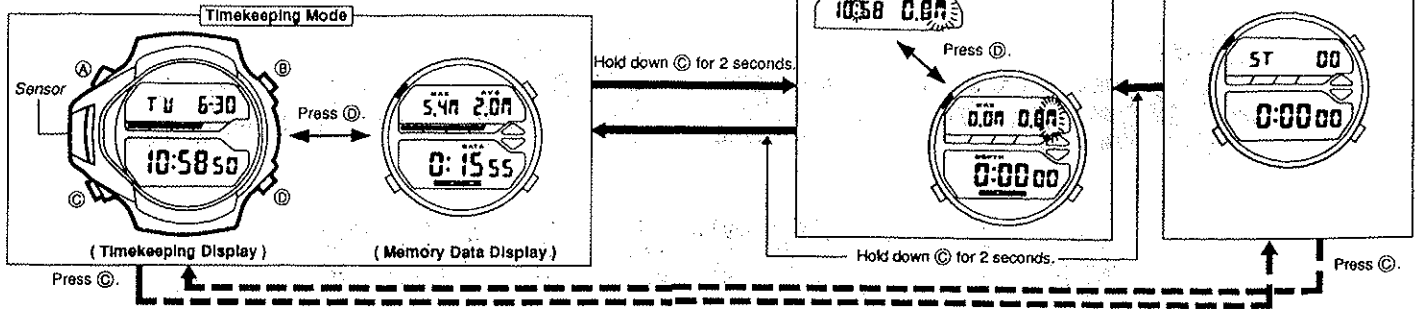


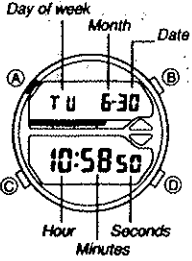
OPERATION CHART: MODULE QW-994

GENERAL GUIDE

For information on how to read the display, refer to the separate instructions on each function.



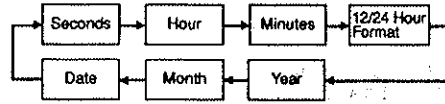
TIMEKEEPING MODE



• While in the Timekeeping Mode, hold down (B) to illuminate the display.

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 (D) to reset them to "00". If you press (D) while the seconds count is in the range of 30 to 59, it is 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 digits (besides seconds), are selected (flashing), press (B) to increase the number or (A) to decrease it. Holding down either button changes the current selection at high speed. While the 12/24-hour setting is selected, press (D) to switch between the two formats.
 5. After you set the time and date, press (A) to return to the Timekeeping Mode.
- The day of the week is automatically set in accordance with the date.
 - The date can be set within the range of January 1, 1990 to December 31, 2029.
 - 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.

DEPTH MEASUREMENT MODE

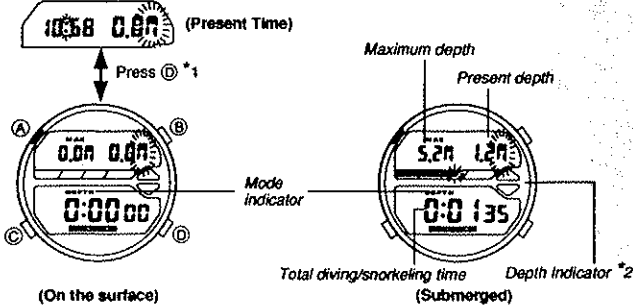
The pressure sensor of this watch provides useful diving/snorkeling data. Besides automatically measuring depths in the Depth Measurement Mode, the watch also stores one set of depth data into a log memory for later recall. You can also change the measured values displayed by the watch between meters (M) and feet (F).

- While in the Depth Measurement Mode, hold down (B) to illuminate the display. The display remains illuminate while (B) is depressed and for about three seconds after you release (B).

Important!

This watch is designed to start depth measurements and record data in the log memory after a depth of 1 meter (4 feet) is reached. Because of this, the explanations in this User's Guide uses the term "submerged" to refer to any depth deeper than 1 meter, and the "on the surface" to refer to any depth shallower than 1 meter.

Understanding the Depth Measurement Mode display



- *1 Pressing (D) switches between the maximum depth display and the present time display, regardless of whether you are on the surface or submerged.
- *2 The depth indicator changes in accordance with your current depth. The "▼" indicator appears whenever your current depth is less than the last measured depth by a factor of 0.5 m or more. The "▲" indicator appears whenever your current depth is greater than the last measured depth by a factor of 0.5 m or more.

About the log memory

There is memory for only one set of log data. The data in the log memory is automatically updated whenever you change from the Timekeeping Mode to the Depth Measurement Mode and then submerge past the 1-meter (4-foot) depth.

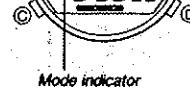
- Total diving/snorkeling time — hours, minutes, seconds
- Maximum depth
- Average depth — Total measured depth (Submerged) divided by total number of measurements

To switch between meters and feet

While in the Depth Measurement Mode, press (A) to select either meters (M) or feet (F).

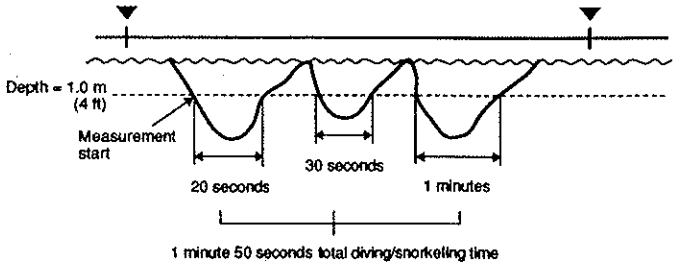
To use the Depth Measurement Mode

1. Before diving/snorkeling, switch to the Depth Measurement Mode by holding down (C) for at least two seconds.
2. After diving/snorkeling, switch back to the Timekeeping Mode by holding down (C) for at least two seconds. At this time, the log data is stored in memory.



Switches to Depth Measurement Mode

Switches to Timekeeping Mode



Note

- While you are submerged, the watch will not revert to the Timekeeping Mode even if you hold down (C). This protects against accidentally changing from the Depth Measurement Mode to the Timekeeping Mode while submerged.
- Once set to the Depth Measurement Mode, the depth measurement function will automatically make total time and depth calculations.
- The watch automatically returns to the Timekeeping Mode after about six hours if you leave it in the Depth Measurement Mode.
- If you remain on the surface (depth of "0") for one hour or more, the watch automatically returns to the Timekeeping Mode.

To review the log data

Maximum depth

Average depth

Total diving/snorkeling time

Mode indicator

Depth Indicator *2

Present time

Present depth

Maximum depth

Average depth

Total diving/snorkeling time

Mode indicator

Depth Indicator *2

Present time

Present depth

Maximum depth

Average depth

Total diving/snorkeling time

Mode indicator

Depth Indicator *2

Present time

Present depth

Maximum depth

Average depth

Total diving/snorkeling time

Mode indicator

Depth Indicator *2

Present time

Present depth

Maximum depth

Average depth

Total diving/snorkeling time

Mode indicator

Depth Indicator *2

Present time

Present depth

Maximum depth

Average depth

Total diving/snorkeling time

The log data can be reviewed (recalled) in the Timekeeping Mode.

1. Hold down (C) to enter the Timekeeping Mode.
2. Press (D) to display the Memory Data Display.

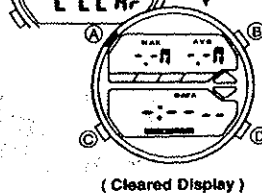
- If you do not press any button for one hour, the watch automatically returns to the Timekeeping Display.

Note

- The log data accompanied by a warning mark (! or !!) should not be used.

To delete the log data

1. Display the Memory Data display.
2. Hold down (D) until the flashing "CLEAR" message stops, indicating that the log data is deleted. At this time, the display automatically switches to the cleared (no data) display.



HELPFUL HINTS ON DEPTH MEASUREMENT FUNCTIONS

About depth and water pressure

Water pressure increases with depth. In the case of sea water (specific gravity = 1.025), water pressure increases by 1 ATM (1.03kg/cm²) with each 10 meters (33 ft) of depth. This watch makes use of the relationship between pressure and depth, using a pressure sensor to calculate the water pressure and then converting this data into depth readings.

Measurement formats and ranges

- Total Time: measured in 1-second increments
Display range: up to 5 hours, 59 minutes and 59 seconds
- Depth: measured in 0.1-meter (1-ft) increments
Display range: between 0 and 50 meters (0 and 164 ft)

Note that depths between 0 and 1 meter (0 and 4 ft) are registered as "0.0 M (0 F)".
Present/Maximum depths show "dEEp" when 50 meters (164 ft) is exceeded.
Average depth shows "-- M (or F)" when 50 meters (164 ft) is exceeded.

Reading frequency: every 3 seconds

Operation of pressure sensor and "0 M (0 F)" reset

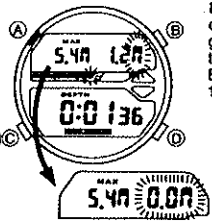
When the Depth Measurement Mode is entered, the built-in sensor immediately begins to operate. When you submerge past the 1-meter (4-foot) point, the sensor automatically begins making depth readings and triggers the time to measure the diving/snorkeling time. Normally, you should select the Depth Measurement Mode immediately before beginning a diving/snorkeling.

Automatic "0 M (0 F)" reset

When the Measurement Mode is entered, the present depth reading is set at "0 M (0 F)" (even if you are underwater at a different pressure). Because of this, avoid switching to the Depth Measurement Mode while underwater.

Manual "0 M (0 F)" reset

In some cases, such as when the sensor is exposed to wide changes in temperature, the display may show a depth of greater than 1.0 M (4 F) even when you are on the surface. In this case, it is necessary to reset the pressure to "0 M (0 F)". By pressing holding down (C) and (D) together for at least 1 second, the pressure reading can be reset to "0 M (0 F)".



Underwater "0 M (0 F)" reset

This watch is equipped with a special function which compares a standard value with the sensor value to provide an absolute pressure reading in cases where you have made one of the following operational errors:

- entered the Depth Measurement Mode while underwater (automatic reset).
- held down (C) and (D) for at least one second while underwater (manual reset).

Calculation of standard value and absolute value

Whenever the sensor value exceeds the standard values listed below during a diving/snorkeling, operation automatically switches to show the absolute water pressure. At this time, a single warning mark "I" appears on the display.

Standard value: 1.24kg/cm² (bars absolute) at 25°C (77°F)

- Bars absolute 2 meters (7 ft) below the surface of the sea water (gravity 1.025) with standard atmosphere at 25°C (77°F)

Absolute water pressure: Depth of 0 meters (0 ft) measured at 25°C (77°F) with a bars absolute of 1.033kg/cm².

Forced Exit from Depth Measurement Mode

When the depth display shows a depth of 1.0 M (4 F) or more, operation cannot be switched from the Depth Measurement Mode to the Timekeeping Mode by pressing (C). If, however, it becomes necessary to switch to the Timekeeping Mode during a dive for one of the reasons listed below, you can do so by holding down (B), (C), (D) together for at least 2 seconds.

- when watch is used in recompression chambers or other high-pressure environments.
- when watch is used in environments where temperature varies widely from suggested operating temperature range.

Note

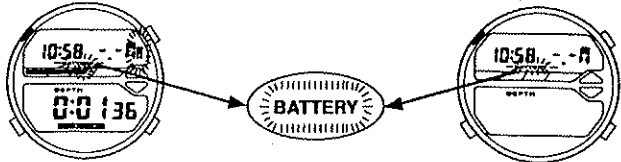
Avoid forcing an exit from the Depth Measurement Mode under normal conditions.

Weak Battery Power

The message "BATTERY" appears on the display to let you know that the batteries are getting weak. While this message is displayed, display light and sensor measurements are not operational, so be sure to have the batteries replaced as soon as possible.

< Depth Measurement Mode (submerged) >

< Other Modes (on the surface) >



- Notes**
- No Depth Measurement Mode measurement, or light operation is available while the low battery message is shown on the display.
 - Be sure to have the batteries replaced at least once every two years.
 - When you notice that the batteries are weakening, have the battery replaced by your dealer or a CASIO distributor.

Depth Reading Errors

In some cases, due to operational errors or abnormal environmental conditions, the display may indicate incorrect depth readings (such as -1.0 meter (-4 ft), etc.). These readings may occur when:

- the watch is exposed to abnormal changes in temperature (such as when it is suddenly submerged after being exposed to direct sunlight for an extended period) or air pressure.
- the depth reading is inadvertently set to "0 M (0 F)" while underwater (depth = 1 to 2 meters/4 to 7 ft)

In such cases, a depth measurement error occurs and the message "Err" appears on the display for three seconds, followed by a flashing warning mark "I". Most of the time, depth errors occur on the surface, and so the reading is automatically reset to 0 M after the error display.

Note that appearance of the warning mark indicates a large error in the displayed data, and so such data should be disregarded.

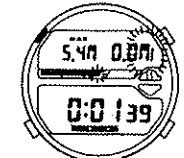
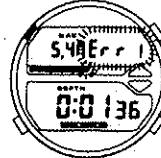
Note

Depth reading errors are not caused by malfunction, and normal depth measurement can be carried out after resetting the depth to 0 M (0 F). The related data, however, should not be relied on. Because of this, always switch first to the Timekeeping Mode and then back to the Depth Measurement Mode before continuing your diving/snorkeling if a depth reading error occurs.

Depth reading error message indicates that log data is incorrect.

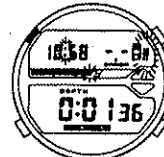
< Depth reading error message >

< Auto-reset to 0 meter >



Automatic 0 reset is performed even after the appearance of a depth reading error message. Measurements and log data storage into memory are performed normally, but the "I" mark continues to flash.

Sensor Error Detection



If your watch is subjected to extremely strong impact, the sensor may malfunction in the Depth Measurement Mode. In this case, an "ERROR" message will appear along with the warning mark "I" indicating incorrect data.

If a sensor error occurs, do not use your watch during diving/snorkeling. Consult with an Authorized CASIO Service Center as soon as possible.

What to do When a Warning Mark Appears

Warning marks indicate some abnormality was detected during Depth Measurement Mode measurements. The warning marks also appear when the data is recalled from the log memory.

The following table describes the meanings of the warning marks.

Warning Mark	Meaning	Possible Cause
I	Absolute Depth	• Entry into Depth Measurement Mode while submerged • Incorrect 0 M reset.
	Depth Error	• Large temperature or pressure change. • Impossible depth (such as negative value) measured.
II	Sensor Error	• Measurement impossible due to sensor malfunction.
	Low Battery Warning	• Low battery power. Display light and sensor measurement operation disabled.

NOTES ON OPERATION

Wide variations in temperature

In some cases, when this watch is exposed to widely varying temperatures, correct pressure measurement may become impossible.

Examples:

- Watch is exposed to direct sunlight for an extended period.
- Watch is stored in an automobile exposed to direct sunlight for an extended period.

If the watch has been exposed to high temperatures, cool it at water temperature for 2 to 3 minutes before using it.

If the watch is subjected to large temperature variations, the display may show a depth of 1.0 meter (4 ft) or greater even at sea level, or other depth measurement errors may be generated.

Wide variations in depth

As depth readings are made every three seconds, the depth reading may differ from the actual depth in cases where sudden changes in depth are made.

High-altitude diving/snorkeling and Fresh-water diving/snorkeling

The depth reading is automatically reset to "0 M (0 F)" whenever the Depth Measurement Mode is entered, so you can use this watch for diving at altitudes. Note, however, that malfunctions occur when diving at altitudes greater than approximately 4,000 meters (13,000 ft). In addition, as this watch bases its calculations on sea water, which has a specific gravity of 1.025, readings will be incorrect during fresh-water diving. During fresh-water dives, you must assume that you are approximately 2.5% deeper than the depth shown on the display.

Example: When displayed depth is 5 meters, actual depth is $5 \times 1.025 = 5.1$ meters.

STOPWATCH MODE

The Stopwatch Mode lets you record elapsed time, split times, and two finishes. The range of the stopwatch is 23 hours, 59 minutes, 59.99 seconds.

(a) Elapsed time measurement

(D) Start → (C) Stop → (D) Re-start → (D) Stop → (B) Clear

(b) Split time measurement

(D) Start → (B) Split → (B) Split release → (D) Stop → (B) Clear

(c) Split time and 1st-2nd place times

(D) Start → (B) Split First runner finishes. → (D) Stop Second runner finishes. Record time of first runner. → (B) Split release Record time of second runner. → (B) Clear

