

# ULTRASONIC FLAW DETECTOR TUD210

ISO 9001



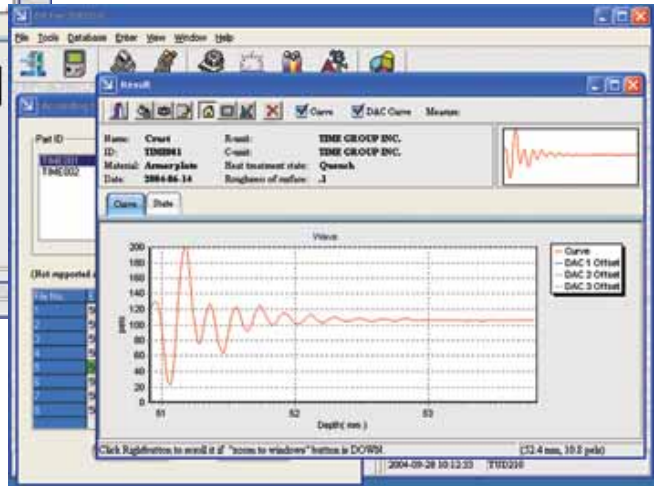
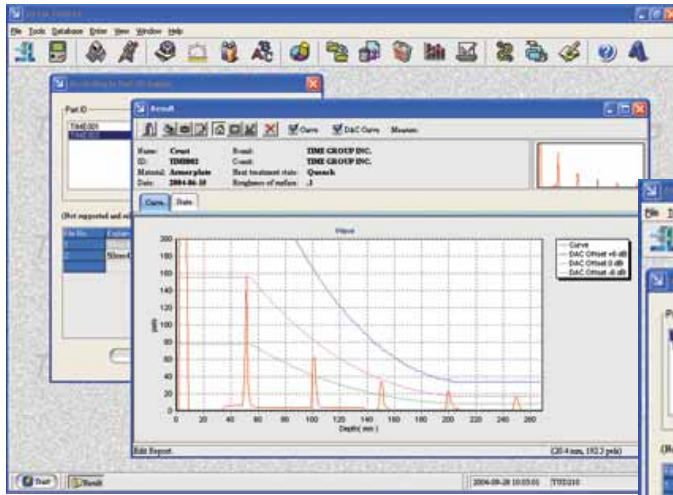
## Features:

- Real-time multi function system, stable, reliable and efficient operation
- The embedded software can be updated online
- Big memory of 400 A graph and 40000 thickness value
- Super Fast sampling capability, RF wave full display
- Wide & high bright EL display screen
- Alternative switch between single probe and double probe
- DAC automatically creation with standard test block
- Li battery, continue working time up to 6 hours
- USB and RS232 interface
- Adjustability of DAC curve is available for various requirements of DAC application
- High speed sampling, radio frequency display with 80 MHz for sampling Min. display range 2.5mm

## Technical Specification

Test modes	Pulse-echo and dual
Pulse	Spike excitation pulse
Measuring range	2.5mm to 5000mm / 0.1inch to 200 inch
Sound speed	1000 m/s~9999m/s
Vertical linearity error	≤3%
Dynamic range	≥32dB
Horizontal linearity error	≤0.2%
Display delay	-20μs to +3400μs
Sensitivity leavings	≥50dB
Probe delay	0μs~99.99μs, resolution 0.01μs
Gain	0-110 dB variable in selectable steps of 0.2,0.5 ,1,2,6,12, and locked
Damping	50 ohms, 150 ohms, and 400 ohms
Rectification	Full wave, positive half wave, negative half wave and RF
Bandwidth	0.2MHz~10MHz ( Low0.2~1, Mid.0.5~4, High 2~10 )
Reject	Linear, 0-80% of full screen, variable in steps of 1%
Scanning resolution	0.1mm (2.5mm~100mm) 1mm (100 mm~5000mm)
Display screen	320 × 240 pixels
Distance readout	Provide single echo or echo to echo thickness reading or sound path, surface, and depth reading for angle beam testing with either peak or flank detection
Unit	mm/inch
Interface	RS 232 and USB interface 9600 baud, 8 bits word length, no parity, 1 stop bit
Printer driver	TP UP-NH-S thermal printer
Power supply	Li batteries, continues working time approx. 6 hours
AC requirements	85 to 264V AC/1.0A, 47 to 63Hz
Charging time	5 hours maximum
Operating temperature	0 to +40
Storage temperature	-20 to +60
Dimensions	53 × 184 × 230mm
Weight	1.2 kg
Probe connector	LEMO

Dataview for TIME ultrasonic flaw detector TUD210



Parameter of Data						Data of Sampled point	
Curve	Value	Date	Value	Date	Value	Depth	Amplitude
Gain	TIMED01	2004-06-14	0	2004-06-14	24.00	01.91	119
Gain	2004-06-14	10	2004-06-14	48%	20.00	02.91	119
Gain	5	Compens	400	2004-06-14	52.00	03.91	125
System	Frequency range	MED	10000	2004-06-14	21.00	04.91	125
Gain	18 dB	Probe	RF	2004-06-14	36%	05.91	129
				2004-06-14		06.91	129
				2004-06-14		07.91	131
				2004-06-14		08.91	128
				2004-06-14		09.91	128
				2004-06-14		10.91	119

### Standard Delivery

- Main unit 1
- Li battery 1
- Neck strap 1
- Power adapter 1
- Couplant 1
- Straight probe 1
- Angle probe 1
- Cable with LEMO connector 2
- Protection case 1
- Screwdriver 1
- TIME certificate 1
- Warranty card 1
- Instruction manual 1

### Optional Accessory

- Various probes (see page 48)
- Dataview for TUD210 ( software)
- Connecting cable
- Printer TP UP-NH

TUD210-Inspection Report					
Book	Job number	201-10	Technician	Test	Responsible unit
	Date	2007-4-5	Test location	Time	Client
Test Object	Serial number	TIMED01			TIME GROUP INC.
	Name	Crown	Material	Armor plate	Heat treatment state
					Quench
					Roughness of surface
					0.1
Probe	Serial number	30	Type	RA40	
	Wave	30 mm	Angle	3 deg	
	F-Depth	30 mm	Depth	30 mm	
	Frequency range	500K	Zone offset	0 mm	
	Serial number	TUD010			
	Gain	31.5 dB	Thickness	40.1 mm	
	Range	20 mm	Velocity distance	50 mm	
	Material velocity	3200 m/s	Echo range(N)	0%	
	F-Depth	30 mm	Echo range(depth)	0	
	FWD	30	Depth	30 mm	
State of TUD210	Display	400	Depth(%)	0	
	Pulse mode	ALL	Mechanical distance	0 mm	
	Reject	0%			
	Alarm high	PGC			
	Offset	30 mm	Alarm	200 mm	
	Offset	20 mm	Alarm	11 mm	
	Offset	22%	Alarm	40%	
	Order date				
	Serial distance	Serial	Vertical		
	Radius		Right	Grade	
Book Standard	Eye-view	Length	Height	Operator	System
				Printer	