

# HEART RATE MONITOR BUYERS GUIDE

## INTRODUCTION

This buyers guide, prepared by **Creative Health Products**, explains the uses and benefits of Heart Rate Monitors or Pulse Monitors to anyone interested in their health, fitness and longevity. Note that Heart Rate Monitors and Pulse Monitors are simply different names for the same device. Both measure and display the number of beats per minute that the heart is beating. This guide also describes the different types of heart rate monitors, advantages and disadvantages of each type and the kinds of exercises and uses most suitable for each. The major makes and models of heart rate monitors on the market are described along with the features of each. **Creative Health Products** has been supplying fitness and health testing products, primarily to institutions, since 1976 and we test and evaluate products sold. We have done this with the heart rate monitors and give you our honest opinions. We stock and sell most of these monitors.

## WHY EXERCISE?

Many things are important to a person's health, fitness and longevity. Exercise is one of the most important. There is complete agreement among doctors, heart specialists, sports medicine physicians, etc., that aerobic exercise of sufficient duration and frequency, and at the proper heart rate has many benefits. Most people think of exercise only in terms of caloric expenditure, weight reduction, etc., in combination with diet, for the purpose of reducing fat and improving appearance. It is true that these are definite benefits. But there are even more significant and possibly life saving benefits of proper aerobic exercise. Aerobic exercise at the proper heart rate can improve cardiovascular fitness, lower risk of heart attack and improve chances of recovery if one does occur, improve mental alertness, improve sleep, increase longevity, increase endurance, reduce fatigue, lower blood pressure and more. You should, of course, consult your physician before starting an exercise program.

## WHY MEASURE HEART RATE?

In order to obtain the maximum benefit from exercise, particularly in terms of cardiovascular improvement, it is important to exercise at the proper heart rate, and sustain this heart rate for a sufficient period of time. The heart, like any other muscle, can be strengthened by regular exercise. Exercise creates a demand for more blood flow, causes the heart to work harder and its rate to increase. Medical authorities have determined the best heart rate range for optimal cardiovascular conditioning and improvement. This best heart rate range is commonly referred to as the "Target Zone". It is high enough to achieve and maintain substantial improvement but not so high as to overstress the heart or be harmful.

## HOW TO DETERMINE YOUR "TARGET ZONE"

There are several different formulas for determining your "Target Zone" but all of them produce results that are very similar. The most common method is to first estimate your maximum attainable heart rate. This is done by subtracting your age from 220. Your target zone is between a minimum of 70% of this result and a maximum of 85%. For example, a 40 year old person would have a maximum heart rate of 180 beats per minute ( $220 - 40 = 180$ ). Multiplying 180 by 70% is 126 and by 85% is 153. The optimal exercise target zone for a 40-year-old would, therefore, be between 126 and 153 beats per minute. It should be noted that people are individuals and this formula for determining target zone provides an average for most people. The maximum heart rate for some people can be lower or higher, but the formula provides a good starting point. Research indicates that a heart rate between 60 and 70% will provide optimal fat burn, but not as much cardiovascular conditioning as above 70%. Therefore, if a person is more interested in weight and fat loss, a range of 60 to 70% is better for this purpose. We recommend you consult your physician before you start an exercise program. He or she can recommend a target zone that is best for you depending on your health, physical condition and goals.

## HOW LONG SHOULD YOU EXERCISE?

Research has shown that for significant cardiovascular improvement to take place the heart rate has to be maintained in the "target zone" continuously for a minimum of 20 minutes during each exercise session. In addition, a minimum of 3 to 4 exercise sessions per week are necessary with no more than 2 days between workouts. Also, each session should begin with a 5 to 10 minute warm-up with intensity gradually increasing to get

into the target zone and a 5 to 10 minute cool-down gradually decreasing.

## WHY USE A HEART RATE MONITOR?

It is impossible for a person to determine their heart rate without measuring it. Without a heart rate monitor a person must stop their exercise and feel their pulse with a finger and count it. This interrupts the exercise which is not desirable and the heart slows down. It may even drop below the minimum level that should be maintained. Furthermore, feeling the pulse and counting it is not accurate and provides only an approximation. By using a heart rate monitor a person can measure their heart rate accurately. And most monitors show a continuous display of heart rate in beats per minute on a digital readout which can be immediately viewed anytime without interrupting the exercise. Most monitors also have alarms that can be set to the users "target zone" which will warn the user with an audible tone if their heart rate goes above or below their target zone. This enables the user to exercise without having to periodically look at the monitor and be confident they are exercising at the proper heart rate.

## SPECIAL INFORMATION FOR PREGNANT WOMEN

Research has shown a risk to the fetus if a pregnant woman allows her heart rate to go above 140 beats per minute. The American College of Obstetricians and Gynecologists has always recommended regular moderate exercise as beneficial for pregnant women, but it now cautions that the heart rate should not go above 140 beats per minute. The ACOG recommended rate of 140 may be a little conservative since the Canadian Government uses a recommendation of 150 beats per minute. Regardless of the exact number chosen, it is now very obvious that pregnant women should monitor their heart rate during exercise to be sure they don't exceed a safe level. The ACOG publishes a brochure with advice for pregnant women including this maximum heart rate information. The title of this is: "Exercise and Fitness: A Guide For Women". It is publication number APO45. A copy is available from: The American College of Obstetricians and Gynecologists, 409 12th St. SW, Washington, DC 20024.

## HOW HEART RATE MONITORS WORK

From our discussions with people who have never used a heart rate monitor, we find there is confusion about what they do and how they work. Many have seen ads showing wristwatch style monitors and think that these detect pulse from the wrist with no external wires or sensors. Unfortunately there is no monitor capable of detecting heart rate from the wrist. Further confusion is caused by advertisements for monitors that require holding a finger on a sensor on the face of the watch. The advertisements do not make it clear that the user must stop exercising and hold their finger on the sensor and be very still, while measuring. Thus readers of these ads think these monitors will measure heart rate continuously while exercising. Such is not the case.

All heart rate monitors have a means of detecting the heart beat and sending an electrical signal with each beat to the electronic circuitry of the monitor. A timing circuit measures the interval between each beat, averages the intervals for a short period of time and converts this into a heart rate reading expressed in beats per minute. The readout does not display the equivalent heart rate for each individual beat because the heart is not a mechanical device like a clock pendulum, and the interval between beats varies. If the rate for each beat were displayed successively, the number would change with each beat. For example, if a persons average heart rate during exercise were 142 beats per minute, and the monitor displayed the rate for each beat, the readings might read: 145, 141, 138, 143, 142, 147, 141, 137, 140, 144, etc. Readings like this, changing with each beat, would be difficult to read and follow. To overcome this, monitors average for a period of time, typically 5 to 15 seconds depending on the model. Thus, the heart rate reading shows this average and remains steady until updated with the next average.

The most significant difference among all heart rate monitors is the method used to detect the pulse or heart signal. There are three main systems in use: 1. detecting blood flow in the capillaries of a finger or ear lobe with an infrared sensor; 2. detecting the heart EKG electrical signal in the hand area, and; 3. detecting the heart EKG electrical signal with chest electrodes, commonly attached to an elastic strap going around the chest.

Each of these systems has its own advantages and disadvantages. The following page has a description of each type of heart rate monitor:

**1. DETECTING BLOOD FLOW IN THE CAPILLARIES OF AN EAR LOBE OR FINGER.** The most basic of this type of monitor has a small infrared sensor under a little window on the surface of the monitor. These units are either a small hand held unit or wrist watch style. The user places a finger tip or thumb over this window and the infrared sensor detects tiny changes in infrared due to the pulsing of the blood in the capillaries with each heart beat. These have the disadvantage that motion will cause changes in the infrared signal detected.

Another type of infrared system places the sensor in a small clip that clips to an earlobe. The ear lobe clip infrared sensor types typically are a small square or rectangular unit designed to mount on the handle bars of exercise bikes, stair climbers, etc. A small wire goes from the readout unit to the ear clip. The advantages of this type are: **1.** often mounted permanently on exercise equipment so that it is very handy to use when the person starts to use the equipment. All that is necessary is to clip on the ear lobe sensor and turn on; and **2.** ideal for multiple users in a health club setting. Disadvantages of this type are: **1.** head motion and flickering or changing light conditions can cause errors; **2.** some people may find the small wire between the sensor and readout unit distracting and; **3.** not as convenient or portable as wristwatch style units. It should be noted that one brand, the Cateye, uses a highly advanced ear lobe sensor which greatly reduces the effect of head motion and light mentioned in **1.**

**2. ELECTRICAL DETECTION OF HEART EKG SIGNAL IN THE HAND AREA.** These heart rate monitors sense the electrical signal that triggers the heart muscle. This signal, which is strong in the chest area, can also be detected in the hands or fingers, although it is much weaker than in the chest area. Typically, heart rate monitors using this system have two metal contact points which are touched or grasped with the hands or fingers, one hand or finger on one contact, the other hand or finger on the other contact. The advantages of these heart rate monitors are: **1.** self-contained and portable - most are easily passed around among people in a group and **2.** can be mounted permanently on exercise equipment or a wall, making them instantly ready for use by multiple users in a health club setting. The disadvantages of this system are: **1.** requires users to stop moving their hands and arms and place their hands on the monitor contacts; **2.** there is a delay of a few seconds from when the electrodes are contacted and when the unit will display the pulse rate, and; **3.** these are suitable only for periodic checks of heart rate while exercising and not for continuous monitoring.

**3. DETECTING THE HEART EKG SIGNAL IN THE CHEST AREA WITH ELECTRODES.** These monitors also sense the heart EKG signal, but on the chest where it is strongest. A comfortable, flexible belt with built in electrodes is worn on the chest just below the bust line. An adjustable elastic strap holds the electrode belt in position against the chest. A transmitter, which attaches to the electrode belt or is built into it transmits the heart EKG signal to a receiver in the monitor unit. Advantages of the chest electrode EKG system are: **1.** it is generally the most reliable and accurate system; **2.** most people find that once the chest strap is on, it is less bothersome than a finger tip or ear lobe sensor; **3.** they have convenient wristwatch style readouts and; **4.** the largest number of different manufacturers and models are available with a wide variety of features. The disadvantages of this system are: **1.** a little more time is usually required to put on the chest strap since it goes under the clothing directly onto the skin; **2.** this type can be affected by interference from electromagnetic radiation from some motorized exercise equipment; close proximity to TVs and computers; high voltage power lines, etc., and; **3.** since most of these units operate on the same frequency, if there are one or more other users in the same area each person's monitor can be affected by another if the users are within about 2-1/2 feet of each other.

The preceding summarizes the basic characteristics of all heart rate monitors. Which one is best for any given individual is going to be determined by their own requirements and preferences, by the type of exercise they are planning, and their budget.

## OTHER FEATURES

Many monitors have various extra features. Some of these include time of day, timer, stopwatch, target alarms, interval timers, calorie counters and memory capabilities for various factors, such as: average heart rate; time in target zone; heart rate at regular intervals or specific times, etc. Of these features, the most popular is the target zone alarm. This allows the user to program high and low alarms to make it easier for the user to exercise at a rate that will keep the heart rate in the "Target Zone", that the user desires and has programmed into the unit.

## DESCRIPTION OF HEARTRATE MONITORS BY MAKE AND MODEL

Next we will describe each make and model of heart rate monitor. Remember the basic characteristics of the various types of monitors and how they work as explained above, since these characteristics will not be repeated in the descriptions of each individual monitor.

### INFRARED SENSOR TYPES

**CATEYE PL-6000.** This is the best infrared earlobe sensor type. The monitor is small & compact, and can be either attached to a persons waistband or mounted on exercise equipment. It is also the best working and most accurate of this type of monitor. Its unique earlobe sensor is less affected by bright or changing light, so it can also be used outdoors. Its features include elapsed timer, average pulse rate, cumulative pulse, and calorie estimator. It can also store this data in memory for later recall.



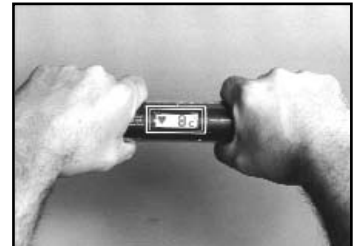
Cateye PL-6000 Ear Lobe Sensor Type

### MONITORS SENSING EKG SIGNAL IN HANDS

**BIOSIG INSTRUMENTS 107 INSTAPULSE.** This is a hand-held EKG unit in the shape of a baton, approximately 7" long with two sensor rings on each end. It turns on automatically when unit is grasped, and displays pulse in a few seconds. It is ideally suited for group use since it is easily passed from person to person.

**BIOSIG INSTRUMENTS 105 INSTAPULSE.** This is larger version of the 107 Instapulse. The baton is 11" long rather than 7", making it easier to pass from person to person. The diameter is the same.

**BIOSIG INSTRUMENTS 105WP INSTAPULSE.** Identical to the 105, but it is water resistant and is suitable for use beside or in a swimming pool.



Biosig Hand Held Instapulse Showing It In Use.

**BIOSIG INSTRUMENTS 201 INSTAPULSE.** This is a strong steel wall mount which combines with the 105 Instapulse. When mounted on a wall, users simply walk up to it and grasp the Instapulse for a few

seconds. It greatly minimizes the possibility of theft of the Instapulse unit. Ideal for use in gyms, schools, Y's, etc., where a permanent location is desired in rooms being used by groups.



**BIOSIG INSTRUMENTS 203 INSTAPULSE.** This is a weighted steel floor stand with the 105 Instapulse mounted at a convenient height. It can be placed anywhere for people to walk up to and use. Like the 201, it minimizes the possibility of theft. Ideal for gyms, schools, Y's, etc., where it might be desired to move it to different rooms from time to time.

## CHEST STRAP EKG TYPE MONITORS WITH WIRELESS TRANSMISSION



Typical use of Transmitter

All of these units have the following common features: A small strap type transmitter that goes on the chest and transmits a signal to the watch unit which has a receiver built into it allowing it to continuously display the users heart rate. All except the lowest cost models have high and low limit alarms and time of day. All use long life lithium batteries in both the receiver and transmitter which last 1 to 3 years depending on use. Polar integral transmitters are sealed and maintenance free. Transmitter battery life on these is 3 to 5 years with average use. The wristwatch style receiver is normally worn on the wrist but also can mount on the handlebar of a bike with the use of a bike mount that is available as an accessory. The primary differences among the units are their features and memory, and we will explain these next. The monitors in this section are listed by **manufacturer in alphabetical order**. **NOTE:** All of these wireless heart rate monitors are water resistant, so this feature will not be repeated in the descriptions.

### ACUMEN



Acumen EON Basix



Acumen EON Basix Plus

All Acumen heart rate monitors have transmission systems that are less susceptible to interference from some exercise equipment other makes of heart rate monitors, etc. but Acumen monitors still interfere with each other.

**ACUMEN EON BASIX.** Like all wireless monitors, this shows a continuous reading of heart rate. It also has time of day, daily alarm, target zone alarms, calorie estimator, night light, and one of the larger displays.

**ACUMEN EON BASIX PLUS.** Has the same features as the Basix above plus calendar, stopwatch, fitness index, recovery timer and memory for total time, time in zone and calories. The memory can create a cumulative record or be cleared before each new session.

**ACUMEN ES MODELS** All Acumen models come in a version that is 20% smaller. The item names are the same, but with an ES suffix. The features are the same as the standard sized models.

### CARDIOSPORT



**CARDIOSPORT FIRST** Entry level monitor showing only heart rate.

### POLAR

**POLAR FS1.** The simplest and least expensive of the Polar wireless heart rate monitors. It displays heart rate in very large numbers on its digital readout. Also has exercise time indicator and memory for average heart rate and total exercise time.



**POLAR F4.** Has time of day, date and alarm. Also has zone pointer, automatic or manual HR limits, Own Cal, toggle feature for time of day, fitness bullets and elapsed time. Choice of displaying heart rate or % of maximum heart rate. Has memory for total exercise time, time in target zone and average heart rate.



Polar F4



Polar F6



Polar F11

**POLAR F6.** In addition to the functions listed above for the F4, this unit has Own Cal, Own Code, Own Zone and a backlight.

**POLAR F11** Manual or Automatic age based target zones, stopwatch, Keeps U Fit program, OwnZone, OwnCal, Polar Fitness Test, OwnCode, zone pointer, fitness bullets. Memory shows exercise time, time in target zone, average and maximum heart rate, calorie expenditure. Downloads by Sonic Link.

### POLAR RS models

**RS100** Three row display, Own Code, low battery indicator, alternating/repeating countdown timers. Stores 1 file with up to 99 splits including average heart rate, Own Cal

**RS200** All the features listed in for Polar RS100 plus interval trainer, event countdown, and HR max predicted. Graphical zone indicator, Polar fitness test with OwnIndex. Stores up to 16 files. Sonic Link transfer of data to Polar web service.

**RS200sd** Same features as the RS200, but also includes a foot pod, for speed/pace and distance features.

**RS-400** Three row user configurable display, Own Code, low battery indicator, interval trainer. Heart Rate features includes HR max predicted, Polar sport zones, average HR per run, graphical target zone indicator, calorie expenditure and training summary. Stores up to 99 files and comes with Polar Protrainer 5 software.

**RS-400sd** Same features as the RS400 but also includes the foot pod for speed/pace and distance features.

**RS-800** Three row user configurable display, Own Code with 2.4GHz W.I.N.D transmitter, low battery indicator, interval trainer. Heart Rate features includes HR max predicted, Polar sport zones, average HR per run, graphical target zone indicator, calorie expenditure and training summary. Stores up to 99 files and comes with Polar Protrainer 5 software.

**RS-800sd** Same features as the RS800 but also includes the S3 Stride W.I.N.D.Sensor for speed/pace and distance features.

### POLAR CS models

**CS100** Three row display, Own Code, low battery indicator, 50 laps with average HR. Cycling features include speed, trip, distance for 2 bicycles, Odometer for 2 bicycles, auto start/stop, and estimated time of arrival. Comes with speed sensor and bike mount. Stores 1 file.

**CS200** Three row display, Own Code, low battery indicator, calorie consumption, and 50 laps with average HR. Cycling features include speed, trip, distance for 2 bicycles, Odometer for 2 bicycles, auto start/stop, and estimated time of arrival. Comes with speed sensor and bike mount. Stores 7 files. Compatible with Polar personal trainer web service.

**CS200sd** Same features as the CS200, but also includes the cadence sensor.

**CS-300** Three row display, Own Code, low battery indicator. Stores 14 files. Cycling features include speed, trip, distance for 2 bicycles, Odometer for 2 bicycles, auto start/stop, and estimated time of arrival. Comes with speed sensor and bike mount. Compatible with Polar personal trainer web service. Wrist watch style receiver.

**CS-400** Three row display, Own Code, low battery indicator, calorie consumption, and 99 laps with average HR. Sport zones, training summary. Cycling features include speed, trip, distance for 2 bicycles, Odometer for 2 bicycles, auto start/stop, estimated time of arrival, altitude, ascent descent and inclinometer. Comes with speed sensor and bike mount. Stores up to 99 files. Includes Polar Protrainer 5 software.

**CS-600** Three row user configurable display, Own Code with 2.4GHz W.I.N.D transmitter, low battery indicator, interval trainer. Heart Rate features includes HR max predicted, Polar sport zones, average HR per run, graphical target zone indicator, calorie expenditure and training summary. Cycling features include speed, trip, distance for 3 bicycles, Odometer for 3 bicycles, auto start/stop, estimated time of arrival, altitude, ascent descent and inclinometer. Comes with W.I.N.D. speed sensor, W.I.N.D. cadence sensor and bike mount. Stores up to 99 files and comes with Polar Protrainer 5 software.

## POLAR CS models

**S625x** Three row display, three sets of target zone alarms, 3 countdown timers. Memory for maximum heart rate, % of maximum heart rate, average heart rate, recovery heart rate, time in, above and below each target zone. Stores up to 50 splits with average heart rate. plus exercise reminder and heart rate recording at a choice of 5, 15, or 60 second intervals. Cycling functions are optional with additional purchase of speed sensor. Infrared downloading. comes with Polar Protrainer 5 software.

**S725x** Three row display, three sets of target zone alarms, 3 countdown timers. Memory for maximum heart rate, % of maximum heart rate, average heart rate, recovery heart rate, time in, above and below each target zone. Stores up to 50 splits with average heart rate. plus exercise reminder and heart rate recording at a choice of 5, 15, or 60 second intervals. Cycling functions include speed, trip, distance for 2 bicycles, Odometer for 2 bicycles, and auto start/stop. Cadence features available with optional cadence sensor. Infrared downloading. Comes with Polar Protrainer 5 software.



Polar S625x



Polar S725x

## POLAR INTERFACE

**902-IrDa-USB POLAR INTERFACE.** If your computer does not have a built-in infrared sensor, Creative Health Products can furnish the appropriate one at low cost.

## POLAR SERVICE CENTER

Creative Health Products is Iso an **Authorized Polar Service Center**. As such we can provide fast, competent service on all Polar products. For return instructions and a printable return form, visit our Polar Service Center Website The web address is

**[www.polarservicecenter.com](http://www.polarservicecenter.com). The separate toll free number for our Polar Service Center is 800-287-5901.**

## OTHER BRANDS

Some of the companies that manufacture heart rate monitors, private brand some of their models for various companies who want their name on it so it looks like it is exclusive to them. This causes some confusion as to just what these models are comparable to. There are also some smaller companies in China and other far east countries that are making some very low end units and private branding them for various companies in the United States. Some of these have various problems with accuracy and reliability of the heart rate signal although most have a good appearance. The biggest single problem with most is dead spots in the field of transmission. *Creative Health Products* has been approached by some of these companies to have units made with the Creative Health name on them. Unfortunately, none that have been evaluated so far, work well enough that we would feel comfortable in marketing them, particularly with the Creative Health Products name on them. Very recently, as this is being written, the market is being flooded with low cost heart rate monitors made in China. Several well known large companies are selling the rights to use their name on them or actually marketing them. There are now so many that it has become difficult for us to evaluate all of them. Therefore, we cannot comment on the quality or accuracy of most of them.

## OTHER INFORMATION

### IMPORTANT NOTE ON WIRELESS MONITORS

Because they are radio-type devices, wireless monitors can be affected by some electrical equipment generating radio or magnetic interference in much the same way as your radio and TV set can be. We have found that some of the wireless units will not work while riding in a car, within one-foot of a TV set or computer monitor, on some Lifecycles and Liferowers, on some treadmills, some Stairmasters, and some other exercise equipment using electric motors or video screens. In addition, if users are very close to one another, they can interfere with each other; even between brands, since all operate on the same frequency. The Polar has a special coded transmission system which reduces interference from equipment etc. and other monitors including all standard Polar and Polar models with coded transmitter. The Acumens have an interference resistant transmitter which reduces interference from other makes of monitors and exercise equipment. However Acumen monitors can interfere with each other.

### ACCURACY

We get many questions on accuracy. We have found that most of the heart rate monitors are reasonably accurate, with the exceptions noted above, if the limitations of each type are accounted for and they are used in the manner intended for each type. The wireless EKG types have the fewest limitations and thus, will work best under the widest range of conditions and exercise. There are some situations, such as while using a rowing machine, that only an EKG type of monitor will work properly. We also find there are a few individuals for whom one type of heart rate monitor will not work well, but another type of monitor will. We are always glad to let these people try out different types, if the type they first selected, does not work on them.

### RELIABILITY

We also get questions on reliability. Like all electronic products, there is always the possibility of a defect. We have found the defect rate on these monitors, range from 1/2 to 1%, except for the few exceptions noted above. This is typical of all small electronic products. Usually if a problem occurs, it will occur within the first 30 days. If this happens, we exchange the defective component for a new one immediately. Usually if a monitor proves good for the first 30 days, then it will give many years of trouble free service. All the above units are guaranteed for 1 year for the watch units and 2 years for the transmitter. Of course, like any electronic product, any of the units can be damaged by abuse, such as dropping it on a hard surface, crushing, overheating, getting chewed by the dog, etc. Any damage caused by these kinds of events is not covered by warranty.

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## WATER RESISTANCE

Most monitors are now water resistant. The ones that are not, are the infrared monitors, and all of the BioSig Instapulse models (except the 105 WP). These models vary from somewhat water resistant to almost completely water resistant, and will tolerate small amounts. There is one precaution necessary, however, on all the water resistant models. The control buttons on the face and sides are water resistant. However, on some models, the seal can be momentarily broken when a button is pushed. So, if the watch is underwater, or if there is water or sweat on your finger tip or on a button when it is pushed, the water or sweat can be pushed through the sides of the button and right into the watch, often damaging it. So, if a button is pushed, it is important to be sure your finger and the button are dry.

## MAINTENANCE

With respect to maintenance, all heart rate monitors require batteries from time to time. The wireless units use long-life Lithium batteries, which will last 1 to 3 years in the watches. The integral type transmitters now used on all wireless monitors are guaranteed for 2 years and typically last 3 to 5 years with average use. All the sensors used with the other types of monitors, (ear lobe, finger, and chest straps) will deteriorate with time, and will have to be replaced. The cost for these components is very modest, and we keep them all in stock for immediate shipment. Typical life of these parts, with average use, is nine months to one year. Replacement costs for the most commonly required components are shown in the **Creative Health Products** Discount Price List.

## WHICH IS THE BEST MONITOR FOR YOU?

We often get questions regarding which type of monitor is most suitable for a particular activity or exercise. We can offer a few suggestions on the following page.

**WIRELESS CHEST STRAP TYPES** - All will work well for all activities. Choosing between the different models of wireless monitors is primarily a matter of selecting the model with the features most useful to you.

**BIOSIG 105 & 107** are ideally suited for group use, where they can be passed around such as with an aerobics class. The BioSig 105WP, being water resistant, can also be used beside a swimming pool.

**BIOSIG 201 & 203** are for group use in a fixed stationary, on a wall or floor stand position, where security from being stolen may be a factor.

**THE CATEYE PL-6000** works well for permanent installations such as mounting on exercise equipment ready for immediate use, and can also be worn on the waist using the belt clip. Because the ear sensor works so well on this model, it is also suitable for portable use such as walking outside. There are a very few people that the EKG type of monitors will not work. For these people the PL-6000 may be the only choice.

**THE POLAR , S725x and the CS series units** are good choices for cyclists who desire a single unit, combining a cycling computer with a heart rate monitor.

## MORE INFORMATION & UPDATES

Updated information is added periodically to the "Heart Rate Monitor Buyer's Guide" on the Creative Health Products web site at: [www.chponline.com](http://www.chponline.com). Some heart rate monitor manufacturers have web sites that have comprehensive information on their monitors. They are Acumen: [www.acumeninc.com](http://www.acumeninc.com), Cardiosport: [www.cardiosport.com](http://www.cardiosport.com), Polar: [www.polarusa.com](http://www.polarusa.com).

## PURCHASING YOUR HEART RATE MONITOR

**CREATIVE HEALTH PRODUCTS** sells monitors at the lowest prices anywhere, and we guarantee them with a 90-day price protection guarantee. Our price list for heart rate monitors is in the catalog on pages 10 thru 13, and on our website at [www.chponline.com](http://www.chponline.com). You can order by phone, FAX, letter, e-mail or on our web site. You may pay by check, money order, COD, VISA, MasterCard, American Express, or Discover. We ship immediately upon receipt of your order, except orders with non-certified, personal, or company checks, are held until check clears - usually 10 to 12 business days.

# Why You Should Purchase Your Heart Rate Monitor From ***CREATIVE HEALTH PRODUCTS***

**CREATIVE HEALTH PRODUCTS** has been in business since 1976, and is one of the largest sellers of heart rate monitors in the world. From ***Creative Health Products***, you will get the lowest price, fastest delivery, and the best service. Here are just some of the reasons to purchase from us:

• FRIENDLY HELP AND ADVICE •

We hope this buyer's guide will answer your questions and give you the information you need to decide which monitor is best for you. We are always glad to help with whatever additional information you need. Since we sell almost every major brand and model of monitor made, we have no ax to grind and thus give our honest unbiased opinions.

• IMMEDIATE SHIPMENTS •

We keep large enough inventories so that we rarely run out of stock. All orders received before 11:00 AM Eastern Time go out the same day. Orders after 11:00 AM, go out the next day.

• 30 DAY MONEY BACK GUARANTEE •

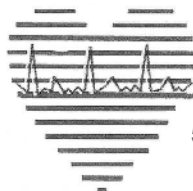
If you are unhappy with any product you purchase from us you can return it within 30 days for a full refund per the terms stated in our main catalog.

• TECHNICAL HELP •

We know and understand all monitors thoroughly. If you are having any problem with a monitor you purchased from us, call us on our toll free number 1-800-742-4478. We will always be glad to help.

• POLAR SERVICE CENTER •

Creative Health Products is the only dealer that is also an **Authorized Polar Service Center**. As such we can provide fast, competent service on all Polar products. For return instructions and a printable return form, visit our Polar Service Center Website. The website address is [www.polarservicecenter.com](http://www.polarservicecenter.com). The separate toll free number for our Polar Service Center is 800-287-5901.



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