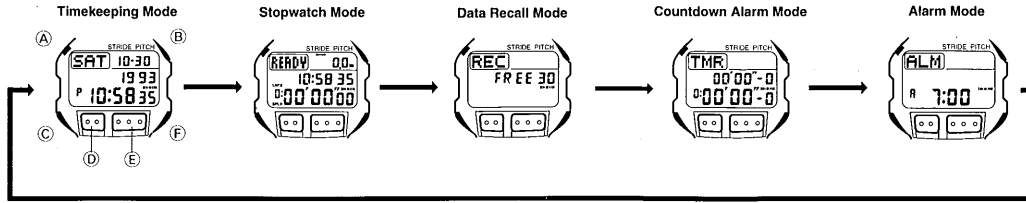


# OPERATION CHART: MODULE QW-1091

## GENERAL GUIDE

- Press (C) to change from mode to mode. Each mode is explained in detail on the following pages.
- In any mode, hold down (B) to illuminate the display



### TIMEKEEPING MODE

- In the Timekeeping Mode, press (F) to switch between the 12-hour and 24-hour formats.

**To set the time and date**

1. Press (A) while in the Timekeeping Mode. The seconds digits flash on the display because they are selected.
2. Press (C) to change the selection in the following sequence.

3. While the seconds digits are selected (flashing), press (E) to reset the seconds to "00". If you press (E) while the seconds count is in the range of 30 to 59, the seconds are reset to "00" and 1 is added to the minutes. If the seconds count is in the range of 00 to 29, the minutes count is unchanged.

4. While any other digits (besides seconds) are selected (flashing), press (E) to increase the number or (D) to decrease it. Holding down either button changes the current selection at high speed.

5. After you set the time and date, press (A) to return to the Timekeeping Mode.

### STOPWATCH MODE

This watch comes with a built-in pace sensor that picks up the running movement of your body to count the number of strides you take (pedometer function). In the Stopwatch Mode, the watch counts the number of strides you take per minute, and displays the result as your pace. The number of strides is multiplied by the length of your stride (which you preset) to display the distance you have covered. Such functions make this watch an important training tool for marathons, and other track events.

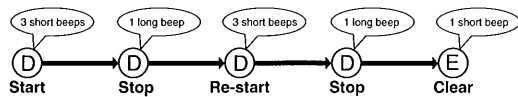
- For the pedometer function to operate correctly, you must be wearing the watch on your wrist when taking measurements.

#### To read the display

- The current time is the time kept in the Timekeeping Mode.

#### To measure elapsed time

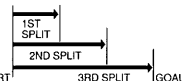
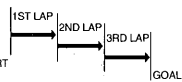
- In the Stopwatch Mode, press (D) to switch timing on and off. To clear the time currently shown on the display, press (B) to stop timing then press (E).
- When you start a timing operation, the middle line of the display automatically switches to show the lap time in place of the current time.
  - In order to measure the cumulative distance from the starting line, you must first correctly set the length of your stride.



#### About lap time and split time

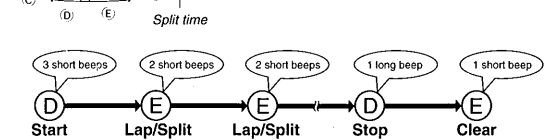
The term lap time refers to the amount of time that it takes to complete a specific segment of a race (each lap in the case of a track race). This watch can measure lap times up to 59 minutes 59.99 seconds long. The lap time reverts to zero and timing resumes from there whenever this limitation is exceeded.

The term split time, on the other hand, refers to the amount of time it takes to get from the start to a specific point. This watch can measure split times up to 9 hours 59 minutes 59.99 seconds long. Exceeding this limitation causes measurement to stop, and a beep to sound for about 10 seconds. When this happens, press (E) to clear the watch. Any data accumulated up to the point that the limit is exceeded is still retained in memory.



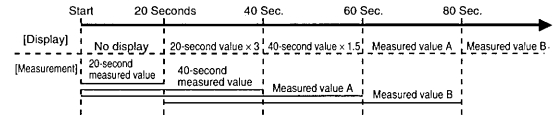
#### To measure split times and lap times

Press (E) to measure a lap/split time. When you do, the middle line of the display shows the lap time, while the lower line shows the split time. This display remains on the display for about eight seconds, during which the stopwatch timing operation continues internally. After about eight seconds, the lap/split times are cleared from the display and the normal stopwatch display returns.



#### Pace

This watch employs a built-in pace sensor that measures the number of strides you take in accordance with the running movement of your body. This data is used to calculate pace information, which is shown on the display as illustrated below.



- The display always shows "----" for the pace during the first 20 seconds of a run.
- This watch is designed to display running pace, within the range of 130 to 250 strides per minute. Whenever your pace is slower than 130 or greater than 250, the display shows "----" in place of the pace.
- Whenever you press (E) to perform a lap/split time operation, the average pace for that lap also appears along with the lap/split times.

#### Pace differentials

The pace differential function of this watch shows you changes in your pace at a glance. Pressing (E) while a measurement is in progress or while a measurement result is displayed switches from the pace display to the pace differential display. The illustrations below show how to interpret the pace differential display. To switch back to the pace display, press (F) again.



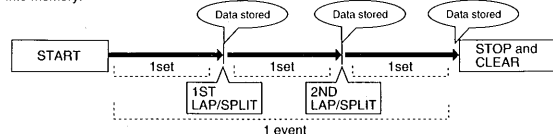
- If a measurement is in progress (no lap/split times displayed), the pace differential display graphically shows the difference between the current pace and the average pace of the previous lap. The pace differential display is updated every 20 seconds.
- If lap/split times are shown on the display, the pace differential display graphically shows the difference between the average pace of the last lap and the lap just before the last lap.
- If you do not perform a lap/split operation, the ±0 pace differential display is shown.
- When the pace differential is in the ranges of -1 to -9 or +1 to +9, the applicable value is shown next to the graphic differential display. No values are displayed for differentials outside these ranges.

#### About the memory function

Whenever you perform a lap/split time operation and whenever you clear the stopwatch display, the measured times is automatically stored into memory along with the measurement month and date, the average pace of each lap, the number of strides per lap/split. If you preset your stride length, the watch also stores the cumulative distance covered, calculated in accordance with the number of strides. This watch manages data according to events, which are made up of multiple sets of data. All data stored from the start of the stopwatch operation to the end of the stopwatch operation makes up one event. Within an event, each lap/split operation stores one set of data. The watch can hold up to 30 sets of data in memory. The following operation causes one event, which consists of three sets of data, to be stored

#### <Example 1>

The following operation causes one event, which consists of three sets of data, to be stored into memory.



#### <Example 2>

If you do not perform a lap/split operation, the event is made up of a single set of data.





If there is room in memory for only one more set of data, the message "FULL" appears on the display. When this happens, the next set of data is stored in the remaining memory area and then the watch continues to store data by automatically deleting the oldest data currently in memory and replacing it with the new data.

Note that data is generally deleted event-by-event, and not set-by-set. This means that if the oldest data stored in memory is an event that consists of three sets of data, the entire event (all three sets of data) is deleted when a new set of data is stored.

The exception to the above rule takes effect when there is only one event in memory, consisting of 30 sets of data. In that case, the new set of data replaces the oldest set of data in memory only, without deleting the other sets that make up the event.

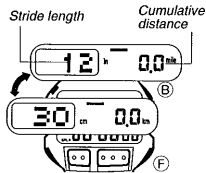
For details on recalling memory data and how to manually delete data, see "Data Recall Mode".

### Stride length

Presetting the length of your stride makes it possible for the watch to automatically calculate the distance you cover by multiplying the number of strides you take by your stride length. You can use either centimeters or inches when setting your stride length, within the range of 30 cm to 250 cm or 12 inches to 98 inches.

- The cumulative distance covered can be measured up to 99.9 kilometers or 99.9 miles. Exceeding this value causes the distance display to change to "...".

### Switching between inches/miles and centimeters/kilometers



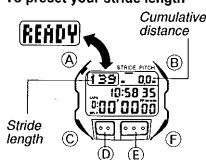
In the Stopwatch Mode, hold down (B) and (E) for a few seconds. Each time you do, the distance unit changes between inches/miles and centimeters/kilometers.

- Each time you perform the above operation, the stride length automatically changes to the minimum value of 30 cm or 12 in.
- Memory data is stored using the unit of measurement that was in effect when the measurement was taken. This operation does not change the unit of stored data.

### Determining your stride length

- Take a trial run over a known distance and count the number of strides it takes.
- For best results, the trial run should be approximately at the speed you plan to run when using the stride length.
- Perform one of the following operations to calculate your stride length. Imagine that it took 3,588 strides to cover 5,000 meters.
 
$$5,000 \text{ m} \div 3,588 = 1.39 \text{ m} \rightarrow 139 \text{ cm}$$

### To preset your stride length



While in the Stopwatch Mode, press (E) to increase the stride length or (B) to decrease it.

- Holding down either button changes the setting at high speed.
- A few seconds after you set the stride length, the display automatically changes back to the "READY" message.
- The stride length is not shown on the display while a stopwatch measurement is in progress.

### About target split times

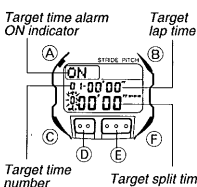
You can preset up to 10 target split times. Two short beeps sound when a target time is reached, so the runner can tell whether the current pace is slower or faster than planned. The last 10 seconds before the final target time (the goal target time) is reached are counted down by a beeper.

- You can switch operation of the target times on and off.

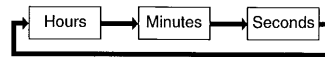
### Note

- Both the lap time and split time are shown on the display when you are setting target split times, but you can only set the split time in the lower part of the display.
- Target lap times are calculated automatically in accordance with the target split time that you preset. The range of the target lap time is 59 minutes, 59 seconds. If the calculated target lap time is greater than one hour, the hour digits are not displayed (only the minute and second digits are displayed).
- You can set target split times in 1-second increments, up to 9 hours, 59 minutes, 59 seconds.

### To set target split times



- While the Stopwatch Mode's pre-measurement display is shown, press (A). The hour digit of Target Time 1 starts to flash in the lower part of the display because it is selected.
- Press (C) to change the selection in the following sequence.

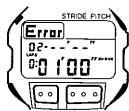


Target time number      Target split time

- While any value is selected (flashing), press (E) to increase it or (D) to decrease it. Holding down either button changes the current selection at high speed.
- After you set the first target split time, press (E) to advance to the next target split time.
- At this time, the hour digit of the next target split time flashes on the display.
- If there is a time already set for this target (from a set of target times you set previously), and if that previously set time is greater than the time you have just set in step 3 above, proceed from step 6, below.
- Press (D) or (E). At this time, the target split time that you set in step 3 above appears on the display.
- Repeat steps 2 through 5 until you finish setting target split times.

### Important!

The 10 target split times represent your progress as you run an event. This means that the time you set for each successive target split time must be greater than the last target split time you set. This means that Target Time 2 must be greater than Target Time 1, Target Time 3 must be greater than Target Time 2, etc. If you set a target time that is not greater than the target time before it, an error message is displayed. Note that the target alarm does not sound when a target time with an error message on its display is reached.



[Error Display]

- After you finish setting the target split time, press (A) to return to the Stopwatch Mode display.
- If you do not perform any operation while the target time setting display is shown, the watch automatically returns to the normal Stopwatch Mode Display.

### To switch a target time alarm on and off

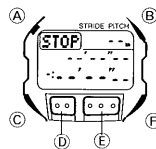
This operation switches all target split time alarms on and off. You cannot switch individual target split time alarms on and off.

- While the Stopwatch Mode's pre-measurement display is shown, press (A). The hour digit of Target Time 1 starts to flash in the lower part of the display because it is selected.
- Press (B) to switch the target split time alarms on and off.
- The indicator "ON" shows that an alarm is on, while "OFF" indicates that the alarm is off.
- Press (A) to return to the Stopwatch Mode.

### To delete all target split times

- While the Stopwatch Mode's pre-measurement display is shown, press (A). The hour digit of Target Time 1 starts to flash in the lower part of the display because it is selected.
- Hold down (B) until the watch emits a long beep.
- This step deletes all the target split times. Note that you cannot delete the target split times individually.
- Press (A) to return to the Stopwatch Mode.

### Auto-stop function



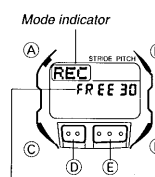
In order to conserve battery power, this watch is designed to automatically stop a Stopwatch Mode measurement if the pace sensor does not pick up any movement for about 10 minutes. If no movement is detected for five minutes, an alarm sounds for five seconds. If no movement is detected for another minute, the alarm sounds again for five seconds. This continues each minute for the next five minutes if no movement is detected. If movement is still not detected at the end of the second five-minute segment, the watch stops the measurement operation and the display changes as shown in the illustration.

- To start a new measurement after a measurement is stopped as described above, press (E) to return to the normal Stopwatch Mode display.
- Any data recorded between the last lap/split operation and the point where the auto-stop function activates is not stored in memory.

### DATA RECALL MODE

The Data Recall Mode is used to recall and delete data that is stored by Stopwatch Mode operations. You can also use this mode to find out how many more sets of data can be stored into memory without deleting data already in memory.

#### [Remaining Memory Display]



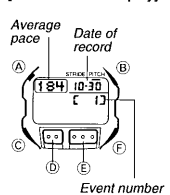
Number of sets that can be stored

When memory becomes full, storing new data causes the oldest data in memory to be deleted. Be sure to make a written record of important data to guard against deleting it.

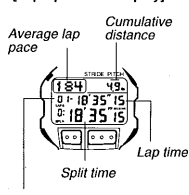
#### To read the displays

After to enter the Data Recall Mode, each press of (E) switches between the following displays.

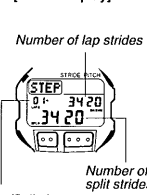
#### [Event Number Display]



#### [Lap/Split Time Display]



#### [Stride Display]

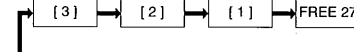
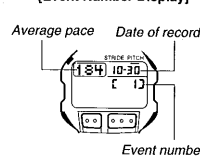


- Event numbers are assigned automatically to each event, in sequence with the oldest event being 1, the next oldest 2, etc.
- Whenever data is deleted automatically or manually, event numbers are automatically adjusted so that they are numbered from oldest to newest.
- The average pace that appears in the Event Number Display is based on the pace for the entire event.
- The number of strides can be counted up to 99,998. When this value is exceeded, the number of strides changes to "...".

#### To data recall from memory

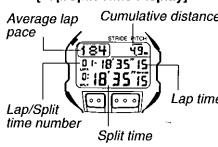
- In the Data Recall Mode, press (E) to scroll through the events, from the newest to the oldest (number 1). Example: When there are three events in memory.

#### [Event Number Display]



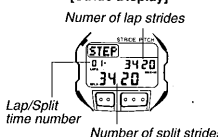
- The display that appears between event number 1 (oldest data) and the newest event shows how much memory is available for storage of data without deleting data already in memory.

#### [Lap/Split Time Display]



- When the event number for the data you want to see is displayed, press (E) to switch to its Lap/Split Time Display.

#### [Stride Display]



- Press (E) again to switch to the Stride Display.
- If you performed lap/split operations during the event, each time you press (E) the Lap/Split Time Displays and Stride Displays appear in succession for each lap/split operation.
- When you press (E) while the Stride Display for the final lap/split of the event you are viewing is displayed, the Event Number Display for the next event appears.
- Pressing (D) moves backward through the displays.

### To delete data

Note that the following procedure deletes the entire event that you select. You cannot select specific sets of data to be deleted.

- In the Data Recall Mode, recall the event that you want to delete.
  - You can use the Event Number Display, Lap/Split Time Display, or Stride Display. Make sure that the event you select is really the one you want to delete.
- Hold down (A) until the watch emits a long beep.
- After the delete operation is complete, the watch automatically displays the Remaining Memory Display.
- Note that data sets already stored in memory for an event that is still being timed shows up in the Data Recall Mode but it cannot be deleted. Even if stopwatch timing has been stopped, you will not be able to delete the data until the stopwatch display is cleared to all zeros. End the measurement operation in the Stopwatch Mode, clear the stopwatch display to all zeros (by pressing (E)) and then return to the Data Recall Mode to view or delete the data.

### COUNTDOWN ALARM MODE

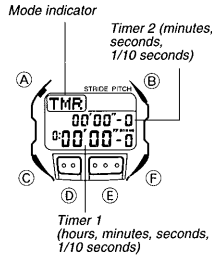
The Countdown Alarm Mode uses two timers (Timer 1 and Timer 2), which countdown in units of a tenth of a second. When the countdown reaches zero, an alarm sounds for 10 seconds, or until you press any button to stop the beeping.

**About countdown timer measurements**  
The Countdown Alarm Mode can countdown times individually or sequentially.

When individual countdown is selected, the timer counts down the time and stops when it reaches zero.

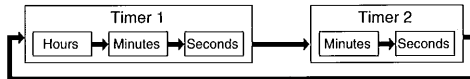
- Setting either of the timers to zero makes the other timer perform individual countdown.

With sequential countdown, Timer 1 counts down until it reaches zero, and then Timer 2 starts. When Timer 2 reaches zero, Timer 1 starts again, this continuous for 30 countdowns. This function is useful when timing sporting events that allow for rest periods between halves, quarters, or rounds.



#### To set the countdown time

- Press (A) while in the Countdown Alarm Mode. The hour digit of Timer 1 starts to flash on the display. The hour digit flashes because it is selected.
- Press (C) to change the selection in the following sequence.



- Press (E) to increase the selected number or (D) to decrease it. Holding down either button changes the selection at high speed.
  - Timer 1 can be set within the range of 1 second to 9 hours 59 minutes 59 seconds.
  - Timer 2 can be set within the range of 1 second to 59 minutes 59 seconds.
- After you set the countdown time, press (A) to return to the Countdown Alarm Mode.

#### To use the countdown timer

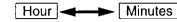
- In the Countdown Alarm Mode, select Individual or Sequential timer measurement.
- Press (D) to start the countdown timer.
- Press (D) again to stop the countdown timer.
  - You can continue countdown timer operation by pressing (D).
- Stop the timer and then press (E) to reset the countdown timer to its starting value.
  - If you attempt a Sequential timer measurement with a countdown time that is 10 seconds or less, the alarm sounds for only one second when zero is reached.

### ALARM MODE

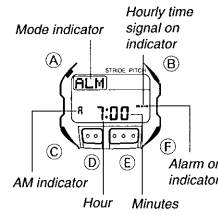
When the Daily Alarm is switched on, the alarm sounds for 20 seconds at the preset time each day. Press any button to stop the alarm after it starts to sound. When the Hourly Time signal is switched on, the watch beeps every hour on the hour.

#### To set the alarm time

- Press (A) while in the Alarm Mode. The hour digits flash on the display because they are selected.
  - At this time the Daily Alarm is switched on automatically.
- Press (C) to change the selection in the following sequence.



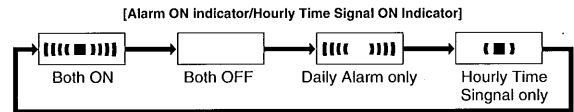
- Press (E) to increase the selected digits and (D) to decrease them. Holding down either button changes the selection at high speed.



- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning (A) or afternoon (F).
- After you set the alarm time, press (A) to return to the Alarm Mode.

#### To switch the Daily Alarm and Hourly Time signal on and off

Press (D) while in the Alarm Mode to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.



#### To test the alarm

Hold down (E) while in the Alarm Mode to sound the alarm.