



Flaw Detector

I1	Ultrasonic Flaw Detector TUD310	P101
I2	Ultrasonic Flaw Detector TUD500	P103
I3	Ultrasonic Flaw Detector TIME®1150	P104
I4	Holiday Detector DJ Series	P107



Features

- Four ways to present waveform: positive half-wave, negative half-wave, full wave and radio frequency.
- Automatic gain adjustment, defect equivalent calculation and peak memory function
- Two high resolution scanning mode: A and B
- Display of echo envelope
- Two individual gates setting and alarming function.
- 32 detecting channels are available with separate detecting parameters and DAC (Distance Amplitude Correction) curves in every channel.
- Automatic formation of DAC curves, and 30 points 'data can be recorded infinitely, adjustable offset curves and gain correction functions are available.
- Three detecting modes(single-probe, dual crystal probe and transmission) with automatic calibration function
- Connected to PC via USB interface with advanced software for data analysis and management.
- Data and documents are managed with file allocation table (FAT)system, making the management of inspection data more convenient, reliant and faster
- Super large memory up to 32M, 1000 echo data can be stored.
- EL Highlight matrix display (no drift with angle, temperature or sunlight)
- Brand new digital signal circuit is designed for TUD310
- Digital signal processor (DSP) is used for signals analyzing, making circuit noise reduced properly and waveform more stable.
- EPSON ink-jet printers can be connected with TUD
- Real-time waveform display and review

TUD310

ULTRASONIC FLAW DETECTOR

Standard Delivery

•Main unit	1	•Warranty card	1
•Power adaptor	1	•Instruction manual	1
•Neck strap	1		
•Cable for probe	2		
•Straight probe(2.5MHz,Ø20)	1		
•Angle probe(5MHz,8×9K2)	1		
•Couplant	1		
•Flash disk	1		
•Screw driver	1		
•TIME certificate	1		

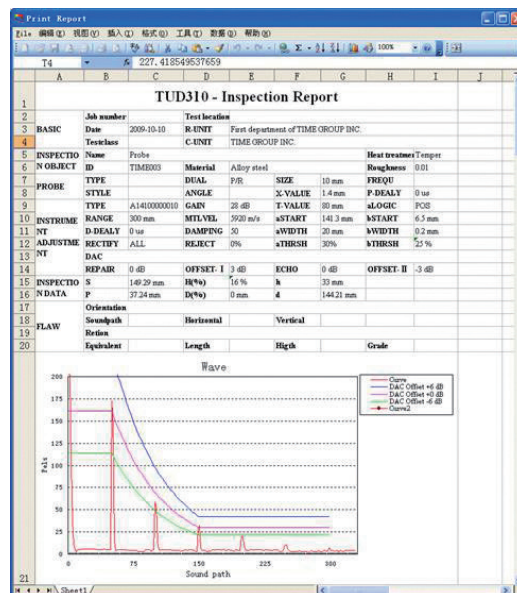
Optional Accessory

- Connecting cable
- Software for TUD310
- Various probes
- EPSON ink-jet printer

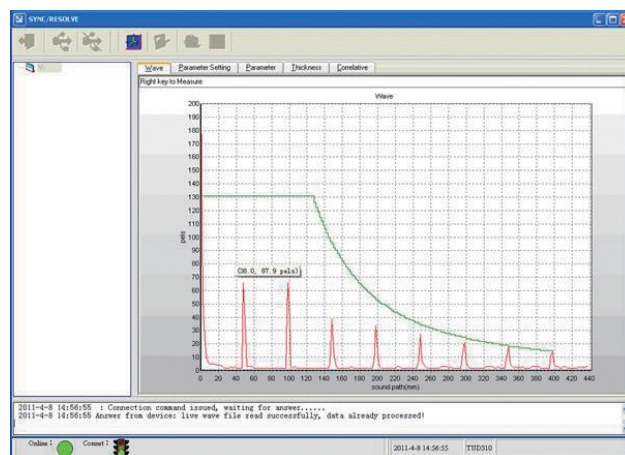
Technical Specification

Items	Description
Scanning range	2.5 mm ~9999 mm
Scanning resolution	0.1mm (2.5mm ~100mm) 1mm (100 mm ~5000mm)
Gain range	0dB ~110 dB
D-delay	-20µs~+3400µs
P-delay	0µs~99.99µs, resolution 0.01µs
Sound speed	1000 m/s~9999m/s
Bandwidth	0.2MHz~15MHz (Low0.2~1 Mid.0.5~4 High3~15)
Vertical linearity accuracy	≤3%
Horizontal linearity accuracy	≤0.2%
Dynamic range	≥32dB
Rectification	Positive half wave, negative wave, full wave, and RF
Sensitivity leavings	≥60dB
Test mode	Pulse-echo, dual and through transmission
Pulser	Spike excitation pulser
Damping	50ohms, 150ohms and 400ohms
Reject	Linear, 0-80% of full screen, variable in steps of 1%
Unit	Metric/inch
Interface	RS232 / USB
Printer	EPSON ink-jet printers
AC requirements	85-264V AC/1.0A,47-63Hz
Temperature	-10℃~40℃
Humidity	20%~90%RH
Power supply	Li battery4×3.6V 4000mAh
Charging time	4~5hours
Dimension (mm)	243×173×70
Weight (g)	1470

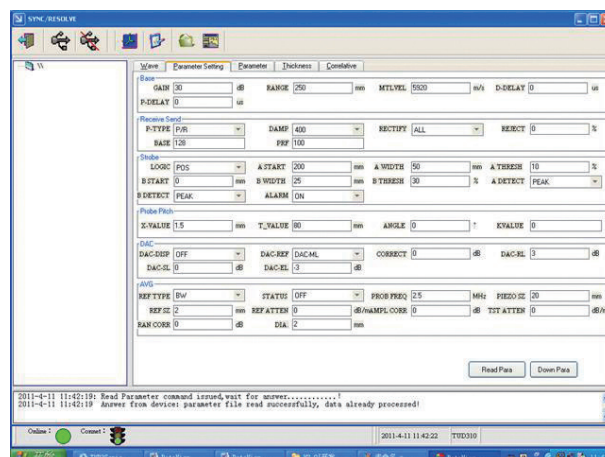
This program is used to display measurement data and graph in real time, edit and store data, prepare flaw detection report and print etc.



Inspection report



Wave data



Setting parameters

TUD310

SOFTWARE AND PROBES



Features

- Large, 640x480 VGA color TET display with 60Hz update.
- Precise and stable horizontal and vertical linearity with horizontal linearity 0.1% and vertical linearity 2%
- High performance square wave pulser with tuning option.
- DAC,AVG,DGS curves and defect echo help to evaluate defect equivalent calculation
- Two high resolution scanning mode: A and B
- Four ways to present waveform: positive half-wave, negative half-wave, full wave and radio frequency.
- Automatic gain adjustment, defect equivalent calculation and peak memory function
- Display of echo envelope
- Two individual gates setting and alarming function.
- Gate measurement includes echo amplitude, beam path, depth, projection and so on.
- Waveform freeze available: in full ,peak, comparative and envelope ways
- 50 detecting channels are available with separate detecting parameters and DAC (Distance Amplitude Correction) curves in every channel.
- Three detecting modes(single-probe, dual crystal probe and transmission) with automatic calibration function
- Connected to PC via USB interface with advanced software for data analysis and management.
- Super large memory, 1000 waveform diagrams can be stored.
- EPSON ink-jet printers can be connected with TUD 500
- Real-time waveform display and review

TUD500

ULTRASONIC FLAW DETECTOR

Standard delivery:

•Main unit	1
•Li battery	2sets
•Power adapter (3A/9V)	1
•LEMO-Q9 probe connecting cable	1
•LEMO-Q6 Probe connecting cable	1
•Neck strap	1
•Wrist strap	1
•Hood	1
•Straight beam probe	1
•Angle beam probe	1
•Couplant	1
•TIME certificate	1
•Warranty card	1
•Instruction manual	1

Optional Accessory

•RS232 communication cable	1
•USB communication cable	1
•Flash disk	1
•Printer	1

Technical Specification

Items	Description
Scanning range	2.5 mm ~9999 mm
Scanning resolution	0.1mm (2.5mm ~100mm) 1mm (100 mm ~5000mm)
Gain range	0dB ~110 dB
D-delay	-20μs~+3400μs
P-delay	0.000~750.000
Sound speed	600 m/s~16000m/s
Bandwidth	0.1MHz~15MHz
Vertical linearity accuracy	≤2%
Horizontal linearity accuracy	≤0.1%
Dynamic range	100dB
Rectification	Positive half wave, negative wave, full wave, and RF
Sensitivity leavings	≥62dB
Test mode	Pulse-echo, dual and through transmission
Pulser	Square pulse
Damping	50ohms, 100ohms ,200ohms,500 ohms
Reject	Linear, 0-80% of full screen
Unit	Metric/inch
Interface	RS232 / USB
Printer	EPSON ink-jet printers
AC requirements	Input: 100-240~50/60Hz Output: 9V DC/3 A~4A
Temperature	-10℃~40℃
Humidity	20%~90%RH
Power	2×3.7V 5000mAh
Charging time	8h
Dimension (mm)	300×180×57
Weight (g)	2000



Features

- 5.7 inch, VGA color TET display and LEMO/BNC probe connector
- Wide measurement range from 1-10000 mm
- Precise and stable horizontal and vertical linearity with horizontal linearity 0.1% and vertical linearity 2%
- DAC、AVG、DGS curves and defect echo help to evaluate defect equivalent calculation
- Simultaneous display of high resolution A-scan and B-scan waveform
- Four ways to present waveform: positive half-wave, negative half-wave, full wave and radio frequency.
- Automatic gain adjustment, defect equivalent calculation and peak memory function
- Two individual gates setting and alarming function.
- Gate measurement includes echo amplitude, beam path, depth, projection and so on.
- Waveform freeze available: in full, peak, comparative and envelope ways
- 50 detecting channels are available with separate detecting parameters and DAC (Distance Amplitude Correction) curves in every channel.
- Adjustable high performance square wave pulse generator
- Three detecting modes (single-probe, dual crystal probe and transmission) with automatic calibration function
- Connected to PC via USB interface with advanced software for data analysis and management.
- Super large memory, 1000 waveform and 4X2000 frame dynamic waveform diagrams can be stored, with the function of storage, checkout and review of channel, waveform, dynamic records.
- Flaw detection report printable

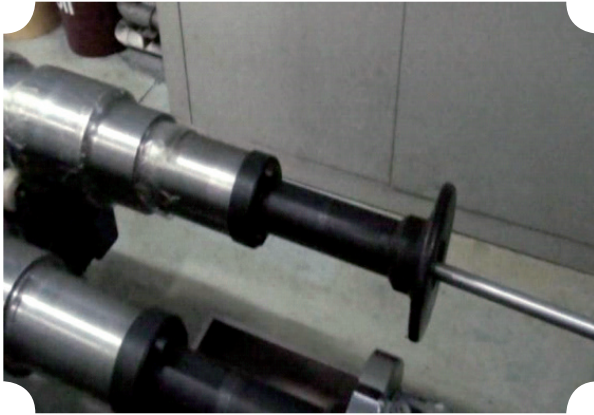
TIME® 1150

ULTRASONIC FLAW DETECTOR

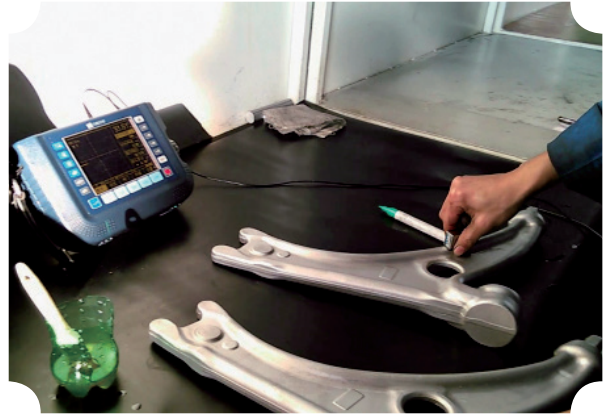
Technical Specification

Operating temperature	-10℃~+50℃
Storage temperature	-20℃~+60℃
Language	English/Chinese/Spanish selectable
Probe socket	LEMO or BNC
Battery (mAh)	2×3.7V 5000mAh
Battery working time	>8 h
Charging time (h)	<8 h
Power adapter Input:	100-240~50/60Hz
Output:	9V DC/3A~4A
LCD	Color transmission TFT, 640×480
Measuring unit	mm、inch、μs
Scanning range (mm)	0~10000
Sound velocity (m/s)	600~16000
P-delay (μs)	-1.000~750.000
D-delay (μs)	-20~+3400
Test mode	Pulse-echo, dual and through transmission
Scanning mode	A scan and B scan, displaying A scan and B scan simultaneously
Pulse generator	
Pulser (V)	Square pulse
Transmitting voltage	100-400 (V) variable in steps of 10V
Transmitting pulse width (ns)	75、100~500 variable in steps of 50 ns
Damping(Ω)	50、100、200、500
Pulse repetition frequency (Hz)	10~1000
Receiver	
Gain (dB)	0 ~ 110
Bandwidth (MHz)	0.1~15
Rectify	Positive half wave, negative half wave, full and RF
Vertical linearity accuracy	±2%
Amplifier resolution (dB)	±1
Dimension (mm)	177 x 255 x 51
Weight (g)	1200

Reject (%)	Linear, 0~80% of the full screen	Standard Delivery	Quantity
Sampling frequency (MHz)	80	Main unit	1 set
Crosstalk rejection (dB)	≥ 80	Lithium battery	2 packs
Dead zone (μs)	≤10 (related with transmitting)	Power adapter (3A/9V)	1 piece
Dynamic range (dB)	≥40	LEMO-Q9 Probe connecting cable (Q9-Q9 probe connecting cable)	1 piece
Instant resolution (dB)	≥32	LEMO-Q6 Probe connecting cable(Q9-Q6 probe connecting cable)	1 piece
Time base linearity	< ±0.2% full screen	Straight beam probe(φ20 2.5MHz)	1 piece
Sensitivity leavings	≥62dB	Angle beam probe(8×9K2 5MHz)	1 piece
Measurements and others		Coupling agent	1 bottle
Gate	2 independence gates	Necklace belt	
Testing position	Edge, Peak value	Wrist belt	1 piece
Gate measurements	Echo amplitude、 Sound path、 depth、 projection etc.	TIME certificate	1 piece
Freeze	Freeze waveform, peak value, comparative and envelope	Warranty card	1 piece
AVG equivalent calculate	Calculate the flaw equivalent according to the flaw echo and AVG curve	Instruction manual	1 piece
DAC flaw evaluating	Make flaw evaluation according to flaw echo and DAC curve		
Gate logic	Off , measurement, gate positive wave alarm, gate negative wave alarm		
Gate alarm	Off、 anytime、 hold for 0.2s、 0.5s、 1s and 2s、 lock		
Alarm	On/off		
Data management, communication and print			
Data storage	50 channels		
Data management	1000 wave images (including 980 A scan images and 20 B scan images)		
	4x2000 dynamic wave image		
	Store, review or replay the channels, waves		
	All the data can be stored to PC or flash disk		
Communication	Communicate with PC via USB interface		
Printing	Print report		
Output port			
USB OTG port	USB2.0 Device connected with PC USB2.0 Host connected with flash disk or printer		



Pipe Inner Wall Flaw Detector



Mechanical Part Flaw Detector



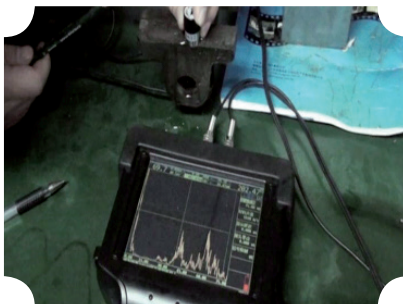
Slim Bar Flaw Detector (Valve)



Weld Flaw Detector



Pipe Hole Flaw Detector



Casting Flaw Detector



TOFD Application



Phased Array Application



Brief Introduction

- DJ series are designed for quick inspecting a wide range of non-conductive coatings and linings for pinholes, porosity and other faults by means of pulsed voltage in the non-destructive testing field. It is widely used in the petro-chemical, pipe mills, plastic fabrication and aerospace industries.

Features

- Display of output high voltage directly
- Clear LCD with blue backlight
- Switch off automatically
- State of charge indicator
- DJ-6(A): mainly used for the antiseptis of pottery
- DJ-6(B): mainly used for petroleum pipeline (high voltage)
- DJ-9: displays leakage points of antiseptis coating on two digits

DJ SERIES

HOLIDAY DETECTOR

Standard Delivery

- Main unit 1
- High voltage detector 1
- Brush probe 2
- Brace rod 1
- Earth lead 1
- Earphone 1
- Power charger 1
- Fuse 2
- Shoulder strap 1
- TIME certificate 1
- Warranty card 1
- Instruction manual 1

Optional Accessory

- Arc-shaped brush
- Circle probe

Technical Specification

Model	DJ-6(A)	DJ-6(B)	DJ-9
Thickness detection	0.03-1mm	0.05-10mm	
Output voltage	0.6KV-8KV	0.6KV-35KV (adjustable)	
DC voltage	12V		
Consumed power	6W		
Alarm	Both earphone and buzzer		
Display	Three digit LCD, fully touch screen		
Dimension (mm)	220x130x88		

