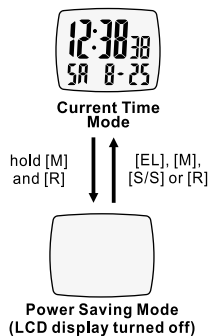




PULSE QT – STRAPLESS HEART RATE MONITOR

Power Saving Mode



Power Saving Mode

■ This Watch includes a Power Saving Function - User can turn off the LCD display temporarily if the Watch is not in use for some days, so that the battery can last longer.

NOTE: Even the LCD display is OFF, the timekeeping function is still running normally in Power Saving Mode.

How to Enter/Exit the Power Saving Mode

■ To enter Power Saving Mode: Hold down [M] and [R] in Current Time Mode for few seconds, and the LCD display will be turned OFF.

■ To exit Power Saving Mode: Press either [EL], [M], [S/S] or [R] once in Power Saving Mode, and the LCD display will be resumed.

Warranty

"Customer satisfaction is our guarantee"

Aussie Fit Sport Science has been developing and marketing unique and innovative fitness/exercise products since 1984. Your new (pulse®) QT Strapless HR Monitor Sportswatch is manufactured to very high international standards and uses Salutron, California, U.S.A. patented technology and is guaranteed against manufacturer defect for one year from date of purchase. If a manufacture defect is found please return the watch to the address below with a description of the problem. It will be repaired or replaced.

A new lithium CR2025 3 volt battery should last over 12 months with normal use, however because battery life is dependent on elapsed time since its installation at the factory and the influence of temperature and humidity and shelf life, the original battery is not covered by guarantee. A sleep mode (see inside front cover) has been designed to extend the battery life. When the battery fades it should be replaced by a qualified watchmaker to ensure continued water resistance. Battery replacement is available by sending the watch to the below address with \$25.00 payment and return address/contact for return post.

50 metres water resistant is a classification for swimming, showering etc. (pulse®) QT should not be worn snorkeling or SCUBA diving nor any buttons be pushed underwater. Heart Rate cannot be detected underwater by this monitor but can be detected out of water whilst wet. e.g. at the end of a swim lap.

Do not wear under conditions where the sensors can be clogged with dirt, dust, glue, resin, soap, etc. or under working conditions where the watch can be scratched or damaged.

Wishing you happy training and success in your fitness pursuit.

Dr Peter Bethune PhD

Aussie Fit Sport Science P/L, 3 Vantage Point Drive, Burleigh Heads, Queensland 4220, Australia.
Tel/fax (07) 5576 3688, email : sales@aussiefitsport.com.au www.aussiefitsport.com.au

1.0 General Guide

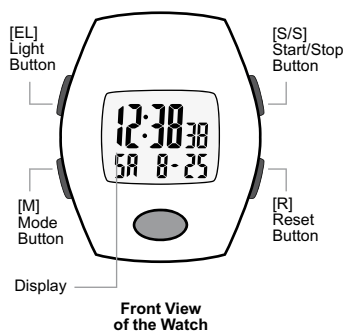
Thank you for purchasing this Watch.

With this watch, you can get ECG accurate heart rate readings without using a chest strap! In addition to the absolute heart rate reading, this Watch also includes relative heart rate as a percentage of one's estimated maximum heart rate.

WARNING !

- DO NOT use this Watch for commercial or professional purposes.
- Make sure that you fully understand the functions and limitations of this watch before using it.
- This Watch is a supplementary device for measuring heart rate; it is NOT a substitute for medical devices. You should periodically compare the heart rate reading acquired by this watch with the reading from your doctor.
- Consult your doctor or trainer before setting your zone alert.

3.0 Designation of the Watch



2.0 Care and Maintenance

- Read this manual thoroughly before using the watch.
- Avoid rough usage or severe impacts to the Watch.
- Store watch in a dry place when it is not in use.
- When the battery runs out, it is recommended to have a professional replace the battery.
- Clean your Watch occasionally with a soft moistened cloth.
- DO NOT expose the watch to chemicals such as gasoline and alcohol; these chemicals will damage the Watch.

4.0 Button Operation Summary

[M] Mode Button

- Press to move among the 7 functional modes.
- Hold down to enter/exit setting display.
- In setting display, press to move among different settings.

[S/S] Start/Stop Button

- In Daily Alarm Mode: Press to switch the daily alarm ON or OFF.
- In Chronograph, Timer or Calorie Counter Mode: Press to start/stop the counting.
- In setting display: press to increase the setting value.

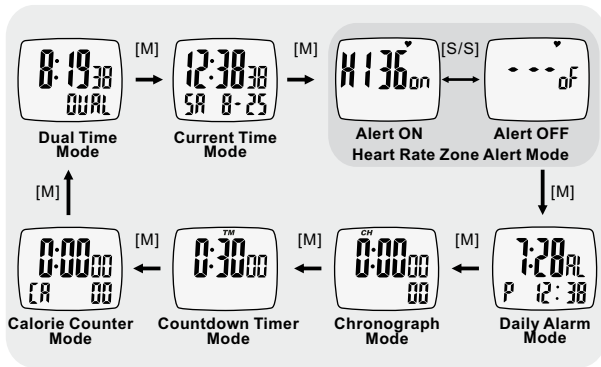
[R] Reset Button

- In Daily Alarm Mode: Press to switch the hourly chime ON or OFF.
- In Chronograph or Calorie Counter Mode (stop-counting): Press to reset the display to zero display.
- In Timer Mode (stop-counting): Press to reload the target time.
- In setting display: Press to decrease the setting value.

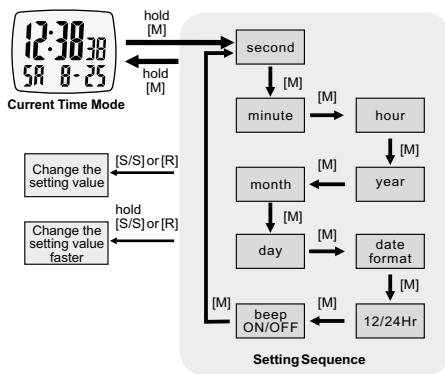
[EL] Light Button

- Press to turn ON the EL back light for about 3 seconds.

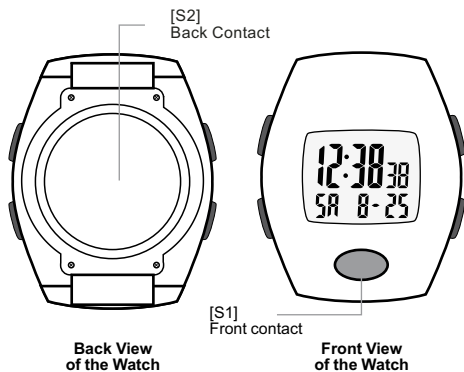
5.0 Functional Mode and Display



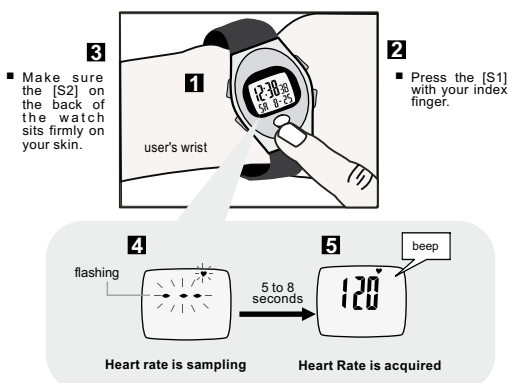
6.0 Setting the Current Time



7.0 Heart Rate Measurement - Contacts



7.2 Heart Rate Measurement - Getting a Heart Rate



5.0 Functional Mode and Display

Functional Modes

- This watch includes 7 functional modes:

- 1) Current Time Mode
- 2) Heart Rate Zone Alert Mode
- 3) Daily Alarm Mode
- 4) Chronograph Mode
- 5) Countdown Timer Mode.
- 6) Calorie Counter Mode
- 7) Dual Time Mode

- Every functional mode includes one or more than one functional displays that provide the supplementary function to the functional mode.

How to Switch among Different Functional Modes

- To select among the above functional modes, press [M] following the adjacent diagram.

6.0 Setting the Current Time

- Hold down [M] for about 2 seconds to switch to setting display, the second digits will start flashing.
- When the second digits is flashing, press [M] to move among settings, or press [S/S] or [R] to reset the second digits to zero.
- If one of the settings (minute, hour, year, month, day) is flashing, press [S/S] or [R] to change the setting value (hold down to change at a faster speed).
- When the 'month-day' or 'day-month' digits is flashing, press the [S/S] or [R] to switch between month-day ('m' icon appear) and day-month ('d' icon appear).
- When the '12' or '24' icon is flashing, press [S/S] or [R] to switch between '12' (12 hour format) and '24' (24 hour format).
- When the beep 'on' or 'oF' icon is flashing, press [S/S] or [R] to switch between 'on' (key tone ON) and 'oF' (key tone OFF).
- If the setting is done, hold down [M] to exit the setting display. The Watch will exit the setting display automatically if NO keystroke has been activated for about 1 minute.

7.1 Heart Rate Measurement - Precautions

1. A heart rate contact [S2] is located on the back of the watch. It must be firmly contact with the user's skin during measurement.
2. DO NOT take heart rate measurement when diving or under water.
3. Clean the [S2] occasionally by applying a few drops of water and wipe it dry with a paper towel to remove any residual grease.
4. DO NOT use hand cream; it will insulate the signal between the skin and the sensors.
5. Clean skin and fingers with soap and water for better signal transmission.
6. DO NOT use the fingertips where the skin is dry and thick. For those with extremely dry skin, moisten fingers and wrist with tap water or apply a conductive gel may help.
7. Hold the watch firmly when taking measurement in motion.
8. During the measurement, avoid any awkward motion. As it will create undesired muscle noise, hence error may be resulted.

7.2 Heart Rate Measurement - Getting a Heart Rate

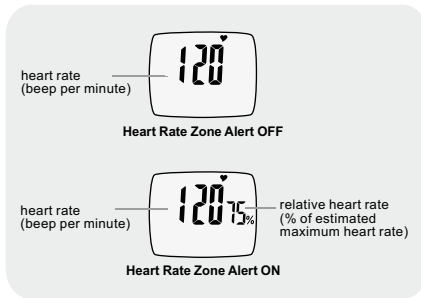
- During exercise or sports, your heart naturally speeds up pumping blood to the body in accordance with your increased energy level.
- This watch measures heart rate, and express it as the number of beats per minute (bpm) and percentage of the estimated maximum heart rate.

How to Get a Heart Rate Reading

1. Wear the Watch on your wrist.
2. Press [S1] with your index finger.
3. At the same time, [S2] must be firmly contacted with your skin.
4. Hold that position for about 5 to 8 seconds.
5. Either "beep" or "beep-beep" will be heard if a heart rate is acquired, meanwhile the display shows the heart rate reading.
6. Then you can remove your fingers, the reading will stay for 5 more seconds. If you keep holding the button, the reading will stay until your remove your finger.

- NOTE: If NO heart rate reading or long response time, check the possible causes and solutions at chapter 14.0, and then repeat the above steps to get your heart rate.

7.3 Reading an Acquired Heart Rate



7.4 Heart Rate Measurement - What is Relative Heart Rate

- Estimated Maximum Heart Rate (EMHR) is calculated by using the below formula:
 - EMHR (male) = 220 - user age.
 - EMHR (Female) = 226 - user age.
 - Example: What is Tom's EMHR at his 60?
 - EMHR (male) = 220-60 = 160.
- Relative Heart Rate or Percentage of Estimated Maximum Heart Rate (%EMHR) is calculated by using the below formula:
 - %EMHR=Acquired heart rate ÷ EMHR X100%
 - Example: What is Tom's %EMHR if he has acquired a heart rate at 120.
 - %EMHR=120 ÷ 160 X 100% = 75%

7.3 Reading an Acquired Heart Rate

How to Read an acquired Heart Rate

- The Watch will display the acquired heart rate in two different formats which depending on whether the heart rate zone alert function is either ON or OFF.

Heart rate zone alert function is OFF

- The acquired heart rate (in beats per minute) will be appeared on the display for 5 seconds, then the screen returns to previous mode.

Heart rate zone alert function is ON

- The acquired heart rate and the relative heart rate will appear on the display for 5 seconds, then the screen returns to previous mode.
- Check the chapter 7.4 for more details on relative heart rate.

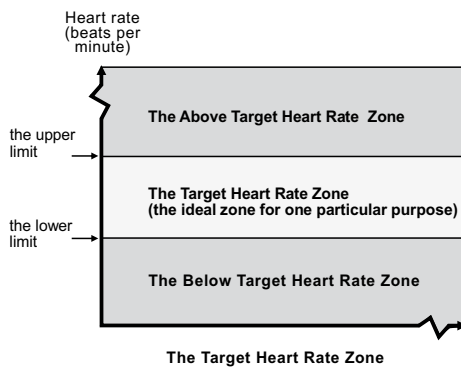
7.4 Heart Rate Measurement - What is Relative Heart Rate

Relative Heart Rate

- Relative heart rate is a percentage that compare one's acquired heart rate with his/her estimated maximum heart rate (EMHR).
- It is a useful figure for analysing the cardio- fitness of a person. Consult your doctor for more information on the implications of relative heart rate.
- To use this feature from the Watch, the user must input his/her age and gender into the Watch, and turn ON the Heart Rate Zone Alert function.
- Check the chapter 8.0 -8.1 for the details on age and gender setting.

NOTE: If age and gender have not been entered, the Relative Heart Rate is not the correct one as the watch use the default age and gender (30 years old, male) or the last set age-gender data for the calculation.

8.0 What is Heart Rate Zone Alert



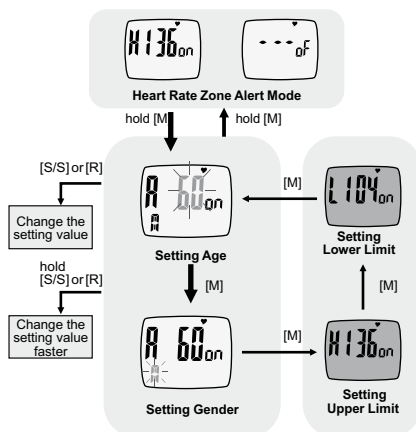
8.0 What is Heart Rate Zone Alert

- This Heart Rate Zone Alert feature can be functioned by setting a target heart rate zone by inputting either one of the below data into the Watch, the Watch will alert the user when his/her heart rate is out of the target heart rate zone.
 - User's Age and Gender, or
 - The Upper and Lower heart rate limits of the target zone
- Check the chapter 8.1-8.2 for the details on the these settings.

The Applications of Heart Rate Zone Alert

- Example 1: Some training require the trainee maintaining his/her heart rate within a target zone. If setting the zone alert according to that target, the Watch will alert the user when his/her heart rate is out of the zone. Hence, the user can render appropriate remedy actions such as slow-down or speed up his/her exercise pace.
- Example 2: Some people may need to maintain his/her heart rate within a target zone for health reasons. If setting the zone alert according to that target, the Watch will alert the user when his /her heart rate is out of the zone. Hence, the user may consult his/her doctor if that condition is dominating.

8.1 Setting the Zone Alert by User's Age and Gender



8.1 Setting the Zone Alert by User's Age and Gender

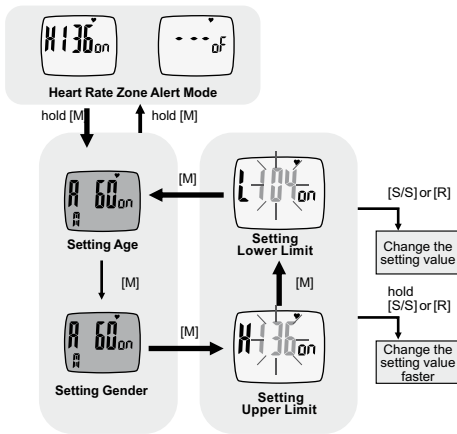
- This Watch allows setting zone alert by inputting the user's age and gender, then the Watch will suggest the upper and lower limits of the target zone automatically.
- To enjoy this zone alert feature effectively and safety, it must be set according to application and one's own health condition. Thus, it is strongly suggest you consulting your doctor or trainer before setting the heart rate zone alert.

How to Set the Age and Gender

- Hold down [M] for about 2 seconds to select setting display, the icon 'A' with flashing digits will be appeared.
- When the icon 'A' is appeared, press [M] to move among different settings, or press [S/S] or [R] to change the setting value (hold down to change at a faster speed).
- When 'M' or 'F' is appeared, press [S/S] or [R] to switch the user's gender between 'M' (male) and 'F' (female).
- If the setting is done, hold down [M] to exit the setting display. The Watch will exit the setting display automatically if NO keystroke has been activated for about 1 minute.

NOTE: Once it is set, it will supersede the previous setting by inputting upper and lower limit of the target zone.

8.2 Setting the Zone Alert by Upper & Lower Heart Rate Limits



8.2 Setting the Zone Alert by Upper & Lower Heart Rate Limits

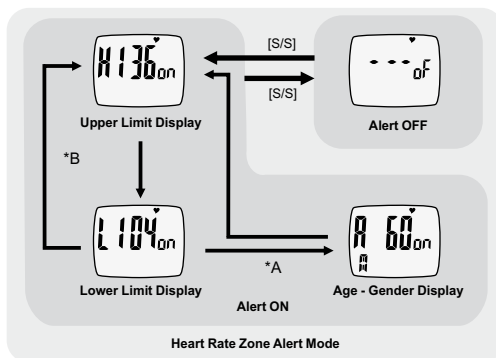
- This Watch allows setting the zone alert by inputting the upper and lower heart rate limits for the target zone directly.
- To enjoy this zone alert feature effectively and safely, it must be set according to application and one's own health condition. Thus, it is strongly suggest you consulting your doctor or trainer before setting the heart rate zone alert.

How to Set the Upper and Lower Limits

- hold down [M] for about 2 seconds to select setting display, the icon 'A' with flashing digits will appear.
- When the icon 'A' is appeared, press [M] twice until the icon 'H' is appeared.
- When 'H' or 'L' is appeared, press [S/S] or [R] to change the setting value (hold down to change at a faster speed).
- If the setting is done, hold down the [M] to exit the setting display. The Watch will exit the setting display automatically if NO keystroke has been activated for about 1 minute.

NOTE: Once it is set, it will supersede the previous setting by inputting age and gender.

8.3 Heart Rate Zone Alert Mode



NOTE *A: If the zone alert is set by using user's age and gender.

NOTE *B: If the zone alert is set by inputting the upper and lower heart rate limit directly.

8.3 Heart Rate Zone Alert Mode

How to Switch the Zone Alert ON/OFF

- Press [S/S] during the Heat Rate Zone Alert Mode to switch the function ON or OFF.

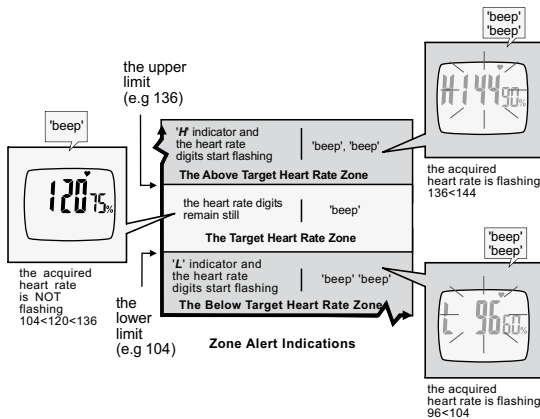
Heart Rate Zone Alert - OFF

- If the alert function is OFF, the '---' and 'of' will appear on the display.

Heart Rate Zone Alert - ON

- If the zone alert is set by user's age and gender, the following displays will appear.
 - The Upper Limit Display,
 - The Lower Limit Display and
 - The Age/Gender Display.
- If the zone alert is set by inputting the upper and lower heart rate limit directly, the following displays will appear.
 - The Upper Limit Display and
 - The Lower Limit Display.

8.4 Heart Rate Zone Alert Indication



8.4 Heart Rate Zone Alert Indication

- When acquiring a heart rate, the Watch will indicate whether the acquired heart rate is fall within, above or below the the target heart rate zone.
- For example, Tom, at his 60, has set the zone alert by using his age and gender. The upper and lower limit will be calculated automatically as follows:
 - Upper limit=136; Lower limit=104.

Within the Target Zone

- If the acquired heart rate (e.g: 120) is within the range (e.g: 104-136), the watch will beep once, and the heart rate digits will remain still.

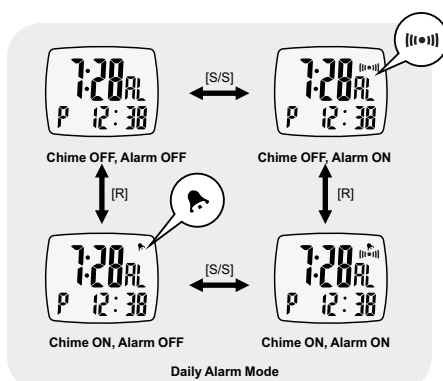
Above the Target Zone

- If the acquired heart rate (e.g: 144) is above the range (e.g: 104-136), the watch will beep twice, and the 'H' indicator with the heart rate digits will start flashing.

Below the Target Zone

- If the acquired heart rate (e.g: 96) is below the range (e.g: 104-136), the watch will beep twice, and the 'L' indicator with the heart rate digits will start flashing.

9.0 Daily Alarm Mode



9.0 Daily Alarm Mode

How to Switch the Daily Alarm ON/OFF

- Press [S/S] once to switch ON or OFF daily alarm.
- When the Daily Alarm Indicator '⌚' appears (the daily alarm is ON), the watch starts beeping at the alarm time for about 30 seconds.

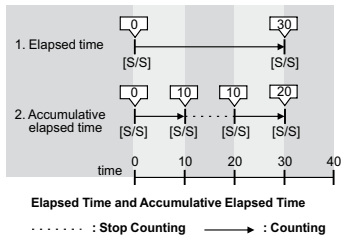
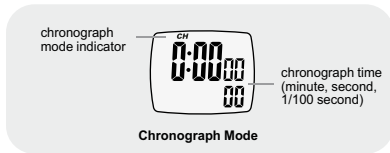
How to Switch the Hourly Chime ON/OFF

- Press the [R] button once to switch ON or OFF hourly chime.
- When the Hourly Chime Indicator '🔔' appears (the hourly chime is ON), the watch will beep once every hour, i.e 1:00, 2:00, 3:00 etc.

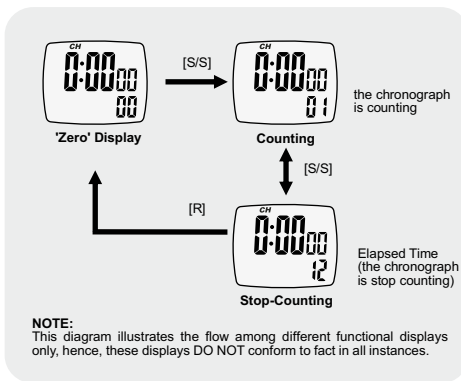
Daily Alarm Sound

- The alarm beeps for 30 seconds when the daily alarm is switched ON.
- You can stop the beeping by pressing any button (except the [EL] button).

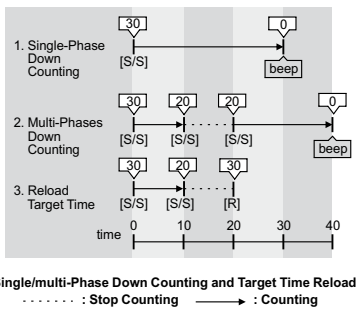
10.0 Chronograph Mode



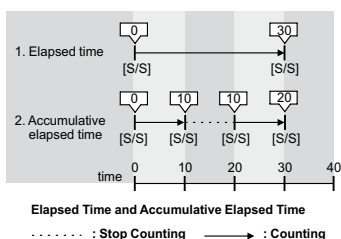
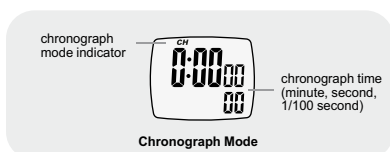
10.1 Using the Chronograph Mode



11.0 Countdown Timer Mode



10.0 Chronograph Mode



10.0 Chronograph Mode

Chronograph Function

- Chronograph Mode measures 2 different periods of time:
 - 1) Elapsed time
 - 2) Accumulative elapsed time.

Chronograph Display

- The display shows the 'Zero' display, if the watch or the chronograph has been reset.
- The Chronograph Mode Indicator '**CHR**' exhibits on the upper row of the display.
- The chronograph time (hours, minutes, seconds and 1/100 second) exhibits on the lower row of the display.
- The maximum counting range of the chronograph is 99 hours, 59 minutes and 59.99 seconds.
- If the accumulated time is beyond the maximum range, the chronograph will be reset, and continue counting start from 00 hours, 00 minutes and 00.00 seconds again.

10.1 Using the Chronograph Mode

How to Use the Chronograph Mode

- In 'Zero' Display, press the [S/S] button once to start the counting. When it is counting, press [S/S] once again to stop the counting, and the elapsed time of which the chronograph is counting will appear.
- When the elapsed time is displaying, press [S/S] again to resume counting.

How to Reset the Chronograph

- To reset the chronograph to 'Zero' (ready for a new counting), press [R] once during the chronograph is stopped.

11.0 Countdown Timer Mode

- This Watch includes a countdown timer to keep track of a fixed period of time (target time) which predefined by user.

The Target Time

- The target time can be set to 99 hours, 59 minutes 59 seconds the maximum.
- Check the chapter 11.1 for more details on the target time setting.

Countdown Timer Display

- The Timer Mode Indicator '**TMR**' exhibits on the upper row of the display.
- The target time (hours, minutes and seconds) exhibits on the upper row of the display.

10.0 Chronograph Mode

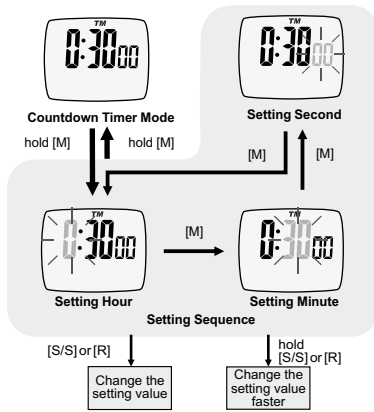
Chronograph Function

- Chronograph Mode measures 2 different periods of time:
 - 1) Elapsed time
 - 2) Accumulative elapsed time.

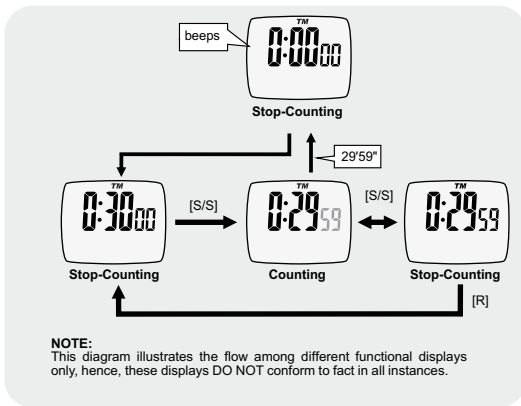
Chronograph Display

- The display shows the 'Zero' display, if the watch or the chronograph has been reset.
- The Chronograph Mode Indicator '**CHR**' exhibits on the upper row of the display.
- The chronograph time (hours, minutes, seconds and 1/100 second) exhibits on the lower row of the display.
- The maximum counting range of the chronograph is 99 hours, 59 minutes and 59.99 seconds.
- If the accumulated time is beyond the maximum range, the chronograph will be reset, and continue counting start from 00 hours, 00 minutes and 00.00 seconds again.

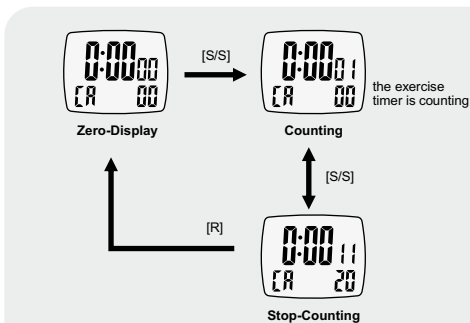
11.1 Setting the Countdown Timer



11.2 Using the Countdown Timer



12.0 Calorie Counter Mode



11.1 Setting the Countdown Timer

How to Set the Timer (Target Time)

- Hold down [M] for about 2 seconds to switch to setting display, the 'hour' digits will start flashing.
- When the 'hour' digits is flashing, press [M] to move the setting (flashing) following the adjacent diagram.
- When one of the settings (hour, minute or second) is flashing, press [S/S] or [R] to change setting value (hold down to change at a faster speed).
- If the setting is done, hold down [M] to exit the setting display.
- The Watch will exit the setting display automatically if NO keystroke has been activated for about 1 minute.

11.2 Using the Countdown Timer

How to Use the Timer

- Once a target time has been set (for example 30 minutes) for the timer, press [S/S] once to start the counting.
- Once the timer is started, the timer will start counting from the target time to zero, and the timer will display the residual time throughout the counting.
- To stop counting, press [S/S] once again.

How to Reload the Timer

- To reload the timer to preset target time (for example 30 minutes) before counting to zero, press [R] once during the timer is stopped.
- To count different target time, it must set a new value for the target time before starting the counting. Check the chapter 11.1 for more details on how to set the Timer.

Timer Alarm Sound

- When the timer counts to the last 5 seconds, the watch will beep once for each second left. When it hits zero, the watch will beep for about 10 seconds
- You can stop the beeping by pressing any button (except the [EL] button).

12.0 Calorie Counter Mode

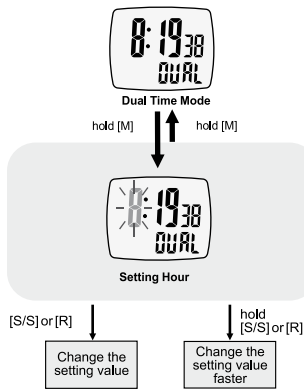
Exercise Timer and Calorie Expenditure Counter

- Press [S/S] once to start /stop the exercise timer.
- Assume that the user is performing exercise during the the timer is counting.
- The total exercise time and the expended calorie will be update to the display.
- The amount of calories expended for that exercise is estimated by the acquired heart rates (acquired during the exercise manually) and the total exercise (counting) time.

How to Reset the Counter

- Press [R] once to reset the counter to 'Zero' display when the exercise timer is stopped.

13.0 Dual Time Mode



14.0 Potential Causes for: NO Heart Rate Reading or Long Response Time

1) Cause: Dry Skin.

Solution: Apply conductive gel or saliva thoroughly to fingers and wrist area. (Even water will help if conductive gel is not available).

2) Cause: Fingers are not placed firmly over the sensors.

Solution: Make sure fingers (not the tips) lay flat and firmly over the sensors and watch is placed securely on wrist. Do not use the very tips of your fingers (i.e. visualize tip toeing with your fingertips.) Fingertips do not allow for enough contact, therefore, ECG will not be picked up.

3) Cause: Muscle tremors, caused by: A) Pressing down too hard on the sensors with fingertips. B) Person is in motion and hold the watch in an awkward manner.

Solution: It is best to place your index finger on the "lower" contact. This will ensure good and consistent readings even while walking or jogging with arms swung naturally.

4) Cause: Dead skin on wrist.

Solution: Usually rubbing your skin with a towel will help.

5) Cause: A thin layer of body grease can insulate the ECG signal that prevents the back sensor on the watch from picking up one's ECG signal.

Solution: Wipe wrist and the back of watch with a tissue or soft towel.

6) Cause: Hairy arms.

Solution: Apply conductive gel to wrist area.

7) Cause: Irregular heartbeats.

Solution: N/A It is difficult to consistently pick up a reading for those with irregular heart beats. Inconsistent response times are expected for those with arrhythmia.

15.0 Specifications

Countdown Timer Mode

- Resolution: 1 second
- Setting limit: 99 hours, 59 minutes, 59 seconds
- Alarm sound: 1 beep at the 5,4,3,2 and 1 second(s). 3 beeps at 0 second for about 10 seconds.

Calorie Counter Mode

- Exercise Timer
- Calorie Expenditure Counter

Dual Time Mode

- Hour, minute and second

Others

- Electro-luminescent backlight

13.0 Dual Time Mode

How to Set the Dual Time

- Hold down [M] for about 2 seconds during the Dual Time Mode to select the setting display, the 'hour' digits will start flashing.
- When the 'hour' digits are flashing, press [S/S] or [R] to change the setting value (hold down to change at a faster speed).
- If the setting is done, hold down [M] to exit the setting sequence.
- The Watch will also exit the setting display automatically if NO keystroke has been activated for about 1 minute.

15.0 Specifications

Current Time Mode

- Hour, minute and second
- Month, day, day of week and year
- 12 / 24 hour format selectable
- Month-day/Day-month format selectable
- Auto calendar from year 2000 to 2099
- Hourly Chime on the hours

Heart Rate Alert Mode

- Measuring range: 43 to 200 beats per minute
- 1 Heart Rate Zone Alert (upper and lower limit)

Daily Alarm Mode

- Daily Alarm: 1 daily alarm
- Alarm Duration: about 30 seconds

Chronograph Mode

- Resolution: 1/100 second
- Counting range: 99 hours, 59 minutes, 59.99 seconds
- Measuring mode: Elapsed time and accumulative elapsed