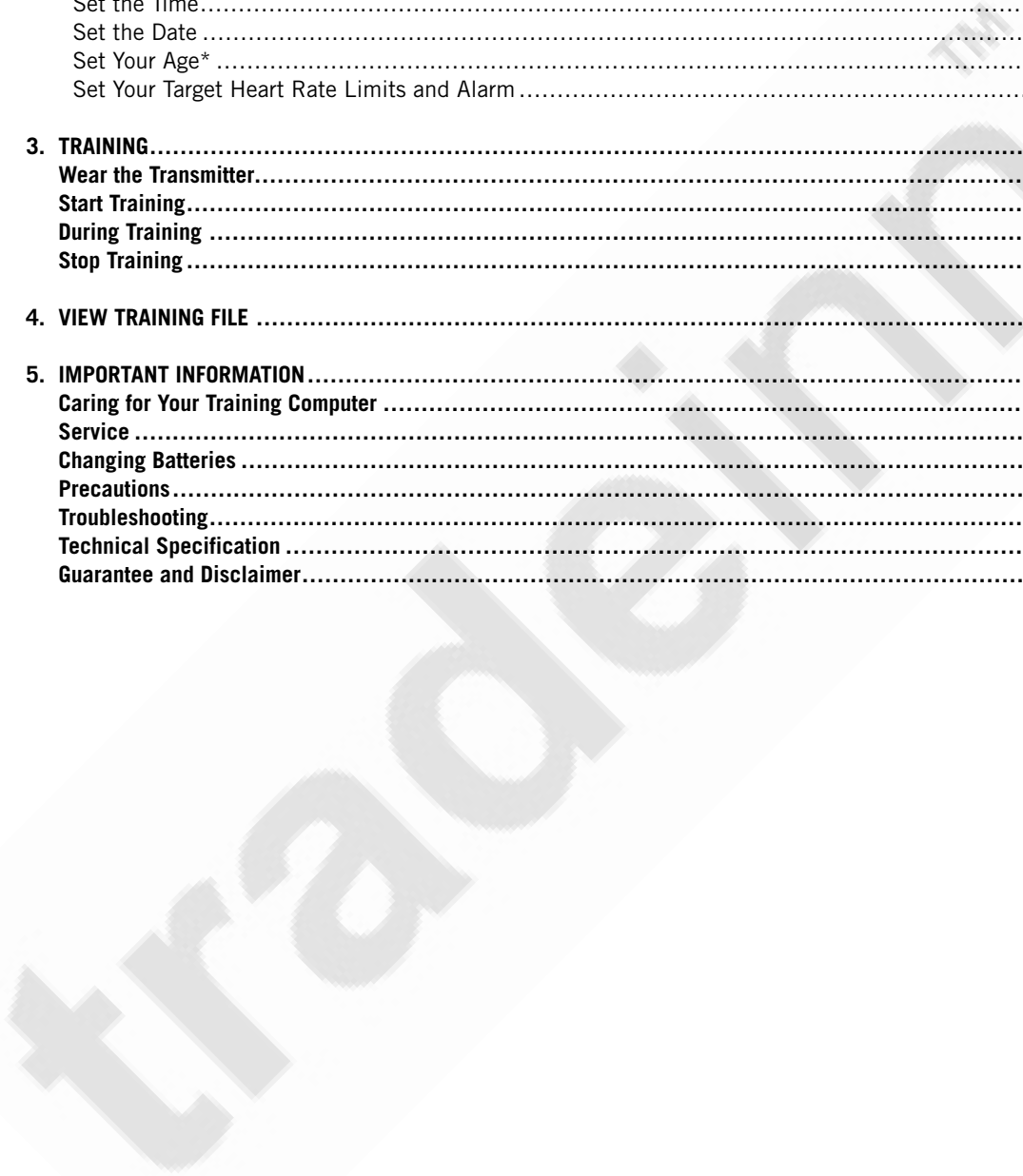




Polar FT1, FT2
User Manual

CONTENTS

1. BENEFITS OF YOUR POLAR FT1/ POLAR FT2 TRAINING COMPUTER.....	3
2. GET STARTED.....	5
Get to Know Your FT1/FT2 Training Computer	5
Menu Structure	5
Display Symbols	5
Easy One Button Logic	6
Settings	6
Set the Time.....	6
Set the Date	7
Set Your Age*	8
Set Your Target Heart Rate Limits and Alarm	8
3. TRAINING.....	10
Wear the Transmitter.....	10
Start Training.....	10
During Training	10
Stop Training	11
4. VIEW TRAINING FILE	12
5. IMPORTANT INFORMATION.....	13
Caring for Your Training Computer	13
Service	13
Changing Batteries	13
Precautions	13
Troubleshooting.....	14
Technical Specification	15
Guarantee and Disclaimer.....	16



1. BENEFITS OF YOUR POLAR FT1/ POLAR FT2 TRAINING COMPUTER



EASINESS OF TRAINING

With FT1/FT2 training computer you'll get an easy start to heart rate -based training.

MOTIVATION

FT1/FT2 training computer guides and motivates you to train in the right, fitness improving zone.

Heart Rate -Based Training

Your heart rate is a convenient, reliable, and personal indicator of the intensity of your training. Knowing your heart rate helps you decide whether to increase or decrease the intensity of your training, based on your goals and fitness level. Although there are many subjective clues indicating how your body is reacting to exercise (perceived exertion, breathing rate, physical sensations), none is as reliable as measuring heart rate. It is objective and affected by both internal and external factors, and is therefore a dependable measure of physical condition.

Using your FT1/FT2 training computer during training:

- Teaches you about your body's reaction to training
- Keeps you from starting out too hard (as beginners are often tempted to do)
- Helps you control the intensity of your training routine
- Provides feedback on how you are improving

Training intensity

Maximum heart rate (HR_{max}) is a value used to define your target heart rate limits. HR_{max} is the highest number of heartbeats per minute (bpm) during maximum physical exertion. HR_{max} can be calculated (estimated) based on your age: $220 - \text{age} = HR_{max}$.

Training intensities can be expressed as percentages of HR_{max} .

There are three different training intensities: **Light**, **Moderate** and **Hard**.

Intensity	Intensity % of HR_{max}	Training benefit
Hard	80-90%	<ul style="list-style-type: none"> • Benefits: Increases maximum performance capacity • Feels like: Tiredness in muscles and heavy breathing • Recommended for: Fit users for short training sessions
Moderate	70-80%	<ul style="list-style-type: none"> • Benefits: Improves aerobic fitness • Feels like: Good, easy breathing, moderate sweating • Recommended for: Everybody for typical training sessions with moderate length
Light	60-70%	<ul style="list-style-type: none"> • Benefits: Improves basic endurance and helps recovery • Feels like: Comfortable, easy breathing, low loading for muscles, light sweating • Recommended for: Everybody

Table 1. Training intensities and benefits

Maximum heart rate (HR _{max})	200	190	180	170	160
HARD 80 - 90% of HR _{max}	180	171	162	153	144
MODERATE 70 - 80% of HR _{max}	160	152	144	136	128
LIGHT 60 - 70% of HR _{max}	140	133	126	119	112
	120	114	108	102	96
Age	20	30	40	50	60

Table 2. Training intensities with age-based heart rate limits

2. GET STARTED

Get to Know Your FT1/FT2 Training Computer

Training computer displays the time, heart rate and other data during training. You can also wear it as a watch.

Transmitter sends the ECG accurate heart rate signal to the training computer.

The latest version of this user manual can be downloaded at www.polar.fi/support.

Register your Polar product at <http://register.polar.fi/> to ensure we can keep improving our products and services to better meet your needs.



Menu Structure

The training computer functions with one button. Press the button in the **Time display** (showing the time of day, date and weekday) to enter different modes:

Button presses	Mode	Menu structure
x 1	EXE (exercise) to measure your heart rate	
x 2	FILE to view your training information	
x 3	ZONE to set your target heart rate limits manually	
x 4	TIME to set the time	
x 5	DATE to set the date	
x 6	USER to set your age*	

* Applies only to Polar FT2 training computer.

Display Symbols

Symbol	Description
	The battery of the training computer is low.
	The target heart rate zone alarm is active.
	Clock symbol indicates the time of day on Exercise and Time Setting mode.
	Your heart rate is being measured and heart rate is inside the target heart rate zone.
	Your heart rate is below your target heart rate zone.
	Your heart rate is above your target heart rate zone.
	Weekday indicator indicates the weekday in the Time display. Weekdays are printed on the display frame.
	The menu level indicator shows you the number of menu items. When browsing the menu, the symbol indicates where you are in the current menu level.
	Training time indicator represents 10 minutes of continuous training.
	When displayed, you can increase the value by one by pressing the button once.
	When displayed, you can decrease the value by one by pressing the button once.

Easy One Button Logic


The button of the training computer has different functionalities depending on the situation of use.

Press the button to

- Select the mode (**EXE**, **FILE**, **ZONE**, **TIME**, **DATE**, **USER***).
- Move to the next display in **FILE**.
- Increase a value when ⊕ symbol is displayed. Pressing the button increases the value by one.
- Decrease a value when ⊖ symbol is displayed. Pressing the button decreases the value by one. The minus symbol is displayed two seconds after you have increased a value.
- Confirm your selection/desired value when **OK?** is displayed.

* Applies only to Polar FT2 training computer.

Press and hold the button to

- Return to the Time display from any mode except Exercise mode. Press and hold the button until **EXIT** is displayed.
- **Activate/deactivate the target heart rate zone alarm in the Exercise mode.** Press and hold the button until  symbol appears/disappears.
- **Activate the backlight in the Time display.** After activating, a button press turns the backlight on in any mode. Backlight is deactivated automatically after five minutes if you do not press the button. If you start training when the backlight is activated, it stays activated until the end of the training session. During training you can turn the backlight on with HeartTouch.

Settings

Set the Time



1. In the Time display, press the button four times. **TIME** is displayed.



2. Wait until **12h** or **24h** is displayed and starts flashing. Press the button to select the time format.



3. Wait until **OK?** appears and press the button to confirm your selection.



If you selected **12h** time format, select **AM** or **PM**. Wait until **OK?** appears and press the button to confirm your selection.



4. Wait until hours start flashing on the display. Adjust the value with the button when the minus or plus symbol is displayed. The minus symbol is displayed two seconds after you have increased a value.



-
- Wait until minutes start flashing on the display. Adjust the value with the button when the minus or plus symbol is displayed. The minus symbol is displayed two seconds after you have increased a value.



-
- When you have adjusted the values, wait until **OK?** appears, and press the button to confirm your selection.

When you have set the time, the training computer returns to the Time display.

Set the Date



-
- In the Time display, press the button five times. **DATE** is displayed.



-
- Wait until the value for the day (in 24h format) or month (in 12h format) is displayed and starts flashing. Adjust the value with the button when the minus or plus symbol is displayed. The minus symbol is displayed two seconds after you have increased a value.



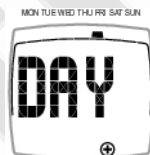
-
- Wait until the month (in 24h format) or day (in 12h format) is displayed. Adjust the value with the button when the minus or plus symbol is displayed. The minus symbol is displayed two seconds after you have increased a value.



-
- When you have adjusted the values, wait until **OK?** appears, and press the button to confirm your selection.



-
- DAY** is displayed and the weekday indicator flashes at the top of the display



-
- The weekdays are on the display frame, as follows:
MON = Monday, **TUE** = Tuesday, **WED** = Wednesday, **THU** = Thursday, **FRI** = Friday, **SAT** = Saturday, **SUN** = Sunday
 When the plus symbol is displayed, press the button to select the weekday.



-
- Once you have selected the weekday, wait until **OK?** appears, and press the button to confirm your selection.

When you have set the date, the training computer returns to the Time display.

Set Your Age*

* Applies only to Polar FT2 training computer.



1. In the Time display, press the button six times. **USER** is displayed.



2. Wait until **AGE** is displayed.



3. Digits for years start flashing. Adjust the value with the button.



4. When you have adjusted the value, wait until **OK?** is displayed, and press the button to confirm your selection. **ZONE SET** is displayed. Your age-based heart rate limits have been set. The upper limit is 85% and the lower limit is 65 % of your maximum heart rate. If you want to change the limits according to the training intensities described in section Training intensity, see Set Your Target Heart Rate Limits and Alarm.

When you have selected your age, the training computer returns to the Time display.

Set Your Target Heart Rate Limits and Alarm

To make sure that you are training at the right intensity level, set your target heart rate limits and alarm before a training session. The alarm sounds when you are out of your target heart rate zone. For more information on heart rate limits and training intensities, see Benefits of Your Polar FT1/ Polar FT2 Training Computer (page 3).

The target heart rate zone alarm indicates when you are out of your target heart rate zone.



1. In the Time display, press the button three times. **ZONE** is displayed.



2. Soon **BEEP** appears and **ON** or **OFF** starts flashing. Press the button to select **ON** (activate the alarm), or **OFF** (deactivate it).




3. When you have selected the desired option, wait until **OK?** is displayed, and press the button to confirm your choice.

Your FT2 training computer automatically calculates your age-based heart rate limits once you have entered your age in the user settings. However, in this display, you can adjust the limits manually. For FT1 training computer, the limits have to be adjusted manually.

(To skip this, press and hold the button until **EXIT** is displayed.)



-
4. **HIGH** is displayed. Wait until digits for the upper heart rate limit start flashing.
Adjust the value. Increase the value when the plus symbol is displayed. Decrease the value when the minus symbol is displayed. The minus symbol is displayed two seconds after you have increased a value.

 *The upper heart rate limit cannot be lower than the lower heart rate limit.*



-
5. When you have adjusted the value, wait until **OK?** appears, and press the button to confirm your selection.



-
6. **LOW** is displayed. Wait until digits for the lower heart rate limit start flashing. Adjust the value.



-
7. When you have adjusted the value, wait until **OK?** is displayed, and press the button to confirm your selection.

When you have completed the target heart rate settings, the training computer returns to the Time display.

3. TRAINING

Wear the Transmitter

1. Fasten one end of the transmitter to the elastic strap.
2. Adjust the transmitter's strap length to fit snugly and comfortably. Secure the strap around your chest, just below the chest muscles, and fasten the strap to the transmitter.
3. Lift the transmitter off your chest and moisten the two grooved electrode areas on the back. Check that the wet electrode areas are firmly against your skin, and that the text on the transmitter is in an upright position and in the centre of your chest.



For more information on how to maintain your transmitter see *Caring for Your Training Computer* (page 13)

Start Training

Before you start training, wear the transmitter and the training computer. There should be no other training computers within a one-meter/three-foot radius from you to avoid interference.



1. Start recording your training session by pressing the button once.
EXE (Exercise) is displayed.



2. The stopwatch starts running in a few seconds. The outline of the heart symbol flashes until your heart rate is detected (this should not take more than 15 seconds).



3. Your heart rate is displayed. A flashing heart symbol indicates an ongoing heart rate measurement. The symbol flashes at the pace of your heart.

i Switch the target heart rate zone alarm **ON** or **OFF** in Exercise mode by pressing and holding the button. The alarm sounds if you are not inside your target heart rate zone.

During Training



HeartTouch

Change the display information (Heart rate / Duration / Time) during the training session by bringing the training computer close to the transmitter's Polar logo. Keep the training computer close to the transmitter until you hear a beep and the desired information is displayed.

i A beep will sound even if the alarm has been deactivated.



- 1.
- 2.
- 3.



Stop Training



1. Heart Rate

Your heart rate in beats per minute.

Symbol 1 = your heart rate is inside your target heart rate zone.

Symbol 2 = your heart rate is below your target heart rate zone.

Symbol 3 = your heart rate is above your target heart rate zone.

2. Training Session Duration

is displayed in minutes and seconds, or in hours and minutes when the session has lasted more than an hour.

Each **Training Time Indicator** represents ten minutes of continuous training. After one hour of continuous training (or six indicators), the counter restarts. Use the indicators to mark time goals for your session.

3. Time

Time of day is displayed.

To stop training recording, press the button. **STOP** is displayed and the training computer returns to the Time display.

4. VIEW TRAINING FILE

Your latest training information remains in the memory of the training computer under **FILE** until you record a new training session. The information in the file is then replaced by the current one.

FILE is protected against accidental starts, and only recordings that last more than one minute are saved.



1. In the Time display, press the button twice.
FILE is displayed.



2. Wait a while and the **total training session duration** is displayed.



3. Press the button. Your **average heart rate (AVG) of the training session** is displayed.



4. Press the button. Your **maximum heart rate (MAX) of the training session** is displayed.



5. Press the button. **The date of your latest training session** is displayed.

Press the button to return to the Time display.

5. IMPORTANT INFORMATION

Caring for Your Training Computer

Training computer and transmitter: Keep in a cool and dry place. Do not store in a damp environment, in non-breathable material (a plastic bag or a sports bag) or with conductive material (a wet towel). Do not expose to direct sunlight for extended periods. Clean with a mild soap and water solution, dry with towel. Never use alcohol or any abrasive material (steel wool or cleaning chemicals). Do not bend or stretch the transmitter. This may damage the electrodes. Do not press the button of your training computer under running water.

Elastic Strap: Rinse with water after every use. Wash after swimming. If used regularly, wash at least once every three weeks in a washing machine at 40°C / 104°F. Use a washing pouch. Do not soak, and use neither detergent with bleach nor fabric softener. Do not dry-clean, spin-dry or iron.

Service

During the two-year guarantee/warranty period we recommend that you have service done by an authorized Polar Service Center only. The warranty does not cover damage or consequential damage caused by service not authorized by Polar Electro.

Please see the separate Polar Customer Service Card for details.

Changing Batteries

Training Computer Battery

Do not open the training computer yourself. We recommend that you have the battery replaced by an authorized Polar Service Center. They test your Polar FT1/FT2 for water resistance after battery replacement and make a full periodic check. Please note the following:

- The low battery indicator is displayed when 10-15% of the battery capacity is left.
- Excessive use of the back light drains the battery more rapidly.
- In cold conditions, the low battery indicator may appear, but will disappear when the temperature rises.
- The back light and sound are automatically turned off when the low battery indicator is displayed.

Transmitter Battery

If you suspect that the transmitter battery has discharged, contact your authorized Polar Service Center for a replacement transmitter.

Precautions

Your training computer is designed to help you achieve your personal fitness goals and indicate the level of physiological strain and intensity during training sessions. No other use is intended nor implied.

Minimizing Possible Risks

Training may include some risk. Before beginning a regular training program, answer the following questions concerning your health status. If you answer yes to any of these questions, consult a physician before starting any training program.

- Have you been physically inactive for the past five years?
- Do you have high blood pressure or high blood cholesterol?
- Do you have symptoms of any disease?
- Are you taking any blood pressure or heart medication?
- Do you have a history of breathing problems?
- Are you recovering from a serious illness or medical treatment?
- Do you use a pacemaker or other implanted electronic device?
- Do you smoke?
- Are you pregnant?

ENGLISH

Note that in addition to training intensity, medication for heart conditions, blood pressure, psychological conditions, asthma, breathing, etc., as well as some energy drinks, alcohol, and nicotine may also affect heart rate.

It is important to be sensitive to your body's responses during training. If you feel unexpected pain or excessive fatigue when training, stop the training session or continue at a lighter intensity.

If you have a pacemaker, defibrillator or other implanted electronic device, you use the training computer at your own risk. Before starting use, take a maximal training stress test under the supervision of a physician. The test is to ensure the safety and reliability of the simultaneous use of the pacemaker and the training computer.

If you are allergic to any substance that comes into contact with your skin or if you suspect an allergic reaction due to using the product, check the listed materials in *Technical Specifications*. To avoid any skin reaction to the transmitter, wear it over a shirt. Moisten the shirt well under the electrodes to ensure flawless operation.

The combined impact of moisture and intense abrasion may cause a black color to come off the transmitter's surface, possibly staining light-colored clothes.

If you use insect repellent on your skin, make sure that it does not come into contact with the transmitter or the training computer.

Exercise equipment with electronic components may cause interfering stray signals.

To tackle these problems, try the following:

1. Remove the transmitter from your chest and use the exercise equipment as you would normally.
2. Move the training computer around until you find an area in which it displays no stray reading or does not flash the heart symbol. Interference is often worst right in front of the display panel of the equipment, while the left or right side of the display is relatively free of disturbance.
3. Put the transmitter back on your chest and keep the training computer in this interference-free area as much as possible.

If your training computer still does not work, the piece of equipment may be electrically too noisy for wireless heart rate measurement.

Water Resistance of the FT1/FT2 Training Computer

FT1 and FT2 training computers may be worn when swimming. To maintain water resistance, do not press the button under water. For more information, visit <http://www.polar.fi/support>. Water resistance of Polar products is tested according to International Standard ISO 2281. Products are divided into three categories according to their water resistance. Check the back of your Polar product for the water resistance category, and compare it to the chart below. Please note that these definitions do not necessarily apply to products of other manufacturers.

Marking on case back	Water resistant characteristics
Water resistant	Protected against wash splashes, sweat, raindrops etc. Not suitable for swimming.
Water resistant 30 m/50 m WR 30M/WR 50M	Suitable for bathing and swimming
Water resistant 100 m WR 100M	Suitable for swimming and snorkeling (without air tanks)

Troubleshooting

If you've lost your way in the menu, press and hold the button until time of day is displayed.

If the heart rate reading becomes erratic, extremely high or shows nil (00), make sure that there are no other heart rate transmitters within 1 m/3 ft and that the transmitter fits snugly and is moistened, clean and undamaged.

Strong electromagnetic signals can cause erratic readings. Electromagnetic disturbances may occur near exercise equipment with electronic components, high-voltage power lines, traffic lights, overhead lines of electric railways, electric bus lines or trams, televisions, car motors, bike computers, some motor-driven exercise equipment, cellular phones, or at electric security gates.

If the abnormal reading continues despite moving away from the source of disturbance, slow down and check your pulse manually.

If you feel it corresponds to the high reading on the display, you may be experiencing cardiac arrhythmia. Most cases of arrhythmia are not serious, but consult your doctor nevertheless.

A cardiac event may have altered your ECG waveform. In this case, consult your physician.

If heart rate measurement does not work despite the actions mentioned previously, the battery of your transmitter may be empty.

Troubleshooting Checklist

If you experience difficulties with heart rate measurement, consider the following:

1. Is the transmitter worn correctly? The belt should be worn flat and tight but comfortably against the skin with the text visible and in upright position.
2. Make sure the electrodes of the transmitter are clean and well-moistened.
3. The training computer must be within one-meter / three feet from the transmitter. The training computer picks up transmitter signals within one meter / three feet.
4. Are the heart rate signals very high and abnormal? Relocating the training computer may help. Disturbance can also be caused by other heart rate monitors or training equipment nearby (see Precautions (page 13) for further information).
5. The chemicals in seawater and some swimming pools may affect the ECG signal pick-up. Pool water with high chlorine content, and seawater are very conductive. The electrodes of the transmitter may short-circuit, preventing ECG signals from being detected by the transmitter. Jumping into water or strenuous muscle movement during competitive swimming may shift the transmitter to a location on the body where ECG signals cannot be picked up. The ECG signal strength is individual and may vary depending on the individual's tissue composition. Problems occur more frequently when measuring heart rate in water.
6. The battery of your training computer may be low even if the low battery symbol is not yet visible.
7. The battery of your transmitter may be empty.

Technical Specification

Training Computer

Battery type	CR 2025
Battery life	Average 2 years (1 h/day, 7 days/week exercise)
Operating temperature	-10 °C to +50 °C / 14 °F to 122 °F
Wrist strap material	Thermoplastic Polyurethane
Back cover, buckle and tongue	Stainless steel complying with the EU Directive 94/27/EU and amendment 1999/C 205/05 on the release of nickel from products intended to come into direct and prolonged contact with the skin.
Watch accuracy	Better than ± 2.0 seconds/day at 25 °C / 77 °F temperature.
Accuracy of heart rate measurement	$\pm 1\%$ or ± 1 bpm, whichever larger, definition applies to steady state conditions.

Transmitter

Battery life	Average 2500 hours
Operating temperature	-10 °C to +50 °C / 14 °F to 122 °F

ENGLISH

Transmitter material	Polyurethane
Strap material	Buckle: Polyurethane, Fabric: Nylon 46 %, polyester 32%, natural rubber (latex) 22%

Limit values

Heart rate measuring range	15 - 240 bpm
Heart rate limits	30 - 199 bpm
Watch	24 h or 12 h
Exercise duration	0 - 23:59
Exercise time display	< 1 h: mm:ss, > 1 h: hh:mm
Age	10 - 99

Guarantee and Disclaimer

Limited Polar International Guarantee

- This guarantee does not affect the consumer's statutory rights under applicable national or state laws in force, or the consumer's rights against the dealer arising from their sales/purchase contract.
- This limited Polar international guarantee is issued by Polar Electro Inc. for consumers who have purchased this product in the USA or Canada. This limited Polar international guarantee is issued by Polar Electro Oy for consumers who have purchased this product in other countries.
- Polar Electro Oy/Polar Electro Inc. guarantees the original consumer/purchaser of this device that the product will be free from defects in material or workmanship for two (2) years from the date of purchase.
- **The receipt of the original purchase is your proof of purchase!**
- The guarantee does not cover the battery, normal wear and tear, damage due to misuse, abuse, accidents or non-compliance with the precautions; improper maintenance, commercial use, cracked, broken or scratched cases/displays, elastic strap and Polar apparel.
- The guarantee does not cover any damage/s, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the product.
- Items purchased second hand are not covered by the two (2) year warranty, unless otherwise stipulated by local law.
- During the guarantee period, the product will be either repaired or replaced at any of the authorized Polar Service Centers regardless of the country of purchase.

Guarantee with respect to any product will be limited to countries where the product has been initially marketed.

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CE 0537

This product is compliant with Directive 93/42/EEC. The relevant Declaration of Conformity is available at www.support.polar.fi.



This crossed out wheeled bin marking shows that Polar products are electronic devices and are in the scope of Directive 2002/96/EC of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE) and batteries and accumulators used in products are in the scope of Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators. These products and batteries/accumulators inside Polar products should thus be disposed of separately in EU countries.



This marking shows that the product is protected against electric shocks.

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