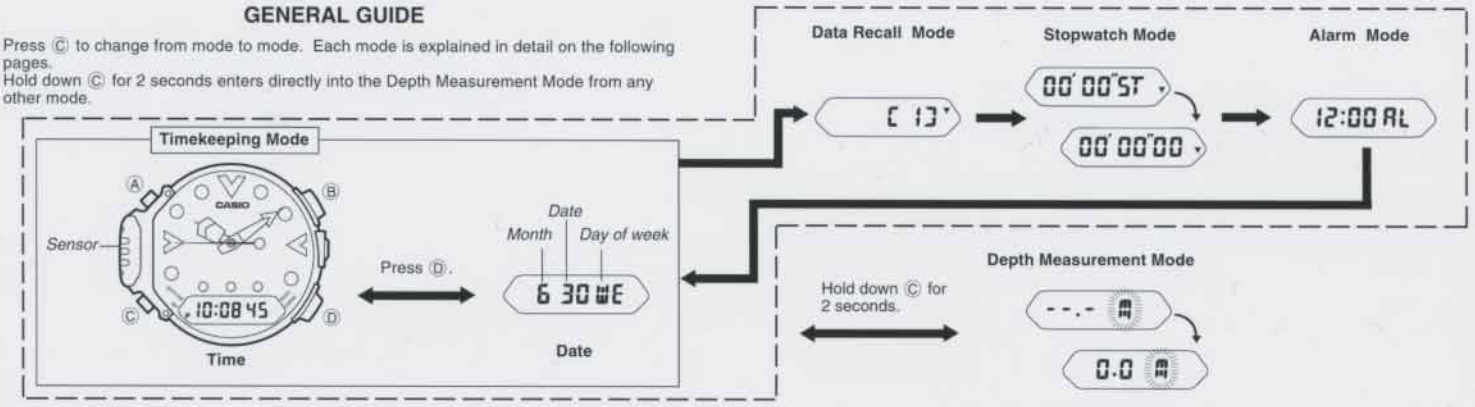
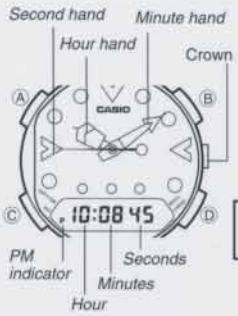
Module No. 732

GENERAL GUIDE

- Press Ⓒ to change from mode to mode. Each mode is explained in detail on the following pages.
- Hold down Ⓒ for 2 seconds enters directly into the Depth Measurement Mode from any other mode.



TIMEKEEPING MODE



- In the Timekeeping Mode, press Ⓓ to switch between time and date displays.

To set the digital time and date

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



3. While the seconds digits are selected (flashing), press Ⓓ to reset the seconds to "00". If you press Ⓓ 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 Ⓓ to increase the number or Ⓑ to decrease it. Holding down either button changes the current selection at high speed.
   While the 12/24-hour setting is selected, press Ⓓ or Ⓑ to switch between the two formats.
5. After you set the time, format, and date, press Ⓐ to return to the Timekeeping Mode.

- 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.
- 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.

To set the analog time

1. Pull the crown out to stop the seconds hand. If you plan to restart analog timekeeping on some time signal (from the radio or television), pull the crown out when the seconds hand in at the 12 o'clock position.
2. Set the hands by turning the crown.
3. Push the crown back in to restart timekeeping.

- Analog time is kept by a mechanical timepiece. Because of this, the second hand may not start to move exactly when you push the crown back in.
- You can set the analog time to match the digital time setting, or you can set it to a different time.

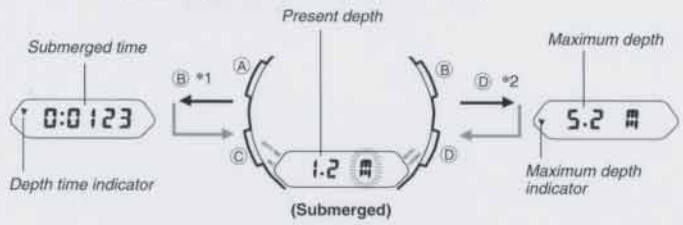
DEPTH MEASUREMENT MODE

The pressure sensor of this watch provides useful diving/snorkeling data. Besides automatically measuring depths in the Depth Measurement Mode, the watch also stores 10 sets of depth data into log memories for later recall.
You can also change the measured values displayed by the watch between meters (M) and feet (F).

- See "Helpful Hints on Depth Measurement Functions" for more detailed information.

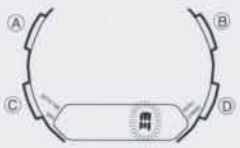
Important !
This watch is designed to start depth measurements and record data in the log memory after a depth of 1 meter (4 feet) is reached. Because of this, the explanations in this User's Guide uses the term " **submerged** " to refer to any depth deeper than 1 meter, and the " **on the surface**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

Understanding the Depth Measurement Mode display



*1 Hold down Ⓑ to display the total time submerged. This time is displayed regardless of whether you are currently submerged or on the surface.
*2 Hold down Ⓓ to display the maximum depth. This depth is displayed regardless of whether you are currently submerged or on the surface.

To switch between meters and feet

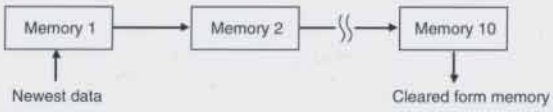


1. While not submerged, enter the Depth Measurement Mode. The depth display should show 0.0 M or 0 F.
2. Hold down Ⓐ until the M or F (whichever is on the display) starts to flash.
3. Press Ⓓ to select either meters (M) or feet (F).
4. After you make your selection, press Ⓐ to return to the Depth Measurement Mode.

About the log memories

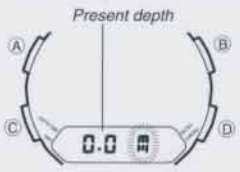
You can store up to 10 sets of log data in memory. Once memory is full, it is updated by recording the newest data and deleting the oldest data.
The following data is stored in memory for each measurement.

- Submerged (Depth) time — Accumulated time (hours, minutes, seconds) you are submerged
- Maximum depth

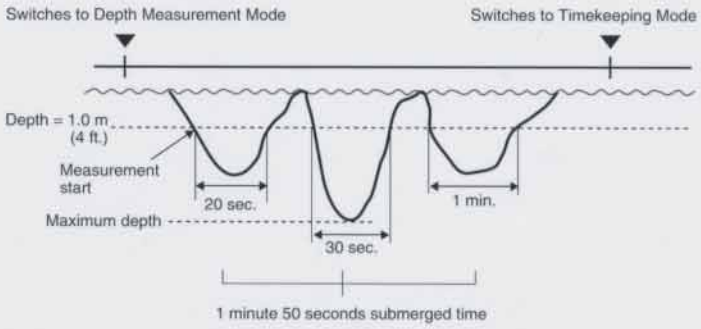


The measured data can be recalled and manually deleted in the Data Recall Mode.

To Use the Depth Measurement Mode



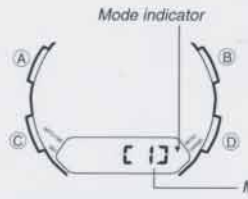
1. Before diving/snorkeling, switch to the Depth Measurement Mode by holding down Ⓒ for at least two seconds.
2. After diving/snorkeling, switch back to the Timekeeping Mode by holding down Ⓒ for at least two seconds. At this time, the log data is stored in memory.



Notes

- Once set to the Depth Measurement Mode, the depth measurement function will automatically make submerged time and depth calculations.
- While you are submerged, the watch will not revert to the Timekeeping Mode even if you hold down Ⓒ. This protects against accidentally changing from the Depth Measurement Mode to the Timekeeping Mode while submerged.
- If you do not press any button on the surface (depth of "0") for one hour, the watch automatically returns to the Timekeeping Mode.
- Whenever the submerged time reaches six hours, the watch automatically switches to the Timekeeping Mode.

DATA RECALL MODE



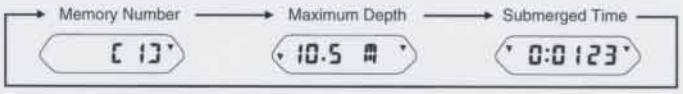
[Memory Number Display]

Use the Data Recall Mode to recall and delete the log data from memory. Whenever you enter the Data Recall Mode from another mode, the newest data is displayed first.

- If you do not press any button for one hour in the Data Recall Mode, the display returns to the Timekeeping Mode automatically.

To recall data from memory

1. In the Data Recall Mode, press (B) to scroll through the displays for memory numbers 1 through 10.
2. While any one of the memory set displays is shown, press (D) to scroll through the data contained in that set in the following sequence.



- Data accompanied by a warning mark (!) is possibly invalid.



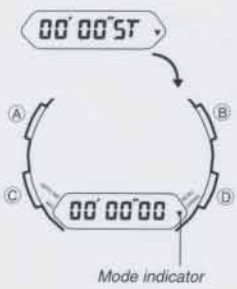
To delete data from memory

1. In the Data Recall Mode, display the memory number display for the set of data you want to delete.

Important!
The delete operation erases the entire set of data you have selected. You cannot delete parts of a set of data.

2. Holding down (A) until the memory number starts to flash.
3. To clear all of the data in the currently displayed set, holding down (C) and (D) simultaneously until the display shows "CLEAR".

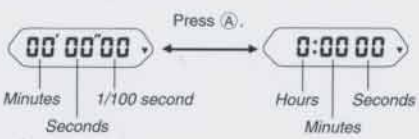
STOPWATCH MODE



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

To change the measured time format

In the Stopwatch Mode, press (A) to change the measure time display format between minutes (00'00"00) and hours (0:00 00).



To measure elapsed time

1. Press (D) to start the stopwatch.
2. Press (D) to stop the stopwatch.
- You can resume the measurement operation by pressing (D) again.
3. Press (B) to clear the stopwatch to all zeros.

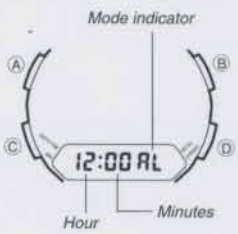
To record split times

1. Press (D) to start the stopwatch.
2. Press (B) to display the timing up to that point. Stopwatch timing continues internally.
3. Press (B) to clear the split time and to continue time measurement on the display.
- You can repeat steps 2 and 3 as many times as you want.
4. Press (D) to stop the time measurement.
5. Press (B) to clear the stopwatch to all zeros.

To time first and second place finishes

1. Press (D) to start the stopwatch.
2. Press (B) when the first finisher crossed the line, and record the time.
3. Press (D) when the second finisher cross the line.
4. Press (B) to display the finishing time of the second finisher.
5. Press (B) again to clear the stopwatch to all zeros.

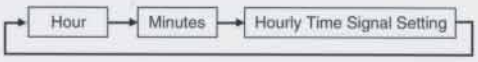
ALARM MODE



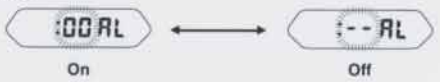
When the Daily Alarm is switched on, the alarm sounds for 20 seconds at the preset time each day. Press any button to stop the alarm after it starts to sound.
When the Hourly Time Signal is switched on, the watch beeps every hour on the hour.
Note that the Daily Alarm and the Hourly Time Signal operate based on the digital time setting.

To set the alarm time and switch the Hourly Time Signal on and off

1. Hold down (A) while in the Alarm Mode until the hours digits start to flash on the display. The hours digits flash because they are *selected*. At this time the Daily Alarm is switched on automatically.
2. Press (C) to change the selection in the following sequence.



3. Press (D) to increase the selected hour or minutes digits or (B) 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 (am) or afternoon (pm).
4. While the Hourly Time Signal setting is selected, press (B) or (D) to switch the hourly time signal on and off.



5. After you set the alarm time, press (A) to return to the Alarm Mode.

To switch the Daily Alarm on and off

While in the Alarm Mode, press (D) to switch the Daily Alarm on and off.



About the alarm

There are two different alarm sounds to choose from : high and low.

To test the alarm

Hold down (B) while in the Alarm Mode to sound the alarm. Each time you test the alarm (by holding down (B)) a different alarm sounds. The sound produced the last time you test the alarm is the one used for the alarm.

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

- Submerged 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 "FULL" when 50 meters (164 ft.) is exceeded.

  Reading frequency: every 3 seconds

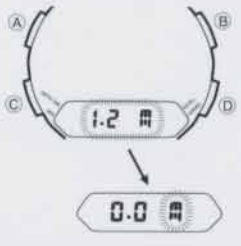
Operation of pressure sensor and "0 M (0 F)" reset

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 submerged 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 that compares a standard value with the sensor value to provide an absolute pressure reading whenever either of the two operations is performed:

- Automatic Reset
  Whenever you enter the Depth Measurement Mode while at a depth less than 1 meter (4 ft.).
- Manual Reset
  Whenever you hold down (C) and (D) for at least one second while underwater.

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 warning mark "!" 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 holding down Ⓒ. If it becomes necessary to switch to the Timekeeping Mode during a dive (when the watch is used in environments where temperature varies widely from the suggested operating temperature range), you can do so by holding down Ⓐ, Ⓑ, Ⓒ, and Ⓓ for at least two seconds.

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

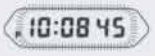
Weak Battery Power

The message "HELP" appears on the display or the display starts to flash to let you know that batteries are getting weak. While this happens, 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) >



Display flashing

Notes
- No Depth Measurement Mode measurement 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 "Error" appears on the display for three seconds, followed by a warning mark "!". Most of the time, depth errors occur on the surface, and so the reading is automatically reset to 0 M (0 F) 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.



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 "!" mark remains on the display.

Sensor Error Detection

If your watch is subjected to extremely strong impact, the sensor may malfunction in the Depth Measurement Mode. In this case, a "SENSOR Error" message will appear along with the warning mark " ! " 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.

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.