

# Ultrasonic Flaw Detector TUD210



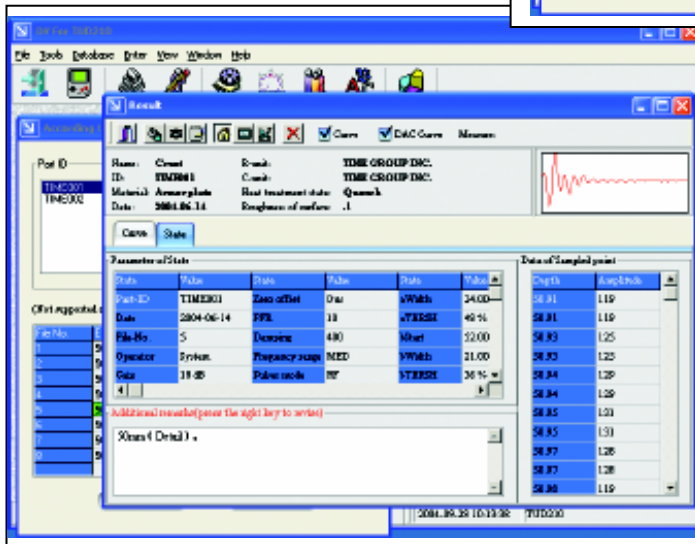
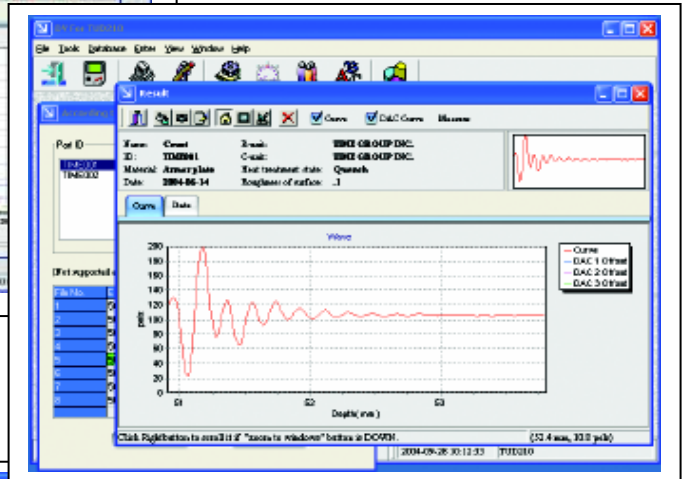
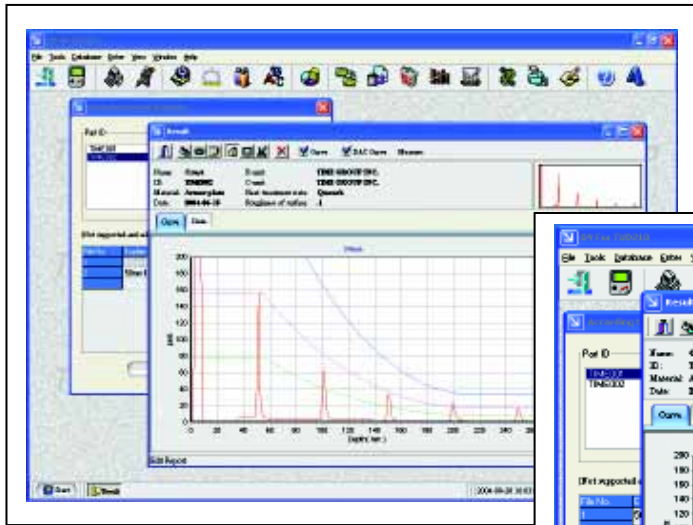
- Real-time multi function system, stable, reliable and efficient operation
- The embedded software can be online updated
- Big memory of 400 A graph and 40000 thickness value
- Super Fast sampling capability, RF wave full display
- Minimum display range 2.5mm
- Wide & high bright EL display screen
- 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
- 3 offset adjustable DAC curve cater to various requirements of DAC in all walks of life
- 400 independent flaw detection channel
- High speed sampling, radio frequency display with 80 MHz for sampling Min. display range 2.5mm

## Technical specifications

Test modes	Pulse-echo and dual
Pulser	Spike excitation pulse
Min. range	2.5 mm (C=5920 m/s, steer) 0.1 inch (C=233 inch/ms)
Max. range	5000mm (C=5920m/s, steer) 200 inch (C=233 inch/ms)
Material velocity	1000 to 9999 m/s variable in steps of 1 m/s 40 to 390 inch/ms in steps of 0.1 inch/ms
Vertical linearity error	≤3%
Dynamic range	≥32dB
Horizontal linearity error	≤0.2%
Display delay	-20μs to +3400μs in steel
Sensitivity leavings	≥50dB
Pulse displacement	-20~+3400 μ s
Probe delay	0μs ~ 99.99μs, resolution 0.01
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	Three selectable broadband (-3dB): Low 0.2-1 MHz Middle 0.5-4 MHz High 2-10 MHz
Reject	Linear, 0-80% of full screen, variable in steps of 1%
Measurement resolution	Sound path: 0.1mm ( display range<99.9 mm )/1mm (display range≥100 mm ) 0.01 inch (display range≥3.90 inch ) 0.1 inch (display range≥3.9 inch )Amplitude: 1% SH, highest echo in the A gate
Display screen and A-scan	Thin film electroluminescent display: 115mm×86mm, 4.5 inch×3.4 inch, 320×240 pixels Zoom display, filled or outlined display and A-scan freeze (gate movement in the frozen A-scan impossible)
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	Metric/imperial
Refracted angle	Fixed setting of 0°,30°,45°,60°,70°,80°,90° or variable from 0° to 90°,refracted angle in 1° resolution
Interface	RS 232 and USB interface 9600 baud, 8 bits word length, no parity, 1 stop bit
Printer driver	TP UP-NH-S line thermal printer
Power supply	Li batteries, continues working time approx. 6 hours Or Charger/Adapter DC Output 9V/3A
AC Mains requirements	85 to 264VAC/1.0A, 47 to 63Hz
Charging time	5 hours maximum
Operating temperature	0 to +40
Storage temperature	-20 to+60
Dimensions (D×W×H)	53 mm×184 mm×230 mm
Weight	1.2 kg/3.1 lbs. with batteries
Probe connector	LEMO

# Ultrasonic Flow Detector TUD210

## Dataview for ultrasonic flow detector TUD210



TUD210-Inspection Report							
Desk	Job number	2D-05	Tranche	Ten	Employer's work	Type department of TIME GROUP INC.	
Test Object	Date	2004-05	Test location	Ten	Client	TIME GROUP INC.	
	Serial number	TUD210			Heat treatment state	Quench	
Probe	Name	Case	Material	Material plate	Roughness of surface	.1	
	Serial number	16					
Weld of TUD210	Weld	F	Type	MARE			
	P-Depth	0 mm	Angle	0 deg			
	Frequency range	1000	Wave effect	Dist			
	Serial number	TUD210					
	Gals	31.5 dB	Thickness	48.1 mm			
	Range	20 mm	Velocity distance	28 mm			
	Material velocity	5920 m/s	Echo range (%)	2%			
	D-Delay	30 cm	Echo range (%)	0			
	DEF	10	Depth	28 mm			
	Damping	400	Depth (%)	0			
Defocus mode	411	Material and distance	Case				
Defect	Region	2%					
	Alarm level	100					
Depth	Offset	20 mm	to start	220 mm			
	Offset	20 mm	to start	12 mm			
Result	Offset	22%	to start	44%			
	Orientation						
Direction	Sound distance	Level	Vertical				
	Radius						
Work	Equipment	Length	High	Good			
	Operator	System					

### Standard delivery

- Main unit 1
- Li battery 1
- Neck strap 1
- Power supply adapter 1
- Couplant 1
- Straight-beam probe ~2.5MHz - 20€ 1
- Angle-beam probe (5MHz-8 × 9K2) 1
- Cable with LEMO connector 2
- Hard shell case 1
- 3.2 Cross screwdriver 1
- TIME certificate 1
- Warranty card 1
- Instruction manual 1
- Carrying case 1

### Optional accessories

- Standard echo probe BH-50
- Angle-beam probe (5MHz-6j16K2)
- Angle-beam probe (2.5MHz-13j13K2.5)
- Straight-beam probe (2.5MHz- 14)
- Dataview for TUD210 ( software with PC cable )
- TP UP-NH Thermal line printer (with power supply unit and 9 pin plug cable )
- USB communication cable