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**Congratulations on purchasing the Polar M71 ti Heart Rate Monitor. We are proud to assist you in achieving your personal fitness goals.**

**This guide will provide you with the basic information on how to exercise with your Polar Heart Rate Monitor and how to get the maximum benefit from its functions.**

**Thank you  
for choosing Polar.**

**POLAR®**



## VISUAL CUES TO READ THIS GUIDE

- ! *Indicates important issues. Please, pay attention!*
- 😊 *Indicates a useful tip. It is good to know these things.*
- ⚡ *Indicates a tip to do things faster.*
- ▶ *See also.*

## IMPORTANT TO REMEMBER!

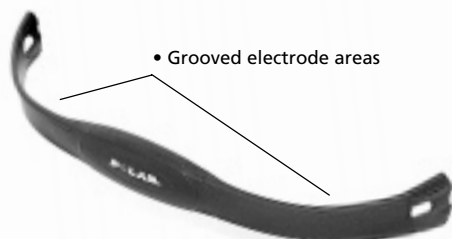
- Adjust the strap length snug enough and wet the Polar transmitter electrodes to ensure flawless heart rate measurement.
- Do not bend or stretch the transmitter.
- Do not operate the buttons of the wrist receiver under water.
- Wash and dry your transmitter regularly after use; never store it wet.
- Keep the Polar Heart Rate Monitor out of extreme cold and heat.
- Do not expose the Polar Heart Rate Monitor to direct sunlight for extended periods.
- Do not store the transmitter in a metal box without an inner part which protects the transmitter contacting metal. Direct contact will discharge the transmitter battery.

# HOW POLAR M71 ti WORKS

## POLAR M71 ti PARTS

Your Polar M71 ti consists of three parts:

### 1. Polar T61™ Transmitter



### 2. Elastic strap



### 3. Polar M71 ti wrist receiver



## GETTING GOING

1. Attach the transmitter to the elastic strap.
2. Adjust the strap length to fit snugly and comfortably. Secure the strap around your chest, below the chest muscles. Lock the buckle.
3. Lift the transmitter off your chest and **wet the grooved electrode areas on the back of it.**
4. Check that the wet electrode areas are firmly against your skin and the Polar logo is in a central upright position.
5. Wear the wrist receiver as you would wear an ordinary watch. If you go biking, you may attach the wrist receiver to a Polar Bike Mount. Keep the wrist receiver within the transmission range (1 metre /3 feet).

! *It is recommended that you wear the transmitter against your bare skin to ensure flawless operation. However, if you wish to wear the transmitter over a shirt, moisten the shirt well under the electrodes.*

**It is important that the electrodes are wet during exercise. After exercising, to preserve the electrodes and battery life:**

1. **Wash the transmitter carefully with a mild soap water solution.**
2. **Rinse it with pure water.**
3. **Dry the transmitter carefully.**





## BUTTONS AND THEIR FUNCTIONS

You can move forward to different modes and control their functions by using the three buttons of the Polar M71 ti. Their principle functions are:



### SET/START/STOP

- Activate the displayed mode
- Lock your selection
- Start the stopwatch
- Stop the stopwatch

### MODE

- Move onward to the following mode or function

### ⏏ /LIGHT

- Adjust your settings
- Signal sound ON or OFF
- Backlight ON

## MODES AND THEIR FUNCTIONS

Polar M71 ti has four main modes:

### 1. TIME OF DAY

You can use the Polar M71 ti as an ordinary watch with alarm function. In the Time of day mode you can

- turn the alarm ON/OFF
- set the alarm time
- set the time of day
- set the date

### 2. HEART RATE MEASURING

Use the Measure mode during your exercise for measuring heart rate. In this mode you can

- see your heart rate reading
- use the stopwatch
- determine your OwnZone
- see your exercising limits
- see the time of day
- see the time you have exercised within your Target Zone so far
- see the accumulated calorie count of your exercise session



### 3. FILE

Polar M71 ti saves information on your latest exercise session. In the File mode you can see the following information:

- total exercising time (TOTAL)
- exercising time spent in your Target Zone (IN TZ)
- OwnCal calorie expenditure during the exercise session (KCAL)
- total cumulative calorie expenditure starting from the moment you have reset the counter (T.KCAL)



### 4. SET

In the Set mode you can define the following information:

- user specific information; age, weight and sex. You also see the limits of your previously determined OwnZone (O.Z.V / O.Z.A)
- Target Zone limits; select whether you want to use your personal OwnZone or determine the values for the Target Zone manually
- OwnCal energy expenditure; select if you want to use this function during exercising
- Help; the Polar M71 ti guides you with help texts if you turn this function on



## POLAR M71 ti HELP



Polar M71 ti guides you with help texts if the Help option is activated. When you begin using the functions and leave the buttons untouched for 5 seconds, Polar M71 ti will assume you need some assistance. It will begin to give you hints on what to do next.

## SETTING THE WATCH



### Set the 12/24 h display

1. To activate 12h mode with AM/PM indicator: In the Time of day mode, press and hold SET/START/STOP for two seconds.
  2. To activate 24h mode: Press and hold SET/START/STOP again. Release after two seconds.
- The chosen time mode is now used in all watch functions.

### Starting the settings

1. In the Time of day mode, press SET/START/STOP.  
*ALARM appears in the display.*  
*Alarm symbol • starts to flash.*
2. Go through setting of alarm, Time of day and date step by step following the instructions. If you chose 24h mode, ignore the steps to set AM or PM.



*If you want to skip some parts and go directly to set a particular watch function, press MODE - move onward.*



*To return to Time of day display at any stage of watch settings, press MODE until your display has returned to the Time of day mode.*

*You can move on even though some digit is blinking on the display. The latest displayed values will be saved.*



## SETTING THE ALARM

In the Time of day mode, press SET/START/STOP.  
*Alarm symbol • is flashing.*



1. Press L/LIGHT to select whether you want the alarm ON or OFF
  - Alarm is ON
  - Alarm is OFF
2. Press SET/START/STOP to lock your selection.  
*AM/PM starts to flash.*  
*In 24h mode the hours flash ▶ step 5*
3. Press L/LIGHT to select AM or PM.
4. Press SET/START/STOP to lock your selection.  
*The hours start to flash.*
5. Press L/LIGHT repeatedly to adjust the desired hour.
6. Press SET/START/STOP to lock your selection.  
*The tens of minutes start flashing.*
7. Press L/LIGHT repeatedly to adjust the desired tens of minutes.
8. Press SET/START/STOP to lock your selection.  
*The minutes start flashing.*

9. Press L/LIGHT repeatedly to adjust the desired minutes.  
You have gone through the alarm setting function.  
*The minutes are flashing.*

10. Press MODE and move onward to set the time.

😊 *When the alarm sounds, it will remain on for one minute unless you turn it off earlier by pressing any of the three buttons of the wrist receiver.*





## SETTING THE TIME OF DAY

AM/PM (In 24h mode the hours) is flashing.

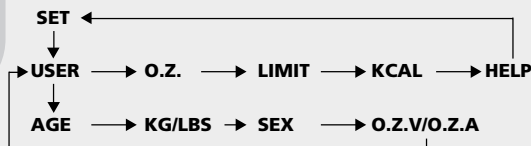
1. Press L/LIGHT to select AM or PM.
2. Press SET/START/STOP to lock your selection.  
*The hours start to flash.*
3. Press L/LIGHT repeatedly to adjust the desired hour.
4. Press SET/START/STOP to lock your selection.  
*The tens of minutes start flashing.*
5. Press L/LIGHT repeatedly to adjust the desired tens of minutes.
6. Press SET/START/STOP to lock your selection.  
*The seconds go to zero.*  
*The minutes start flashing.*
7. Press L/LIGHT repeatedly to adjust the desired minutes.
8. Press SET/START/STOP to lock your selection.  
You have gone through the time setting function.  
*The seconds start running.*  
*AM/PM or the hours start flashing.*
9. Press MODE and move onward to set the date.

## SETTING THE DATE

The date follows the structure YearMonthDay.  
*The digit for the tens of years is flashing.*

1. Press /LIGHT to adjust the desired value for the tens of years.  
*The digit for years starts to flash.*
2. Press SET/START/STOP to lock your selection.  
*The digit for years starts to flash.*
3. Press /LIGHT to adjust the desired value for the year.
4. Press SET/START/STOP to lock your selection.  
*The digit for month starts to flash.*
5. Press /LIGHT to adjust the desired value for the month.
6. Press SET/START/STOP to lock your selection.  
*The digit for day starts to flash.*
7. Press /LIGHT to adjust the desired value for the day.  
You have gone through the date setting function.  
*The digit for day is flashing.*
8. Press MODE and return to the Time of day mode.

## SETTING USER INFORMATION AND MEASUREMENT OPTIONS



In the Set mode you can define your personal user information and determine the options which are used during heart rate measurement.



*At any time of the settings you can return to the Set mode by pressing MODE until you see SET on the display.*

You can move on even though some digit is blinking on the display. The latest displayed values will be saved.

The settings of user information and measurement options are a prerequisite for the use of Polar M71 ti's unique OwnZone and OwnCal features.



## USER SETTINGS

Polar M71 ti needs information about you to calculate your OwnZone and OwnCal calorie expenditure.

Begin with the display showing the time of day.


1. Press MODE three times to enter the SET mode.
2. Press SET/START/STOP to enter the setting loop.  
*USER is displayed.*

### Setting age



1. From the display showing USER, press SET/START/STOP to enter the user information loop and to change its settings.  
*AGE appears, the digit for tens of years is flashing.*
2. Press ((\*/LIGHT to adjust the value for tens of years.
3. Press SET/START/STOP to lock your selection.  
*The digit for years begins to flash.*
4. Press ((\*/LIGHT to adjust the value for years.  
*You have now set your age.*

### Setting weight

1. In the USER setting loop, press MODE to set your weight.  
*KG appears, the digit for hundreds of kilos is flashing.*

 *Select the weight unit between KG and LBS by pressing and holding SET/START/STOP for two seconds.*

2. Press ((\*/LIGHT repeatedly to adjust the value for hundreds of kg/lbs.
3. Press SET/START/STOP to lock your selection.  
*The digit for tens of kg/lbs is flashing.*
4. Press ((\*/LIGHT to adjust the value for tens of kg/lbs.

- 
- 
5. Press SET/START/STOP to lock your selection.  
*The unit for kg/lbs is flashing.*

6. Press ((\*/LIGHT to adjust the unit value for kg/lbs.  
*You have now set your weight.*

### Setting sex

1. In the USER setting loop, press MODE again to set your sex.  
*SEX appears, MALE is flashing.*
2. Press ((\*/LIGHT to select the right sex.

You have now set all necessary user information.

### See your latest OwnZone

In the user information loop you can see the latest OwnZone which Polar M71 ti has determined for you. This is read-only information, you cannot change the values manually.

To see your latest OwnZone heart rate limits proceed as follows:

1. From the display showing USER, press SET/START/STOP to enter the user information loop.
2. Press MODE until O.Z.V or O.Z.A and the corresponding heart rate readings appear on the display.  
*O.Z.V=Indicates OwnZone heart rate limits based on your heart rate variability.*  
*O.Z.A=Indicates OwnZone heart rate limits based on your age.*
3. Press MODE to move onward.

Reset the latest OwnZone heart rate limits based on your heart rate variability as follows:

1. From the display showing USER, press SET/START/STOP to enter the AGE display.
2. Readjust your age by pressing ((\*/LIGHT.  
Heart rate limits based on your age are displayed on the OwnZone heart rate limits display.





## TURNING OWNZONE ON/OFF

Select whether you want to use the OwnZone option. Alternatively, you can set the Target Zone limits manually yourself.

1. Begin with the display showing SET. Press SET/START/STOP to enter the setting loop.  
*USER is displayed.*
2. Press MODE to move onward in the setting loop.  
*O.Z. is displayed  
ON or OFF is flashing.*
3. Press SIGNAL/LIGHT to select ON or OFF.  
*ON - You can determine your OwnZone each time you start exercising and use the OwnZone limits to guide your exertion level.  
OFF - The OwnZone function is OFF and you can set the Target Zone limits manually.*



*Age must be entered before the OwnZone feature can be used. Polar M71 ti prompts USER? if your age is missing.*

## MANUALLY DEFINING YOUR TARGET ZONE LIMITS

If you choose not to use the OwnZone function, you may want to manually enter a Target Zone.

1. Begin with the display showing SET. Press SET/START/STOP to enter the setting loop.  
*USER is displayed.*
2. Press MODE to move onward in the setting loop.  
*O.Z. is displayed.  
ON/OFF is flashing.*
3. Press ((L)/LIGHT to select OFF for OwnZone.

4. Press MODE to move onward to user-defined Target Zone limits.

*LIMIT is displayed.*

*The upper and lower limit values are flashing.*

5. Press SET/START/STOP to start setting the Target Zone limits.

*The upper limit value flashes and is ready to be adjusted.*

6. Press ((L)/LIGHT to adjust the value.



*The digits run faster if you press and hold the ((L)/LIGHT button. Release the button at the desired value.*

7. Press SET/START/STOP to lock your selection.

*The lower limit reading starts to flash.*

8. Press ((L)/LIGHT to adjust the correct value.

9. You have now manually set your Target Zone limits.

Press MODE to move onward.

*Both limits are flashing.*

*The highest possible value for the upper limit is 240. When the lower limit reaches the upper limit value, the lower limit will be reset to 10, the lowest possible setting.*





## TURNING THE OWNCAL CALORIE COUNTER ON/OFF

1. Begin with the display showing SET. Press SET/START/STOP to enter the setting loop.  
*USER is displayed.*
2. Press MODE to move onward in the setting loop until you come to the OwnCal calorie counter option.  
*KCAL is displayed, ON or OFF is flashing.*
3. Press ((\*/LIGHT to select whether you want the calorie counter to be ON or OFF.
4. Press MODE to move onward.

! *Your weight and sex must be determined before the OwnCal feature can be used. Polar M71 ti prompts USER? if necessary user information is missing.*

Polar M71 ti calculates your energy expenditure based on gender, body weight and heart rate. If you exercise with your OwnZone, the calorie calculation starts when your heart rate is above the determined lower limit. This determined limit is lower OwnZone heart rate limit minus 5 heart beats. If you have chosen to exercise with your manually defined Target Zone limits, the OwnCal calorie counter starts from the heart rate value of 100 bpm.

The higher the heart rate, the faster the energy expenditure accumulation. Energy expenditure depends on body weight; the heavier the weight the higher the energy expenditure.

Polar M71 ti shows the energy expenditure of your latest exercise session as well as the cumulative total energy expenditure value in kilocalories (kcal). ► **Recalling training information.** 1 kilocalorie (kcal or Calorie) = 1000 calories (cal).

## ACTIVATING THE HELP ON/OFF

Polar M71 ti has English help texts. When you are familiar with the product and do not need the Help, you can disable it.

1. Begin with the display showing SET. Press SET/START/STOP to enter the setting loop.  
*USER is displayed.*
2. Press MODE to move onward in the setting loop until you come to the Help function.  
*HELP is displayed, ON or OFF is flashing.*
3. Press ((\*/LIGHT to set the help ON or OFF.

! *To see the meaning of the help texts*  
► **Polar glossary**





## START THE HEART RATE MEASUREMENT

1. Wear the Polar transmitter and the wrist receiver as described in the chapter **Getting going**.
2. To make sure that the code search will be successful:
  - Keep the wrist receiver within 1 metre / 3 feet of your transmitter
  - Check that you are not near to other people with heart rate monitors, high voltage power lines, televisions, mobile phones, cars, exercise equipment etc.

3. Begin with display showing Time of day.

4. Press MODE to enter the MEASURE mode.



*A heart shaped frame appears. The wrist receiver starts searching for coded transmission for max. 15 seconds.*



*Heart rate measurement commences and the heart symbol inside the frame starts flashing. Your heart rate reading (in beats per minute) appears in the display.*

If the code search was not successful, the frame around the heart symbol will disappear after 15 seconds. Go back to step 2 to repeat the code search.

If you still do not succeed in code searching, but your heart rate is displayed and the heart symbol without a frame is flashing, you can start exercising but your wrist receiver may become disturbed by other heart rate monitors.



5. Start the stopwatch by pressing SET/START/STOP.

*Stopwatch starts running and you hear a long beep.*

*Automatic recording begins.*

*Determining your OwnZone begins if you have set the option ON.*

6. You can now start your warmup with your Polar M71 ti.

## DETERMINE YOUR OWNZONE

Polar M71 ti is able to determine the individual training heart rate zone for you. This exercise zone is called your OwnZone (O.Z.).

For most adults, OwnZone corresponds to 65-85 % of the maximum heart rate. OwnZone is suitable for cardiovascular training either for health-related or fitness improvement purposes.

OwnZone works well for those whose goal is weight control via physical activity and exercise, because the OwnZone intensity corresponds to intensity from "light to moderate" to "moderate". Exercise of this intensity level can be conducted even for extended periods safely and often and yields the best results for weight loss.


The OwnZone can be found during a warmup period of an exercise session lasting 2-10 minutes.
















































## HOW TO DETERMINE YOUR OWNZONE

OwnZone is easiest determined by walking and jogging as instructed below. However, you are able to find your OwnZone with other exercise modes as well, e.g. exercising with a stationary bike. The principle is that you start exercising very slowly with light intensity and gradually increase your heart rate.

1. Check that you have set your personal user information correctly.
2. Because the heart rate variability measurement needs every heart beat to be picked up properly, make sure that the transmitter belt is tight enough and the electrodes well moistened.
3. Check that you have the OwnZone function ON.
4. Start the heart rate measurement as described earlier.
5. Start the stopwatch.
  -  ..... appears in the display.
  - Stopwatch starts running.

6. There are five stages in finding your OwnZone. After each stage you hear a long beep which tells you that you should increase your speed slightly. The display shows which stage you are in:

1. Walking at very slow pace for 2 min.  ..... ..
2. Walking at brisk pace for 2 min.   ..... ..
3. Walking at very brisk pace for 2 min.    ..... ..
4. Jogging at slow pace for 2 min.     ..... ..
5. Running for 2 min.                                                                                                                                                                                                                                                                                                                                                                                              



## OWNZONE METHODS

Polar M71 ti uses multiple methods for determining your safe OwnZone. The primary method is to measure and analyse the heart rate variability and thereby determine the most individual and current parameters.

If your heart rate exceeds the safety limit during the determination, Polar M71 ti picks up your latest OwnZone definition based on heart rate variability. Alternatively, if there is no previous determination in memory, Polar M71 ti will automatically calculate Target Zone limits which are based on your age predicted maximum heart rate. These methods ensure the safest possible exercising zone determination for you.

The method used in defining the exercising Target Zone is indicated after the two beeps as follows:

- 1. O.Z.V (OwnZone Variability) and the currently determined OwnZone limits appear on the illuminated display.*
- 2. O.Z.L (OwnZone Latest) and your previously determined OwnZone limits appear on the illuminated display.*
- 3. O.Z.A (OwnZone Age) and your age-predicted heart rate limits appear on the illuminated display.*

## HOW TO USE PREVIOUSLY DETERMINED OWNZONE

Every time you start the stopwatch and have the OwnZone option on, Polar M71 ti starts finding your OwnZone. You can determine your OwnZone for every exercise session separately. At least it should always be performed when changing exercise environment, exercise mode or if you have abnormal feelings about your physiological state when starting the exercise.

However, you can choose to exercise with the latest OwnZone limits in case you are not willing to start the process of redefining your OwnZone.

1. Start the heart rate measurement and stopwatch as usual.

*⌘ ..... appears on the display.*

2. Press SET/START/STOP. Polar M71 ti starts using your latest determined OwnZone.

*O.Z.L and the values for your previously determined OwnZone appear momentarily on the illuminated display.*

In case there is no previously determined OwnZone in memory, Polar M71 ti starts using your age predicted exercising limits.

*O.Z.A and your age-predicted heart rate limits appear on the illuminated display.*





## FUNCTIONS DURING HEART RATE MEASUREMENT

MEASURE



### SEE YOUR HEART RATE


You can see your heart rate in beats per minute. A flashing heart symbol indicates an ongoing heart rate measurement. The inner heart symbol flashes at the pace of your heart. The outline indicates that the heart rate reception is coded.


### ILLUMINATE THE DISPLAY

Press /LIGHT.

*Backlight is activated for a few seconds.*

### TURN THE TARGET ZONE SOUND SIGNAL ON/OFF

When the Target Zone sound symbol appears in the display, you will hear an alarm sound with each heart beat if you go above the Upper Limit or below the Lower Limit of your Target Zone. Press and hold /LIGHT for 2 seconds to turn the Target Zone sound signal on and off.

 Target Zone sound signal is ON.



*A flashing heart rate reading also informs you of being outside your Target Zone.*



## START/STOP THE STOPWATCH

Press SET/START/STOP to start/stop the stopwatch.

**The elapsed exercise time, time within the Target Zone, calorie expenditure during the exercise and the increment for the cumulative calorie expenditure will be stored only when the stopwatch is running.**

You can pause the stopwatch by pressing SET/START/STOP. Repeating it will restart the stopwatch and the above calculations.

To reset the stopwatch to zero:

1. Stop the stopwatch.
2. Press and hold SET/START/STOP for two seconds.

### CHECK YOUR HEART RATE LIMITS


While exercising you don't have to press any button to check the heart rate limits you are using. Just bring the wrist receiver up to your chest near the transmitter's Polar logo.

*The current exercising zone values and backlight will be on for a few seconds.*

### CHECK EXERCISE INFORMATION

The following information is available by pressing MODE when STOPW is displayed:

1. Press MODE once for Time of day.  
*TIME and the Time of day appear on the display.*

- 
- Press MODE twice for time spent in Target Zone during exercise to that point.  
*IN TZ and the time spent in the Target Zone during the exercise session are displayed.*
  - Press MODE three times for calorie expenditure during exercise to that point.  
*KCAL and the calorie expenditure during the exercise up to that moment are displayed.*

**!** *The calorie counting feature must be set ON to be able to see the KCAL display.*

- Press MODE to return to the stopwatch display.

## STOP THE HEART RATE MEASUREMENT

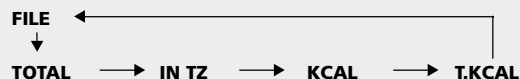
- Press SET/START/STOP to stop the stopwatch.  
*The stopwatch stops.  
You hear two long beeps.  
Heart rate measurement without exercising limits or calorie calculation continues.*
- Press MODE and leave the Measure mode.  
*Heart rate measurement stops.  
You enter the File mode and are able to recall your exercise information.*



*The M71 ti receiver turns itself into time of day mode within 5 minutes in case you forget to quit the Measure mode after having stopped the stopwatch and taken the transmitter off your chest.*



## RECALLING TRAINING INFORMATION



Your latest training information is in the memory of the Polar M71 ti until the next time you start the stopwatch. Then your previous training information will be replaced by the new one. Polar M71 ti saves only one compiled training file at a time.

- In the File mode, press SET/START/STOP to enter the training information recalling loop.
- Move onward with MODE until you come back to FILE.

### 1. TOTAL EXERCISING TIME (TOTAL)

The total exercising time is the time which you have exercised with the stopwatch running.

### 2. EXERCISING TIME IN THE TARGET ZONE (IN TZ)

You will have the exercising time which you have spent within your OwnZone/ your self-defined Target Zone.

### 3. CALORIE EXPENDITURE DURING THE EXERCISE (KCAL)

You will see how many kilocalories you have expended during the exercise.



## 4. TOTAL CALORIE EXPENDITURE (T.KCAL)

The total calorie expenditure is the only function in the Polar M71 ti which memorises information for more than one exercise session. You will have a count for the cumulative calorie expenditure during several exercise sessions. This function allows you to follow the calorie expenditure as a gauge of effective exercise e.g. during one week.

To reset the total calorie expenditure count to zero:

1. Start with the display showing T.KCAL.
2. Press and hold SET/START/STOP for a couple of seconds.



## CARE AND MAINTENANCE

Your Polar Heart Rate Monitor is a high-tech instrument of superior design and workmanship and should be treated with care. The suggestions below will help you fulfill the warranty obligations and enjoy this product for many years to come.

### TAKING CARE OF YOUR POLAR HEART RATE MONITOR

- Wash the transmitter regularly after use with a mild soap and water solution. Dry it carefully after washing.
- Never store the Polar transmitter wet. Sweat and moisture can keep its electrodes wet and the transmitter activated, which shortens the battery life.
- Store your Polar Heart Rate Monitor in a cool and dry place. Do not store it in any kind of non-breathing material, such as a plastic bag or a sports bag **if it is wet**.
- Do not bend or stretch the transmitter. This may damage the electrodes.
- Don't dry the transmitter in any other way than with a towel. Hard-handed handling may damage the electrodes.
- Keep your Polar Heart Rate Monitor out of extreme cold (below -10 °C/14 °F and heat (above 50 °C/122 °F).
- Do not expose the Polar Heart Rate Monitor to direct sunlight for extended periods, such as by leaving it in a car.



## BATTERIES

### POLAR TRANSMITTER

The estimated average battery life of the Polar transmitter is 2500 hours of use. Contact your distributor/ dealer for a transmitter replacement. ► **Customer Care Charter** for detailed instructions.



*Polar recycles used transmitters.*

### POLAR M71 ti RECEIVER

The estimated average battery life of the Polar M71 ti receiver is 1 year in normal use (2h/day, 7 days a week). However, because the battery is inserted at the factory, the actual life of your first battery once in your possession may be less than the estimated battery life. Note also that excessive use of the backlight and the alarm signals will use the battery more rapidly.

Do not open the Polar wrist receiver yourself. To ensure the water resistance properties and the use of qualified components, the wrist receiver battery should be replaced only by a person authorised by Polar Electro Oy. At the same time a full periodic check of the Polar Heart Rate Monitor will be done. ► **Customer Care Charter** for detailed instructions.

## SERVICE

Should your Polar Heart Rate Monitor need service, see **Customer Care Charter** to contact an authorised Polar Service Center.



*Water resistance cannot be guaranteed after unauthorised service.*

## PRECAUTIONS

### USING A POLAR HEART RATE MONITOR IN A WATER ENVIRONMENT

Polar M71 ti Heart Rate Monitor is water resistant to 50 metres/160 feet. To maintain the water resistance, do not operate the buttons of the wrist receiver under water.



Heart rate measurement in a water environment is technically demanding for the following reasons:

- Pool water with a high chlorine content and seawater may be very conductive and the electrodes of Polar transmitter may get short circuited and ECG signals cannot be detected by the transmitter unit.
- Jumping into the water or strenuous muscle movement during competitive swimming may cause water resistance that shifts the transmitter on the body to a location where it is not possible to pick up ECG signal.
- The ECG signal strength varies depending on the individual's tissue composition and the percentage of people who have problems in heart rate measuring is considerably higher in a water environment than in other use.

### POLAR HEART RATE MONITOR AND INTERFERENCE

#### ELECTROMAGNETIC INTERFERENCE

Disturbances may occur near 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 when you walk through electric security gates.

#### CROSSTALK

The non-coded Polar wrist receiver picks up transmitter signals within 1 metre/3 feet. Therefore, make sure no other transmitter is within that range. Signals from more than one transmitter picked up simultaneously can cause an incorrect readout.

#### EXERCISE EQUIPMENT

Several pieces of exercise equipment with electronic or electrical components such as LED displays, motors and electrical brakes may cause interfering stray signals. To try to tackle these problems, relocate the Polar wrist receiver as follows:

1. Remove the transmitter from your chest and use the exercise equipment as you would normally.
2. Move the receiver around until you find an area in which it displays no stray reading or flashing of 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 the chest and keep the wrist receiver in this interference-free area as far as it is possible.
4. If the Polar Heart Rate Monitor still does not work with the exercise equipment, this piece of equipment may be electrically too noisy for wireless heart rate measurement.

#### **Notice for 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.



## FREQUENTLY ASKED QUESTIONS

### WHAT SHOULD I DO IF...

#### **... OWNZONE DETERMINATION ONLY SELDOM GIVES ME HEART RATE LIMITS WHICH ARE BASED ON HEART RATE VARIABILITY (O.Z.V)?**

1. Check that the elastic strap is snug enough.
2. Make sure that the electrodes of the transmitter are moistened against your skin.
3. Put on the transmitter 15-20 minutes prior to the start of your exercise to ensure good adaptation between the electrodes and your skin.
4. Start the first stage of determining your OwnZone sufficiently slowly. If you obtain the heart rate limits based on age within the first 2 minutes you have raised your heart rate too quickly. The heart rate reading should not rise over 20 beats/minute from the starting level. During the first stage you can, for example, put on your sports clothing.
5. If you reach the OwnZone limits based on age (O.Z.A) or the previously determined OwnZone limits based on your heart rate variability (O.Z.L) only after 10 minutes from starting specification you have not raised your heart rate sufficiently rapidly. Raise your heart rate more quickly during the OwnZone determination.
6. If you have always used walking and running to determine your OwnZone, walking uphill, cycling or using an ergometer may work better for you.
7. Stress or heavy mental loading may reduce your heart rate variability so that the needed point where the heart rate variability vanishes cannot be measured. Relax for 5 - 10 minutes before OwnZone determination by sitting down and decreasing your heart rate.




8. For a small percentage of people the heart rate variability will not totally disappear with increasing workload. In this case the age-predicted limits are the best estimation for the exercising zone.

### **...THE OWNZONE HEART RATE LIMITS BASED ON HEART RATE VARIABILITY (O.Z.V) VARY CONSIDERABLY?**

Heart rate variability reacts sensitively to all changes taking place in the body and environment. The O.Z.V heart rate limits are affected by, amongst others, your daily state of fitness, the time of OwnZone determination, the type of exercise and state of mind. The lower limit of the O.Z.V heart rate limits can change for the same person by as much as 30 beats.

However it is important that the effect of exercise carried out in the OwnZone feels light, or moderate. For example if you raise your heart rate too rapidly after the first stage, you may get too high OwnZone heart rate limits. If the OwnZone-heart rate limits seem to be too high we recommend that the OwnZone determination is done again.

### **... SOME OTHER PERSON USES MY POLAR M71 ti HEART RATE MONITOR?**

Polar M71 ti determines the OwnZone heart rate limits on the basis of heart rate and age. If someone else uses your Polar M71 ti Heart Rate Monitor it is necessary to zero the O.Z.V. heart rate limits which are in the memory. Zeroing is done by resetting the age in the USER mode with the /LIGHT button.

Even although the user is the same age as you the age must still be reset in order that the O.Z.V heart rate limits are zeroed. If this is not done the Polar M71 ti may give the following user OwnZone heart rate limits based on your heart rate variability which is stored in the memory of the equipment.

Polar M71 ti calculates the OwnCal energy expenditure based on the gender, weight, exercise time and heart rate. Therefore the weight and gender must be reset.

Changing the user also affects the calculation of the total calorie expenditure (T.KCAL). If the T.KCAL reading is not zeroed when the user changes, the Polar M71 ti adds the calorie expenditure of new exercise periods into its memory, even although the user information is changed. If you want that only your own energy expenditure is stored in the Polar M71 ti's memory you must set the calorie calculator off in the USER mode when the equipment is used by someone else.

### **... THERE IS NO HEART RATE READING?**

1. Check that the electrodes of the transmitter are moistened and that you are wearing it as instructed.
2. Check that you have kept the transmitter clean.
  - ▶ **Care and maintenance.**
3. Check that there are no sources of electromagnetic radiation in the close vicinity of the Polar wrist receiver, such as TV sets, cellular phones, CRT monitors etc.
  - ▶ **Precautions.**
4. Have you had a cardiac event which may have altered your EKG waveform? In this case consult your physician.

### **...HEART SYMBOL FLASHES IRREGULARLY?**

1. Check that your Polar wrist receiver is inside the transmission range and not further than 1 metre/ 3 feet from the Polar transmitter you are wearing.
2. Check that the elastic strap has not become loose during exercise.
3. Make sure that the electrodes of the transmitter are moistened.
4. Make sure that there is no other heart rate transmitter within the reception range (1 metre/ 3 feet).
  - ▶ **Precautions/Crosstalk.**
5. Cardiac arrhythmia may cause irregular readings. In this case consult your physician.

### **...OTHER PERSON WITH HEART RATE MONITOR IS CAUSING INTERFERENCE?**

Your training partner may have coincidentally activated exactly the same code as you. In this case keep distance to your training partner or proceed as follows:





1. Stop the stopwatch and heart rate measurement.
2. Take the transmitter off your chest for 10 seconds.
3. Put the transmitter back and start the heart rate measurement again.

### ... HEART RATE READING BECOMES ERRATIC OR EXTREMELY HIGH?

You may have come within range of strong electromagnetic signals which cause erratic readings on the wrist receiver display. Check your surroundings and move further away from the source of disturbance.

► **Precautions.**

### ... THERE ARE NO REACTIONS TO ANY BUTTONS?

Reset the Polar Heart Rate Monitor. Resetting clears all memory values and settings will return to the default settings.

1. Simultaneously press all three buttons.

*Display becomes full of digits.*

2. Press SET/START/STOP button once.

*The Polar M71 ti enters the Time of day mode.*

### ... THE DISPLAY IS BLANK OR FADING?

Usually the first sign of a discharged battery is fading of the digits when using the backlight. Have the batteries checked. ► **Customer Care Charter**

### ... THE BATTERY OF THE WRIST RECEIVER MUST BE REPLACED?

We recommend having all service done by an authorised Polar Service. This is especially necessary to ensure the warranty remains valid and is not affected by incorrect repair procedures done by an unauthorised agent. Polar Service will test your wrist receiver for water resistance after battery replacement and make a full periodic check of the complete Polar Heart Rate Monitor. ► **Care and maintenance/Batteries** and **Customer Care Charter.**

## POLAR GLOSSARY

♥ Indicates coded transmission of heart rate. The inner heart flashes to the beat of your heart.

⦿ In the Time of day mode indicates that the alarm is on. In the measure mode indicates that the sound signal will alarm if you are exercising outside your Target Zone.

♯ Indicates OwnZone determination procedure

**AGE:** Insert your age in User settings.

**ALARM:** Indicates the alarm clock in watch settings

**AM/PM:** 12 hour mode of time

**DATE:** Indicates the date in watch settings

**DAY:** Indicates date in Time of day mode

**Electrodes:** The grooved areas of the transmitter, against the skin. Pick up the heart's electrical impulses.

**FILE:** File mode to recall training information

**Heart rate:** The number of heart beats per minute (bpm)

**Heart rate variability:** Fluctuations of interbeat intervals. Heart rate variability of a healthy subject is in general large in resting conditions and during light exercise. Heart rate variability gradually disappears when exercise becomes more severe and heart rate increases.

#### Help texts

**START:** Start the stopwatch or start the settings

**NEXT:** Move onward to a following mode or function

**SET:** Select the user settings

**ADJUST:** Adjust the settings

**LOCK:** Lock your selection

**OPEN:** Open an exercise file

**RESET:** Reset the total calorie expenditure count.

**USER?:** Indicates that you have not set all necessary user information.

**HR<sub>max</sub>:** Maximum heart rate

**IN TZ:** Exercising time in Target Zone

**KCAL:** Indicates the energy expenditure of your exercise session.



**KG/LBS:** Insert your weight either in kg or in lbs.

**LIMIT:** Indicates Target Zone limits which should be set manually.

**MEASURE:** Measure mode

**OwnCal calorie counter:** Your cumulative energy expenditure during exercise.

**OwnZone, O.Z.:** Target Zone which Polar M71 ti determines for you. OwnZone is an individual guide for light to moderate exercise intensity.

**O.Z.A:** Indicates OwnZone limits which are based on your age.

**O.Z.L:** Your latest OwnZone limits.

**O.Z.V:** Indicates OwnZone limits which are based on your heart rate variability.

**Polar Coded Transmitter:** Automatically locks in a code to transmit your heart rate to your wrist receiver. In coded transmission the receiver accepts heart rate from your Polar Coded Transmitter only. Coding significantly reduces crosstalk caused by other users of heart rate monitors. However, it does not necessarily reduce all environmental interference.

**SET:** Set mode

**SEX:** Indicates the sex in User settings. Select Male or Female.

**STOPW:** Indicates stopwatch function in measure mode.

**Target Zone, TZ:** The area between the upper and lower target zone limits. Can be defined manually by yourself or automatically by Polar M71 ti.

**Target Zone limits, manually set:** Are determined as percentages of age predicted or measured maximum heart rate. The percentages are converted into heart rate beats per minute.

**T.KCAL:** Indicates the cumulative total calorie expenditure of your exercise sessions.

**TIME:** Indicates the Time of day in the watch settings.

**Time of day mode:** Display showing Time of day.

**TOTAL:** The total exercise time.

**USER:** Indicates the loop where you set your personal information.

## TECHNICAL SPECIFICATIONS

Polar Heart Rate Monitor is 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 heart beats per minute (bpm).

### POLAR TRANSMITTER

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

### POLAR M71 ti WRIST RECEIVER

Case: Titanium  
 Battery type: CR 2032  
 Battery life: Average 1 year  
 (2h/day, 7 days/week)  
 Operating temperature: -10 °C to +50 °C / 14 °F to 122 °F  
 Water resistance: to 50 metres / 160 feet  
 Accuracy of formula for age based OwnZone heart rate limits (O.Z.A):  $\pm 1$ bpm  
 Accuracy of heart rate measurement:  $\pm 1\%$  or  $\pm$  bpm, whichever larger, definition applies to steady state conditions

### DEFAULT SETTINGS

OwnZone OFF  
 Upper Limit (manual) 160  
 Lower Limit (manual) 80  
 Age 00  
 Weight 00 (kg)  
 Sex Male  
 Help ON  
 Kcal OFF  
 Time of day 24h  
 Alarm OFF



## LIMITED POLAR WARRANTY


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- Polar Electro Oy warrants to the original consumer/purchaser of this heart rate monitor that the product will be free from defects in material or workmanship for one year from the date of purchase. **Please keep the receipt which is your proof of purchase!**
- Warranty does not cover receiver battery, damage due to misuse, abuse, accidents or negligence of the precautions; improper maintenance, commercial use, cracked or broken cases.
- Warranty does not cover damage or consequential damage caused by service not authorised by Polar Electro Oy.
- During the warranty period the product will be either repaired or replaced at an authorised service center free of charge.
- This warranty 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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 This CE marking shows compliance of this product with Directive 93/42/EEC.

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, FR 92.09150, GB 2258587, HK 306/1996, SG 9592117-7, US 5486818, FI 96380, US 5611346, FI 68734, DE 3439238, GB 2149514, HK 812/1989, US 4625733, FI 100924. Other patents pending.



## DISCLAIMER

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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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## POLAR M71ti™ HEART RATE MONITOR USER'S MANUAL

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