)
<b>Operating Temperature</b>	°C	-10~40
<b>Weight</b>	kg	Approx. 1.15 (including battery)
<b>Dimension</b>	mm	152 × 240 × 52 (W×H×L)

## STANDARD CONFIGURATION

CTS-9006 Digital Ultrasonic Flaw Detector Main Unit
CD-92 Charger
DC-92 Battery
2.5Z20N Normal Probe
BH-50 Standard Echo Probe
BNC- BNC-2m Probe Cable
CD for Computer Communication and Data Processing Software

**【Note】** : For optional probes and accessories, please refer to ***NDT Probes and Accessories***.