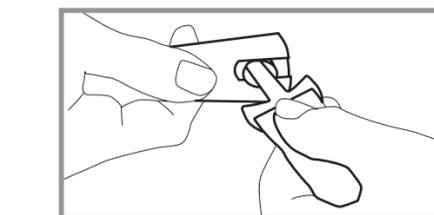
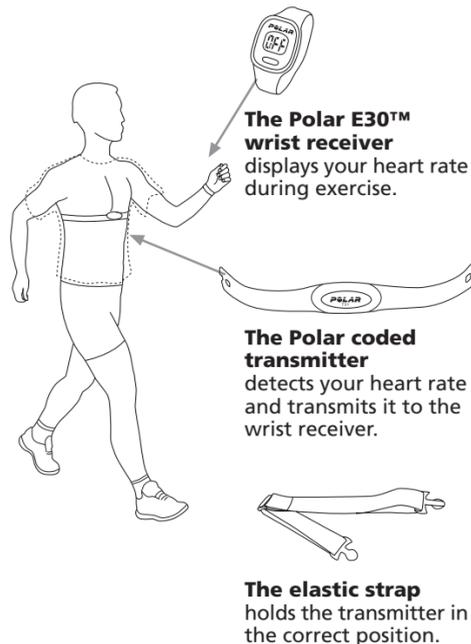


## Contents

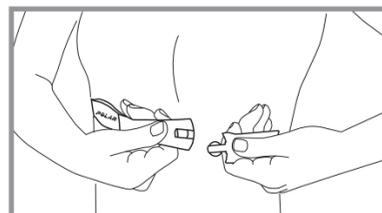
1. How to Put Your Heart Rate Monitor On
2. How to Start and Stop Your HRM
3. How to Recall Data from the E30
4. Uploading Settings from Your Computer
5. Post Exercise Care
6. Finding your Target Heart Rate Zone
7. Changing the Battery
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**Note:** Your E30 comes preprogrammed with the audible out of zone alarm activated and with a target heart rate zone of 135-180 bpm. Please use the calculation in the "Finding Your Target Zone" section and reset the target heart rate zone, if necessary, before using the E30 with your students or exercising with the E30 yourself.

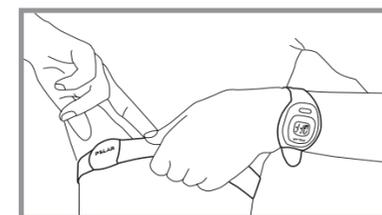
### 1. How to Put Your Heart Rate Monitor (HRM) On



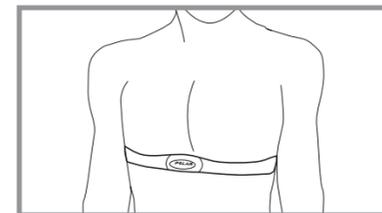
1. Attach one side of elastic strap to the transmitter.



2. Adjust the strap length so that it is snug but not uncomfortable. Position the transmitter so that it is just below the chest muscles, across the sternal notch, and buckle it.



3. Lift the transmitter off your chest and moisten the **two** oval electrode areas on the backside of the transmitter.



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

#### Additional Tips for Working with Children:

1. In small children or children with concave chests, etc., you might find you get a better heart rate reading if you put the transmitter across their backs, with the Polar logo upside down.
2. Have your students put the transmitter on and adjust the straps, over their t-shirts. Then they can slide the straps down and wiggle them up under their shirts.
3. It may be possible to wear the transmitter over a T-shirt as long as the area under the electrodes is thoroughly wetted. If the E30 does not pick up heart rate, the transmitter will have to be worn directly against the skin.

### 2. How to Start and Stop Your HRM

1. With the watch within 3 feet / 1 meter of your transmitter, press the red button to start.



2. First the upper and lower limit of your target zone will be displayed. Then the heart rate symbol will flash to the beat of your heart. Your heart rate will appear in 5 seconds. If you go above or below your zone, the heart rate display will flash and an alarm will beep (See section 4).

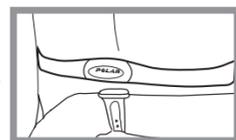


**Note:** When starting the monitor, have your students stay at least 3 feet / 1 meter apart so that the watch can lock onto its wearer's heart rate signal. This helps to minimize interference when the students come close together during exercise. See section 8 for specifics.

#### Time in Zone Indicators

1 solid block = 5 minutes spent in target zone (a flashing block is incomplete), 6 solid blocks = 30 minutes. After 30 minutes, when all the blocks are solid, the cycle will start again but will read from right to left.

3. To check your exact time in zone while exercising, bring the watch near the Polar logo on the transmitter. Your exact time in zone will appear for 3 seconds and then the display will automatically revert to showing heart rate.



4. To stop recording, press the red button. The display will read OFF.

### 3. How to Recall Data from the E30



1. From the OFF display, press and hold the red button. The display will briefly show "File" and then display the average heart rate for the exercise.



2. Press the red button. The display will show the total time in target zone.



3. Press the red button. The display will show the total exercise time.



4. Press the red button. The display will show the upper target zone limit.

5. Press the red button. The display will show the lower target zone limit. If you keep making short presses of the red button, you will keep scrolling through the data.

6. To exit the file mode, press and hold the red button. The display will read OFF.

If you want to recall your file later, start with step 1. The E30 saves one complete file. When a new exercise recording is started, the new information will be recorded over the old. As a safety, if the red button is accidentally pushed, and either no heart rate is picked up, or if the recording is interrupted within 5 minutes, no new information will be saved and the old file will still be intact.

**Note:** At any point in the file recall, you can return to OFF by pressing and holding the red button.

### 4. Uploading Settings from Your Computer to the E30

The E30 allows you to program a target zone and turn the audible out of zone alarm on or off, right from your computer.

**Note:** To upload settings you will need a PC with a sound card (compatible with Sound Blaster™) and dynamic loudspeakers. 'Dynamic' speakers are also referred to as magnetic or acoustic speakers. These are common on desktop PC's, but some laptops have ceramic speakers, and these will not work. In this case, you can buy inexpensive dynamic speakers or headphones and plug them in. (Before purchasing, check with your tech people, they may have some.)

#### Installing the software:

1. Ask your technology person for assistance. You may need an authorization password to install the software on a school computer.
2. Place the E30 CD in your CD drive and close.
3. Wait for the setup screen to appear automatically.
4. Follow the instructions on your screen.

#### Uploading settings:

1. Click on the E30 software icon on your desktop.
2. Set the target zone limits and choose to have the audible alarm either on or off.

3. From the OFF mode on the E30 HRM, press and hold the button so the file recall starts and the average heart rate is displayed.

4. Hold the E30 less than 7"/18cm from the speaker.

5. Click the **Set HRM** button on your computer and hold the E30 steady. You will hear a series of chirps. If uploading is successful, the E30 will read **Set** and **OK**.

6. Press and hold the button on the E30 to return to the OFF mode.

**Note:** If you are unsuccessful (the HRM does not show **Set** and **OK**), turn the HRM sideways to speaker with the watch face up, so that the 'P' in 'Polar' is closest to the speaker, and try again. You can also try adjusting the volume up or down and varying the distance of the HRM to the speaker. Louder and closer is not always better.

#### Advanced:

If you change the target zone regularly, click the **Advanced** button. You can name the zone and save it for later use.

### 5. Post Exercise Care

- Carefully wash the transmitter with a mild soap and water solution.
- Rinse it in clean water and gently dry the transmitter with a soft towel.
- Keep the watch clean and wipe off any moisture.
- The elastic strap can be machine washed in cold water and detergent, but should be hung up to air dry.
- Store the HRM in a clean and dry place (like your Class Management System). 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 colour, which might stain light-coloured clothes especially, to come off the transmitter's surface.

### 6. Finding your Target Heart Rate Zone

To find the target heart rate zone for your students, you'll need to estimate their maximum heart rate ( $HR_{max}$ ). To do this, use the following formula.

$$220 - \text{the age of the student} = (HR_{max})$$

For the general activities of children, a zone of 70 to 85% of  $HR_{max}$  has a positive effect on their hearts and aerobic fitness, without being too strenuous.

**To find the correct zone:**  
 $0.70 \times HR_{max}$  = (lower limit)  
 $0.85 \times HR_{max}$  = (upper limit)

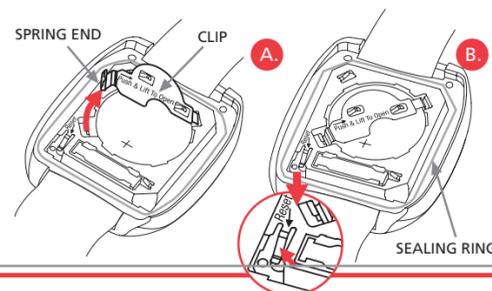
! **Note:** If you teach children of different ages, use the average to estimate their  $HR_{max}$ , as long as their ages do not vary by more than three or four years.

### 7. Changing the Battery

We recommend having all service done by an authorized Polar Service Center. However, if you wish to change the battery yourself, please follow these instructions.

! **Note:** If you use your Polar heart rate monitor in water, the rubber seal may have to be replaced and the unit should be tested for water resistance every time the seal is broken. If an unauthorized service agent services the monitor, or if you change the battery yourself, the Polar warranty does not cover damage or consequential damage that may occur.

You need the following equipment:  
 • Battery type: Panasonic CR 2025, 3V Li  
 • Dust-free pad  
 • Small Phillips or standard screwdriver  
 • Plastic tweezers (recommended)



- Put the watch face down on a clean, dust free pad (mouse pads work well). Remove the back cover by removing the screws and gently pry it off with a thin blade. Throughout these directions, do not turn the watch over while the back cover is loosened or removed because the contents may spill out of the module.
- (Illustration A) Push the tab of the spring gently and remove the clip.
- Remove the old battery and replace it with a new battery, positive side up. Because dirt and oils from your fingers can contaminate the battery and weaken the contact, we recommend using plastic tweezers. Do not use metal tweezers as they may short circuit the new battery.
- Reattach the clip and press the spring gently so that it locks the battery in place.
- (Illustration B) Reset the E30 by pressing the reset tab against the round golden pad for one second.

- Without turning the E30 over, lift it up and make sure that OFF is clearly displayed on its face.
- (Illustration B) Make sure the sealing ring is not damaged and is in its groove all around the housing.
- Replace the back cover. The Polar logo on the cover should be upright in respect to the buckle end of the wrist strap (In other words, if you were to pick up the E30 by the buckle end of the wrist strap, the Polar logo would be right side up.)
- Replace the screws being careful not to cross-thread them. Tighten the screws from opposite corners. Make sure the sealing ring has not come out of its groove, and is not hanging out the side. If it is, take off the back cover and re-seat the ring.
- Test your E30: put on the transmitter, wet the electrodes, and make sure the E30 picks up your heart rate and that all the digit segments are visible. If you do not get a heart rate reading or if some digits are only partially displayed, remove the back cover and reset the E30 as you did in step 5.

### 8. Precautions

**Electromagnetic Interference**  
 Disturbances may occur near high voltage power lines, traffic lights, overhead lines of electric railways, electric bus lines or trams, televisions, computers, cars, electric motors, bike computers, some motor driven exercise equipment, cellular phones, antennas, invisible fences, or when you walk through electric security gates. Interference or "crosstalk" can also be caused by the heart rate signal from another Polar HRM wearer.

#### 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 an individual is 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?

### 8. Precautions

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.

**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.

**Notice to persons with pacemakers, defibrillators or other implanted electronic devices.**

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.

### 9. Frequently Asked Questions

**What should I do if...**

**... there is no heart rate reading or the heart symbol flashes irregularly?**

Check to make sure the transmitter is on tight enough, its electrodes are wet, and that it is in the correct position. Check that the wrist receiver is within 3 feet / 1 meter of the transmitter.

**...there is interference between the heart rate monitors of two students?**

The two students may have exactly the same heart rate transmission code. Separate the two by at least 3 feet / 1 meter and have them continue exercising as before.

**Or**  
 Separate the students and have at least one of them stop the recording and remove his or her transmitter for 30 seconds. Put the transmitter back on and restart the recording. This will cause the E30 to search for a new code.

! **Note:** To help minimize interference between monitors, have your students stand at least 3 feet / 1 meter apart when they start their recordings. This allows the E30 to lock onto a single heart rate signal and transmission code.

**...the heart rate reading becomes erratic or extremely high?**

You may have come within range of strong electromagnetic signals, which cause erratic readings. Check your surroundings and move further away from the source of disturbance. Interference is much more likely if the HRM is receiving a non-coded heart rate signal. In the Measure mode, look at the heart at the top of the display. A heart with a frame indicates coded transmission of heart rate . A heart without a frame indicates a non-coded transmission. If non-coded, move away from the disturbance and remove the transmitter for 30 seconds, put it back on, and stop and restart the recording.

### 10. 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 the 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: ±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: .....5 min

### 11. 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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Polar logotype is a registered trademark and Polar E30 is a trademark of Polar Electro Oy.

This product is protected by one or several of the following patents:  
 FI 88223, DE 4215549, FR 92.06120, GB 2257523, HK 113/1996, SG 9591671-4, US 5491474, FI 88972, DE 9219139.8, FR 92.09150, GB 2258587, HK 306/1996, SG 9592117-7, US 5486818, FI 96380, US 5611346, EP 665947, DE 69414362, FI 68734, DE 3493238, GB 2149514, HK 812/1989, US 4625733, FI 100924, FI 100452, US 5840039, FI 4150, DE 20008882.3, FR 0006504, FI 4069, US 6272365, FR 9907823, GB 2339833, DE 29910633, FI 104463, US 6183422, FI 4157, DE 20008883.1, FR 0006778, WO 97/33512, GB 2326240.  
 Other patents pending.

### 12. 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.
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