

JPD-100S9



AngelSounds[®]

Fetal Doppler

USER MANUAL

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Manual Version:Version 1.1

Issuing Date: 2020.11

To download an APP of “JUMPER Health” for the Fetal Doppler. Scan the QR code below.



JUMPER Health
Download APP with
 

Contact Us

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Please read the User Manual carefully to make sure safe and proper use of this Fetal Doppler , Please read and fully understand the Safety Precautions before use.

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Quick Start Guide

We know you are anxious to get started with your Fetal Doppler but we'd like to encourage you to read the whole manual firstly.

1. Install the 9 volt battery to the battery clip & make sure it is firmly connected. Don't forget to unwrap the clear plastic protective wrapper from the 9 volt battery first.
2. To download an APP of "JUMPER Health" for the Fetal Doppler on a smartphone. Connect the device to the smartphone via a recording cable. For detailed operation, see the user manual of JUMPER Health.
3. Turn on the Fetal Doppler and test it on your own heart first with some coupling agent to make sure it is working correctly. If you don't hear your own heartbeat then troubleshoot before trying to find the fetal heartbeat.
4. When the Fetal Doppler is working correctly you can now lay back and apply coupling agent to the surface of the ultrasonic probe.
5. Now put the Fetal Doppler to your tummy and move it very very very slowly until you heard your baby's heartbeat sounds.
6. Listen, Record, Share and Enjoy the fetal heartbeat sounds.

If you have any difficulties please look for solutions in the user manual detail pages. You can also send an email to contact us directly for assistance!

Thank You for Your Purchase!

Thank you for purchasing the Fetal Doppler JPD-100S9 made by Jumper Medical. Please read the user manual carefully before using the product, and put it in a safe place for future reference.

We hope you are completely satisfied with your Fetal Doppler purchase.

To Provide Feedback

Website: www.jumper-medical.com

Email: info@jumper-medical.com

Your reviews and seller feedback allow us to give you the best products and service possible!

Using Your Fetal Doppler

This guide will show you how to use your Fetal Doppler to listen to the sound of your baby's heartbeat. The normal range of fetal heart rate: 110bpm-160bpm.



CAUTION: It cannot replace the professional fetal monitor, when the fetal heart rate is abnormal, or can not find the fetal heart, can not feel the fetal movement, pregnant woman's should immediately go to the hospital to seek the doctor's help.

Package Contents

- Fetal Doppler
- Battery (9V)
- Recording cable
- Coupling agent (15g)
- User manual
- User manual of JUMPER Health



Fetal Doppler



Battery



Recording cable



Coupling agent

For simplicity of operation the unit is easy to assemble. Carefully check each item as there are some damages that may have occurred during shipment. If any item are damaged, please contact Jumper Customer Service immediately.

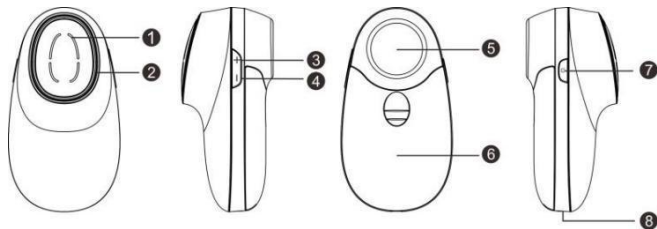
Intended use

The Fetal Doppler JPD-100S9 is a hand-held, battery powered audio Doppler device used for detecting fetal heartbeats.

Note for home use

This device cannot replace a professional fetal monitor. If the fetal heart rate is abnormal or cannot be located using this monitor, immediately go to the hospital to seek the doctor's help. If fetal movement is not felt by the pregnant woman, immediately go to the hospital to seek the doctor's help.

Unit Appearance



1. Loudspeaker
2. Working indicator light
3. Volume up button
4. Volume down button
5. Ultrasound transducer
6. Battery cover
7. Power on/off button
8. Recording jack

Controls and Indicators

Power On/Off button - Used to power on or off the Fetal Doppler.

Working indicator light - Press the “Power on/off button” and hold for about 2 seconds, the device powered on when the working Indicator light turns green.

In power-on state, press the “Power on/off button” and hold for about 2 seconds, the device powered off when the working Indicator light turns orange.

Loudspeaker-Used to output the sounds of the fetal heartbeat.

Volume up/down button-Used to change the volume. Press the “Volume up button”, the sound volume will increase. Contrary, press the “Volume down button”, the sound volume will decrease.

Recording jack-Used to connect a smartphone via a recording cable.

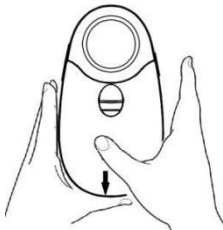
Note:The device will power on automatically when the device connect a smartphone via a recording cable. If some smartphones does not support, you need to operate manually to power on or off the device.

Ultrasound transducer - The part that touches the mommy's belly to detect the sounds of the fetal heartbeat, kicks and movements.

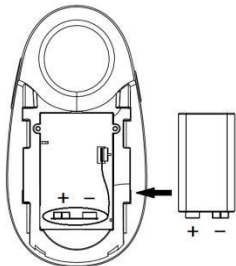
Battery Cover - Used to access the battery.

Step One:Installing and Replacing the battery:

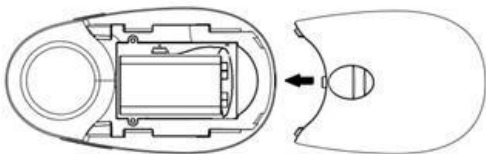
1. Take out the battery cover as bellow picture shows.



2. Run the wire along the right side and put the battery clip at the bottom as bellow picture shows. when place the battery make sure the "+" and "-" matched.



3. Close the battery cover as the bellow picture shows.



Additional Battery Notes:

- Be sure to remove the battery's protective clear wrapper before installing it in the Fetal Doppler.
- If the Fetal Doppler stops working, or won't turn on, please replace the battery with a new battery.
- Keep the battery in a cool and dry environment when not in use.

- Remove the battery from the unit if you do not anticipate using it for long time to protect both the Fetal Doppler and the battery.
- The Battery Type is an Alkaline 9 Volt
- Please dispose of battery properly when it loses power.

Step Two: To download a APP of JUMPER Health on a smartphone

Download and install a APP of "JUMPER Health"

- Scan the QR code to download



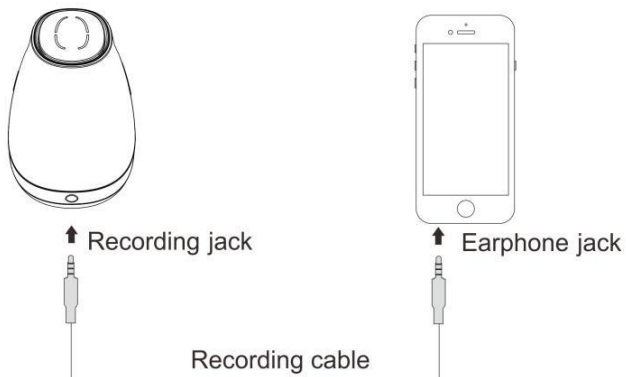
JUMPER Health
Download APP with
 

- Download the app in APP Store or Google Market by entering the keyword "JUMPER Health".

Notes: This APP supports iOS 7.0 and later versions, and Android 4.3 and later versions. In addition, hardware of the smartphone needs to support Bluetooth 4.0.

Step Three: Connect the Fetal Doppler to a smartphone via recording cable

1. Insert one end of the recording cable into recording jack first, and then insert the other end into earphone jack.
2. The device will power on automatically when the device connects a smartphone via a recording cable. If some smartphones do not support, you need to operate manually to power on or off the device.



Step Four: Coat the coupling agent on the ultrasonic probe

We recommend the liberal use of Ultrasonic, Aloe Vera or medical ultrasonic coupling gel to reduce the static caused by moving the Fetal Doppler around on the belly. Baby Oil, Coconut Oil, Virgin Olive Oil or even Vaseline work well which is also readily available in most homes. Actually anything that lubricates the movement across your belly will work. We do however suggest that you don't use colored gels or lotions.

Caution: Be sure not to get coupling agent into the area around the On/ Off/ Volume dial as this could damage the unit.

Step Five: Listening to the Baby's Heartbeat

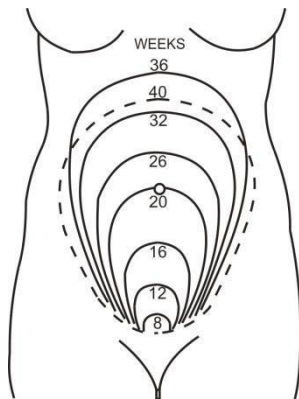
1. Always check the Fetal Doppler on your own heartbeat first to make sure everything is connected and working properly. Refer to the FAQs if it isn't before proceeding.
2. We recommend the mother be in a reclining position for easiest detection of the baby's heartbeat.
3. Apply a generous amount of coupling gel to the receiver and to the mother's abdomen.
4. Hold the receiver to the mother's heart first to hear how it sounds so it's easier to distinguish from the baby.
5. Then hold the receiver to the mother's abdomen to listen to the baby's heartbeat which should be much faster than mommy's heartbeat.
6. Move the Fetal Doppler very very slowly to find the optimum placement based on the baby's current position.
7. After the heartbeat is detected, adjust the volume to a comfortable level and enjoy.
8. After you are done listening, turn off the power and gently wipe the Fetal Doppler clean but do not use cleaning agents or soap and water as this could damage the unit.

Location and Detection

Detection of the Baby's Heart Rate is detectable 90% of the time after the 12th week gestation.

Between 8 and 16 weeks it is possible to hear the heartbeat if conditions are perfect.

After the 16th week you should have no problem finding the heartbeat.



The gestational chart shows about where you should be able to find your baby's heartbeat as it grows each week.

Early in the gestation period place the receiver near the middle of the abdomen above the pubic line but aiming down towards the pubic bone.

Move the receiver slowly while searching because the heart is so small and the sound it makes so faint that it will be easy to miss hearing the heart if you move too quickly.

Keep in mind that each mommy and baby is different so not being able to detect the heartbeat early isn't a reason for concern.

If you are not able to detect the baby within 10 minutes we recommend taking a break and trying again a few days later. However, if you are concerned about any issues relating to your pregnancy you should contact your healthcare provider for assistance.

As the baby grows, the heartbeats become stronger and it will be easier for you to detect the sounds the baby makes.

We recommend keeping the session to less than 10 minutes at a time. we recommend limited use in short intervals, infrequently and primarily after the first trimester.

Make sure to continuously use plenty of coupling gel to reduce the static caused by moving the probe around on the mother's belly. We recommend the use of any of the following: Ultrasonic Gel, Aloe Vera, Medical ultrasonic coupling gel, Baby Oil, Coconut Oil, Virgin Olive Oil or even Vaseline work well. DO NOT use colored gels or lotions as this will not adequately protect the probe from damage.

By counting the heartbeats for one minute you will be able to determine the baby's heart rate in beats per minute (BPM). Do this at least 3 times and average the results to get a more accurate reading.

A baby's normal heart rate should be between 110 and 160 BPM. The baby's heart rate can vary based on the level of activity. Early in the pregnancy the baby's heart rate will vary but as the baby matures the heart rate will become more consistent.

If you detect a heart rate in the range of 60 to 100 BPM then you are most likely picking up the mother's heartbeats.

If you are concerned about the sounds you hear you should contact your healthcare provider for assistance.

The Fetal Doppler is a listening system to hear the sounds your baby makes and is NOT a medical device and can not be used for diagnostic or medical purposes and is not to be used as a substitute for regular prenatal care by a licensed doctor.

Recording your Baby's Heartbeat

We recommend and encourage you to record the sound of your baby's heartbeat on a smartphone. What a wonderful sound to share with your family and friends. It would also be an amazing memory to share with your child as they grow older.

Once you have the Fetal Doppler connected, find the baby's heartbeat and then begin recording. You may need to turn up the unit's volume up button to get the best recording.

Tip: Record the mother's heartbeat also during this time and play it to soothe your newborn baby in the nursery. Rather than a generic white noise heartbeat, wouldn't it be better to use the baby's mother's heartbeat?

Share your Recording on Social Media

Share the recording you made with your family and friends on your own Social Media like Facebook, Twitter.

Principles of how the Fetal Doppler works

This Fetal Doppler consists of a receiver unit that can detect the slightest of sounds inside the womb and sends signal output to a loudspeaker or a smartphone.

A sound wave is transmitted from the Fetal Doppler to the uterus in the mommy's belly and an echo is then received back when the sound wave bounces off of the baby's heart.

The difference between these two signals (sound waves) are measured to determine the baby's heartbeat.

Cleaning, Disinfecting, Care and Disposal

We recommend cleaning the gel from the transducer probe with a soft cloth. You can disinfect the probe by wiping it with 70% ethanol or alcohol wipes and then drying with a soft dry cloth. Do not use abrasives, solvents, bleach, soap and water, steam or high temperature cleaning processes to sterilize the unit as any of these can damage it. Do not immerse in water or liquids to clean the Fetal Doppler as this will short out the unit.

The battery is recyclable. Please recycle the battery after use by following your local recycling guidelines.

Do not disassemble the unit. Your warranty will be voided upon unauthorized destruction or service to the product.

Product FAQs

Unit doesn't turn on - Make sure a fresh battery is installed and the power is turned on. Check to make sure the battery connector is connected fully onto the battery terminals. Make sure you've removed the clear protective wrapper off of the battery.

The working indicator light is turns orange - Make sure a fresh battery is installed.

There is no sound coming through the loudspeaker - Make sure a fresh battery is installed and that the working indicator light is illuminated. Be sure to turn up the volume using the Volume up button.

Uncomfortable noise is coming through loudspeaker - Make sure a fresh battery is installed. A weak battery can cause noise. Interference can be caused by nearby electronic devices (e.g. high frequency electronics, cell phones, cordless phones, etc.). Make sure there is plenty of coupling gel between the probe and the abdomen. Some slight noise does occur when moving the probe from one location to another on the abdomen and sufficient lubrication will decrease this significantly.

How soon can I hear the baby - We recommend that the Fetal Doppler be used after the 16th week of pregnancy. Before that there are a lot of variables that may not let you hear your baby yet. Keep in mind that the baby is tiny still before 16 weeks. The Fetal Doppler works more like a laser pointer than a floodlight in that you will hear the baby when it is perfectly lined up. But the field of view of detecting the baby is small, like a laser pointer, so if you are off slightly you'll miss the baby. As the baby grows each week, being able to find the baby becomes easier and easier to do.

I'm finding it difficult to find the baby after 16 weeks - First check to see if you can hear your own heartbeat to be sure the unit is working correctly. If you can not hear your own heartbeat then something is wrong and you should trouble shoot first before attempting to locate the baby. Make sure to use sufficient lubricating gel. Don't apply too much pressure to the mother's abdomen. You have not yet found the optimum placement of the probe to hear the baby's heartbeat, take a break for a day and try again later. Slow down moving the probe around on the abdomen to make it easier to hear the heartbeat when you find the right location. The baby can sometimes be located behind the placenta making it difficult to find, try again later.

The battery cover doesn't want to stay on – Please review the detailed instructions on replacing the battery cover on page 6 for help.

How do I record the heartbeat – Please read the user manual of JUMPER Health carefully.

Specifications

Product name: Fetal Doppler

Model: JPD-100S9

Safety: FDA approved; Complies with IEC 60601-1, EN60601-1-2, IEC 61266

Classification:

Anti-electric shock type: Internal powered equipment

Anti-electric shock degree: Type BF equipment

Classification of protection against harmful ingress of water: IP22

Mode of operation: Continuous operation

Technical Parameters:

Ultrasonic emitting frequency: 2.5MHz

Output power: < 20mW

Overall sensitivity at the distances 200 mm from the face of the transducer, \geq 90dB

Spatial-peak temporal-peak acoustic pressure:

$< 0.1\text{MPa}$

Effective area of the ultrasonic transducer active element: 1.57cm^2

The acoustic coupling medium for normal use: ph: $5.5\sim 8$ Acoustic impedance: $\leq 1.7 \times 10^5\text{g/cm}^2\cdot\text{s}$

The acoustic output parameter meets the provision freedom from publication in IEC 61157 Requirement for the declaration of the acoustic output of medical diagnostic ultrasonic equipment: $P_{\text{a}} < 1\text{MPa}$; $I_{\text{ob}} < 20\text{mW/cm}^2$; $I_{\text{spta}} < 100\text{mW/cm}^2$

Audio output power: $< 0.2\text{ W}$

Audio out jack: $\Phi 3.5\text{mm}$

Recommended battery type: 9V DC alkaline battery Stand-by Time: $> 4\text{hours}$

Suitable gestation: 16 gestational weeks or later

Physical Characteristics:

Size: $119 \times 65 \times 54\text{mm}$

Weight: $155\text{g} \pm 5\text{g}$. (including battery)

Shelf Life: 5 years, please inspect yearly for safety

Operating conditions

Temperature: $5\text{ }^\circ\text{C}$ to $40\text{ }^\circ\text{C}$

Humidity: $\leq 80\%$ RH, non-condensing

Atmospheric pressure: 86kPa to 106kPa



Storage and shipping conditions










Temperature: $-20\text{ }^\circ\text{C}$ to $55\text{ }^\circ\text{C}$

Humidity: $10\% - 93\%$ RH, non-condensing

Atmospheric pressure: 50kPa to 106kPa

Symbol explanation

	Consult instructions for use of the product and/or its accessories.
	Warning Information

	Authorized Representative in the European Community
	CE Mark: The Product system conforms to essential requirements of the Medical Device Directive 93/42/EEC.
	Date of manufacture.
	Information about the manufacturer.
	Type BF applied part
	Specifies serial number of the Product
	Batch code
	The environmental protection use period is 5 years.
IP22	Degree of protection against ingress of water and particulate matter.
	It indicates that the equipment should be sent to the special agencies according to local regulation for separate collection after its useful life.

EMC Information



CAUTION:

Fetal Doppler needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided for in the ACCOMPANYING DOCUMENTS.



CAUTION:

Portable and mobile RF communications equipment can affect **Fetal Doppler**.



CAUTION:

The **Fetal Doppler** should not be used adjacent to or stacked with other equipment.

A1.1 Electromagnetic Emissions

The **Fetal Doppler** is intended for use in the electromagnetic environment specified below. The customer or the user of the Fetal heart monitor should assure that it is used in such an environment.

Emissions	test	Compliance
RF emissions CISPR 11	Group 1	The Fetal Doppler uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Fetal Doppler is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

A 1.2 Electromagnetic Immunity

The **Fetal Doppler** is intended for use in the electromagnetic environment specified below. The customer or the user of the Fetal Doppler should assure that it is used in such an environment.


Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.

Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment
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A 1.3 Electromagnetic Immunity (not life-supporting)

The **Fetal Doppler** is intended for use in the electromagnetic environment specified below. The customer or the user of the Fetal Doppler should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
			<p>Portable and mobile RF communications equipment should be used no closer to any part of the Fetal Doppler including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance</p> $d = 1,2\sqrt{P}$ $d = 2,3\sqrt{P} \quad 800 \text{ MHz to } 2,5 \text{ GHz}$ $d = 1,2\sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$

Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	<p>a. Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range.</p> <p>b. Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Fetal Doppler is used exceeds the applicable RF compliance level above, the Fetal Doppler should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Fetal Doppler.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.</p>			

A 1.4 Recommended Separation Distances

Recommended separation distances between portable and mobile RF communications equipment and the **Fetal Doppler**.

The **Fetal Doppler** is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the **Fetal Doppler** can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the **Fetal Doppler** as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	80 MHz to 800 MHz $d = 1,2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2,3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

AngelSounds[®]



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