

POLAR®

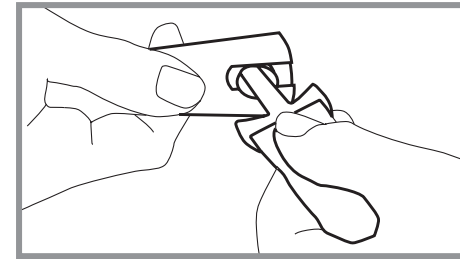
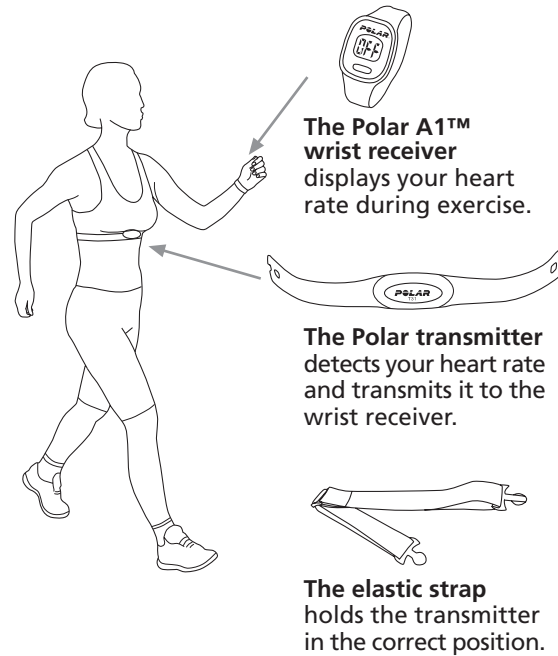


Heart Rate Monitor

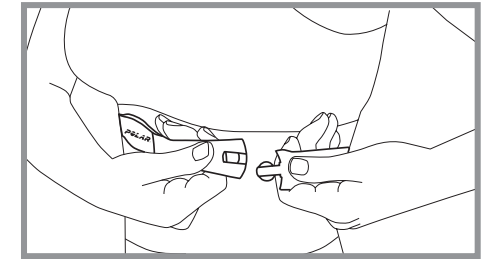
User's Manual
USA

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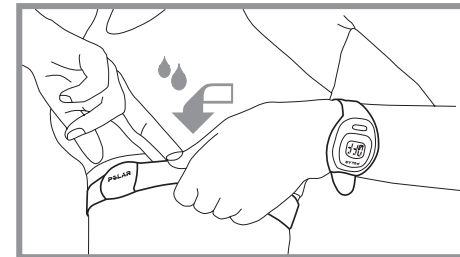
1. How to Put Your Heart Rate Monitor On



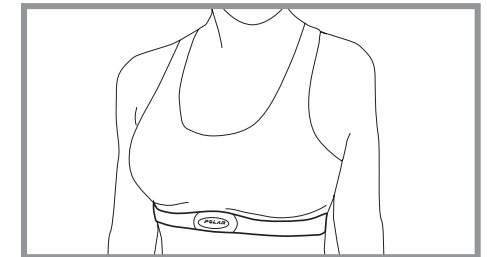
1. Attach the transmitter to the elastic strap.



2. Adjust the strap length to fit snugly and comfortably. Secure the strap around your chest, just below the chest muscles, and buckle it.



3. Lift the transmitter off your chest and moisten the two grooved electrode areas on the back.



4. Check that the wet electrode areas are firmly against your skin and the Polar logo is in a central, upright position.

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2. How to Start

1. Keep the wrist receiver within 3 feet of your transmitter. Check that you are not near other people with heart rate monitors or any source of electromagnetic disturbance.
2. Press to start.



3. Stopwatch begins to run. Your heart rate appears in 5 seconds. Heart rate symbol ♥ flashes to the beat of your heart.



Exercise Time Indicator

1 block = 10 minutes exercise, 6 blocks = 1 h
After one hour, when all the blocks are black, the cycle starts again.

4. To check your exercise time, bring the wrist receiver near the Polar logo on the transmitter. Your elapsed exercise time will appear for three seconds.



3. How to Stop and Recall File

1. Press to stop.
2. File recalling (steps 2-4) is scrolling automatically.
3. Average heart rate (3 sec.)



4. Total exercise time (3 sec.)
5. OFF-display



The average heart rate and the total exercise time are shown twice.

After that the wrist receiver turns off.

You can stop the file recall by pressing the button.

If you want to recall your file later, press and hold the button when OFF is displayed.

4. After Exercising

1. Carefully wash the transmitter with a mild soap and water solution.
2. Rinse it with pure water.
3. Dry the transmitter carefully with a soft towel.
4. Keep the wrist receiver clean and wipe off any moisture.
5. Store the heart rate monitor in a clean and dry place. Dirt impairs the elasticity and functioning of the transmitter. Sweat and moisture can keep the electrodes wet and the transmitter activated, which shortens battery life.

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

5. Target Heart Rate Zone

To find your target heart rate zone, you need to know your maximum heart rate (HR_{max}). To estimate your HR_{max} , use the following formula:

$$HR_{max} = 220 - \text{age}$$

$$\text{Your } HR_{max} = 220 - \text{age} = \text{_____}$$

Reference: American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription. Williams & Wilkins, 2000.

Your target heart rate zone is a range between the lower and upper heart rate limits expressed as percentages of your maximum heart rate (HR_{max}).

When your heart beats at 50-60% of your HR_{max} , you're in the **light intensity** zone. This kind of exercise is easy; ex. daily activities and light chores. It delivers some health benefits.

Push on to 60-70% of your HR_{max} and you're in the **light to moderate intensity** zone. This is good for improving health, fitness and for weight loss. It also improves endurance.

At 70-85% of your HR_{max} , you've moved into the **moderate to heavy intensity** zone. This is harder work, but effective for strengthening aerobic fitness and endurance especially for people exercising more regularly.

Find out your target zones:

Light intensity:

$$\text{upper limit } 0.60 \times \text{your } HR_{max} = \text{_____}$$

$$\text{lower limit } 0.50 \times \text{your } HR_{max} = \text{_____}$$

Light to moderate intensity:

$$\text{upper limit } 0.70 \times \text{your } HR_{max} = \text{_____}$$

$$\text{lower limit } 0.60 \times \text{your } HR_{max} = \text{_____}$$

Moderate to heavy intensity:

$$\text{upper limit } 0.85 \times \text{your } HR_{max} = \text{_____}$$

$$\text{lower limit } 0.70 \times \text{your } HR_{max} = \text{_____}$$



7. Minimizing Possible Risks in Exercising with Heart Rate Monitor

Exercise may include some risk, especially for those who have been sedentary.

Before starting a regular exercise program you are recommended to answer to the following questions for health status checking. If the answer is yes to any of the questions, we recommend to consult a doctor before starting an exercise program.

- Have you not exercised for the past 5 years?
- Do you have high blood pressure?
- Do you have 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 another implanted electronic device?
- Do you smoke?
- Are you pregnant?

Note that in addition to exercise intensity, medications for heart, blood pressure, psyche, asthma, breathing etc. as well as some energy drinks, alcohol and nicotine, can affect heart rate.

It is important to be sensitive to your body's reactions during exercise. If you feel unexpected pain or excessive fatigue when exercising, it is recommended to stop the exercise or continue at a lighter intensity.

Notice to persons with pacemakers, defibrillator or other implanted electronic device. Persons who have a pacemaker use the Polar Heart Rate Monitor at their own risk. Before starting use, we always recommend an exercise test under doctor's supervision. The test is to ensure the safety and reliability of the simultaneous use of the pacemaker and the heart rate monitor.

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

8. Technical Specifications

All Polar heart rate monitors are designed to indicate the level of physiological strain and intensity in sports and exercise. No other use is intended or implied. Heart rate is displayed as number of heartbeats per minute (bpm).

Polar Transmitter

Battery type: Built-in Lithium Cell
Battery life: Average 2500 hours of use
Operating temperature: 14 °F to 122 °F / -10 °C to +50 °C
Material: Polyurethane
Waterproof

Elastic Strap

Buckle material: Polyurethane
Fabric material: Nylon, polyester and natural rubber including a small amount of latex

Wrist Receiver

Battery type: CR 2025
Battery life: Average 2 years (2h/day, 7 days/week)
Operating temperature: 14 °F to 122 °F / -10 °C to +50 °C
Water resistance: to 100 feet/30 meters
Wrist strap: Polyurethane
Wrist strap buckle: Polyoxymethylene
Back cover: Stainless steel complying with the EU Directive 94/27/EU and its amendment 1999/C 205/05 on the release of nickel from products intended to come into direct and prolonged contact with the skin.
Accuracy of heart rate measurement: $\pm 1\%$ or ± 1 bpm, whichever larger, definition applies to steady state conditions
Total exercise time:9 h 59 min
Exercise time display < 1 h:mm:ss
Exercise time display > 1 h:h:mm
Minimum duration of recorded exercise:1 min

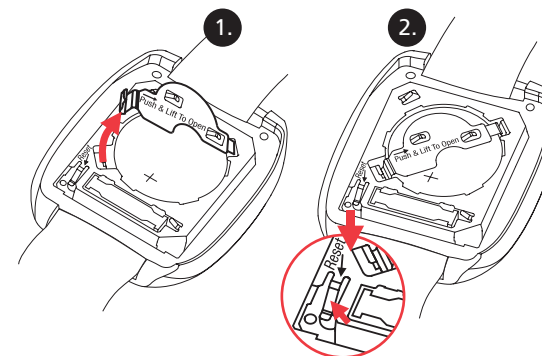
6. When Battery Runs Out

We recommend having all service done by an authorized Polar Service Center. **Warranty does not cover damage or consequential damage caused by service not authorized by Polar Electro Inc.** Water resistance cannot be guaranteed after an unauthorized service. However, if you wish to use a local watch shop or battery replacement center or to change the battery yourself, please follow these instructions.

You need the following equipment:

- Battery type: Panasonic CR 2025, 3V Li
 - Piece of dust-free pad
 - Small Phillips or standard screwdriver
 - Plastic tweezers (recommended)
1. Put the wrist receiver on a clean, dust-free pad on an even table surface and open the back cover by removing the screws counterclockwise. Do not turn the receiver upside down since the module may fall off.
 2. Push the spring gently. Lift the spring gently upwards and release the other end of the spring, too. ①
 3. Take the old battery off and put a new battery in the battery housing + side up, using plastic tweezers. Do not use metal tweezers because they may shortcircuit the battery. Note also that bare fingers cause grease and contaminate the battery, which weakens the contact.
 4. Assemble the plate back in reverse order, placing the rotating joint properly in the slot. Press the spring gently so that it locks the battery in its proper position.
 5. Reset the receiver by pressing the reset spring against the round golden pad for 1 second. ②

6. Check the display. All digits are displayed.
7. Make sure that the sealing ring is not damaged and it is in its groove all the way around the housing.
8. Put the back cover in its place. The Polar logo on the outside of the back cover is in the upright position with respect to the buckle side of the wrist strap.
9. Tighten the screws from opposite corners. Do not force the screws or damage the existing threads. Check that the sealing ring has stayed in its groove and it is not showing from the joint.
10. Test the functioning. Mount the transmitter and wet its electrodes. Start heart rate measurement by pressing the button. In case the heart rate measurement does not start or all segments do not appear normally, reopen the case and go back to the point 5, reset the receiver.



7. Limited Polar International Guarantee

- This limited Polar international guarantee is issued by Polar Electro Inc. for the consumers who have purchased this product in the USA or Canada. This limited Polar international guarantee is issued by Polar Electro Oy for the consumers who have purchased this product in other countries.
- Polar Electro Inc. / Polar Electro Oy guarantees to the original consumer/ purchaser of this product that the product will be free from defects in material or workmanship for two years from the date of purchase.
- **Please keep the receipt or International Guarantee Card, which is your proof of purchase!**
- The guarantee does not cover the battery, damage due to misuse, abuse, accidents or non-compliance with the precautions; improper maintenance, commercial use, cracked or broken cases.
- 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. During the guarantee period the product will be either repaired or replaced at an authorized service center free of charge.
- 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.

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10. Disclaimer

- The material in this manual is for informational purposes only. The products it describes are subject to change without prior notice, due to the manufacturer's continuous development program.
- Polar Electro Inc. / Polar Electro Oy makes no representations or warranties with respect to this manual or with respect to the products described herein. Polar Electro Inc. / Polar Electro Oy shall not be liable for any damages, losses, costs or expenses, direct, indirect or incidental, consequential or special, arising out of, or related to the use of this material or the products described herein.

Polar Electro Inc.
370 Crossways Park Drive
Woodbury NY 11797-2050
U.S.A.

Polar Service Center:
1-800-227-1314

Polar Electro Canada
c/o Lanco Logistics Inc.
4330 Joseph-Dubreuil
Lachine, Quebec
CANADA, H8T 3C4
1-888-918-5043

www.polarusa.com