

# SPEED MASTER with HRM



## INSTRUCTION MANUAL

### Activation - Before starting

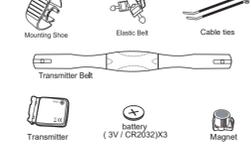
**Bike Watch**  
Please remove the protective foil from the display when you use the speed master watch for the first time and press the **A**, **C** or **D** button (sound signal), until all display segments appear for a short time. You automatically reach setting the units of measurement.  
- Choose between the metric and imperial with the **C** button.  
- Confirm your selection with the **A** button, the 24h blink.  
- Set the time in the time mode (also see **TIME MODE**)  
- Choose between the 12h and 24h display with the **C** button.  
- Confirm your selection with the **A** button, the seconds blink.

**Note:** By pressing and holding the **C** button you can use the fast forward function in the settings.

- Press the **A** button to reset the seconds to zero.
- Press the **A** button, the minutes blink.
- Set the minutes with the **C** button.
- Press the **A** button, the hours blink.
- Set the hours, year, month, day, birthday, weight, height and wheel size (also see **WHEEL SIZE INPUT**).
- Press the **A** button and all settings are saved.

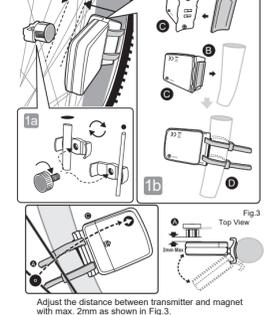
The Bike watch can be worn like a wristwatch.

### Accessories



### TRANSMITTER INSTALLATION

Clamp the magnet on the spoke of front wheel with the screw provided and attach the transmitter to the left fork by using the cable ties as shown in Fig. 1. Make sure the arc of magnet intersects the alignment mark on the transmitter with 2 mm clearance.



### WHEEL SIZE INPUT

Keep the **A** button pressed for about 3 seconds in **TIME MODE**. "SETTING" appears on the display. Switch to wheel size input mode and 2124 blinks. Multiply wheel diameter (d) in millimeters by 3.1416 to determine wheel factor (c), refer to Fig. 4. Press the **C** button to adjust digit to be input and the **A** button to confirm the digit if the desired number.

Wheel Diameter (d)	Wheel Factor (c)
20"	1596
21"	1759
24"	1916
26"	2074
26.5" (Tubular)	2114
26.6" (700x23C)	2136
27"	2155
27" (700x32C)	2155
27"	2217
(Metric)	
ATB 24"x1.75	1888
ATB 24"x1.4	1995
ATB 24"x1.5	2039
ATB 24"x1.75	2045
ATB 24"x2.65(68)	2099
27"x1	2136
27"x1.14	2155

### STOPWATCH MODE

Press the **D** button until you reach the stopwatch mode, shown by "CHRONO".  
In stopwatch mode you can choose between the sub functions:  
• CHRONO (stopwatch)  
• DATA RECALL (view data)



**Stopwatch**  
Press the **C** button in the stopwatch mode until CHRONO is displayed.

**Note:** Switching between "stopwatch" and "data recall" only works if at least 1 lap has been recorded.

99 lap times can be saved. If the lap memory is full, the display MEMORY FULL appears.



### Training Zone Alarm

Keep the **C** button pressed with the display of the upper and lower limits.  
Alarm symbol appears - Training zone alarm activated.  
Alarm symbol disappears - Training zone alarm deactivated if the heart rate drops below the lower limit or rises above the upper limit, the alarm sounds (if activated).

**Alarm when exceeding the maximum heart rate.**  
On the right of the current heart rate the % of the maximum heart rate is displayed.

If your heart rate is at 99% of the calculated maximum heart rate or even exceeds it, a permanent audio warning sounds to call your attention. You can minimize the risk of overstrain. The alarm for the maximum heart rate is independent of whether the training zone alarm is activated or not.

The audio warning automatically ends as soon as your heart rate drops below 99% of your maximum heart rate.



### Calories, Fat and BMI

Press the **C** button in the bike mode until CALORIES is displayed.  
Alarm symbol appears - Training zone alarm activated.  
Alarm symbol disappears - Training zone alarm deactivated if the heart rate drops below the lower limit or rises above the upper limit, the alarm sounds (if activated).

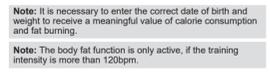
**Calories (CALORIES appears)**  
The metabolic rate in calories is measured automatically when the heart rate is received in the heart rate mode. The measured value is shown in the bottom line of the display (C.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Fat (FAT appears)**  
As soon as the bike signal is received in bike mode, the estimated value of the burned fat in grams is shown in the lower line of the display (F.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Heart Rate (HRM)**  
Press the **C** button in the pedometer mode until HRM is displayed.  
The heart rate is shown in the lower segment of the display, in the middle the current speed.

**Note:** It is necessary to enter the correct date of birth and weight to receive a meaningful value of calorie consumption and fat burning.

**Note:** The body fat function is only active, if the training intensity is more than 120bpm.



### Calories, Fat and BMI

Press the **C** button in the heart rate mode until CALORIE is displayed.  
In the lower segment of the display calories, fat and BMI are displayed (switch with the **A** button), in the middle the heart rate.

**Calories (CALORIES appears)**  
The metabolic rate in calories is measured automatically when the heart rate is received in the heart rate mode. The measured value is shown in the bottom line of the display (C.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Fat (FAT appears)**  
As soon as the heart rate signal is received in the heart rate mode, the estimated value of the burned fat in grams is shown in the lower line of the display (F.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Heart Rate (HRM)**  
Press the **C** button in the pedometer mode until HRM is displayed.  
The heart rate is shown in the lower segment of the display, in the middle the current speed.

**Note:** It is necessary to enter the correct date of birth, weight and height to receive a meaningful value of calorie consumption and fat burning.

**Note:** The body fat function is only active, if the training intensity is more than 120bpm.



### INTRODUCTION

**WARNING:** Always consult your physician before starting a fitness programme. A pulse computer is not a medical device. It is a training tool designed to measure and display your heart rate.

### USE A PRECISE TRAINING METHOD

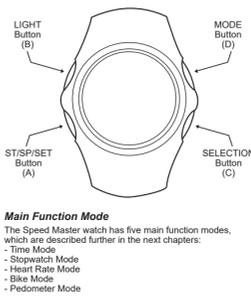
All the experts agree: the heart is the most important muscle in the body and, like all muscles, should be exercised regularly to remain strong and efficient. But how can determine whether you are exercising your heart both safely and effectively?  
Fortunately, the heart itself provides you with key information that will help you to examine the effectiveness and the degree of safety of your training method. Your heart rate, which is expressed in a single number (Beats Per Minute), gives a constant account of your body's state of health. Your heart rate will tell you how fast you are using energy or whether you are exercising too hard or too lax.  
Obviously, your body does not benefit from a training method if your heart rate is too low. If it is too high, you run the risk of injury and you will suffer from fatigue.  
It does not matter whether your goal is to win athletics meetings, lose weight or simply to improve your overall health. What is important is that you can refine your training method by keeping your heart rate within a certain target zone. In order to accomplish this, you would obviously need to know your precise heart rate at any given moment throughout your training session.  
modern technology has now enabled us to present you with wireless electronic pulse computers, monitoring your heart rate with one of these computers is easy and fun to do.

### KNOW YOUR LIMITS AND DETERMINE YOUR PERSONAL EXERCISE ZONE

Exercise zones are established by setting Upper and Lower Heart Rate Limits. These limits constitute a certain percentage of your Maximum Heart Rate (MHR).  
You may already know your MHR (MHR=220-(Your age))  
You are an avid athlete? If you have already taken a Max. Heart Rate test, if not, the following formula will help you to make an educated guess:

### Function Button/Modes/Settings

#### Function Buttons of the Speed Master Watch



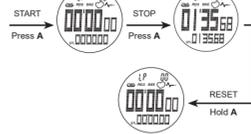
#### Main Function Mode

The Speed Master watch has five main function modes, which are described further in the next chapters:  
- Time Mode  
- Stopwatch Mode  
- Heart Rate Mode  
- Bike Mode  
- Pedometer Mode

The first mode displayed is the time mode. Press the **D** button to switch between the different modes. The different modes are described in sections **TIME MODE**, **STOPWATCH MODE**, **HEART RATE MODE**, **BIKE MODE** and **PEDEOMETER MODE**.

#### For your reference, you can following methods to take different measurement:

#### STANDARD MEASUREMENT : A-A-A



#### LAP TIME MEASUREMENT : A-C-C-A-A



#### BMI (Body Mass Index)

Age (years)	BMI normal value (kg/m2)
19-24	19 - 24
25-34	20 - 25
35-44	21 - 26
45-54	22 - 27
55-64	23 - 28
> 64	24 - 29

The BMI (Body Mass Index) is a measured value for the evaluation of the body weight of humans. The BMI only gives a rough guidance level.  
The BMI is calculated by dividing the body weight in kg by the body size in metres squared. The heart rate monitor watch automatically calculates the BMI from the entered data.

#### Fat (FAT appears)

As soon as the heart rate signal is received in bike mode, the estimated value of the burned fat in grams is shown in the lower line of the display (F.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Note:** It is necessary to enter the correct date of birth, weight and height to receive a meaningful value of calorie consumption and fat burning.

**Note:** The body fat function is only active, if the training intensity is more than 120bpm.

#### Calories, Fat and BMI

Press the **C** button in the bike mode until CALORIE is displayed.  
Alarm symbol appears - Training zone alarm activated.  
Alarm symbol disappears - Training zone alarm deactivated if the heart rate drops below the lower limit or rises above the upper limit, the alarm sounds (if activated).

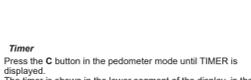
**Calories (CALORIES appears)**  
The metabolic rate in calories is measured automatically when the heart rate is received in the heart rate mode. The measured value is shown in the bottom line of the display (C.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Fat (FAT appears)**  
As soon as the bike signal is received in bike mode, the estimated value of the burned fat in grams is shown in the lower line of the display (F.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Heart Rate (HRM)**  
Press the **C** button in the pedometer mode until HRM is displayed.  
The heart rate is shown in the lower segment of the display, in the middle the current speed.

**Note:** It is necessary to enter the correct date of birth, weight and height to receive a meaningful value of calorie consumption and fat burning.

**Note:** The body fat function is only active, if the training intensity is more than 120bpm.



#### Calories, Fat and BMI

Press the **C** button in the heart rate mode until CALORIE is displayed.  
In the lower segment of the display calories, fat and BMI are displayed (switch with the **A** button), in the middle the heart rate.

**Calories (CALORIES appears)**  
The metabolic rate in calories is measured automatically when the heart rate is received in the heart rate mode. The measured value is shown in the bottom line of the display (C.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Fat (FAT appears)**  
As soon as the heart rate signal is received in the heart rate mode, the estimated value of the burned fat in grams is shown in the lower line of the display (F.). Press and hold the **A** button (shown by RESET) to reset the value to zero.

**Heart Rate (HRM)**  
Press the **C** button in the pedometer mode until HRM is displayed.  
The heart rate is shown in the lower segment of the display, in the middle the current speed.

**Note:** It is necessary to enter the correct date of birth, weight and height to receive a meaningful value of calorie consumption and fat burning.

**Note:** The body fat function is only active, if the training intensity is more than 120bpm.



### EXERCISE ZONE (BPM)

AGE	20	25	30	35	40	45	50	55	60	65
PERFORMANCE	175	185	195	205	215	225	235	245	255	265
HEART RATE	140	150	160	170	180	190	200	210	220	230
34% MHR	115	125	135	145	155	165	175	185	195	205
50% MHR	140	150	160	170	180	190	200	210	220	230
65% MHR	155	165	175	185	195	205	215	225	235	245
80% MHR	170	180	190	200	210	220	230	240	250	260
95% MHR	185	195	205	215	225	235	245	255	265	275

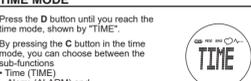
**Zone 1 - Health (50% - 65% of the MHR)**  
This exercise zone is used by athletes who do long training sessions of low intensity. Exercising in this mode will improve both your mental and physical health.

**Zone 2 - Fitness (65% - 80% of the MHR)**  
This exercise zone is used by athletes who want to increase their strength and improve their endurance while burning a greater number of calories.

**Zone 3 - Performance (80% - 95% of the MHR)**  
This exercise zone is ideal for short and very intensive training sessions. Competitive athletes use this zone in order to build greater speed and explosive power. Exercising in this mode will create an "oxygen debt" and increase the degree of lactic acid in the muscular tissue.

### TIME MODE

Press the **D** button until you reach the time mode, shown by "TIME".  
By pressing the **C** button in the time mode, you can choose between the sub-functions:  
• Time (TIMER)  
• Alarm (ALARM) and  
• Countdown Timer (TIMER).



**Time**  
Press the **C** button in the time mode until you reach the time mode, shown by "TIME".  
Press the **A** button to stop the stopwatch, then press **C** button to enter data recall mode.  
- To reset the stopwatch, press and hold **A** button to zero.

**Setting the Time**  
Keep the **A** button pressed for about 3 seconds, "SETTING" appears on the display and 24h blinks. Choose between the 12h and 24h display with the **C** button. Confirm your selection with the **A** button, the seconds blink.



**Recall Lap Memory : C-A-A.....A-C-A**



### HEART RATE MODE

Press the **D** button until you are in the heart rate mode, displayed by "HRM".

By pressing the **C** button in the heart rate mode, you can choose between the sub functions:  
- Training time (TIMER)  
- Memory (MEMO)  
- Training zone (ZONE)  
- Calories, fat and BMI (CALORIE)  
- Bike speed (BIKE)  
- Pedometer speed (PEDO) and  
- Fitness level (FITNESS LEVEL).

**Note:** If the buttons are not pressed for about 5 minutes in the heart rate mode, the clock automatically changes to the time mode.

When the chest belt is worn, the current heart rate is shown in the middle segment of the display. Otherwise "0" is displayed. The heart symbol blinks when the heart rate is received from the chest belt. If no signal is received, the heart symbol stops blinking and the last heart rate remains displayed.

On the right of the current heart rate the % of the maximum heart rate is displayed. The maximum heart rate is calculated automatically by entering personal data such as age, weight, etc.

**Attention:** All the sub functions described below only work when the chest belt is worn.

**Fitness Level**  
Press the **C** button in the heart rate mode until FITNESS LEVEL is displayed.  
Press the **A** button immediately after the training (with applied chest belt) to start a 5 minute countdown. After the countdown (recovery phase) the heart rate and the fitness level are displayed.

Level of Fitness	Heart rate after 5 min
Level 6	> 130
Level 5	130-120
Level 4	120-110
Level 3	110-105
Level 2	105-100
Level 1	< 100

During the countdown you can see the following indicators on the display:  
- Heart symbol, which moves from left to right (progress bar)  
- Number on the left of the display: Heart rate at the time when the countdown starts.  
- Number on the right of the display: Current heart rate.  
- Lower segment of the display: The minutes are counted down.

**BIKE MODE**  
Press the **D** button until you reach the bike mode, shown by "BIKE".

By pressing the **C** button in the bike mode, you can choose between the sub functions:  
- Time (TIMER)  
- Daily distance (DISTANCE)  
- Average speed (AVG SPEED)  
- Maximum speed (MAX SPEED)  
- Total distance (ODOMETER)  
- Calories, fat and BMI (CALORIE)  
- Heart rate (HRM)  
- Scan function (SCAN)

**Note:** If in the bike mode the buttons are not operated for about 5 minutes, or if the heart rate monitor watch does not register any activity, the watch automatically changes into the time mode.

The current speed is shown in the middle segment of the display.

**Setting of the total distance as well as calibration of the speed for walking and running.**

**Note:** It does not matter if you want to only walk or run, under all circumstances perform a calibration for walking (walking) AND running (fast walking).

In case you do not calibrate your watch, the displayed values have only limited significance. In that case the watch falls back on a standard calibration, which does not correspond to your personal movement profile.

During the calibration the watch records your personal movement profile. The slider you walk or run, the more exact the results will be. It is also true: the longer the distance for calibration is, the more exact the results will be.

The heart rate monitor watch automatically perceives, based on the calibration, whether you are walking or running during your training, and correspondingly displays the speed, steps, etc.

Choose the same speed and rhythm as during calibration, when you are running and walking, to get a meaningful result. If you wore the heart rate monitor watch on the left (right) hand during calibration, wear it also on your left (right) hand during training.

• Display CALI OK! and SAVED appears. The calibration was correct and was saved.  
• The watch now changes to the display CALI FOR WALKING (calibration for walking).

• Display CALI OK! and SAVED appears. The calibration was correct and was saved.  
• The watch now changes to the display CALI FOR WALKING (calibration for walking).

**Current Speed**  
Total distance

**Average Speed**  
Press the **C** button in the pedometer mode until AVE SPEED is displayed.  
The average speed is shown in the lower segment of the display, in the middle the current speed.

**Maximum Speed**  
Press the **C** button in the pedometer mode until MAX SPEED is displayed.  
The maximum speed is shown in the lower segment of the display, in the middle the current speed.

**Daily Distance**  
The covered distance is shown in the lower segment of the display (with 2 decimal places), in the middle the current speed.

**ODOMETER MODE**  
Press the **D** button until you reach the pedometer mode, shown by "PEDO".

By pressing the **C** button in the pedometer mode, you can choose between the sub functions:  
- Total distance and Speed calibration (ODOMETER)  
- Number of steps (STEP)  
- Calories, fat and BMI (CALORIES)  
- Heart rate (HRM)  
- Time (TIMER)  
- Daily distance (DISTANCE)  
- Average speed (AVG SPEED)  
- Maximum speed (MAX SPEED).

**Note:** If in the pedometer mode the buttons are not operated for about 5 minutes, or if the heart rate monitor watch does not register any activity, the watch automatically changes into the time mode.

The current speed is shown in the middle segment of the display.

**Total distance and Speed calibration**  
Press the **C** button in the pedometer mode until ODOMETER is displayed. The total distance is shown in the lower segment of the display, in the middle the current speed.

### FEATURES

If necessary, you can consult the table on the gift box.

**SENSOR FEATURES**  
• Digital motion sensor for speed detection  
• Current speed  
• Total distance  
• Distance  
• Average speed, Maximum speed  
• Odometer  
• Odometer Save Function  
• Calibration for personalized step length of running & jogging

**HEART RATE MONITOR**  
• Speed measurement  
• Pulse zone training programs  
• Health, fitness performance and user-definable  
• Zone limits (in 3 zones, belowzone, above zone and total)  
• Pulse out alert  
• Highest pulse, lowest pulse, average pulse

**CALORIE FUNCTIONS**  
• Calorie loss and fat burn during exercise  
• Calculation of BMI  
• Fitness level

**CHRONOGRAPH**  
• Countdown timer  
• 110 second 89 laps multi-split stopwatch

**WATCH**  
• Water resistant  
• Clock alarm  
• Irregular pulse signal

**OTHER SPECIFICATIONS**  
• EL backlight  
• Water resistant housing

**BIKE**  
• Current / maximum / average speed  
• Speed measurement  
• Trip distance - 999 km  
• Trip timer  
• Trip odometer  
• Trip odometer Save Function  
• Auto Scan

• Press the **C** button to reset the seconds to zero.  
Confirm your selection with the **A** button, the minutes blink.  
**Note:** You can use the fast forward function in the settings by pressing and holding the **C** button.

• Set the minutes with the **C** button, Confirm with the **A** button.  
Set the hours with the **D** button. Confirm your selection with the **A** button, the hours blink.  
Confirm with the **A** button, the month blinks.  
- Set the month with the **C** button, Settings of 1, 2, 3, 11, 12 and - are possible. If you choose - the alarm sounds every month (on the first day, - see next section, "setting the day"). Confirm with the **A** button, the day blinks.  
- Set the day with the **C** button, Settings of 1, 2, 3, 30, 31 and - are possible. If you choose - the alarm sounds every day. Confirm with the **A** button, the button CHIME (hourly alarm) blinks.  
• You can now set the hourly alarm to ON or OFF with the **C** button.

**Alarm**  
Press the **C** button in the time mode until ALARM is displayed.  
Now press the **D** button, all settings are saved and the set alarm is activated automatically.

**Setting the Alarm**  
• Keep the **A** button pressed for about 3 seconds. "SETTING" appears on the display and minutes blink.  
Set the hours with the **C** button. Confirm your selection with the **A** button, the hours blink.  
• Set the minutes with the **D** button. Confirm your selection with the **A** button, the month blinks.  
• Set the month with the **C** button, Settings of 1, 2, 3, 11, 12 and - are possible. If you choose - the alarm sounds every month (on the first day, - see next section, "setting the day"). Confirm with the **A** button, the day blinks.  
• Set the day with the **C** button, Settings of 1, 2, 3, 30, 31 and - are possible. If you choose - the alarm sounds every day. Confirm with the **A** button, the button CHIME (hourly alarm) blinks.  
• You can now set the hourly alarm to ON or OFF with the **C** button.

**Activate/Deactivate Alarm**  
Press the **A** button when the alarm time is displayed. Alarm symbol is displayed - alarm on. Alarm symbol not displayed = alarm off.

**Switch off Alarm**  
When the alarm rings, you can switch it off by pressing the **A**, **C** or **D** button.

For all three types of timers applies:  
• Press **A** button - Timer starts  
• Press **A** button again - Timer stops  
• Press **A** button again - Timer continuous  
• Keep **A** pressed for about 3 seconds when the time is stopped - timer resets to the originally set time.  
• When the