

	CAUTION: The battery must be properly disposed according to local regulation after their use.
	CAUTION: The battery must be taken out from the battery compartment if the device will not be used for a long time.
	CAUTION: The device shall only be used if the battery cover is closed.
	CAUTION: Battery must be stored in cool and dry place.
	CAUTION: If use rechargeable battery, to insure capability and life, please fully charge batteries before first use, normally, batteries must be continuously charged over 14 hours or charged according to the guidance displayed on the battery.
	CAUTION: Please don't set anode and cathode of the battery wrongly.
	CAUTION: The shell life of this product is Five year
	CAUTION: After the service life, please return the products to the manufacture or disposal of the products according to local regulations.
	CAUTION: This device cannot be used with defibrillator or high frequency surgical unit.
	CAUTION: Please choose the accessories authorized by our company or the device may be damaged.
	CAUTION: Please keep the probe from edge tool.
	CAUTION: Please use machine under the environment without strong electromagnetic field, which may influence measure result.

1.2 Symbols

Mark	Summary	Mark	Summary
	Refer to user		Up button
	Type BF		Down button
	Serial Number		Probe Connector
	Caution, Consult		ON/OFF
	Date of		Manufacturer
	The symbol indicates that the device complies with the European Council		

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Auto Shut-OFF: After 1 minute no signal, power off automatically.

Battery Type Recommended: Two pieces of 1.5 V DC batteries (SIZE AA) or one piece 14500 Lithium battery (DC 3.7V).

Standard Configuration: 2.5 MHz Ultrasound Probe

Nominal Frequency: Continuous wave Doppler

Working Frequency: 2.5 MHz±10%

Audio bandwidth and power: 250Hz ~1.25kHz, 1.5W

Table 1. Sound output level technical data of ultrasonic probe

Index Label	MI	TIS		TIB		TIC
		At surface	Below surface	At surface	Below surface	
Maximum index	0.016	0.121		0.957		(a)
Index component value		0.105	0.121	0.957	0.235	
Acoustic Parameters	$p_{1,2}$ at Z_{mi} (MPa)	0.026				
	P (mW)		21.66		21.66	#
	$P_{1,1}$ (mW)		8.84		8.84	
	Z_s (cm)			3.8		
	Z_b (cm)				3.8	
	Z_{MI} (cm)	2.7				
	$Z_{PI,2}$ (cm)	2.7				
	f_{max} (MHz)	2.501	2.501		2.501	#
Other Information	prf (Hz)	1				
	srr (Hz)	—				
	n_{ppp}	1				
	$I_{sp1,2}$ at $Z_{PI,2}$ (W/cm ²)	0.01				
	$I_{sp1,2}$ at $Z_{PI,2}$ or Z_{MI} (W/cm ²)	10.19				
$I_{sp1,2}$ at $Z_{PI,2}$ - Z_s	16.23					
P _r at Z_{PI} (Wpa)	0.032					
Operating Control Condition	Frequency	2.5MHz				
NOTE 1 :		Only one operating condition per index.				
NOTE 2 :		Data should be entered for "at surface" and "below surface" both in the column related to TIS or TIB.				

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	Authorized Representative in the European Community
	The symbol indicates that the device should be sent to the special agencies according to
IPX2	Protected against access to hazardous parts with a finger and against vertically falling water drops when enclosure tilted up to 15°
IPX1	Protected against access to hazardous parts with a finger and against vertically falling water drops.

2 Introduction

2.1 Intended use

Fetal Doppler is a hand-held obstetrical unit, which can be mainly used to detect the fetal heartbeat rate (FHR) and the sound of the fetal heart beat (SFH).

2.2 Features

There are sixteen different models available: AD50A, AD51A, AD50C, AD51C, AD50E, AD51E, AD50G, AD51G, AD50B, **AD51B**, AD50D, AD51D, AD50F, AD51F, AD50H, AD51H

The features of the Dopplers are listed in the following chart:

	AD50A AD50C AD50E AD50G	AD51A AD51C AD51E AD51G	AD50B AD50D AD50F AD50H	AD51B AD51D AD51F AD51H
LCD Display	✓	✗	✓	✗
TFT Display	✗	✓	✗	✓
Headphone Socket	✓	✓	✓	✓
Mini USB	✗	✗	✓	✓
Probe Socket	✓	✓	✓	✓
Powered by Alkaline Batteries	✓	✓	✗	✗
Powered by Lithium Batteries	✗	✗	✓	✓

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CAUTION

The battery must be taken out from the battery compartment if the device will not be used for a long time.

3.7 Product specifications

Product Name: Fetal Doppler

Model No.: AD50A, AD51A, AD50C, AD51C, AD50E, AD51E, AD50G, AD51G, AD50B, **AD51B**, AD50D, AD51D, AD50F, AD51F, AD50H, AD51H

Safety:

Complies with: IEC60601-1

Classification:

Anti-electric Shock Type: Internally powered equipment

Anti-electric Shock Degree: Type B equipment

Liquid Proof Degree:

Main unit: IPX1

Probe: Prevent from water splashing, degree of protection: IPX2

Degree of Safety in Presence of Flammable Gases: Equipment not suitable for use in presence of flammable gases

Working System: Continuous running equipment

EMC: Group I Class B

Physical Characteristic

Size: 140 mm (Length) × 35 mm (Width) × 108 mm (Height)

Weight: about 250g (including probe, excluding battery)

Environmental Specifications

Temperature range: 0 °C ~ 40 °C

Humidity range: 30% to 90%

Atmospheric pressure range: 60.0kPa ~ 110.0kPa

Transportation and Storage

Temperature range: -10 °C ~ 60 °C

Temperature range: 10% to 93%

Atmospheric pressure range: 50.0kPa ~ 110.0kPa

Display: 1.77" LCD display

FHR Measuring Range: 50 BPM ~ 240 BPM (BPM: beat per minute)

Resolution: 1 BPM

Accuracy: ± 2 BPM

Power Consumption : < 0.8 W

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