

## 20 FUNCTION HEART RATE MONITOR WITH NEW EXERCISE TECHNOLOGY

### Read Me First

For accurate readings and best performance, please read the following suggestions.

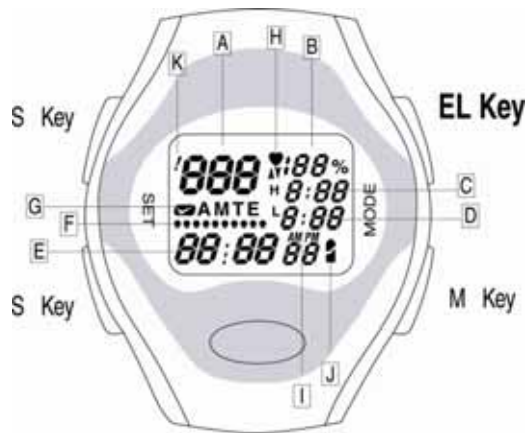
- The skin types of people and their heart rate signals vary. You may need to take some time to be familiar with the Transmitter Strap to achieve stable signals. So please be patient, especially during the cold, dry winter months.
- Dry conductive rubber contact and skin will cause erroneous readings of “0” of heart rate display, so please moisten the conductive rubber contact for accurate readings.
- Use water, ECG gel or other conductive liquids to moisten the conductive rubber contact. DO NOT use Vaseline or oils which may insulate the Transmitter making it unable to detect the heart rate signals.
- **Heart rate display may drop to “0” or jump to “250” when near high tension power lines and transformers, or any electromagnetic devices such as television, computer, cell phone, mechanical watches etc. Execute “MODE CLEAR” to clear all records and leave the area of interference to get your actual heart rate displayed again.**
- Dehydration and alcohol consumption can affect the detection and accuracy of the heart rate display. For accurate readings, do not use the Transmitter and wait until your body is back to normal levels.
- Wear the transmitter against your bare skin to ensure best detection. Body hair can affect the detection and transmission of heart rate. If necessary, trim and shave the hair to keep a smooth transmitter contact.
- Conductive rubber contact should be flat on your body when you adjust the chest strap. For certain individuals, the computer will work better if the transmitter is worn either more to the left side, a little higher, a little lower or possibly upside down.
- Always warm-up before exercise, use Heart Rate Monitor to keep within your target zone to exercise efficiently and safely, and cool down for a few minutes at a low intensity before stopping.
- Do not bend or stretch the transmitter and keep it out of extreme cold and heat.
- Clean and dry the transmitter carefully after use, do not store it wet.

### WARNING

1. This heart rate monitor is designed to measure and display your heart rate during physical activity when in a good state of health. It is not a medical device, nor is it intended for medical diagnostic purposes.
2. Please consult a doctor for advice on exercise frequency and duration appropriate for your age, highest and lowest heart rate limits etc. Please stop exercising if you feel uncomfortable, faint, or dizzy.
3. **Do not put on the Heart Rate Transmitter if you are using any device to adjust or aid your heart rate (i.e. Pace Maker)**
4. The transmitter does not work in water. Please do not immerse this device in water. Due to the high conductivity of water, heart rate measurement is not accurate and cause erratic reading under water. Swimming pools have a high concentration of chlorine and sea water also is very acidic and conductive.

Signals are unable to transfer correctly in these environments.

## MAIN WATCH UNIT



- [A] Current heart rate display
- [B] Percentage of cardiovascular/Efficiency percentage of preset exercise time
- [C] High Limit of Target Zone/Total time over High Limit of Target Zone
- [D] Low Limit of Target Zone/Total time over Low Limit of Target Zone
- [E] Function Mode display: Clock display/ Average heart rate/Maximum heart rate/Stopwatch/ Exercise time countdown
- [F] Time bar in seconds/current cardiovascular strength level
- [G] Function Mode symbol
- [H] Target Zone Indicator
- [I] AM/PM display for 12 Hour format
- [J] Weak battery symbol
- [K] **!** Visual alarm indication

## 20 FUNCTION AND OTHER FEATURES

### 20 FUNCTIONS

1. Two automatic training programs in accordance to age input.
  - Fat Burning Program (F P1).
  - Cardiovascular Strength Building Program (F P2)
2. Freely programmable Target Zone and exercise time (F P3)
3. Three different steps audible alarms
  - A: Every 30 seconds one "beep" when current heart rate is in the Target Zone
  - B: Every 30 seconds four "beep" when current heart rate is over High Limit of Target Zone
  - C: Every 10 seconds four short "beep" when current heart rate is over your age's **Maximum Pulse Limit (MPL: refer to Target Heart Chart).**
4. Two step Visual alarm
  - !** Symbol appears when current heart rate is over High Limit

“!” Symbol flashes when current heart rate is over your age’s MPL

5. Percentage of current cardiovascular strength
6. Efficiency percentage of preset exercise time
7. Preset exercise time count down
8. Current heart rate display 35-250 Beats per minute
9. Maximum heart rate recorded 35-250 Beats per minute
10. Average heart rate in 6 optional periods 35-250 Beats per minute
11. Total time over Low Limit of Target Zone, 00:00-09:59 (Hour/Minute)
12. Total time over High Limit of Target Zone, 00:00-09:59 (Hour/Minute)
13. Stopwatch 9: 59: 59 (Hour/Minute/Second)
14. 12/24 Hour clock
15. Target Zone Indicator
16. Target Zone re-settable and re-checkable
17. Current cardiovascular strength level
18. Time bar in seconds
19. Unique transmission LED indicator
20. EL backlight

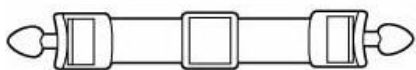
Other Features:

- Weak battery detection
- Auto Power Saving
- 3 V Lithium batteries (Two CR2032) included
- Batteries replaceable
- Water resistant

## ACCESSORIES & ATTACHMENT



Heart Rate Transmitter



Elastic Strap



Battery Cover of Transmitter



Battery Rubber Pad of Transmitter (O-ring)



CR2032 3V Lithium battery of Transmitter



“C” “Tube for bike mounting

## WATCH BATTER REPLACEMENT

The watch includes one 3V CR2032 lithium battery. When display of weak batter for replacement is on, replace the battery with a new CR2032 battery or equivalent.

1. Use a screw driver to loose the screws at the back cover, separate the back over apart from the front case.
2. Remove the clear plastic cover carefully.
3. Use a small screw driver to unlock the metal spring and to tilt out the old battery.
4. Slide a new CR2032 battery back to the location.
5. Press the metal spring back to the lock position to secure the new battery.
6. Place the plastic cover back and assemble the back cover on the front case.
7. Tighten the screws and promptly dispose of the ode battery.

Note: 1. Do not loss any O-ring and metal spring.

2. Removing the watch battery will erase all data recorded and reset the watch receiver.

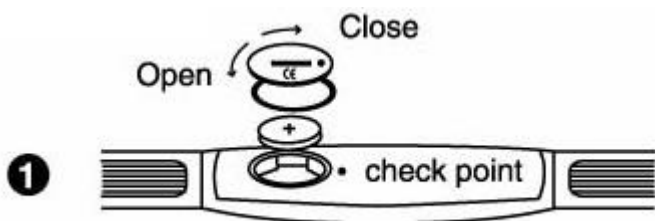


## TRANSMITTER BATTERY INSTALLMENT

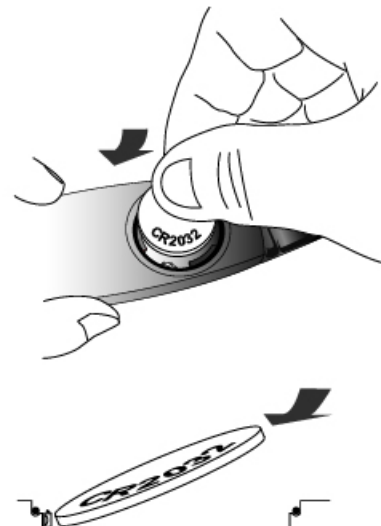
Slide the CR2032 battery at an angle and make sure during battery installation that the battery is first pressed against the side contact (positive electrode) and then pressed into the battery compartment.

**Place the battery rubber pad (O-ring) and battery cover properly into the case then close the cover, tightening it with a coin or similar object.**

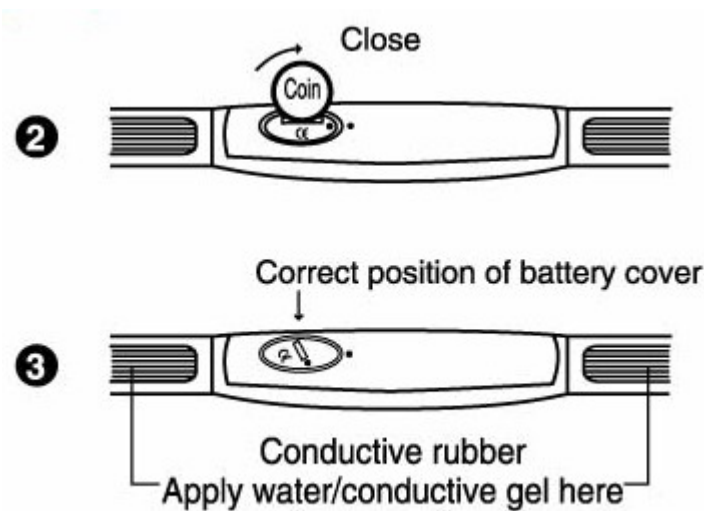
**The rubber pad (O-ring) ensures water proof protection of the battery compartment.**



## IMPORTANT



Make sure to close the battery cover very tightly as below illustrated to prevent sweat and moisture from spoiling the battery composition.



### NOTICE

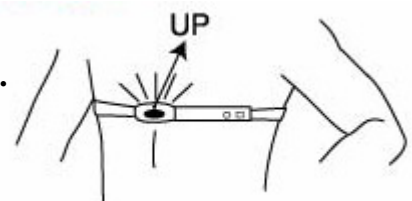
Apply water or conductive gel to moisture the conductive rubbers which both must be in proper contact with your chest skin to detect heart rate for best performance.

### CARE AND MAINTENANCE

1. The user should not wear the transmitter during swimming.
2. This is not a diving instrument, and therefore buttons should not be operated (put to use) while under water.
3. Keep the transmitter clean especially the two parts of conductive rubber.
4. Do not store the transmitter in a web environment. It must be stored in a cool dry place. Moisturized electrodes and activated transmitter will shorten the battery's life.
5. Do not store the transmitter near high voltage power lines, televisions, cellular phones...etc. to avoid electromagnetic interference from shortening the life of the battery.


### PUTTING ON HEART RATE TRANSMITTER

Please be sure that the LED flashing light indicator above logo.  
This is the correct position for the most stable heart rate transmission.



Position the heart rate transmitter and adjust the elastic strap to fit your chest snugly as shown.



**To check for proper operation**, the  symbol on the watch will flash upon receiving a pulse signal. The watch will then take a few seconds to display the initial current heart rate.

#### **NOTE**

1. If you get irregular pulses, please execute “RESET” to clear all records. Hold the S KEY and the M KEY down simultaneously for 8 seconds.
2. Keep a distance not over 80 CM (30”) between the watch and Heart Rate Transmitter for good wireless reception as illustrated.

#### **UNIQUE TRANSMISSION LED INDICATOR**

A red transmitter **LED** will flash indicating the transmitter is in operation. Adjust the transmitter position to keep the **LED** indicator flashing consistently for accurate readings.

NOTE: If the watch does not display heart rate readings when the Heart Rate symbol flashes for over two minutes, please check the watch battery installation and execute a “**RESET**” to the watch.



#### **FINDING YOUR TARGET HEART ZONE**

Training in your Target Heart Zone is important and it is recommended that you consult your personal doctor or physician. Recent research has indicated that optimal use of fat as energy occurs **when your heart beats per minute (BPM) is between 55% and 65% of your Maximum Pulse Limit (MPL).**

Refer to the chart below to find your Target Heart Zone for your age.

##### **1. FAT BURNING ZONE**

Your heart rate during exercise should be at **55% to 65%** of your Maximum Pulse Limit (MPL) if you are in good health and either a beginner or intermediate exerciser (one who has done some prior aerobic activity)



## 2. CARDIOVASCULAR STRENGTH ZONE

Good aerobic condition/advanced exercisers can select a target heart zone at **65% to 85%** of their Maximum Pulse Limit (MPL).

### TARGET HEART CHART

AGE	20	25	30	35	40	45	50	55	60	(BPM)
MPL	200	19	19	18	18	17	17	16	16	
85%	170	16	16	15	15	14	14	14	13	
65%	130	12	12	12	11	11	11	10	10	
55%	110	10	10	10	99	96	94	91	88	

### 1. RESET

Hold the S KEY and the M KEY down simultaneously for 8 seconds to clear all data, the whole display will be shown and then enter AGE INPUT.

### 2. AGE INPUT

The computer preset age is "20". Press the S KEY one time to advance age to 21, press and hold the S KEY down and the numbers will increase rapidly. Ages range from **18 to 60**. Press the S KEY until you get the age that you want. Press the M KEY to confirm the age and enter **F P1** to select the training programs.

### 3. TRAINING/FREE PROGRAMS SELECTION

#### **F P1: Automatic Fat Burning program**

According to your age input, the computer will automatically set the High/Low limits of Fat Burning Zone (refer to **Target Heart Chart**) and exercise time of **25** minutes over Low Limit of Target Zone. Press the M KEY to select this program and then enter the selection mode **F P4** of the **Average Heart Rate** Calculation Period. Pressing S KEY will enter **F P2**.

#### **F P2: Automatic Cardiovascular Strength Training program**

According to your age input, the computer will automatically set the high/low Cardiovascular Zone limits (refer to **Target Heart Chart**) and exercise time of **40** minutes over the low Target Zone limit. Press the M KEY to select this program and then enter selection mode **F P4** of the **Average Heart Rate** Calculation Period. Pressing S KEY will enter **F P3**.

Select Freely program (F P3) if your age is outside of the 18-60 range or if you want to set your own Target Zone and Exercise time. To remind you again, please consult your doctor for comments about exercise frequency and duration appropriate for your age, highest and lowest

heart rate limits etc.

### **F P3: Freely Programmable Target Zone & Exercise Time**

The original stored target zone and the exercise time **25** minutes of **F P3** mode are the same as **F P1**. In **F P3** mode you can freely set high/low target zone limits and exercise time by changing the flashing digits.

Press the S KEY or hold the S KEY down (same method as Age Input) to increase numbers of the first digit of the high limit. Press the M KEY to confirm and then shift to 2<sup>nd</sup> digit. All other digits for high/low limits and exercise time can be adjusted by the same method. Once these are set enter **F P4** of the **Average Heart Rate** calculation period selection mode.

### **NOTE**

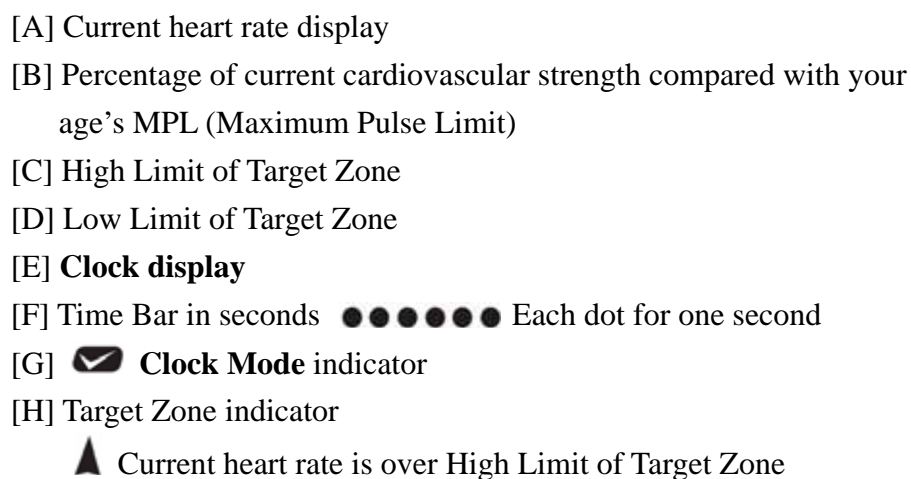
1. Low/High Limit of Target Zone range: 35-250 BPM
2. Low Limit must not be higher than High Limit
3. Exercise time range: 0-9:59:59 (H/M/S)

### **F P4: Selection of Average Heart Rate Calculation Period**

6 optional calculation periods of 10, 20, 30, 40, 50 and 60 minutes are provided for average heart rate calculation and display. Press S KEY to select the period you want, and then press the M KEY to **CLOCK MODE**.

Please refer to the flow chart of operation.





- ▼ Current heart rate is below Low Limit of Target Zone  
▲▼ Current heart rate is in Target Zone  
[I] AM/PM for 12 Hour format  
[J] 🔋 Weak battery indicator for replacement  
[K] ! Visual alarms symbol


## 5. CLOCK SETTING

Hold the S KEY first and press the M KEY down simultaneously for 4 seconds, the "**minute**" digits will then be flashing. To advance the minutes, press the S KEY until you get the minutes that you want. Press and hold the S KEY down and the numbers will increase rapidly. Press the M KEY and the "**hour**" digits will be flashing, press the S KEY until you get the hours that you want. Press the M KEY and now, hours and minutes will be flashing.

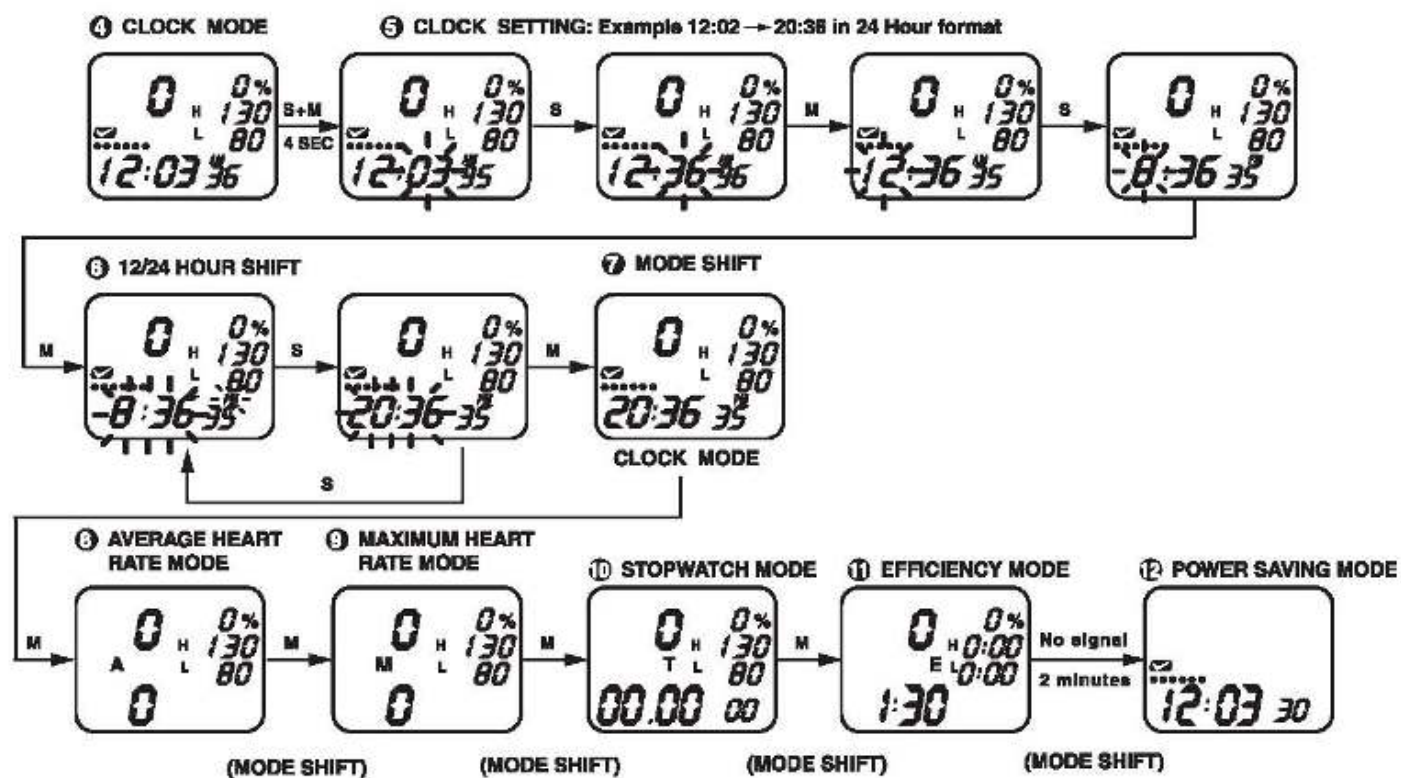
## 6. 12/24 HOUR FORMAT SHIFT

To shift clock display to 24 Hour format press the S KEY. Press the **S KEY again** and clock display to shift back to the original 12 Hour format. Press the M KEY to finish clock setting and enter **CLOCK MODE**.

## CLOCK RESETING

Press the M KEY to shift to the  Clock Mode, hold the S KEY first and press the M KEY (holding both down) for 4 seconds. The "**Minute**" digits will then be flashing for resetting.

Please refer to the flow chart on next page for **Clock Setting**



## 7. MODE SHIFT

Press the M KEY to enter next Average Heart Rate Mode and the other modes.

### MODE CLEAR

In every [A] [M] [T] [E] mode, hold the S KEY and press M KEY once, the records of [A] [M] [T] [E] modes will be simultaneously cleared to ZERO or will return to preset value.

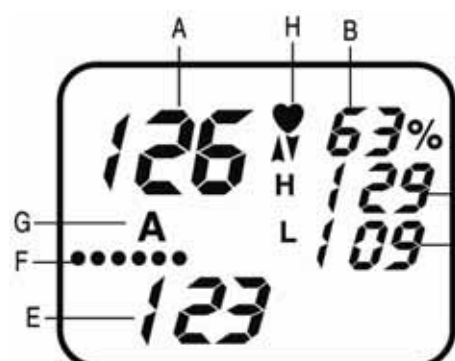
### CHANGING AGE INPUT

Press the M KEY to shift to [E] Mode, press the S KEY only down over 8 seconds, the watch will return to F Mode for changing AGE INPUT.

### CHANGING PROGRAMS

Press the M KEY to shift to [T] Mode. Press the S KEY only down over 8 seconds, the watch will return to F P1 for change of training programs.

## 8. AVERAGE HEART RATE MODE



[A] Current heart rate display

[B] Percentage of current cardiovascular strength compared with your age's MPL

[C] High Limit of Target Zone

[D] Low Limit of Target Zone

[E] Average heart rate display as per preset average period

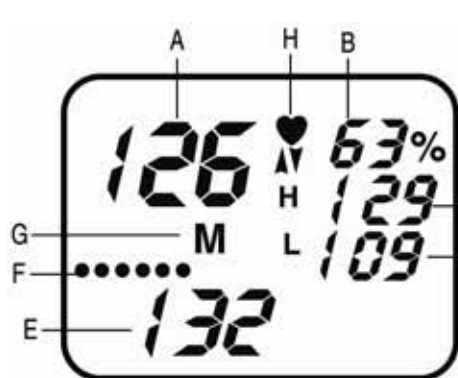
(refer to F P4)

[F] Current cardiovascular strength level (Each dot for 10%)

[G] [A] Average Heart Rate Mode indicator

[H] Target Zone indicator (same as Clock Mode)

## 9. MAXIMUM HEART RATE MODE



[A] Current heart rate display

[B] Percentage of current cardiovascular strength compared with your age's MPL

[C] High Limit of Target Zone

[D] Low Limit of Target Zone

[E] **Your maximum heart rate record**

[F] Current cardiovascular strength level (Each dot for 10%)

[G] [M] Maximum Heart Rate Mode indicator

[H] Target Zone indicator (same as Clock Mode)

## 10. STOPWATCH MODE

Press the M KEY to shift to STOPWATCH MODE, the [T] indicator will not flash. Press the S KEY to activate Stopwatch and the [T] indicator will flash. Press the S KEY again to stop Stopwatch and the [T] indicator will stop flashing. Press the S KEY for continuous time count.

Hold the S KEY and press the M KEY one time to clear record.

Stopwatch range: 00:00:00(Minute/Second/Second % ) - 9:59:59 (Hour/Minute/Second)

### NOTE

In [T] STOPWATCH MODE, the watch will not enter the POWER SAVING MODE once Stopwatch is activated. Stop STOPWATCH or shift to the other mode to enter Power Saving Mode.



[A] Current heart rate display

[B] Percentage of current cardiovascular strength compared with your age's MPL

[C] High Limit of Target Zone

[D] Low Limit of Target Zone

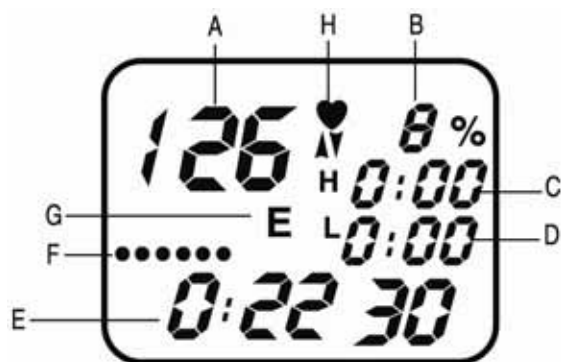
[E] **Stopwatch display**

[F] Current cardiovascular strength level (Each dot for 10%)

[G] [T] Stopwatch Mode indicator

[H] Target Zone indicator (same as Clock Mode)

## 11. EFFICIENCY MODE



[A] Current heart rate display

[B] Efficiency Percentage of Preset Exercise Time

Formula:  $\% = \frac{\text{Total time over Low Limite of Target Zone}}{\text{Preset Exercise Time}} \times 100\%$

[C] Total time over High Limit of Target Zone

[D] Total time over Low Limit of Target Zone

[E] Preset time count down (Hour/Min./Sec.)

=Preset Exercise Time - Total time over Low Limit of Target Zone

[F] Current cardiovascular strength level (Each dot for 10%)

[G] [E] Efficiency Mode indicator

[H] Target Zone indicator (same as Clock Mode)

## 12. AUTO POWER SAVING

When the watch does not receive any signal or input for 2 minutes, the power will be automatically saved and the watch will display the CLOCK time/symbol only.

The AUTO POWER SAVING Mode is automatically released when the S KEY or the M KEY is pressed.

### NOTE

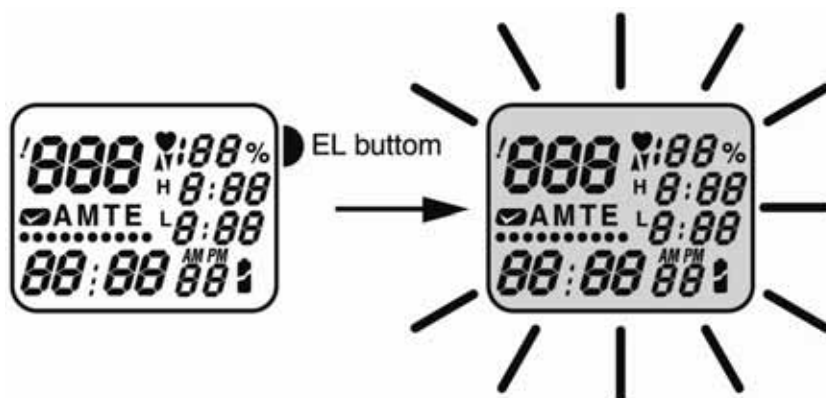
The watch will not enter Auto Power Saving Mode if the AGE INPUT or CLOCK SETTING doesn't finish setting or if STOPWATCH MODE is activated.

### EL Backlight

Press EL key to illuminate the watch for 3~4 seconds.

Remark:

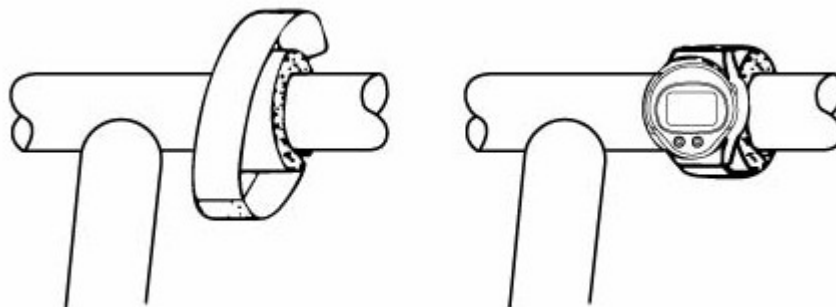
1. Large consumption of electricity will be caused upon long-term usage of luminescence liquid crystal.
2. Luminescence will not display visually under sunlight.





## **MOUNTING WATCH ON BIKE HANDLEBAR**

Attach "C" Tube on handlebar, then mount the watch onto "C" Tube and tighten it securely.



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## **FREQUENTLY ASKED QUESTIONS**

- \* Please check that the transmitter electrodes are clean of debris.
- \* Do not operate your heart rate monitor near highly electromagnetic fields, such as TV sets, cell phones, computers, other watch units or other electronic devices that may cause signal interference.
- \* Check the strap unit for a tight fit across the chest area. Loose fit may cause poor signal transfer and detection.
- \* Keep your transmitter and watch unit within the maximum distance range of 80cm(2 1/2 feet) for strong signal transfer.
- \* Avoid being near another heart rate transmitter within the maximum distance range of 80cm you're your watch unit. The second transmitter may cause inaccurate readings on your watch unit.
- \* If at any time you experience irregular readings and or feel uncomfortable, consult a doctor to determine your heart condition.
- \* If the unit does not start up or stops during operation please recheck the battery installation and if the battery needs replacement. (Note: Check the contact plate in the battery case is not bent or damaged.)
- \* Sometimes when irregular data appears, execute "RESET" and try again to get the signal.

## **GUARANTEE**

The following is not covered in the warranty:

- Battery
- Misuse and abuse to the system
- Improper maintenance
- Cracked or broken casings
- Plastic, rubber or fabric strap damage

## **DISCLAIMER**

The specifications and descriptions in this user manual are subject to change without notice.