

# Industrial Ultrasonic Products



*Super Idea for Ultrasonic Inspection*

**SIUI**



# Shantou Institute of Ultrasonic Instruments Co., Ltd.



## About SIUI

SIUI is an ISO certified company and has been dedicated to R&D, manufacture and sales of Ultrasonic Flaw Detectors for more than 30 years.

SIUI has established advanced manufacture technique and widespread sales network, with its products serving in machinery, metallurgy, railway, shipbuilding, aircraft and building. SIUI has a complete product line, including phased-array ultrasonic flaw detectors, conventional flaw detectors, thickness gauges, and up to 1,000 types of probes and accessories.

Since 1995, SIUI has been certified by lots of domestic and overseas authorities.

- ISO9001 Certification
- European CE Marking
- Product Certification issued by Ministry of Railway
- An affiliated unit to the Product Quality Supervision and Test Center for Mechanical Industry Ultrasonic Instruments
- The only professional institute of ultrasonic instruments in China.



\*SIUI products are compliant with European, American and Japanese related standards.

**SIUI is a member in professional NDT societies.**



**Our customers:**



# Phased Array & TOFD & Thickness Measurement Flaw Detector

## SyncScan

**Minimize your cost for Phased Array & TOFD**



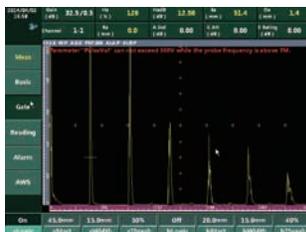
Latest ultrasonic flaw detector from SIUI, SyncScan incorporates the latest advancements in high-performance Phased Array and TOFD detection into one compact and durable unit. SyncScan can be upgraded with Phased Array, TOFD and thickness measurement to satisfy various inspection requirements.

### Superior Features

- IP rate: IP65
- Light Weight: 3.75 kg with battery
- Touch screen: 8.4" LCD with resolution 800×600 pixels
- Upgradeable from conventional UT to PA / TOFD / thickness measurement
- TOFD optional software: 1~4 channel TOFD for Selection
- PA optional software: Simultaneous Display of PAUT and TOFD Software / PA Groups (up to 6 groups) / Flat Weld Groove / Corrosion Solution / Flat Weld Solution / Pipe Girth Weld Solution / Angle Weld Solution



### Upgradeable from UT to Phased Array or TOFD

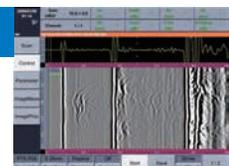
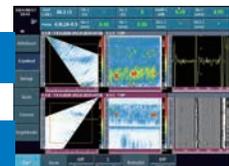


Conventional UT

Version 1: upgradeable to 16:128 PAUT + 1-ch TOFD/ UT

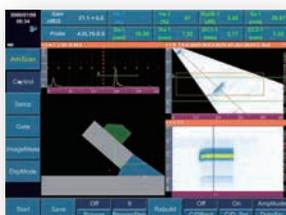
Version 2: upgradeable to 16:64 PAUT(PR) + 1-ch TOFD/ UT

Version 3: upgradeable to 1/2/4-ch TOFD/ UT

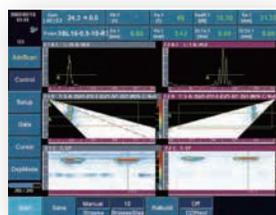


\* PR: pitch & catch function. Thickness measurement function is available for all versions.

\* Please define the version when purchasing.



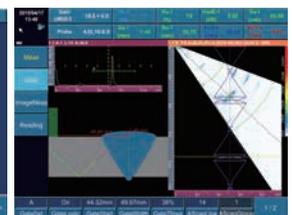
Angle Weld Solution



Pipe Girth Weld Solution



Flat Weld Solution



# Phased Array & TOFD Flaw Detector

# SUPOR

## PAUT+TOFD+Conventional UT

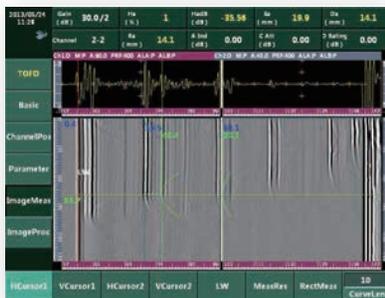


New generation of ultrasonic flaw detector from SIUI, with modular design and more powerful functions.

The SUPOR represents the persistent fine tradition of SIUI: innovative technology, advanced process, small size, lightweight, powerful functions and easy operation.

## Superior Features

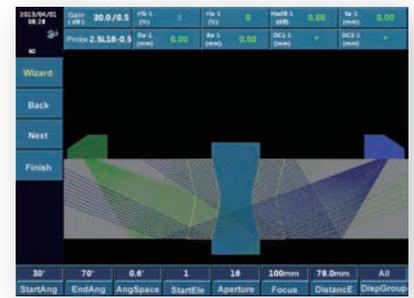
- Grouping Scanning
- Support Two PAUT Probes Working Simultaneously with Grouping Function.
- Modular Design: Phased array/ TOFD/ Multi-channel UT or TOFD
- Simultaneous Inspection of PA & TOFD
- Calibration Wizard and Imaging Wizard
- Weld Simulation
- Real Time A/B/C/D Scan
- 8.4" Touch Screen LCD with Resolution 800×600 Pixels
- Optional Software: TKY software, flat weld solution, angle weld solution, pipe girth weld solution.



TOFD Image



Multi-Group Scanning



Welding Simulation

## Modular Design

SUPOR can work with multiple ultrasound imaging modules:

- 16:64 Phased Array with 2-ch conventional UT module+ optional 1 or 2-ch TOFD function;
- 32:128 Phased Array with 2-ch conventional UT module+ optional 1 or 2-ch TOFD function;
- 2/4/6 TOFD modules with conventional UT functions...



## TKY Software(Optional)

T-K-Y weld joints structures are widely adopted in construction and offshore oil engineering. The safety and reliability of weld joints determine the offshore platform structure and safety of oil and gas production.

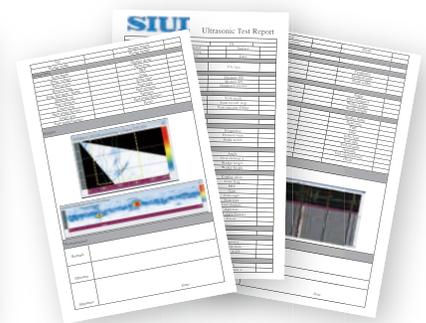
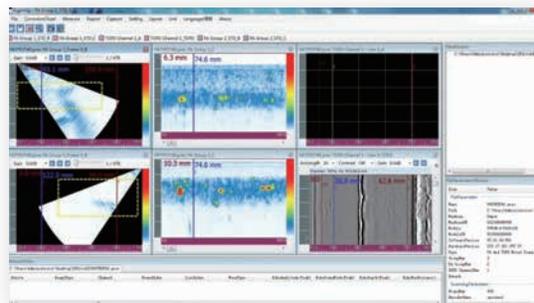
Conventional ultrasonic inspection on T-K-Y weld joints face these problems: complicate procedure, difficult defect position, heavy workload, low defection efficiency and so on. In order to solve problems above, SIUI combines phased array technology with computer-aided technology and develop our unique TKY software, which is perfectly used for PAUT of critical T-K-Y weld joints.



## SuporUp PC Software

SuporUp is a PC-based software for

- Checking data file
- Measuring data analysis
- Generating measurement reports



## Application

SUPOR can work with crawlers to achieve

- Weld inspection
- Gas pressure welding on rail
- Pressure vessel inspection
- Stainless steel and PE pipe inspection
- .....



# Ultrasonic Flaw Detector & Thickness Gauge

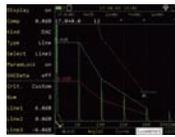
## Smartor

A combination of ultrasonic testing and ultrasonic thickness measurement.



### Superior Features

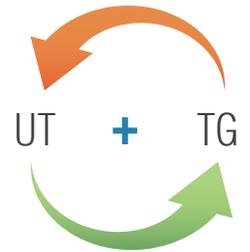
- High IP rate: IP 65
- Compact size: 198 (W) \* 128 (H) \* 52.5 (D) mm
- Light weight: 0.85kg only including battery
- 5.7" LCD with high resolution 640x480 pixels
- Advanced conventional UT functions & thickness measurement functions
- Smart test wizard
- Weld Simulation



Version 1: UT



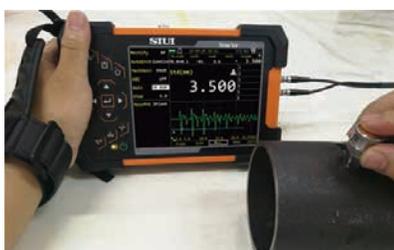
Version 2: TG



Flat weld testing



Angle weld testing



Thickness measurement on pipe



Thickness measurement on step block

# Portable Ultrasonic Flaw Detector

## Advanced Model

### CTS-9009PLUS CTS-9009



- Small Size
- Low Consumption
- High Performance

## Popular Model

### CTS-9006 CTS-9005

- Easy Operation
- Multi-Purpose
- Lightweight

## Application

It is suitable for inspecting flaw position and size, which can be widely used for various detection demands, such as pipes and tubes, welding lines, pressure vessels and airplane parts.



## Advanced Model

### CTS-4020E



- High-speed Sampling
- Ethernet Communication
- High Limit Sensitivity
- Adjustable PRF
- Low Noise

## Popular Model

### CTS-2020E

## Application

It is suitable for inspecting flaw position and size, which can be widely used for various detection demands, such as pipes and tubes, welding lines, pressure vessels, airplane parts, forged pieces and coarse-crystal material.

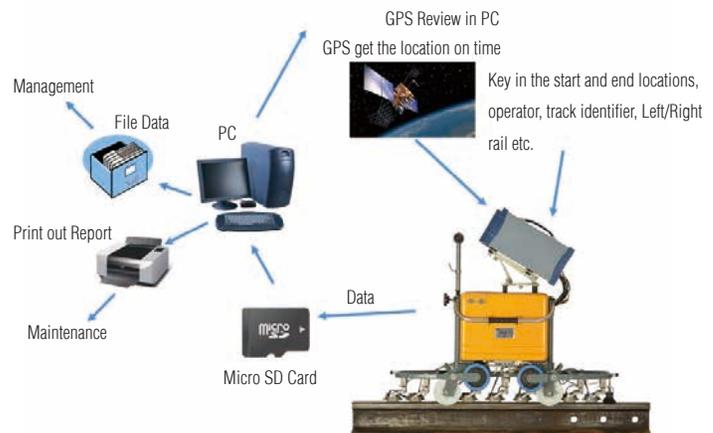


# Ultrasonic Rail Flaw Detector

## Hand Push RailRover



The RailRover Digital Ultrasonic Rail Flaw Detector is the latest digital hand pushed ultrasonic rail testing machine. It has 9 channels and an independent channel for handheld confirmation testing of welds and rail foot. Other features include a GPS location system, internal memory for saving data and the ability to transfer data to a PC or laptop via micro SD card connection to allow simple, easy defect management.



### Superior Features

- 9 Individual Transmit/Receive Channels
- A & B Scan Display and Recording
- Self-Testing Function on Probes
- GPS Location System
- DAC on All Probes

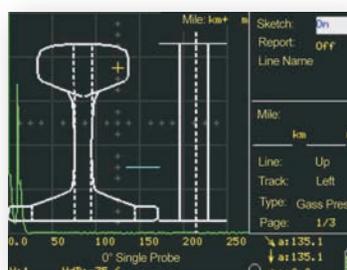
## Hand Held RailTek



The RailTek ultrasonic flaw detector for rail weld joint is the latest digital portable ultrasonic rail testing machine with powerful function and easy operation, which is the first choice for rail weld joint inspection. Superior features include up to seven ultrasonic probes can be connected, high defect inspection rate and real-time Cineloop.

### Superior Features

- Compact and Portable
- Up to Seven Ultrasonic Probes can be Connected
- Easy Operation
- Super-low Consumption
- Strong Performance
- Dynamic Recording



# Multi-Channel Ultrasonic Flaw Detector Series

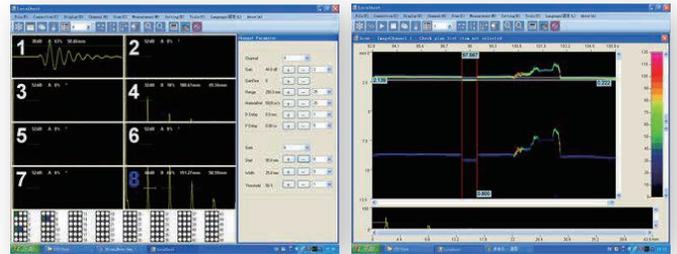
## CTS-5XX1 series

Multi-Channel Ultrasonic Flaw Detector series are based on PC platform. By working with probe detection and mechanical devices, this new series can achieve automatic ultrasound testing with high accuracy, reliability and high efficiency.



### Superior Features

- It can support from 32 to 128 channels (four types of housing for 32/64/96/128 channels).
- Each PCB has 8 independent T/R channels.
- For the same PCB, any transmission channel can combine with any receiver channel. Each PCB can have combination up to 8 groups.
- For the same PCB, the channels work in turn. Different PCBs can work at the same time or work in turn.



A Scan

B Scan

## CTS-8XX series

4/6/8/16/32-channels flaw detectors are available for selection.

- High Performance
- Anti-Interference
- Real-time Auto Alarm
- Ethernet Communication
- Remote Control
- Flaw Detection Data Management



### Application

It can achieve automatic ultrasound testing on section steel, such as steel tube, steel rod, steel billet and steel plate, by working with probe detection and mechanical drive devices.



# Ultrasonic Thickness Gauge

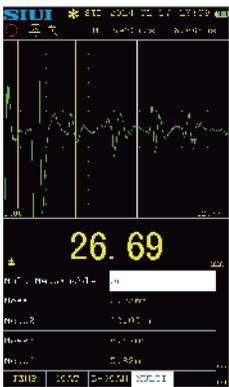
## CTS-49 CTS-59



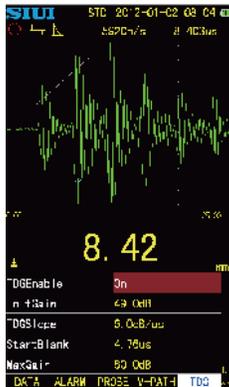
- Auto Echo Search
- Rotatable Screen
- Two-point Calibration
- Through Coating Measurement
- MULTI-Layers Measurement

### Application

It is suitable for a wide range of applications, especially corrosion.



Multi-layers Measurement



V-PATH



CTS-59 Measures Vessel



CTS-59 with Pencil Probe

### Popular Model

## CTS-30A

## CTS-30B



- Compact Size
- Light Weight
- Low Consumption
- Long Operation Duration

### Advanced Model

## CTS-30C

- Multi-probe Selection
- Thru-coating Measurement

### Application

Machinery / chemical / ship building/ aeronautical / aerospace industries



# Ultrasonic Crawlers



The PA bracelet crawler LPS-01 and LPS-02 are compatible with PA ultrasonic flaw detector, which is used to perform circumferential weld inspection on small diameter pipes.



The PA chain crawler CPS-X07 is compatible with PA ultrasonic flaw detector, which is used to perform pipeline corrosion inspection.



UHTS-X02 has up to six combinations:

- Combination 1 (1-channel TOFD)
- Combination 2 (2-channel TOFD)
- Combination 3 (1 PAUT probe)
- Combination 4 (2 PAUT probe)
- Combination 5 (2 PAUT probes+1-channel TOFD)
- Combination 6 (2 PAUT probes+2-channel TOFD)

\*Both UHTS-X02 and PTS-P05 supports irrigation wedges and non-irrigation wedges.



PTS-P05 has up to three combinations:

- Combination 1 (1-channel TOFD)
- Combination 2 (One PAUT Probe)
- Combination 3 (Two PAUT Probes)



TSB-1/2-P05 TOFD Crawler



PES-01 PA Crawler

# Probes and Accessories

The line of ultrasound probe includes normal, angle, variable-angle, dual, immersion, focusing angle-beam, broadband normal probes, composite probes, spotweld probes, TOFD probes and phased-array probes, which can meet different application requirements of customers. In addition, OEM orders can be accepted subject to specifications and purchase quantity.

## Phased Array and TOFD Probes



SIUI can provide:

- A series of PA and TOFD probes for different kinds of inspections
- Customization of PA and TOFD probes with different specifications
- PA and TOFD probes with different connectors compatible with equipments from other manufacturers.

## UT Probes



## Wedges



## Calibration Blocks



## Probe Cables





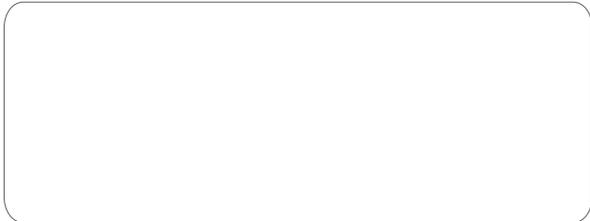
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DCY2.791.EN.Catalog.CY/6C05