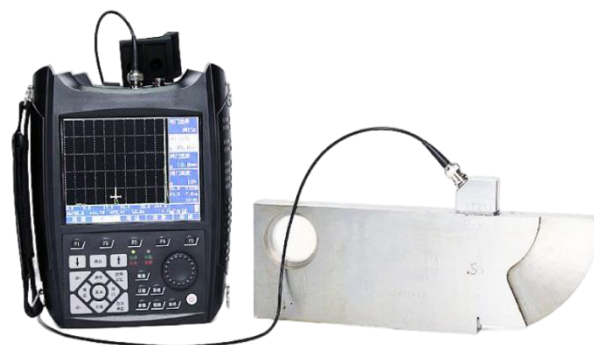


## SUB180 Ultrasonic Flaw Detector

The portable ultrasonic flaw detector is specially designed to meet the needs of non-destructive testing engineers. It is a portable industrial non-destructive testing instrument used to detect, locate, evaluate and diagnose various damages. It can freely and accurately detect welding defects, cracks, and pores inside the workpiece. It is widely used in power engineering, boiler pressure vessels, steel structures, military industry, aviation, railway transportation, automatic machinery and equipment and other industries. It is an indispensable testing tool in the field of non-destructive testing.



### Main Features

- Real-time dynamic color video
- A variety of industry reports are available
- Sound and light alarm for various conditions, low battery alarm
- Single crystal, double crystal, and transmission probes are available
- Data can be imported into the computer through the USB2.0 interface
- Automatic calibration function of the probe is simple and convenient to use
- Positive half wave, negative half wave, full wave, 3 detection methods
- Large-capacity lithium battery, and can be tested while charging



## Main Functions

DAC	√
AVG	√
Built-in Standards	√
Gate Alarm	√
Curve Alarm	√
Wave Freeze	√
Channels	100
Waveforms	1000
Recording duration	60min+20*5min
Auto Calibration	√
Noise Suppression	√
Peak Memory	√
Echo Envelope	√
Thickness B-scan	√

Color B-scan	√
Grayscale B-scan	√
Auto Gain	√
Echo Coding	Background
Aperture $\phi$ Value Calculation	√
Weld Figure	√
Crack Depth	√
Curved Surface Correction	√
TCG	×
AWS	√
Internal Memory	1GB
Software	√

## Specifications

Test range	8.0~25000 mm
Sound velocity in material	200~20000 m/s
Gain	0 dB~110 dB
Display delay (D-Delay)	-15 $\mu$ s~+3400 $\mu$ s
Probe delay (P-delay)	0 $\mu$ s~1000 $\mu$ s
Operating Frequency	0.2~20MHz
Electric Noise Level	$\leq$ 12%
Sensitivity margin	>62 dB (depth: 200 mm, flat-bottom hole $\Phi$ 2)
Resolution	>40 dB
Noise suppression	0~50% (digital reject)
Vertical linearity error	$\leq$ 3%
Horizontal linearity error	$\leq$ 0.1%
Dynamic Range	$\geq$ 32 dB
Unit	mm/inch
Probe Types	Single Straight, Single Angle, Dual Straight, Dual Angle, Transmission, Surface
Gate monitors	Two independent gates, gate A and B
Rectification	Full wave, RF, positive half-wave, negative half-wave
Sampling rate	100MHz
Transmitter Pulse	Square wave and spike pulses
Transmitter Pulse Amplitude	Multi-grades adjustable (100V, 250V, 400V, 500V)
Pulse Width	Auto or 50~1000 ns or spike pulse
Probe Damping	50 $\Omega$ , 75 $\Omega$ , 150 $\Omega$ , 500 $\Omega$
Pulse Repetition Frequency (PRF)	5~1000Hz or auto-high/middle/low
Ambient Temperature	-20 $^{\circ}$ C~50 $^{\circ}$ C
Ambient Humidity	20%~95% RH
Power adaptor	DC: 8.4V
Battery	Li battery 7.4V 7800mAh
Working Hours	$\geq$ 20 hours
Screen	320 $\times$ 240, 5.7-inch LCD with 16-theme colors
Size	220 $\times$ 175 $\times$ 59 (mm)
Weight	1.3 kg including battery





Package List			
No.	Type	Qty	Remarks
1	Ultrasonic detector main unit	1	
2	Power adaptor (& power cable)	1	Input: 100-240VAC, 50Hz/60Hz Output: 8.4VDC/3.0A
3	Probe cable	2	1.5 meter, BNC-BNC
4	Straight beam probe	1	2.5MHz, $\Phi 20$
5	Angle beam probe	1	2.5MHz, 9x9mm, K2=63.4°
6	Protective cover for main unit	1	
7	Operation Manual	1	
8	Instrument case	1	
9	Battery	1	Lithium battery 7.4V 7800mAh
10	USB Communication cable	1	USB Mini
11	PC Software	1	In the USB Flash disk
12	Strap set	1	With a wrist strap, shoulder strap, back strap
13	Warranty card	1	

