

English

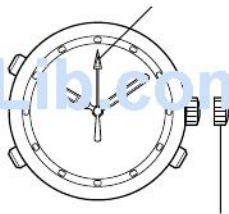
ManualsLib.com

ManualsLib.com

1. NAME OF PARTS

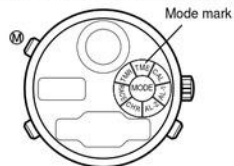
Name \ Mode		Time	Calendar	Alarm 1	Alarm 2	Chronograph	Race Timer	Timer
Button Ⓐ	Press once	EL light ON		Switching ON/OFF	Switching ON/OFF	Start/Stop	Start/Stop	Start/Stop
	Press for more than 2 seconds			Alarm monitor	Alarm monitor	—	—	—
Button Ⓑ	Press once	Thermometry	Thermometry	—	—	Split/Reset	Set time adjustment	Set time adjustment
	Press for more than 2 seconds	To time adjustment mode	To calendar adjustment mode	To alarm adjustment mode	To alarm adjustment mode	—	Quick set time adjustment	Quick set time adjustment
Button Ⓜ	Press once	To <CAL> mode	To <AL-1> mode	To <AL-2> mode	To <CHR> mode	To <RACE> mode	To <TMR> mode	To <TME> mode
1: Mode mark display		TME	CAL	AL-1	AL-2	CHR	RACE	TMR
2: Digital display [1]		Hours, Minutes, Seconds	Month, Date, Day of the week	Set time, ON/OFF	Set time, ON/OFF	Hours, Minutes, Seconds	Minutes, Seconds, Set time	Minutes, Seconds, Set time
3: Digital display [2]		Temperature	Temperature	Temperature	Temperature	1/1000 second	Temperature	Temperature

ManualsLib.com



3. CHANGING DIGITAL FUNCTIONS (MODES)

Besides the time function, this watch has six other functions. Calendar, alarm 1, alarm 2, chronograph, race timer and timer.
The current mode can be checked by the mode mark. Each time button **M** is pressed, the watch mode changes in the following sequence.



Mode mark	Mode (function)
TME	Time
CAL	Calendar
AL-1	Alarm 1
AL-2	Alarm 2
CHR	Chronograph
RACE	Race timer
TMR	Timer

<Automatic return function>

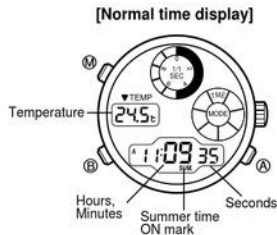
When the watch is left in alarm 1 or alarm 2 mode for more than 2 minutes, it automatically returns to time mode.

4. USING EACH FUNCTION (MODE)

A. Time mode <TME>

When button **A** is pressed or being pressed in time mode, the EL light is turned on.

When button **B** is pressed, the current temperature is recalculated.



<Switching to summer time (daylight saving time)>

- Press button **B** in time mode for more than 2 seconds. The "SUM." and "ON/OF" starts blinking to indicate that the watch enters time setting mode.
- Press button **A** to set summer time on or off. Each time button **A** is pressed, the summer time setting mode is switched on (ON) or off (OF) alternately.
- Press button **M** to return the watch to normal time display.

- When watch is set to the summer time (ON).
The "SUM." appears and the watch indicates time that is one hour ahead of standard time.

<Setting digital time>

- (1) Press button **(B)** in normal time mode for more than 2 seconds. The "SUM." and "ON/OFF" starts blinking to indicate that the watch enters time setting mode.
- (2) Each time button **(B)** is pressed in time setting mode, the blinking figures change from the "SUM." to "seconds", "minutes", "hours", "12-hour/24-hour", and to "SUM." again. Use button **(B)** to select the figures you want to change.
- (3) Adjust the blinking figures by pressing button **(A)**. (If button **(A)** is pressed continuously, the figures change quickly.)
 - The summer time display is switched ON/OFF each time button **(A)** is pressed.
 - For resetting seconds, press button **(A)** to restart from "00" second.
 - The "12-hour/24-hour" indication system is switched alternately each time button **(A)** is pressed.
- (4) Press button **(M)** to return the watch to normal time display.

- When setting time in 12-hour indication system, make sure it is correctly set for the morning (A) or the afternoon (P).
- If the watch is left in time setting mode (figures blinking) for more than 2 minutes, it returns to normal time display automatically.
- If button **(M)** is pressed in time setting mode, the watch returns to normal time display.

B. Calendar mode <CAL>

When button (A) is pressed or being pressed in calendar mode, the EL light is turned on.

When button (B) is pressed, the current temperature is recalculated.

[Normal calendar display]

Temperature



Month, Date Day of the week

<Setting calendar>

- (1) Press button (B) in calendar mode for more than 2 seconds. The "Month" starts blinking to indicate that the watch enters calendar setting mode.
- (2) Press button (B) to select the setting "Month", "Date" or "Year". Blinking figures move in order from "Month" to "Date", to "Year".
- (3) Press button (A) to adjust the blinking figures. (If button (A) is pressed continuously, the figures changes quickly.)
- (4) Press button (M) to return the watch to normal calendar display.

- The Year (in the Christian era) can be set between 1998 and 2099. (Year display appears in calendar setting mode only.)
- If the watch is left in calendar setting mode (figures blinking) for more than 2 minutes, the watch returns to normal calendar display automatically.
- The correct day of the week is automatically set as a result of setting the year, month and date.
- If the date is set to a non-existing date (for example, February 30), the watch automatically displays the first day of the next month when it returns to normal calendar display.
- This watch need not to set for the 1st day of every month due to the automatic calendar function.
- If button (M) is pressed in calendar setting mode, the watch returns to normal calendar display.

C. Alarm 1 & 2 modes <AL-1, AL-2>

The only difference between alarm 1 and alarm 2 is the sound. The two modes are the same in use and setting manner. When either alarm is set (ON) once, it sounds for 20 seconds at the same time every day.

[Normal alarm display (ON)]

Temperature



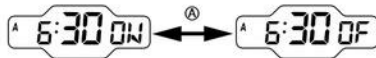
Alarm time (hours, minutes) ON or OF (off)

<Setting alarms>

- (1) Press button **B** in alarm mode for more than 2 seconds. The "Hours" starts blinking to indicate that the watch enters alarm setting mode. The blinking figures can be adjusted.
- (2) Press button **A** to adjust "Hours".
- (3) While the "Hours" is blinking, press button **B** to start the "Minutes" blinking.
- (4) Press button **A** to adjust "Minutes". (Pressing button **A** continuously changes the figures quickly.)
- (5) Press button **M** to return the watch to normal alarm display.

<Switching alarm ON/OFF>

Each time button **A** is pressed while in normal alarm display, the alarm is switched ON/OFF(off) alternately. ("ON": alarm is on, "OF": alarm is off.)



< Alarm sound duration, Stopping alarm>

The Alarm sound duration is 20 seconds. Alarm sound stops by pressing any button.

<Monitoring sound>

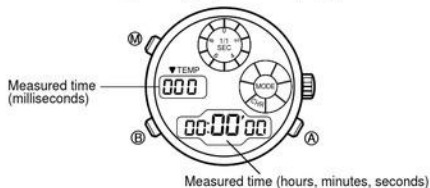
While button **A** is being pressed in alarm mode, the alarm continues to sound.

- When time mode is in 12-hour system, the alarm mode is in the same system. Be aware of A/P indication whether it is set for morning (A) or afternoon (P).
- If time mode is set for summer time, it does not affect the alarm mode.
- If the watch is left in alarm setting mode for more than 2 minutes, it automatically returns to normal alarm display.
- If button (M) is pressed in alarm setting mode, the watch returns to normal alarm display.

D. Chronograph mode <CHR>

The chronograph is capable of measuring and indicating a maximum of 23 hours, 59 minutes, 59 seconds and 999 milliseconds in increments of 1/1000 second. After 24 hours, it stops with a reset display of "00°00'00"000". The chronograph can also measure split time (elapsed time).

[Chronograph reset display]

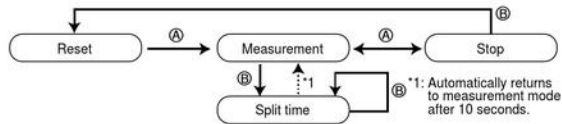


<Total elapsed time measurement>

- (1) The chronograph starts or stops each time button (A) is pressed.
- (2) To reset the chronograph, press button (B) after it is stopped.

<Split time measurement>

- (1) The chronograph starts or stops each time button (A) is pressed.
- (2) Press button (B) during a time measurement, and the watch shows a split time for 10 seconds. While a split time is shown, "SPLIT" will blink.
Each time button (B) is pressed, the chronograph shows the latest split time.
- (3) To reset chronograph, press button (B) after it is stopped.



<Changing the mode during time measurement in chronograph mode>

Even if button (M) is pressed during a time measurement in chronograph mode and mode is changed, time measurement is continued internally. The measured time is shown when the mode is returned to chronograph again. However, if the time measurement is continued for more than 24 hours, the chronograph stops at the reset state.

* Confirmation sound and EL light

At the time of start, stop, split time check or reset operation in chronograph mode, a confirmation sound is heard.

At the time of stop or a split time measurement, the EL light is turned on for 3 seconds with the sound.

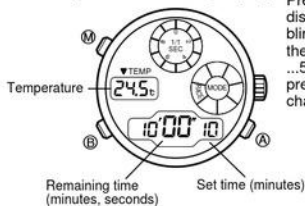
Split time: Elapsed time from start point



E. Race timer mode <RACE>

Race timer mode has an automatic chronograph function that starts time measurement when set time is up. The timer can be set in 15 ways; for 1, 3, 5 or 6 minutes, and for 10 to 60 minutes in increments of 5 minutes. Set the timer according to the race.

[Race timer setting display]

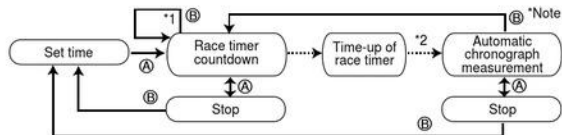


<Setting race timer>

Press button **(B)** in race timer setting display to select a set time (set time blinks). Each time button **(B)** is pressed, the set time changes from 60, 55, 50, ...5, 3, 1 (minutes). (If button **(B)** is pressed continuously, the set time changes quickly.)

<Race timer countdown>

- (1) Press button **(A)** in race timer setting display and the race timer starts counting down.
- (2) If button **(A)** is pressed during the countdown, the race timer stops. If button **(A)** is pressed again, the race timer restarts the countdown.
- (3) If button **(B)** is pressed after the race timer is stopped, the set time of the race timer is shown.
- (4) When the countdown of the set time is complete, the automatic chronograph starts while a time-up signal is sounding for 5 seconds.



*1: Race timer restart function (flyback function)

If button **(A)** is pressed during the countdown, the race timer returns to the set time and restarts.

*2: Automatic chronograph start function

When the set time of the race timer is up, the automatic chronograph starts.

<Automatic chronograph measurement>

The automatic chronograph starts time measurement the instant the race timer time is up. The maximum time is 23 hours, 59 minutes, 59 seconds in increments of 1 second. After 24 hours, it returns to race timer set time.

- (1) Each time button **(A)** is pressed while the automatic chronograph is in the time measurement display, the automatic chronograph alternately stops and restarts.
- (2) If button **(A)** is pressed while the automatic chronograph is in the time measurement display, the display returns to race timer countdown.
- (3) If button **(A)** is pressed when the automatic chronograph is stopped, and the display returns to the race timer set time.

* Note

After race timer is switched to the automatic chronograph display, the race timer repeats the countdown internally according to the set time.

If button **(A)** is pressed in automatic chronograph display to change to the race timer display, the race timer indicates the remaining time (in the countdown) that has repeatedly been checked internally. (However, if the automatic chronograph is stopped halfway, the timer that internally continues checking time will not stop.)

Example: When the race timer is set for 5 minutes.

The race timer repeats for 5 minutes while the automatic chronograph is in time measurement. If button **(A)** is pressed 3 minutes after the automatic chronograph display, 2 minutes is indicated as the remaining time of the race timer.

• Time-up warning sound

A time-up warning sound is heard when the remaining time is 10, 5, 3 minutes, 1 minute, 50 seconds, 40, 30, 20, 10, 5, 4, 3, 2 seconds and 1 second before the set time is up.

• Confirmation sound

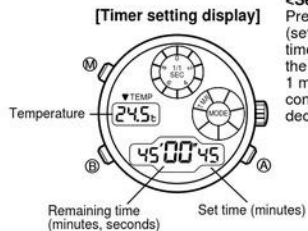
At the time of start, stop, reset or restart operation in race timer or automatic chronograph mode, a confirmation sound is heard.

<Changing modes during race timer countdown>

If button **M** is pressed in race timer or automatic chronograph display, the time measurement is continued internally. If the mode is moved to race timer again, the time that is continuously measured by the race timer is indicated. However, if automatic chronograph continues for more than 24 hours, the display is returned to the set time of the race timer.

F. Timer mode <TMR>

The timer can be set for 1 minute to 60 minutes in increments of 1 minute. When the set time is up, a time-up warning sound is heard for about 5 seconds. After that, the timer returns to set time and stops.

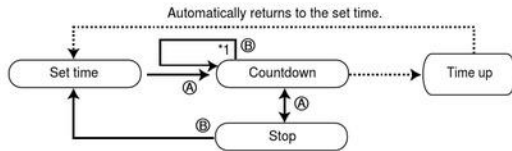


<Setting timer>

Press button **B** in timer setting display (set time is blinking) to change the set time. Each time button **B** is pressed, the indicated set time decreases by 1 minute. (If button **B** is pressed continuously, the indicated value decreases quickly.)

<Timer countdown>

- (1) Press button (A) to start the timer at the set time.
- (2) If button (A) is pressed during timer countdown, the timer stops. If button (A) is pressed again, the timer restarts.
- (3) If button (B) is pressed when the timer stops, the display returns to the timer set time.



*1: Timer restart function

If button (B) is pressed during timer countdown, the mode immediately changes to timer set time display and restarts.

• Confirmation sound

At the time of start, stop, reset or timer restart operation in timer mode, a confirmation sound is heard.

<Changing modes during timer countdown>

If button (M) is pressed in timer mode to change the mode, the time countdown is continued internally. If the mode is changed again to timer mode, the time continuously counted down by the timer is displayed. However, if the timer time is up, the display returns to timer set time.

5. USING THE THERMOMETER

The thermometer indicates the current or last measured temperature in all modes except the chronograph mode.

Temperature is measured in two ways:

1. By button operation at any time
2. Automatically measured every hour, on the hour

Temperature can be indicated either in centigrade (°C) or on Fahrenheit (°F).

<Automatic temperature measurement>

Temperature is automatically measured every hour, on the hour and when the mode changes from chronograph to race timer.

However, if the watch is in the setting status (blinking indication) in time mode or chronograph mode at the moment of measurement, no temperature is measured.

<Temperature measurement by button operation>

If button **(C)** is pressed in the normal time mode or calendar mode, temperature is repeatedly measured for 3 minutes at intervals of 2 seconds.

<Temperature measurement range and accuracy>

	In Centigrade (°C)	On Fahrenheit scale (°F)
Temperature display range	-9.9°C ~ +59.9°C	14°F ~ 139°F
Measurement unit	0.1°C	1°F
Measurement accuracy	20°C ~ 30°C: ±1°C -5°C ~ +40°C: ±2°C	68°F ~ 86°F: ±2°F 23°F ~ 104°F: ±4°F

(Note)

- If the watch is worn on the wrist during temperature measurement, the body temperature affects measurement.
For accurate temperature measurement, take the watch off and leave it in the measuring environment at least for 20 to 30 minutes. The influence of body temperature depends on environmental conditions such as difference between atmospheric temperature and body temperature before taking the watch off, etc.

- Do not use the thermometer out of the display range. Extremely hot or cold temperature may cause breakdown of the watch.

<Switching temperature display between centigrade and Fahrenheit>

Press button (A) in time or calendar mode for more than 3 seconds while pressing button (M). The temperature display changes from centigrade (°C) to Fahrenheit (°F) or vice versa.

If button (A) is pressed before button (M), display does not change.

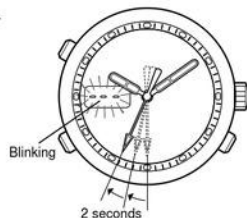


6. LOW BATTERY INDICATOR

When the battery gets weak, the low battery indicator function appears in digital display 2 as shown below.

- The second hand moves at 2-second intervals (moves by 2 increments every 2 seconds).
- In time or calendar mode, the temperature display starts to blinking "- - -".

Even when the watch falls into such condition, it still displays the time but the EL light, thermometer and alarm will not function. Immediately replace the battery with new one.



7. ALL RESET

After replacement of the battery, be sure to perform the all reset operation as shown below.

If the watch malfunctions or shows an abnormal display as a result of an excessive shock or static electricity (for example, the watch indicates nothing, continuously sounds alarm, etc.). Perform the all reset operation.



- (1) Pull the crown out.
- (2) Simultaneously press buttons **A**, **B** and **M**.
- (3) Release the three buttons.
- (4) Press the crown back. (A confirmation sound is heard.)

All reset operation is complete.
Before use, reset the watch for the correct time in all modes.

8. USING THE BEZEL

Some watches do not have the following bezel functions because of differences in type or design.

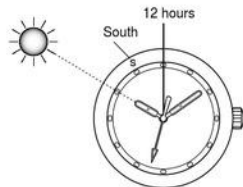
1. Compass function
2. Yachting function

1. Compass function (in the northern hemisphere)

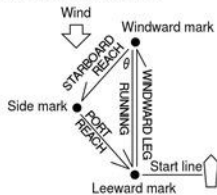
Compass direction can be approximated by this function, based on the direction of the sun.

<Finding compass direction>

Point the hour hand in the direction of the sun. The midpoint between the hour hand and the 12 hours mark is roughly equal to south. Point the "S" mark in the south direction and you can read the approximate directions of the compass. Use this indication just as a guideline because the indication changes slightly depending on the season and latitude.



2. Yachting function



<Background knowledge>

In general yacht racing, such markings as shown in the figure are set in the course. Yachtsmen compete in how fast they can sail the course in the specified order. Sailing directions are specified by angles such as north = 0°, east = 90°, south = 180°, west = 270°. Sailing with the wind coming from the right side is called starboard, sailing with wind from the left side is called port.

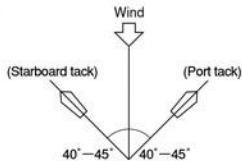
<Using bezel-1>

- (1) Before setting sail, find the windward mark by the compass and set the "▲" mark of the 12-hours point in the direction.

- (2) The course toward the side mark from the windward mark (starboard reach) is in the direction of the green "▲" mark located in the lower left side. Therefore, sail in this direction so that the yacht reaches the side mark even when the mark is hard to find because of bad weather.
 - (3) In the same manner as (2), sail in the direction indicated by the red "▲" mark in order to sail on the course from the side marking to the leeward mark (port reach).
 - (4) For sailing from the right side marking to the left, sail the yacht in the direction of the white "▲" mark.
- Note: The above-mentioned method is effective only when θ is set at 45°. If the θ is 60° and the side mark projects sideways, read the numbers above the green and red markings, otherwise the right course cannot be found. In case θ is 30° and the side mark is inside, read the numbers under the red and green ▲ markings.

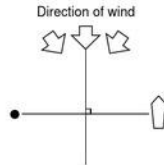
<Using bezel-2>

The yacht can sail in the windward direction at an angle of 45° (high performance yacht can sail 40°). If the yacht is sailed in the windward direction before race and the obtained angle at the red or green mark (upper right or upper left) is set, the wind shift can be read during the race. Therefore, the yacht can be sailed in the most favorable direction.



<Using bezel-3>

The bezel can be used to find the angle of the start line to the wind direction. The start line is generally set to the wind at an angle of 90° . However, it seldom is the real right angle because the wind direction changes frequently. Therefore, set the white \blacktriangle mark in the wind direction and sail in the direction from one end to the other. If the sailing direction is in positive side of the white line of the 3-hours (or 9-hours) point, it is advantageous to set sail close to the current direction. If the current direction is in negative side of the white line, it is advantageous to take a course opposite to the mark.



* Making full use of the three functions enables you to sail in the most favorable course.

ManualsLib.com



ManualsLib.com

ManualsLib.com

ManualsLib.com

ManualsLib.com