iHeartRhythm

Owner's Manual

V1.0.1
Model - 1400FX

www.iheartrhythm.com

iHeartRhythm Manual

Thank you for purchasing the iHeartRhythm. Now you can record your heart rhythm yourself as often as you want and as long as you want. You can store electrocardiographic recordings in your personal computer, and send them to your physician by email or by printing them for your next office visit.

Please read this instruction manual before using the device. If you have any questions, comments or complaints please contact us at contact@iheartrhythm.com. We appreciate all feedback.

Refer to www.iheartrhythm.com for Manual updates, free software updates, and interpretations of your heart rhythm by trained personnel.

Sincerely,
The iHeartRhythm Team

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I. iHeartRhythm Description

II. Operating Your iHeartRhythm

Before You Start:

1 - Please read all information provided in this manual prior to use.

2 - Install the iHeartRhythm software on your computer by inserting the CD into your computer. Follow the instructions in the installation wizard, or run setup.exe. More details are on page 9.

3 - Remember that only trained healthcare professionals are qualified to interpret a heart rhythm strip.

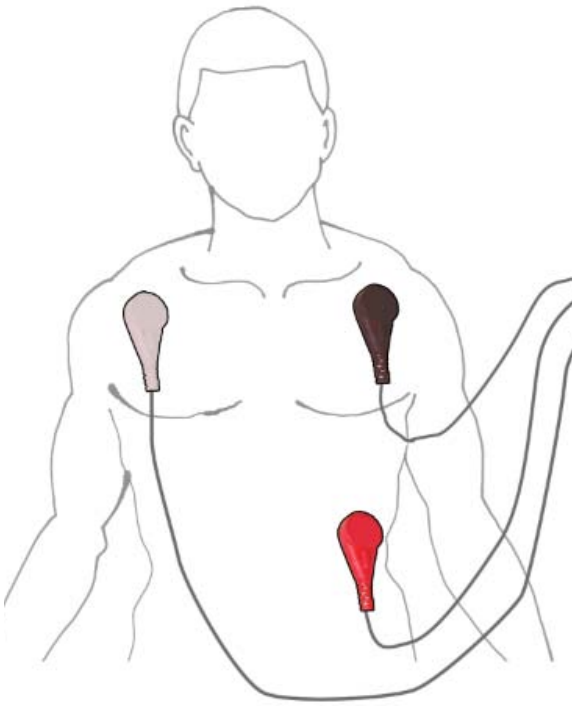
Recording Your Heart Rhythm:

1 - Plug one end of the USB cable into the iHeartRhythm box, and plug the other end into your computer.

2 - Attach the electrodes to your chest, as illustrated below. Place one on the top of your right pectoral, one on the top of your left pectoral, and one on the left side of your waist. You can use either the disposable adhesive electrodes or reusable suction electrodes:

- *Adhesive Electrodes* are suitable for continuous monitoring up to five days. They come sealed in an airtight package to prevent the moist electrode gel from drying out. Once the package is opened, the silver-silver chloride gel will dry out in a few days, impairing the electrocardiographic recordings considerably. Adding a drip of electrode gel to the center of dried-out adhesive electrodes will help restore their EKG recording capacity. Additional adhesive pads can be purchased from iHeartRhythm.com.

- *Reusable Suction Cup Electrodes* are suitable for brief electrocardiographic recordings for a few minutes. First, rub electrode gel onto your skin where you will place the electrodes. Next, squeeze the silicon bulb on the electrode, press it to your skin over the gel, and release it to create a vacuum seal.

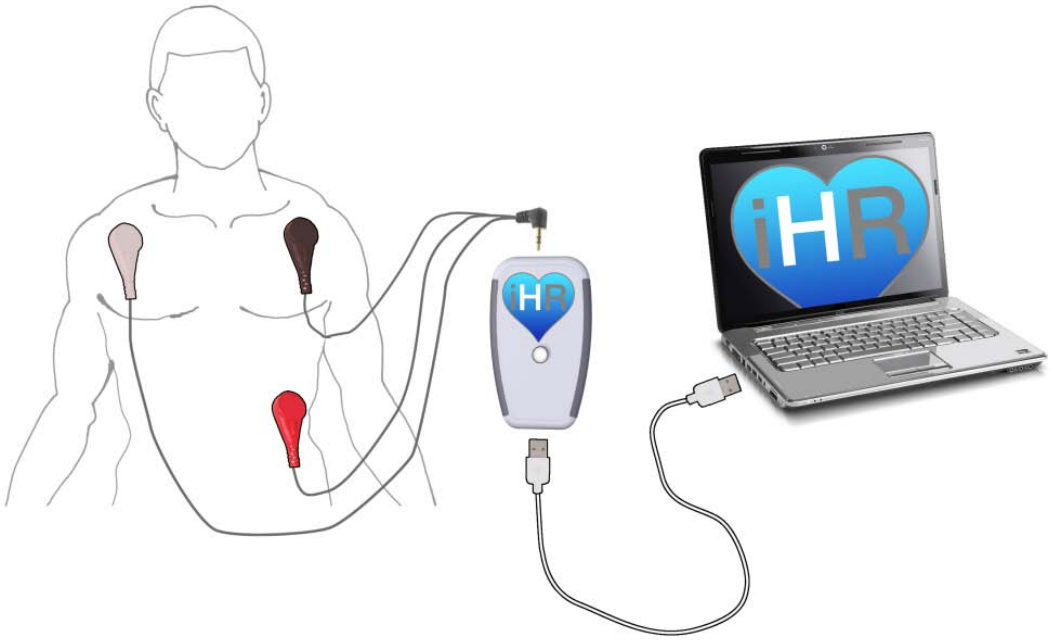


3 - Snap the 3-lead wires onto the electrodes, allocating the color-coded electrodes as shown. The white snap should be placed on the right shoulder (“RA” – for right arm), the black snap should be placed on the left shoulder (“LA” – for left arm), and the red snap should be placed on your waist (“LL” – for left leg).

4 - Plug the 3-lead cable into the top of the iHeartRhtyhm.

5 - Open and run the iHeartRhythm Program on your computer.

6 - Press the start button on iHeartRhythm Program and your rhythm will appear on the screen.



Your setup should look like this

Troubleshooting

If the green line is flat then the iHeartRhythm is not picking up your heart's electronic signal. To solve this problem, try moving the white and/or red electrode(s) an inch or two in different directions. All users require slightly different electrode placements because of the varying differences in each person's body shape. Inching the white and/or red electrode toward and away from your heart helps the system locate your signal. The white and red electrodes should be equidistant from your heart.

If the recordings display excessive noise - in other words, if the line is extremely wavy, irregular, and volatile - position yourself further from the computer or from any other nearby electrical appliance. Also, try to sit or lay as relaxed and still as possible. Body movement causes motion artifacts.

III. iHeartRhythm Software

System Requirements:
Operating System – Windows XP, Vista, 7

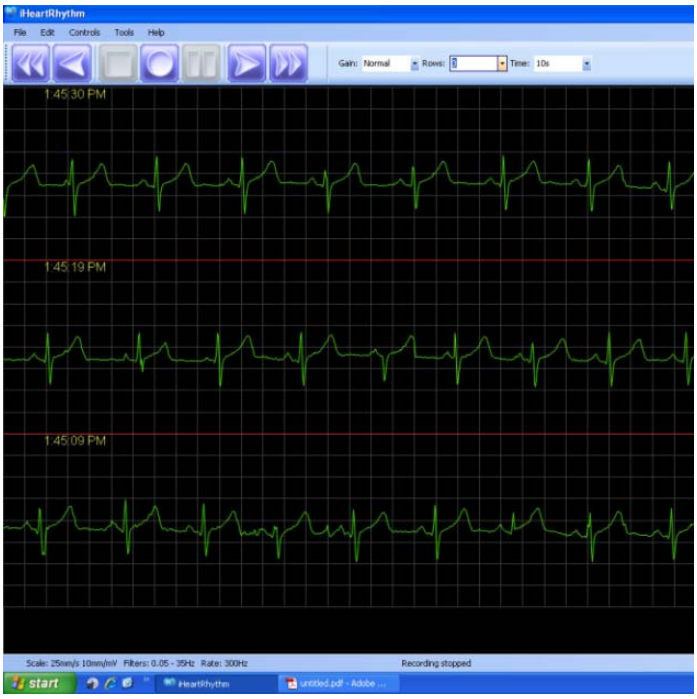
Installation
Insert the CD into your computer and run setup.exe. Follow the installation wizard instructions to complete the installation.

Starting the Program
1 - Click the "Start" button in Windows > then "All Programs" > then iHeartRhythm

2 - The first time you open the program, it will ask for your name, date of birth, and current medications. iHeartRhythm will automatically store this information for you, so that it can be easily attached to any emails you send your doctor.

3 - *Recording*
This is the starting screen for iHeartRhythm. With the electrodes attached to your chest, simply press *Record* (circle button), and your heart rhythm will begin scrolling across the screen in real time.

4 - *Pausing Recordings*
Clicking *Pause* (rectangles button) will allow you to focus on particular beats or patterns, because rhythm recording will continue but will not be displayed. Press *Record* again to reveal the hidden rhythm and continue watching it.



5 - *Stopping Recordings*
To stop recording, click on the *Stop* (square button). In either pause or stop mode, the rhythm can be scrolled forward or backwards using the *Forward* or *Backward* arrow buttons.

6 - *Saving your rhythm*
To save the rhythm in your computer, click on *File* > *Save As*. To transmit the recordings by email, click on *Tools* > *Email*. To print paper recordings of your heart rhythm, click on *File* > *Print*.

Measuring Your Heart Rate

Click once somewhere on the black EKG interface to select a starting point for the measurement. Choose a particular point in the waveform (the apex of the tall spike is suggested). Click again on the same point in the waveform in the subsequent heartbeat. A yellow line should appear between the two points. The heart rate displayed (yellow number) is the approximate number of heart beats in one minute.

Optimal EKG recordings

1 - Make certain that the electrodes are pressed against the skin tightly.

2 - Whether you are sitting or lying, the less movement the better.

3 - Avoid touching the electrodes with your hands or arms.

4 - Try different sites across the chest to obtain recordings displaying the heart rhythm waveforms with large voltages.

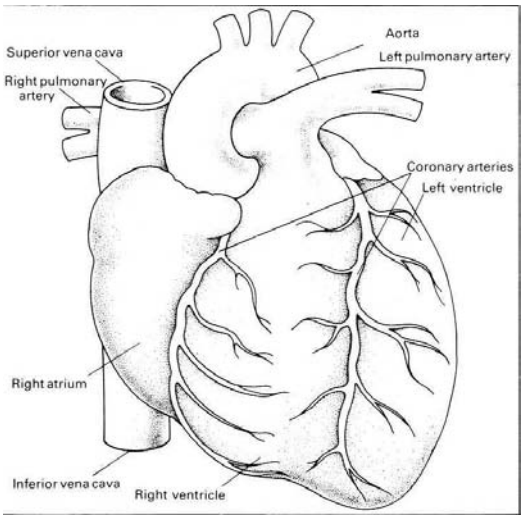
5 - If recordings display excessive noise, position yourself further from the computer or any other nearby electrical device.

6 – Excessive chest hair will impair electrocardiographic recordings. Shave hair at the site of electrode attachment to the skin.

IV. General Information about Heart Rhythms

Knowing Your Heart

The human heart beats 60 times a minute, on average, throughout our entire life. However, wide variations are common across demographic populations, and within individuals as they perform different activities. For example the heart rate frequently declines to 45-60 beats per minute when you are asleep, and may be even slower during deep sleep. Trained athletes frequently have slower heart rates at rest because their left ventricles enlarge to pump more blood during exercise. The resulting increase in stroke volume means that their hearts pump more blood with slower heart rates. A few highly trained athletes will



have heart rates at rest as slow as 35 beats per minute. However during exercise, most adult's hearts can beat as much as 180 times per minute.

The quantity of blood pumped by the heart per minute, cardiac output, is equal to the volume of blood pumped by each heart beat (stroke volume) multiplied by the number of heart beats per minute. Thus, in the normal heart, doubling the heart rate doubles the cardiac output. Thus, heart rhythm is an important determinant of the amount of blood pumped by the heart.

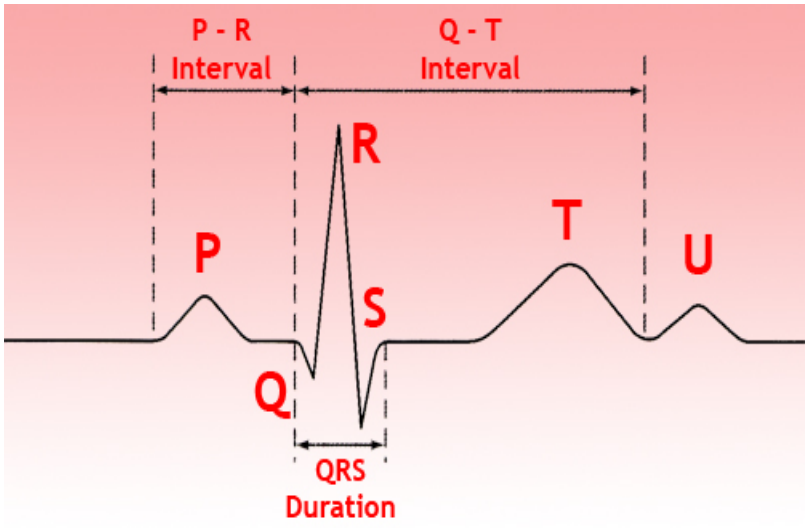
The heart is comprised of four chambers - two atria and two ventricles - which must contract in a synchronized pattern to optimize the pumping performance of the heart. Blood is pumped to your lungs where it is oxygenated, cycled back through your heart, where it is pumped through the rest of your body.

Normally the two atriae contract first, filling the two ventricles that are the main pumps of the heart. The thick walled left ventricle is the most powerful chamber, and produces high pressure to propel blood through the arteries to the body. The thin-walled right ventricle pumps blood under much lower pressure to the pulmonary artery, which distributes blood to the right and left lungs. After it is oxygenated there, it returns to the left atrium to be re-circulated to the left ventricle. Simultaneous contraction of the two atria ensures that the two ventricles are fully filled before they contract. Thus, contraction of the atrium primes the pumping of the ventricles, optimizing the performance of the heart.

The heart has its own electric conduction system, which drives the rate and timing of the heartbeat. This electricity adjusts the timing of the contraction patterns of the two atria and two ventricles to provide optimal pumping of the heart to maximize cardiac output. The electrical conduction system also automatically adjusts the heart rate to provide faster heart rates when the body needs more blood flow and a slower heart rate when at rest. During exercise, the electrical system of the heart increases the heart rate steadily to match the needs of the muscles for more blood flow.

Understanding Your Rhythm

The human heartbeat begins with an electrical spark generated by the clump of specialized cells in the upper right atrium referred to as the SA node. This electrical signal passes quickly through the right and left atrium, causing them to contract, before then being transmitted to the right and left ventricles, causing them to contract respectively.



The normal heart rhythm, referred to as normal sinus rhythm, is characterized by first a P-wave due to electrical activation of the two atria, next a larger R-wave caused by electrical activation of the two ventricles and lastly a T-wave resulting from recovery of the ventricles. Normal sinus rhythm is usually very regular with equally spaced intervals between heart beats. Occasionally, however, the heart rate will vary slightly with respiration causing a slight variation in the intervals between the beats. This variety of the normal heart rhythm is referred to as sinus arrhythmia and is more common in younger individuals.

See our website, www.iheartrhythm.com, for descriptions and illustrations of the major heart rhythm disorders. Multiple daily or weekly recordings of your heart rhythm enhance your physician's understanding of the frequency of your rhythm disorder and help to determine the effectiveness of antiarrhythmic therapy. Several important arrhythmias, such as atrial fibrillation, are often asymptomatic. With iHeartRhythm, you and your doctor can now monitor your rhythm for earlier detection of recurrences of atrial fibrillation so that antiarrhythmic and/or anticoagulant therapy can be started sooner to prevent stroke.

V. Safety Information

Read this important information before using your iHeartRhythm.

1 - Only use the iHeartRhythm under the supervision of a trained healthcare professional. It is *not designed for self-diagnosis of arrhythmias*. Only trained healthcare professionals can interpret electrocardiographic rhythms accurately.
2 - Do not use in the presence of flammable anesthetics, drugs, or pressurized oxygen.
3 - Do not use this device during an MRI scan.
4 - Do not take measurements where the device will be exposed to strong electromagnetic forces.
5 - Never use the iHeartRhythm during an electrical storm or near any high voltage electrical appliances.
6 - Never disassemble, repair, or modify the device.
7 - This device is not intended for use in children.
8 - Self Diagnosis is dangerous. The measurement results are reference for analyzing the cardiac rhythm of patients by doctors only, and should never be used as a basis for starting or modifying treatment without independent confirmation by medical examination.
9 - Only use this device with a laptop personal computer when not plugged into a wall power supply (only on battery power).

VI. Warranty

This product manufactured by iHeartRhythm LLC is warranted to be free of material defects for a length of three months from the date of purchase. Upon the return of this item to the factory (freight prepaid) it will, if found to be defective, be

replaced to the owner free of charge, or refunded for the full purchase price. Abuse, negligence, cosmetic deterioration and normal wear and tear are not covered by this warranty. All returns must be accompanied by a dated slip or other acceptable evidence of date of original purchase.

VII. Maintenance and Storage

1 - Do not use this device in locations with excessively high or low temperatures or humidity.
2 - Use at temperatures within 41 F to 104 F (5 C and 40 C)
3 - Do not wash this device in water.