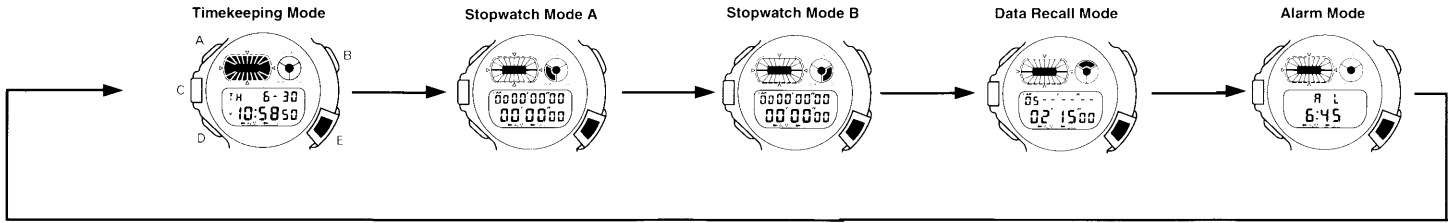


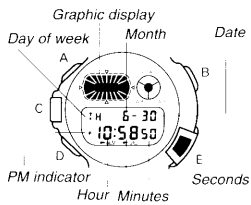
OPERATION CHART:MODULE QW-1103

GENERAL GUIDE

- Press **C** to change from mode to mode. Each mode is explained in detail on the following pages.



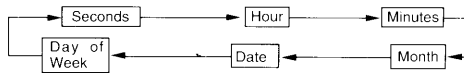
TIMEKEEPING MODE



- In the Timekeeping Mode, hold down **B** to illuminate the display.
- In the Timekeeping Mode, press **E** to switch between the 12-hour and 24-hour formats.
- In the Timekeeping Mode, the Graphic Display indicates the counting of seconds.

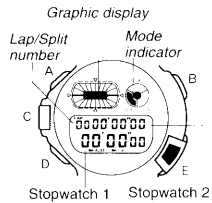
To set the time and date

- Hold down **A** while in the Timekeeping Mode until the seconds digits start to flash on the display. The seconds digits flash because they are selected.
- Press **C** to change the selection in the following sequence.



- 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.
 - While any other digits (besides seconds) are selected (flashing), press **E** to increase the number. While the day of the week is selected, pressing **E** advances to the next day. Holding down **E** changes the current selection at high speed.
 - After you set the time and date, press **A** to return to the Timekeeping Mode.
- The watch does not make any allowance for leap years. Be sure to manually set February 29 (when one occurs) to the appropriate date.
 - If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Timekeeping Mode automatically.

STOPWATCH MODE A



This watch has two stopwatch modes: Stopwatch Mode A and Stopwatch Mode B. The Stopwatch Mode A and Stopwatch Mode B are synchronized with each other. Both of the Stopwatch Modes have two stopwatches (Stopwatch 1 and Stopwatch 2), which can be used to measure elapsed time, lap times, and split times etc. The range of the stopwatches is 9 hours, 59 minutes, 59.99 seconds. The Stopwatch Modes also include memories, plus a host of other useful functions.

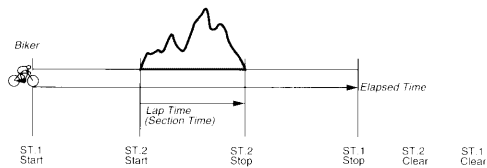
* This means that if you change (by pressing **C**) from Stopwatch Mode A to the Stopwatch Mode B, you will find the same timing operation being performed.

Notes

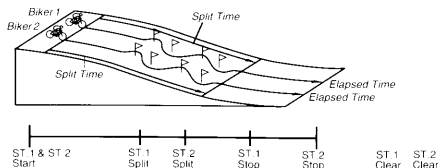
- Whenever the time being measured in the Stopwatch Mode A or Stopwatch Mode B becomes greater than 59 minutes 59.99 seconds, the display automatically switches from minutes, seconds, and 1/100 of a second (00'00'00) to hours, minutes, seconds (0:00:00).
- You can use the lap time function to time how long it takes to complete a specific portion (such as a single lap) of a race.
- You can use split time function to time how long it takes to get from the start to a specific point in a race.

Stopwatch Mode A Applications

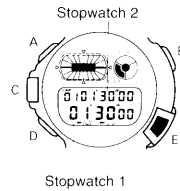
- Elapsed time measurement
- Two-finish measurement
- Simultaneous timing of two vehicles during motor sports events etc.
- Simultaneous measurement of total elapsed time and lap/split times
- Simultaneous measurement of total elapsed time and section time



- Simultaneous measurement of total elapsed time and split time



To measure elapsed time



You can measure elapsed time using Stopwatch 1 or both two stopwatches at the same time (synchro start).

- Press **B** to start the Stopwatch 1.
- To start both two stopwatches at the same time, press **A**.
- Press **B** to stop the Stopwatch 1.
- To stop the Stopwatch 2, press **A**.
- You can resume the measurement operation by pressing **B** for Stopwatch 1 or **A** for Stopwatch 2 (if you use the synchro start).
- Press **E** to clear the Stopwatch 1 to 00'00'00.
- To clear the Stopwatch 2, press **D**.

To time first and second place finishers

- Press **A** to start the two stopwatches.
- Press **B** when the first finisher crosses the line.
- The finish time of the first finisher is shown on Stopwatch 1.
- Press **A** when the second finisher crosses the line.
- The finish time of the second finisher is shown on Stopwatch 2.
- Press **E** to clear the Stopwatch 1 to 00'00'00.
- Press **D** to clear the Stopwatch 2 to 00'00'00.

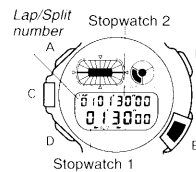
About lap/split time measurements

Both of the stopwatches in Stopwatch Mode A can be used to measure lap times or split times. You can either start both of the stopwatches at the same time (synchro start) or individually (single start). Before performing a lap or split time measurement, you must first select the operation you want to perform. For details, see "To select lap time or split time operation".

Notes

- Before starting both stopwatches at the same time, make sure that the display of both stopwatches show zeros. If they don't, press **E** to clear Stopwatch 1 or **D** to clear Stopwatch 2.
- If you want to start the stopwatches individually, be sure to start Stopwatch 1 before starting Stopwatch 2. Stopwatch 2 will not start unless the other stopwatch is already in operation.

To measure lap (or split) times using synchro start



- Select lap time or split time operation and then enter the Stopwatch Mode A.
- Press **A** to start the two stopwatches.
- To record the time of first lap (or split), press either of the buttons used to register a lap (or split) time: **E** for Stopwatch 1 or **D** for Stopwatch 2.
- At this time, the measured lap (or split) time and lap/split number remains on the display for about 8 seconds. After 8 seconds, the display changes to show the timing of the next lap (or split).

- Repeat step 3 for subsequent laps (or splits).
- Each time you press a button to record a lap (or split) time, that time is stored in memory. See "About time memories" for details.
- The lap (or split) number shown on the display is the greatest lap (or split) number between the two stopwatches. If Stopwatch 1 is timing lap 2 and Stopwatch 2 is timing lap 4 for example, the lap number display shows 04.
- Whenever you press either of the buttons that records a lap (or split) time, the corresponding lap number is shown on the display for about 8 seconds.
- To stop the stopwatches, press either of the buttons: **B** for Stopwatch 1 or **A** for Stopwatch 2.
- To clear the stopwatches, press either of the buttons: **E** for Stopwatch 1 or **D** for Stopwatch 2.

To measure lap (or split) times using single start

- Press **B** to start Stopwatch 1.
- Press **A** to start Stopwatch 2.
- To record the time of the first lap (or split), press either of the buttons used to register a lap (or split) time: **E** for Stopwatch 1 or **D** for Stopwatch 2.
- At this time, the measured lap (or split) time and lap/split number remains on the display for about 8 seconds. After 8 seconds, the display changes to show the timing of the next lap (or split).
- Each time you press a button to record a lap (or split) time, that time is stored in memory. See "About time memories" for details below.
- To stop the stopwatches, press either of the buttons: **B** for Stopwatch 1 or **A** for Stopwatch 2.
- To clear the stopwatches, press either of the buttons: **E** for Stopwatch 1 or **D** for Stopwatch 2.

About time memories

This watch is equipped with five lap/split time memories for Stopwatch 1 and one lap/split time memory for Stopwatch 2. The lap or split time is stored into memory whenever you perform a lap/split operation. When you clear the stopwatch to all zeros, either the final lap/split time or the total elapsed time (depending on the type of operation you were using) is stored into memory. If memory is full when you record a lap/split time, the oldest lap/split time stored is deleted to make room for the new one. Lap/split times are kept in memory until you clear the stopwatch to all zeros and then start a new time measurement (elapsed time, lap time, etc.). For details on recalling lap/split times, see Data Recall Mode.

* The same memory is used by Stopwatch Mode A and Stopwatch Mode B. If you fill up the five memories with Stopwatch 1 lap time data with Stopwatch Mode A, and then use Stopwatch 1 in Stopwatch Mode B to measure elapsed time, Stopwatch 1's elapsed time data will be in memory.

About the lap time beeper

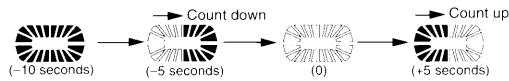
As you time a new lap (or split), the stopwatch you are using (1 or 2) compares the current lap (or split) time with the time of the last lap stored in memory. The watch beeps whenever the lap (or split) currently being timed gets to 10 seconds of the previous lap stored in memory by that stopwatch.

- The lap time beeper does not operate if the last lap measured is shorter than 10 seconds or if the split time is longer than 10 hours.

About the graphic display

The graphic display indicates the operation of each of the stopwatches. The upper part of the graphic display is for Stopwatch 2, while the lower part is for Stopwatch 1. The graphic display operates in conjunction with the lap time beeper described above to count down the final 10 seconds as the current lap time approaches the last lap time stored in memory. After the same time as the last lap stored in memory is reached, the graphic display counts up the next 10 seconds. The illustrations below show how the graphic display counts down and counts up.

- The graphic displays do not operate if the last lap measured is shorter than 10 seconds or if the split time is longer than 10 hours.



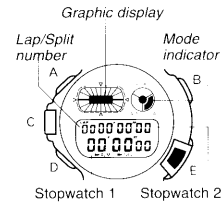
STOPWATCH MODE B

With Stopwatch Mode B, you can automatically start split time measurement with Stopwatch 2 whenever you perform a lap or split time operation with Stopwatch 1.

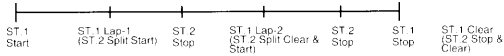
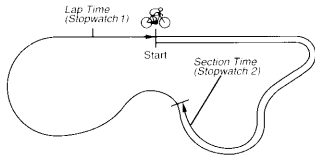
Stopwatch Mode B and Stopwatch Mode A are synchronized with each other. Besides actual timing operations, the memory, the lap time beeper, and graphic display all operate the same as they do for Stopwatch Mode A.

Stopwatch Mode B Applications

- Elapsed time measurement



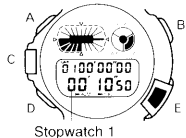
- Simultaneous measurement of lap times and sections (fixed distance from the start up to another point on the course)



To measure elapsed time

With Stopwatch Mode B, be sure to use Stopwatch 1 for elapsed time measurements.

- Press B to start the Stopwatch 1.
- Press B to stop the Stopwatch 1.
- You can resume the measurement operation by pressing B.
- Press E to clear the Stopwatch 1.



To measure lap (or split) time

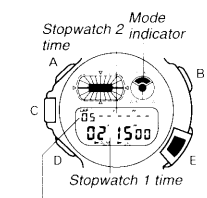
- Select lap time or split time operation and then enter the Stopwatch Mode B.
- Press B to start the Stopwatch 1.
- Press E to record the time for the first lap/split for Stopwatch 1. At this time, Stopwatch 2 starts timing automatically.
- The measured lap (or split) time and lap/split number for the Stopwatch 1 remains on the display for about 8 seconds. After 8 seconds, the display changes to show the timing of the next lap (or split).
- Press A to stop the Stopwatch 2.
- Repeat steps 3 and 4 for subsequent laps/splits.
- Each time you press a button to record a lap/split time, that time is stored in memory. See "About time memories" for details.
- Any time you start a timing with Stopwatch 1 (by pressing E), Stopwatch 2 is automatically cleared and restarted.
- Press B to stop the Stopwatch 1.
- Press E to clear the Stopwatches to all zeros.

DATA RECALL MODE

Use the Data Recall Mode to recall times stored in memory, to select lap time or split time operation, to set the distance, and to display the calculated speed.

To recall data from memory

- Whenever you enter the Data Recall Mode, the display shows the newest time (the lap or split with the lowest lap/split number) of Stopwatch 1.
- Press E to scroll through the other times stored in memory.
- While a Stopwatch 1 time is displayed, the Stopwatch 2 area of the display shows ---, and while a Stopwatch 2 time is displayed, the Stopwatch 1 area of the display shows ---.



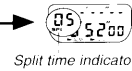
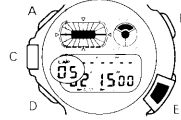
- Following the oldest time of ST. 1 (Stopwatch 1), this operation recalls Stopwatch 1 times, starting from the oldest.

To select lap time or split time operation

While in the Data Recall Mode, press B to switch between the lap time and split time.

- The current setting is shown on the display by an indicator.

Lap time indicator

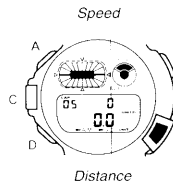


About the distance

Once you set a distance, you can then display the speed that a lap or split was run, based on the lap or split time stored in memory. You can set one distance, which is used by Stopwatch 1 and 2. Note that the following explanation applies to both kilometers and miles, and no adjustment is necessary to switch between the two distance units.

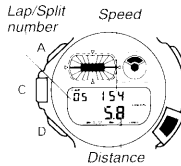
- The maximum distance is 999.9 (kilometers or miles).

To set the distance



- In the Data Recall Mode, press A or D for the distance display.
- Each time you press D, the distance increases in increments of 0.1, while pressing A decreases it. Holding down either button changes the distance at high speed.
- All lap or split times already stored in memory use the distance you input, and speeds are displayed for each.
- Press D and A at the same time to clear the distance to 0.0.
- If you do not press any button for about 5 seconds, the display return to the Data Recall Mode automatically.

To display the speed



- Set the distance in the Data Recall Mode.
- Perform lap (or split) measurements in the Stopwatch Mode A (or Stopwatch Mode B).
- Enter the Data Recall Mode.
- Press A or D for the distance display.
- At this time, the display shows the speed for the newest time (the lap or split with the lowest lap/split number) of Stopwatch 1, based on the distance that you preset.
- Press E to scroll through the speeds for other times stored in memory.
- The maximum speed is 999 (kilometers or miles per hour).
- If you do not press any button for about 5 seconds, the display return to the Data Recall Mode automatically.

About speed calculation errors

Whenever the distance is preset to zero, the speeds also become zero. The following conditions cause errors in internal calculations of speed. In such cases, "---" will be shown on the display in place of numeric data.

- When the measured time exceed 10 hours.
- When the result of a speed is greater than 999 kph (or mph).
- When no times are stored in memory (while the first lap or split is being timed)

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.

- If the alarm starts to sound while in either of the Stopwatch Modes (Stopwatch Mode A, Stopwatch Mode B), press C to stop it.
- In the Alarm Mode, hold down B to illuminate the display.

To set the alarm time

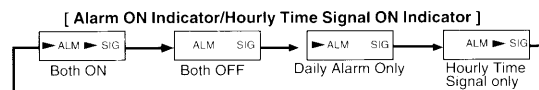
- Hold down A while in the Alarm Mode until the hour digits start to flash on the display. The hour digits flash because they are selected.
- This operation will switch the Daily Alarm on automatically.



- Press E to increase the selected digits. Holding down E increases 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 or afternoon (P).
- 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 E 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 D while in the Alarm Mode to sound the alarm.