



SMART TRAINER - HEART RATE MONITOR

MODEL: SE139

USER MANUAL

CONTENTS

Introduction	2
Smart Training Program	2
Fitness Index.....	3
Training Tips	4
The Receiver Watch	4
The Heart Rate Chest Belt	6
Effective Range	6
General Operation	7
Backlight.....	7
Operating Modes	7
How To Set The Real-time Clock.....	7
How To Use The Alarm Clock.....	7
How To Use The Second Zone Time.....	7
Heart Rate Monitoring	7
User Profile	7
Display Of Fitness Index.....	8
Before Starting The Smart Training Program.....	8
Starting The Smart Training Program	8

How To Train With The Stopwatch.....	9
How To Recall Training Data	9
Use In The Water	10
Battery Replacement	10
Precautions	11
Specifications	12
About Oregon Scientific	12
EU-Declaration Of Conformity	12

INTRODUCTION

Congratulations on your purchasing the Smart Trainer - Heart Rate Monitor. The Smart Trainer - Heart Rate Monitor is a feature-packed precision device. Apart from monitoring your heart rate and calorie and fat consumption while training, it is capable of deriving the optimum training program for you basing on your target activity score.

The products come with a heart rate chest belt and a receiver watch complete with the functions of a real-time clock, stopwatch and back light.

SMART TRAINING PROGRAM

It is important you know your maximum heart rate (MHR), training zone, upper heart rate limit and lower heart rate limit before you begin. They help you achieve the maximum health benefits out of your workout. Your Smart Trainer - Heart Rate Monitor was equipped with a SMART TRAINING PROGRAM that your own MHR could be determined so that your own upper and lower limit was set automatically throughout the training process.

Or you can set your own upper and lower limit using the following as a reference guide.

You may estimate your MHR using the following formula:

Men $220 - \text{age} = \text{MHR}$

Women $230 - \text{age} = \text{MHR}$

There are generally three training zones. They are health benefited and related to your MHR as follows:

50%	Moderate Activity
60%	Weight Management
70%	Aerobic Zone
80%	Anaerobic Threshold Zone
90%	Red Line Zone (maximum capacity)
100%	

The upper and lower heart rate limits are calculated by multiplying your MHR by the percentages of the selected training zone.

For example:

For a 40-year-old man to train for health maintenance,

His Upper Heart Rate Limit $(220 - 40) \times 70\% = 126$
(beats per minute)

His Lower Heart Rate Limit $(220 - 40) \times 60\% = 108$
(beats per minute)

For a 30-year-old woman to train for aerobic exercise,

Her Upper Heart Rate Limit $(230 - 30) \times 80\% = 160$
(beats per minute)



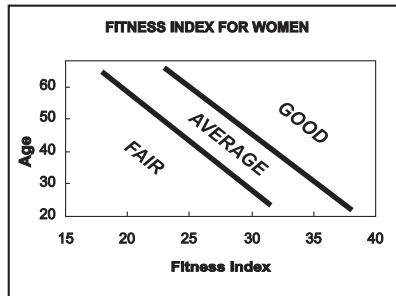
Her Lower Heart Rate Limit $(230 - 30) \times 70\% = 140$
(beats per minute)

The SMART TRAINING PROGRAM will guide you through the warm up exercise to the end of the training exercise. Throughout the whole training process you may check the calories consumed and % of fat burn (from which it could show the percentage of calories came from burning fat).

FITNESS INDEX

Your Smart Trainer - Heart Rate Monitor will generate a fitness index based on your aerobic fitness, or your capacity to engage any forms of aerobic exercise, dependent and limited by the body's ability to deliver oxygen to the working muscles in training. It is often measured by maximum oxygen uptake (VO2 Max), which is defined as the highest amount of oxygen that can be utilized when exercising at an increasingly demanding level. The lungs, heart, blood, circulatory system, and working muscles are all factors in determined VO2 Max. The unit of VO2 Max is ml/kg.min.

Generally, the fitness range lies between 13 to 53 depend on ages. The higher the index, the fitter you are. (Refer to the following diagram for reference.)



TRAINING TIPS

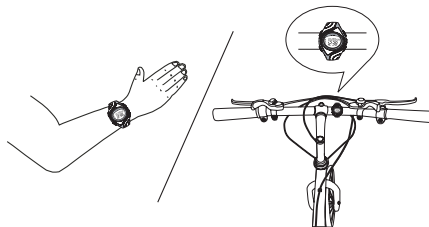
- Identify your training goal, be it to lose weight, keep fit, improve health or compete with a friend.
- Select a training activity you enjoy. Varying your exercises can make your training more interesting.
- Start slowly.
- Exercise regularly. Twenty to 30 minutes each and three to four times a week for a healthier cardiovascular system.
- Gradually steps up your training zone as you become fitter.
- Always allow at least five minutes before and after training within your exercise zone for warm-up and cool-down.
- The health maintenance zone has the lowest training intensity. It is good for beginners and those who want to strengthen their cardiovascular systems.
- The aerobic exercise zone increases strength and endurance. It works within the body's oxygen intake capability, burns more calories and can last longer.
- The anaerobic exercise zone generates speed and power. It works at or above the body's oxygen intake capability, builds more muscle and cannot be maintained for a long time.
- Measure your pulse after training. Then repeat the procedure again after three minutes. If it does not

return to its normal resting pulse, you might have trained too hard.

- Always check with your doctor before starting a vigorous training program.

THE RECEIVER WATCH


You can wear it on your wrist or strap it to your bike or exercise machine.



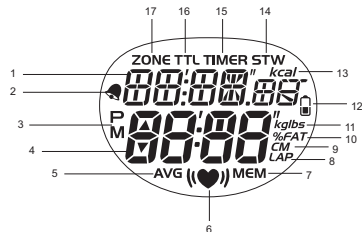





Control Button On The Receiver Watch



1. **MEM / LAP BUTTON**
Displays training records or marks a lap in stopwatch mode
2. **MODE BUTTON**
Changes the operating mode
3. **ST/SP/+ BUTTON**
Monitors the training program and the stopwatch or changes a value in setting mode
4. 
Activate backlight
5. **SET BUTTON**
Holds to enter the setting mode or changes a value in setting mode or displays the calorie and fat consumption in training

LCD



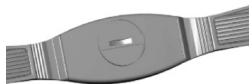
1. Displays texts and numerical values
2. : Indicates alarm is On
3. **A / P** / **M / M**: 12 hour clock
4. Displays texts and numerical values
5. **AVG**: Average heart rate display
6. **((♥))**: Indicates a heart rate reading is detected
7. **MEM**: Indicates exercise data is displayed
8. **LAP**: Indicates lap memory record
9. **CM**: Height unit
10. **%FAT**: Percentage of fat burn
11. **kglbs**: Weight unit
12.  or : Indicates battery power is low
13. **kcal**: Calorie unit

14. **STW**: Indicates you are in Stopwatch Mode or the stopwatch is running
15. **TIMER**: Indicates training programme is activated
16. **TTL**: Indicates the total exercise time
17. **ZONE**: Indicates zone time is displayed

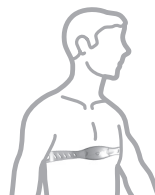
THE HEART RATE CHEST BELT

The heart rate chest belt is used to count your heartbeat and transmit the data to the receiver watch. To put it on,

1. Wet the conductive pads on the underside of the heart rate chest belt with few drops of water or a conductive gel to ensure a solid contact.



2. Strap the heart rate chest belt across the chest. Adjust the strap until the heart rate chest belt sits snugly below the pectoral muscles for an accurate heart rate signal.



HINTS

- The position of the heart rate chest belt affects its performance. Move the heart rate chest belt along the strap for the best transmission. Avoid areas with dense chest hair.
- In dry, cold climates, it takes the heart rate chest belt a while to function steadily. This is normal as sweat could improve the contact with the skin.

EFFECTIVE RANGE

The heart rate chest belt and receiver watch will start transmitting and receiving signals once batteries are in place. Both units should be worn or mounted within an effective distance of 62.5 centimeters (25 inches). If the signals have become unsteady,

- Shorten the distance between the heart rate chest belt and receiver watch.
- Re-adjust the position of the heart rate chest belt.
- Check the batteries. Replace them when necessary.





GENERAL OPERATION

BACKLIGHT

To activate backlight:

Press  to turn backlight On for 5 seconds.

NOTE The backlight function will not operate if "" or "" is displayed.

OPERATING MODES

The receiver watch has six operating modes for real-time, alarm time, second zone time, user profile, SMART TRAINING PROGRAM and stopwatch.

Refer to **FIG. 1** to toggle between the operating mode.

HOW TO SET THE REAL-TIME CLOCK

Refer to **FIG. 2** to set the real time clock.

NOTE The Smart Trainer - Heart Rate Monitor comes with 50 years auto calendar. It is no need to set the days-of-the-week nor the dates every month.

HOW TO USE THE ALARM CLOCK

Refer to **FIG. 3** to set the alarm clock.

To activate or deactivate the alarm, press **SET** while the alarm time is displayed. The alarm indicator will appear when the function is activated (**FIG. 3a**).

When the alarm clock is activated, it will turn on at the

set time every day. Press any button to stop the alarm for the day. The alarm clock is still active and will turn on again the following day.

HOW TO USE THE SECOND ZONE TIME

The second zone time is useful in keeping track of another time zone. The time zone is set using the same procedure as the real-time clock (**FIG. 2a**).

HEART RATE MONITORING

USER PROFILE

You have to first enter your user profile to benefit from the SMART TRAINING PROGRAM and fully utilize the Smart Trainer - Heart Rate Monitor functions.

Refer to **FIG. 4** to enter your user profile (gender, age, weight, height & activity score).

Activity Score

It represents your general physical activity.

If you do not usually participate in programmed recreation sports or exercise, your score is 0 (low).

If you participate two or three times a week for a total of around one hour in recreation or working requiring modest physical activity, such as golf, horseback riding, callisthenics, gymnastics, table tennis, bowling, weight lifting, yard work etc., your score is 1 (medium).

If you actively and regularly participate in heavy physical

exercise, such as running, jogging, swimming, cycling, boxing, skipping rope, running on the spot or engaging in vigorous aerobic activity type exercise such as tennis, basket ball or handball, your score is 2 (high).

DISPLAY OF FITNESS INDEX

Your fitness index will be displayed just after the user profile is entered. Or you can display your fitness index by pressing **MEM** while the user profile mode is displayed (all data in the user profile should be entered first). (**FIG. 4a**)

BEFORE STARTING THE SMART TRAINING PROGRAM

Once you have entered all the parameters for your user profile, you need to set the target activity and exercise time for your training. Refer to **FIG. 5** for the procedure.

NOTE

1. Make sure you fill in the target activity level and all the parameters in your user profile. Otherwise, the calorie count and fat consumption rate will not be available in training.
2. You can leave out the heart rate limits as desired. The SMART TRAINING PROGRAM will automatically select the optimal figures according to the parameters input.
3. Should you choose to enter the heart rate limits, be sure the lower limit does not exceed the higher limit.

4. A flashing ▼ or ▲ will appear if the lower or upper limit is exceeded (**FIG. 6**). When the heart rate limit alert is activated, a beeping warning signal will be heard whenever lower or upper limit is exceeded.

STARTING THE SMART TRAINING PROGRAM

Once all is done, press **ST/SP/+** to activate the smart training program (**FIG. 7**). To display the calorie consumed and % fat burn, press **SET** at any time once the SMART TRAINING PROGRAM is started.

The SMART TRAINING PROGRAM starts with an automatic 5 minute warm-up session. This prepares you for the training ahead. Your current heart rate will be displayed.

Three short beeps mark the end of the warm-up session. You might skip the warm-up and start your exercise directly. To do so follow the procedure as shown in **FIG. 7a**. You may hear three short beeps once again the preset exercise time is reached.

NOTE

1. SMART TRAINING PROGRAM could be stopped at any time during the exercise. It cannot be resumed. Once it is stopped, it could be only restarted for another training section.
2. You can also let the SMART TRAINING PROGRAM running in the background while using other functions except the stopwatch function. The TIMER



indicator will flash to indicate the SMART TRAINING PROGRAM is still active.

3. The SMART TRAINING PROGRAM and stopwatch can be operated one at a time only.

HOW TO TRAIN WITH THE STOPWATCH

Before starting the stopwatch you need to set the target activity. (FIG. 8)

After finish setting the target activity, you may start exercise with the stopwatch. (FIG. 9)

When the stop watch has stopped running, press **MEM** to display the following data in sequence:

- The stretch of exercising time within the training zone.
- Total exercising time and average heart rate.
- Calorie consumed and % fat burn.

NOTE

1. Make sure you fill in all the parameters. Otherwise, the calorie count and % fat burn will not be available in training.
2. You can leave out the heart rate limits as desired. The SMART TRAINING PROGRAM will automatically select the optimal figures according to the parameter inputs.
3. Should you choose to enter the heart rate limits, be sure the lower limit does not exceed the higher limit.

4. A flashing ▼ or ▲ will appear if the lower or upper limit is exceeded (FIG. 6). When the heart rate limit alert is activated, a two-beep warning signal will be heard whenever lower or upper limit is exceeded.
5. You can also let the stopwatch running in the background while using other functions except the SMART TRAINING PROGRAM. The STW indicator will flash to indicate the stopwatch is still active.
6. The SMART TRAINING PROGRAM and stopwatch can be operated one at a time only.

HOW TO RECALL TRAINING DATA

To recall the Calories and % Fat Burn

You may check the calories consumed and % fat burn during the exercise or after the exercise. In the SMART TRAINER PROGRAM refers to FIG. 10 to recall the calories consumed and % fat burn during exercise and after exercise respectively.

In the stop watch mode refers to FIG. 9a to recall the calories consumed and % fat burn during exercise. To recall the calories consumed and % fat burn after exercise refer to FIG. 9b.

To recall the LAP memory

The following information will be stored in the LAP memory:

- The stretch of exercising time within the training zone.

- Total exercising time and average heart rate.
- Calorie consumed and % fat burn.

You may store up to 44 lap memories into the Smart Trainer - Heart Rate Monitor. These 44 lap memories will share a total 99:59:59 memory record. Refer to **FIG. 11** to recall various lap memory record.

USE IN THE WATER

The SE139 is water-resistant up to 50 meters (164 feet).

	RAIN SPLASHES ETC	SHOWERING (WARM/ COOL WATER ONLY)	LIGHT SWIMMING/ SHALLOW WATER	SHALLOW DIVING/ SURFING/ WATER SPORTS	SNORKELING/ DEEP WATER DIVING
50M / 164 FEET	OK	OK	OK	OK	NO

NOTE Set the watch before exposing it to excessive water. Pressing the keys while in the water or during heavy rainstorms may cause water to enter the watch.

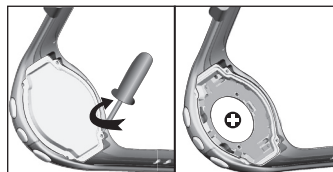
BATTERY REPLACEMENT

The SE139 uses a CR2032 lithium battery for the receiver watch and a CR2032 for the heart rate chest belt. Both are included with the unit.

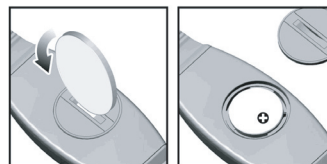


When the battery of the receiver watch is running low, the low battery indicator will light up. As for the heart rate chest belt, it stops transmitting signals when the battery is dry.

To change the battery, refer to the following diagram,



WATCH



CHEST BELT

Note on Battery: Batteries included (if any) are for demonstration purpose only. For optimal daily-usage, application of new alkaline batteries are recommended.



PRECAUTIONS

To ensure you use your product correctly and safely, read these warnings and the entire user manual before using the product:

- Use a soft, slightly moistened cloth. Do not use abrasive or corrosive cleaning agents, as these may cause damage. Use lukewarm water and mild soap to clean the watch. Never use the products in hot water or store them when wet.
- Do not subject the product to excessive force, shock, dust, temperature changes, or humidity. Never expose the product to direct sunlight for extended periods. Such treatment may result in malfunction.
- Do not tamper with the internal components. Doing so will terminate the product warranty and may cause damage. The main unit contains no user-serviceable parts.
- Do not scratch hard objects against the LCD display as this may cause damage.
- Take precautions when handling all battery types.
- Remove the batteries whenever you are planning to store the product for a long period of time.
- When replacing batteries, use new batteries as specified in this user manual.

- The product is a precision instrument. Never attempt to take this device apart. Contact the retailer or our customer service department if the product requires servicing.
- Do not touch the exposed electronic circuitry, as there is a danger of electric shock.
- Check all major functions if the device has not been used for a long time. Maintain regular internal testing and cleaning of your device. Have your watch serviced by an approved service center annually.
- When disposing of this product, ensure it is collected separately for special treatment and not as normal household waste.
- Due to printing limitations, the displays shown in this manual may differ from the actual display.
- The contents of this manual may not be reproduced without the permission of the manufacturer.

NOTE The technical specifications for this product and the contents of the user manual are subject to change without notice.

NOTE Features and accessories will not be available in all countries. For more information, please contact your local retailer.

SPECIFICATIONS

Time	: 12hr /24hr
Date	: DD-MM or MM-DD and days-of-the-week
Year	: 2001 - 2050 (auto-calendar)
Zone time	: (+)23 - (-)23 hour
Stop watch	: 00:00'00" - 99:59'59"
Lap counter	: 44 laps share 00:00'00" - 99:59'59" recording time
Alarm	: daily alarm, heart rate zone alert alarm
Measuring range	: 30 - 240 bpm
Heart rate zone limit	: 30 - 240 bpm
Smart Training Program timer	: 00:00'00" - 99:59'59"
Calories calculation	: 0 - 9,999 kcal
% fat burn calculation	: 0 - 100%
Receiver watch power	: 1 x CR2032
Heart rate chest belt power	: 1 x CR2032
Operation temperature	: 0°C - 40°C (32°F - 104°F)
Storage temperature	: -20°C - 60°C (-4°F - 140°F)
Water resistance	: not actuating keys to 50m

ABOUT OREGON SCIENTIFIC

Visit our website (www.oregonscientific.com) to learn more about Oregon Scientific products. If you're in the US and would like to contact our Customer Care department directly, please visit: www2.oregonscientific.com/service/support.asp

For international inquiries, please visit: www2.oregonscientific.com/about/international

EU-DECLARATION OF CONFORMITY

Hereby, Oregon Scientific, declares that this Smart Trainer - Heart Rate Monitor (Model SE139) is in compliance with EMC directive 89/336/CE. A copy of the signed and dated Declaration of Conformity is available on request via our Oregon Scientific Customer Service.

