

# ULTRASONIC FLAW DETECTOR

## SUD10/SUD20/SUD50

**S**UD series ultrasonic flaw detectors are portable, microprocessor-based instruments that are suitable for both shop and field use. They are integrated with international advanced digital integration and new EL display technology, are smart Digital Ultrasonic Flaw Detector propelled by SADT. SUD series flaw detectors have almost all functions to meet requirements of professional application for nondestructive testing.

SUD20 and SUD50 are more portable models. ●



SUD10

SUD20

SUD50

### Key Features

- ✓ Automated gain and gain scan;
- ✓ Peak Hold and Peak Memory;
- ✓ DAC, AVG, B scan, AWS
- ✓ TCG curve
- ✓ High-speed capture and very low noise
- ✓ Automated make video of test process and play. Use USB flash disk, the length of video is unlimited.
- ✓ High contrast viewing of the waveform from bright, direct sunlight to complete darkness and easy to read from all angles
- ✓ Automated display precise flaw location (Depth d, level p, distance s, amplitude, sz dB, Ø);
- ✓ Automated switch three staff gauge (Depth d, level p, distance s);
- ✓ Automated calibration of transducer Zero-point, Angles, Front edge and material Velocity ;
- ✓ Convenient to make and use DAC/TCG and AVG to evaluate the echo, the curve can be modified and compensated
- ✓ 6dB DAC functions;
- ✓ 100 independence setup, any criterion can be input freely, we can work in the scene without test block;
- ✓ Big memory of 1000 A graph
- ✓ Big memory of 300 A graph and 30000 thickness values
- ✓ Li battery, continue working time up to 10 hours;
- ✓ The embedded software can be online updated;
- ✓ Display freeze;
- ✓ Automated echo degree;
- ✓ Angles and K-value;
- ✓ Lock and unlock function of system parameters;
- ✓ Electronic clock calendar ;
- ✓ Two gates setting and alarm indication;
- ✓ Gate and DAC alarm;
- ✓ Automated measurement of nodularity and vermicularity
- ✓ RS232/USB port, Communication with PC is easy
- ✓ Powerful pc software and reports can be export to excel
- ✓ Pulse parameteres can be adjusted
- ✓ Dormancy and screen savers
- ✓ Solid metal housing (IP65)

### Ultrasonic Flaw Detector

#### Standard package

Main unit	1
2.5MHz-Ø20 straight probe	1
4MHz 60° 8x9mm angle probe	1
Probe cable (Q9 to Q9)	1
Probe cable (Q9 to C5)	1
4A/9V power adapter	1
Data managing software	1
Interface cable	1
Operation manual	1
Carrying case	1

#### Optional accessories

Standard block V-1 (IIW1)
Standard block V-2 (IIW2)
RS232 cable to PC
Probe cable Q9-Q9
Probe cable Q9-C5
Probe cable C9-Q9
Probe cable C9-C5
Lithium ion battery
Power adaptor 4A/9V
Leather case

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## Optional probes

5MHz, 6x6mm, 45°  
 5MHz, 6x6mm, 60°  
 5MHz, 6x6mm, 70°  
 2MHz, 8X9mm, 45°  
 2MHz, 8X9mm, 60°  
 2MHz, 8X9mm, 70°  
 4MHz, 8X9mm, 45°  
 4MHz, 8X9mm, 60°  
 4MHz, 8X9mm, 70°  
 2MHz, 14X16mm, 45°  
 2MHz, 14X16mm, 60°  
 2MHz, 14X16mm, 70°  
 4MHz, 14X16mm, 45°  
 4MHz, 14X16mm, 60°  
 4MHz, 14X16mm, 70°  
 2MHz, 20X22mm, 45°  
 2MHz, 20X22mm, 60°  
 2MHz, 20X22mm, 70°  
 4MHz, 20X22mm, 45°  
 4MHz, 20X22mm, 60°  
 4MHz, 20X22mm, 70°  
 2MHz, 12mm, 0°  
 4MHz, 12 mm, 0°  
 2MHz, 20mm, 0°  
 4MHz, 20 mm, 0°  
 0.5MHz, 24mm, 0°  
 1MHz, 24 mm, 0°  
 2MHz, 24mm, 0°  
 4MHz, 24 mm, 0°  
 2MHz, 12 mm, 0° DUAL  
 4MHz, 12 mm, 0° DUAL  
 2MHz, 20 mm, 0° DUAL  
 4MHz, 20 mm, 0° DUAL  
 2MHz, 24 mm, 0° DUAL  
 4MHz, 24 mm, 0° DUAL  
 4MHz, 3x10mm, 45°, FD=10mm  
 4MHz, 3x10mm, 60°, FD=8mm  
 4MHz, 3x10mm, 70°, FD=6mm

## Specifications

Model	SUD10	SUD20	SUD50
Measuring range (mm)	0.5~10000		
Frequency range (MHz)	0.5~20		
Pulse shift (μs)	-20~+3400		
Vertical linearity error	≤2.5%		≤3%
Horizontal linearity error	≤0.1%		
Gain (dB)	0~120	0~130	0~120
Zero (μs)	0.0~99.99		
Material velocity	1000~15000 m/s		
Sensitivity margin	≥60dB		≥62dB
Dynamic scope	≥32dB		≥34dB
Measurement mode	single, dual, THRU		
Reject	0~80%		
Port type	BNC(Q9)		
Memory	300		1000
Independence setup	100		
sz, dB, Ø	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Peak hold and Peak memory	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B scan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AVG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TCG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Predefined standards (13)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automated calibration (IIW)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6dB DAC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Make video	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Unlimited
PC software	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Online update	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Curved surface correction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AWS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pulse energy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pulse width	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Gate alarm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DAC alarm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Continue working time	10h	9h	12h
Display	LED True Color		
Support	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wrist strap	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Operating temperature	-20~55°C		
Dimension	240mm×180mm×50mm	210mm×156mm×38mm	238mm×160mm×48mm
Net weight	1.8kg	1.0kg	1.0kg
Standards	JB/T 10061-1999, JJG 746-2004		