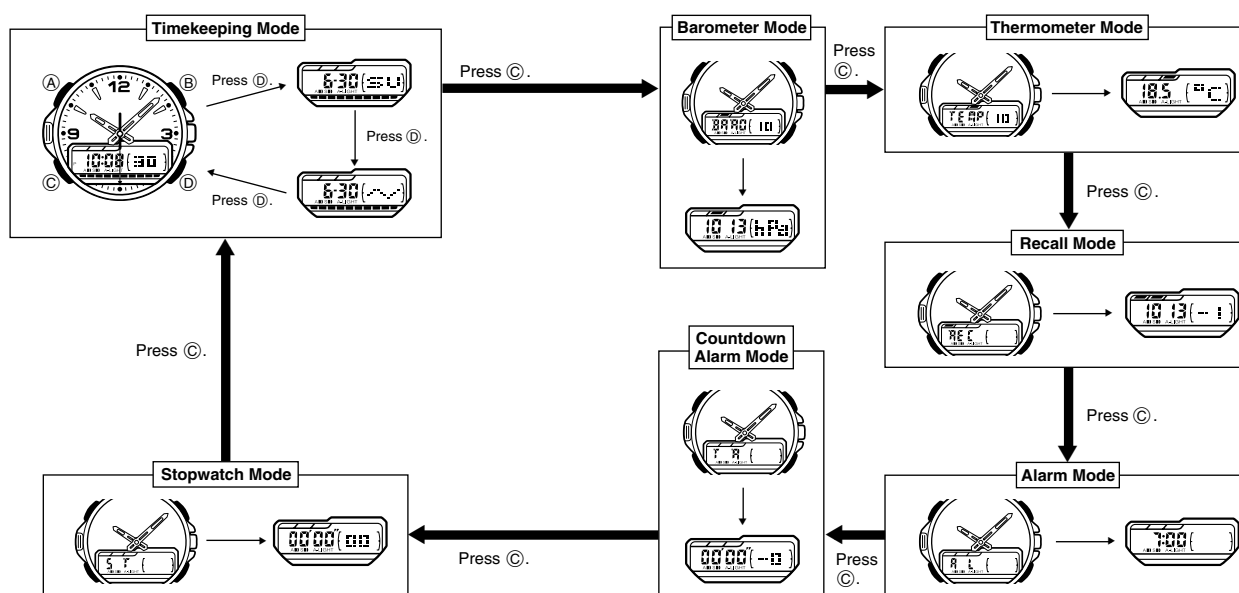


GENERAL GUIDE

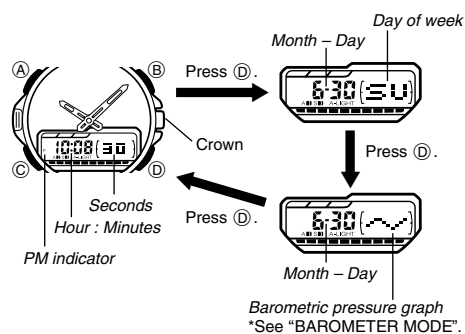
- Press **C** to change from mode to mode.
- Holding down **C** in any mode for about one second returns to the normal timekeeping screen.
- Pressing **C** after performing some operation in the Recall Mode, Alarm Mode, or Countdown Alarm Mode returns to the normal timekeeping screen.

- Pressing **B** in any mode besides the Countdown Alarm Mode or Stopwatch Mode illuminates the display for about 1.5 second. The backlight is disabled while a setting screen is on the display.
- The backlight of Module 2347 illuminates both the digital display and analog face. The backlight of Module 2345 illuminates the digital display only.
- If you do not perform any operation for a few minutes while a setting screen (with flashing digits) is on the display, the watch automatically exits the setting screen.
- If you do not perform any operation for about 10 hours in the Barometer Mode or Thermometer Mode, the watch automatically reverts to the Timekeeping Mode screen.



TIMEKEEPING MODE

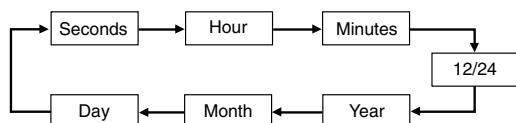
- Pressing **D** changes the display in the sequence shown below.



- The display type you select is used until you change it.

To set the time, date and display contrast

- While in the Timekeeping Mode, hold down **A** until the seconds digits flash on the display.
- Press **C** to move the selection (flashing) in the following sequence.



- While the seconds setting is selected (flashing), press **D** to reset it to 00. If you press **D** while the seconds setting is in the range of 30 to 59, the seconds are reset to 00 and 1 is added to the minutes. If the seconds setting is in the range of 00 to 29, the minutes count is unchanged.
- While the 12/24-hour format setting is selected, press **D** to toggle it between 12 and 24.
- When the 12-hour format is selected, the indicator **P** appears on the display to indicate "p.m." times. There is no indicator for "a.m." times. Selecting the 24-hour format causes the **24** to appear on the display.

- While any other setting is selected (flashing), press **D** to increase the number or **B** to decrease it.
- Holding down either button changes the setting at high speed.
- After you set the time and date, press **A** to change to the contrast setting screen.
- The indicator **CNT** appears on the left of the screen, and the value indicating the current contrast setting flashes on the right.
- You can set the contrast to one of 11 levels in the range of -5 to +5.
- Press **D** to make the display darker, or **B** to make it lighter.
- After the contrast is the setting you want, press **A** to return to the normal timekeeping screen.
- The day of the week is automatically set in accordance with the date.
- The date can be set within the range of January 1, 1995 to December 31, 2039.
- The watch's built-in full automatic calendar automatically makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after the replacement of the watch's battery.

To set the analog time

- Pull the crown out to stop the second hand.
 - If you plan to restart analog timekeeping on some time signal (from the radio or television), pull the crown out when the second hand is at the 12 o'clock position.
 - Set the hands by turning the crown.
 - 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.

ABOUT THE BACKLIGHT

This watch features an electroluminescent (EL) backlight that helps you easily read the face, even in total darkness. Its auto light switch automatically lights the watch face whenever you turn your wrist towards your face.



- The backlight of Module 2347 illuminates both the digital display and analog face. The backlight of Module 2345 illuminates the digital display only.

Note

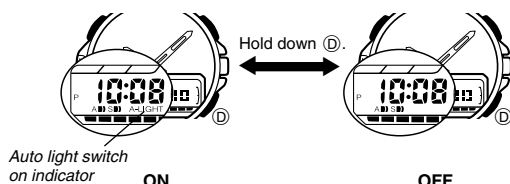
- The backlight of the watch employs an electroluminescent (EL) light, which loses illuminating power after very long use.
- Frequent use of the backlight shortens the battery life.
- The illumination provided by the backlight may be hard to see when viewed under direct sunlight.
- The watch will emit an audible sound whenever the display is illuminated. It does not indicate malfunction of the watch.
- The backlight automatically turns off whenever an alarm sounds.

To manually turn on the backlight

- Pressing **B** in any mode besides the Countdown Alarm Mode or Stopwatch Mode illuminates the display for about 1.5 second. The backlight is disabled while a setting screen is on the display.

To switch the auto light switch on and off

While in the Timekeeping Mode, hold down **D** for one second to turn the auto light switch on and off.



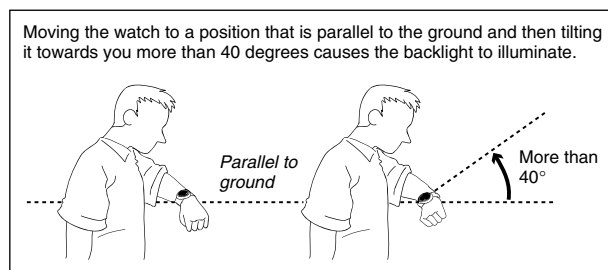
- Note that pressing **D** also changes the display.
- The auto light switch on indicator is shown on the display in all modes while the auto light switch is on.
- In order to protect against running down the battery, the auto light switch is automatically turned off approximately six hours after you turn it on. Repeat the above procedure to turn the auto light switch back on if you want.
- Pressing **B** in any mode besides the Countdown Alarm Mode or Stopwatch Mode illuminates the display for about 1.5 second, regardless of the auto light switch on/off setting.

About the auto light switch

While the auto light switch is turned on, the backlight automatically lights for about 1.5 second in any mode whenever you position your wrist as described below.

Important!

Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life.



- The backlight may not illuminate if the face of the watch is more than 15 degrees off parallel as shown below. Make sure that the back of your hand is parallel to the ground.



- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If the backlight does not illuminate, try moving the watch back to the starting position (parallel with the ground) and then tilt it back towards you again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.
- Under certain conditions the backlight may not light until about one second or less after turn the face of the watch towards you. This does not necessarily indicate malfunction of the backlight.

Warning!

- Never try to read your watch when mountain climbing or hiking in areas that are dark or in areas with poor footing. Doing so is dangerous and can result in serious personal injury.
- Never try to read your watch when running where there is the danger of accidents, especially in locations where there might be vehicular or pedestrian traffic. Doing so is dangerous and can result in serious personal injury.
- Never try to read your watch when riding on a bicycle or when operating a motorcycle or any other motor vehicle. Doing so is dangerous and can result in a traffic accident and serious personal injury.
- When you are wearing the watch, make sure that its auto light switch is turned off before riding on a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the backlight can create a distraction, which can result in a traffic accident and serious personal injury.

BAROMETER MODE

This watch uses a pressure sensor to measure barometric pressure. It can be adjusted to correct for measurement error.

Important !

The barometer that is built into this watch measures changes in barometric pressure, which you can then apply to your own weather predictions. It is not intended for use as a precision instrument in official weather prediction or reporting applications.

Example barometer applications

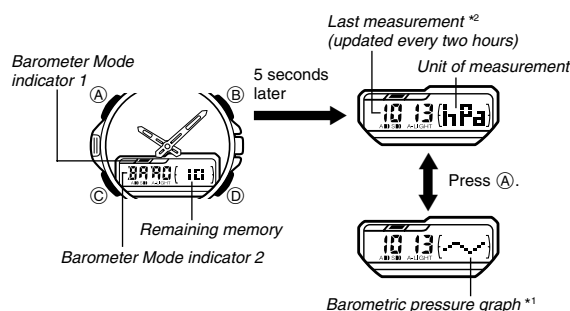
- Before going mountain climbing, you can take readings to predict upcoming weather.
- You can predict the weather for golf or other outdoor activities.

About barometric pressure measurements

The watch takes barometric pressure measurements every five seconds for the first two minutes after you enter the Barometer Mode. The Barometer Mode indicator 1 flashes on the display during these two minutes.

After the first two minutes, the Barometer Mode indicator 1 stops flashing, and the watch automatically takes measurements every two hours (starting from midnight).

The watch continues to take barometric pressure readings every two hours, even if you change to another mode. Measurement data can be viewed on the Timekeeping Mode screen on the barometric pressure graph.

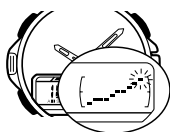


*1 The barometric pressure graph shows the barometric pressure readings for the past 18 hours. The flashing point on the right of the display is the point of the last measurement.

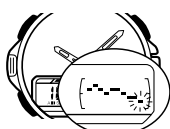
*2 The displays show "--- hPa" (or inHg) if a measured value falls outside the range of 460 hPa/mb to 1100 hPa/mb (13.55 inHg to 32.45 inHg). The normal display will return as soon as the pressure returns with the allowable range.

Using the barometric pressure graph

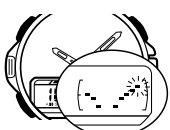
Barometric pressure is affected by changes in weather and temperature. The following shows how to interpret the data that appears on the barometric pressure graph.



A rising graph generally means better weather.



A falling graph generally means deteriorating weather.



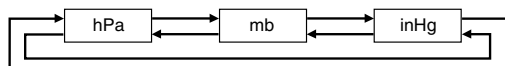
Note that if there are sudden changes in weather or temperature, the graph line of past measurements may run off the top or bottom of the display. The entire graph will become visible once barometric pressure conditions stabilize.

The following conditions cause the barometric pressure measurement to be skipped, with the corresponding point on the barometric pressure graph being left blank.

- Barometric reading that is out of range (460 hPa/mb to 1100 hPa/mb/13.55 inHg to 32.45 inHg).
- Sensor malfunction.
- Dead battery.

Selecting the unit of measurement

1. Use **(C)** to enter the Barometer Mode.
2. Hold down **(A)** until "OFF" or the current barometric pressure value flashes on the display.
3. Press **(C)** to change to the measurement unit selection screen.
4. Each press of **(D)** or **(B)** cycles the barometric pressure measurement unit as shown below.



5. After you select the measurement unit you want, press **(A)** to return to the Barometer Mode screen.
- Note that all measurement data currently in memory is also deleted whenever you change the barometric pressure or temperature unit of measurement.

Calibrating the barometric pressure measurement

The sensor of this watch is calibrated at the factory before shipment, and further adjustment is normally not required. If noticeable error is found in the barometric pressure readings produced by the watch, you can adjust it to correct the error.

Important!

Incorrectly calibrating the barometric pressure measurement of this watch can result in incorrect readings. Compare the readings produced by the watch with those of another reliable, accurate barometer.

To calibrate the barometric pressure

1. Use **(C)** to enter the Barometer Mode.
2. Hold down **(A)** until "OFF" or the current barometric pressure calibration value flashes on the display.
- "OFF" appears when the factory setting is currently set as the current barometric pressure calibration value.
3. Each press of **(D)** increases the displayed barometric pressure by 1 hPa/mb, while pressing **(B)** decreases it. Holding down either button changes the value at high speed.
- If inHg is currently selected as the unit of measurement, the above operations change the reading by 0.05 inHg.
- Pressing **(B)** and **(D)** at the same time returns to the "OFF" setting.
4. After calibrating the barometric pressure, press **(A)** to return to the Barometer Mode screen.

THERMOMETER MODE

A built-in temperature sensor measures temperature and shows the measured value on the display. The thermometer can be calibrated to correct for errors.

Important!

Temperature measurements are affected by your body temperature (while you are wearing the watch), direct sunlight, and moisture. To achieve a more accurate temperature measurement, remove the watch from your wrist, place it in a well-ventilated location out of direct sunlight, and wipe off all moisture from the case. It takes approximately 20 to 30 minutes for the case of the watch to reach the temperature of the surrounding air.

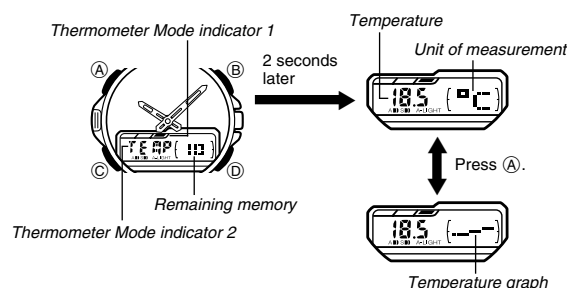
About temperature measurements

The watch takes temperature measurements every five seconds for the first two minutes after you enter the Thermometer Mode. The Thermometer Mode indicator 1 flashes on the display during these two minutes.

After the first two minutes, the Thermometer Mode indicator 1 stops flashing, and the watch automatically takes measurements every five minutes.

Understanding the temperature display

The display shows "— . — °C" (or °F) if a measured value falls outside the range of -10.0°C to 60.0°C (14.0°F to 140.0°F). The normal display will return as soon as the temperature returns within the allowable range.



Selecting the measurement unit

1. Use **(C)** to enter the Thermometer Mode.
2. Hold down **(A)** until "OFF" or the current temperature calibration value flashes on the display.
3. Press **(C)** to change to the measurement unit selection screen.
4. Each press of **(D)** or **(B)** toggles the temperature measurement unit as shown below.



5. After you select the measurement unit you want, press **(A)** to return to the Thermometer Mode screen.
- Note that all measurement data currently in memory is also deleted whenever you change the barometric pressure or temperature unit of measurement.

Calibrating the temperature measurement

The temperature sensor of this watch is calibrated at the factory before shipment, and further adjustment is normally not required. If noticeable error is found in the temperature readings produced by the watch, you can adjust it to correct the error.

Important!

Incorrectly calibrating the temperature measurement of this watch can result in incorrect readings. Carefully read the following before doing anything.

- Compare the readings produced by the watch with those of another reliable, accurate thermometer.
- If adjustment is required, remove the watch from your wrist and wait for 20 or 30 minutes to give the temperature of the watch time to stabilize.

To calibrate the temperature

1. Use **(C)** to enter the Thermometer Mode.
2. Hold down **(A)** until "OFF" or the current temperature calibration value flashes on the display.
- "OFF" appears when the factory setting is currently set as the current temperature calibration value.
3. Each press of **(D)** increases the displayed temperature by 0.1°C, while pressing **(B)** decreases it. Holding down either button changes the value at high speed.
- If Fahrenheit is currently selected as the unit of measurement, the above operations change the reading by 0.2°F.
- Pressing **(B)** and **(D)** at the same time returns to the "OFF" setting.
4. After calibrating the temperature, press **(A)** to return to the Thermometer Mode screen.

MEMORY

The watch is equipped with memory that you can use to store up to 10 barometric pressure and temperature readings. Note that the date and time of the measurement is not included with the data. The number of available blank records that can be used to store data is shown on the right side of the Barometer and Thermometer Mode screens.

Storing a Measurement

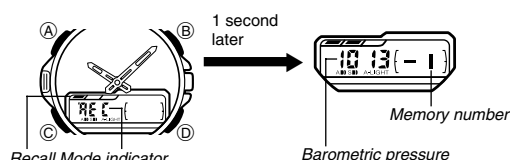
While in the Barometer or Thermometer Mode, hold down **(D)** for about one second until the watch beeps, indicating that the latest measurement is stored in memory.

- The message "FULL" appears on the display for about one second when you hold down **(D)** while memory is full. No more data can be stored while memory is full.
- If you want to store more data after memory becomes full, use the procedure under "Recall Mode" below to delete the current data to make room for new data.

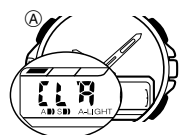
RECALL MODE

Recalling data

1. Use **(C)** to enter the Recall Mode.
 2. Each press of **(D)** cycles through the barometric pressure and temperature data in memory. Mode indicators appear to tell you what type of data is currently displayed.
- Note that measurement units are not indicated on the Recall Mode screens.
 - The display shows "-----" if there is no data.



Deleting Data



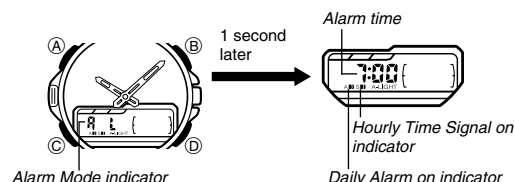
While in the Recall Mode, hold down **(A)**. The watch beeps, and the message **CLR** flashes on the display to indicate data is about to be deleted. Keep **(A)** depressed for about two seconds to delete all the measurement data currently in memory.

- Note that this procedure deletes all measurement data in memory. You cannot delete individual records.

ALARM MODE

When the Daily Alarm is turned 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 turned on, the watch beeps every hour on the hour.



To set the alarm time

1. Hold down **(A)** until the hour digits start to flash on the display. The hour digits flash because they are *selected*. At this time the alarm is automatically turned on.
2. Press **(C)** to change the selection in the sequence shown below.



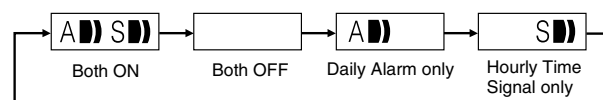
3. Press **(D)** to increase the number or **(B)** to decrease it.
 - Holding down either button changes the setting at high speed.
4. After you set the alarm time, press **(A)** to return to the Alarm Mode screen.
- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning or afternoon.

To stop the alarm

- Press any button to stop the alarm after it starts to sound.

To turn 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 sequence shown below.



- The Daily Alarm and Hourly Time Signal on indicator is displayed in all modes.

To test the alarm

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

- Note that pressing **(D)** also changes the Daily Alarm and Hourly Time Signal on and off settings.

COUNTDOWN ALARM MODE

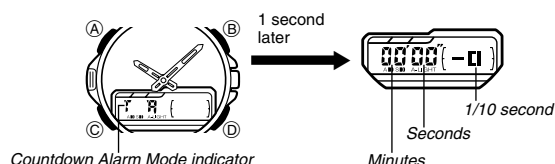
The countdown alarm can be set within a range of 10 seconds to 60 minutes. When the countdown reaches zero, an alarm sounds for 10 seconds or until you press any button.

About Auto-repeat

- When the end of the countdown is reached while Auto-repeat is on, the alarm sounds, but the countdown restarts from the beginning without stopping.
- To stop the countdown, press **(D)**. You can then manually reset to the start time by pressing **(B)**.
- If you set a starting time of 1 minute or less and have Auto-repeat turned on, the countdown alarm tone (which normally sounds for 10 seconds) sounds for only one second.

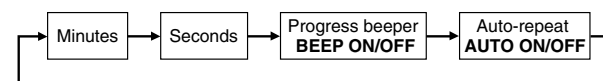
About the Progress Beeper

- When the Progress Beeper is turned on, the watch beeps as the countdown time passes the 10, 5, 4, 3, 2, and 1-minute marks, and the 50, 40, 30, 20, 10, 5, 4, 3, 2, and 1-second marks.
- Even if the Progress Beeper is turned on, it does not operate if you set a starting time of 1 minute or less and have Auto-repeat turned on.



To make countdown alarm settings

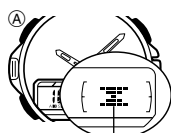
1. Hold down **(A)** while in the Countdown Alarm Mode. The minutes setting flashes on the display because they are *selected*.
2. Press **(C)** to change the selection in the following sequence.



3. Press **(D)** to increase the selected number or **(B)** to decrease it. Holding down either button changes the setting at high speed.
 - The seconds can be set in units of 10 seconds.
 - Set 0 minutes, 0 seconds to specify a start time of 60 minutes.
 - While the Progress Beeper ON/OFF setting is selected (flashing), press **(D)** or **(B)** to toggle the Progress Beeper on and off.
 - While the Auto-repeat ON/OFF setting is selected (flashing), press **(D)** or **(B)** to toggle Auto-repeat on and off.

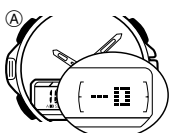
- After all the settings are the way you want, press (A) to exit the setting screen.
- The on/off status of Auto-repeat is indicated on the normal Countdown Alarm Mode screen as shown below. To view the Progress Beeper ON/OFF setting, you must display the setting screen.

Auto-repeat ON



Auto-repeat on indicator

Auto-repeat OFF

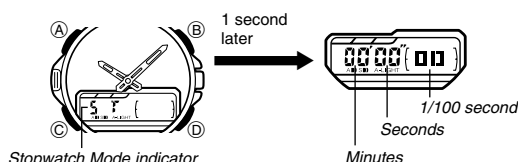


To use the countdown alarm

- Press (D) while in the Countdown Alarm Mode to start the countdown.
- Press (D) again to stop the countdown.
- You can resume countdown by pressing (D).
- Stop the countdown and then press (B) to reset the countdown time to its starting value.

STOPWATCH MODE

The Stopwatch Mode lets you record elapsed time, split times, and two finishes. The range of the stopwatch is 59 minutes, 59.99 seconds. Stopwatch functions are available in the Stopwatch Mode, which you can enter using (C).



(a) Elapsed time measurement

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

First runner finishes. Second runner finishes. Record time of first runner. Record time of second runner.

BATTERY REPLACEMENT

ALWAYS LEAVE BATTERY REPLACEMENT UP TO THE DEALER WHERE YOU BOUGHT THE WATCH OR TO AN AUTHORIZED CASIO DISTRIBUTOR. BE SURE TO SHOW THE FOLLOWING INFORMATION TO THE PERSON REPLACING THE BATTERY.

Attention dealer or CASIO distributor

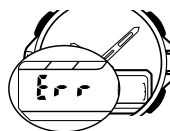
Be sure to use the following procedure when replacing the battery.

- Remove the back cover screws, and then remove the back cover.
 - Pull up the battery holder.
 - Remove the old battery and load a new one.
 - Close the battery holder.
 - Touch the AC contact and the battery (+) side with metallic tweezers.
 - Replace the back cover and secure it with the screws.
 - Check the display of the watch. If the message "OPEN" is on the display, it means the back cover is not closed correctly. Remove the back cover and carefully replace it again.
- * Absence of the "OPEN" message does not necessarily indicate an air-tight seal. Other tests are required to check for air tightness.

WARNING INDICATORS

This watch displays warning indicators to let you know when the sensor is malfunctioning and when battery power is low.

Err Display – Sensor Malfunction Warning

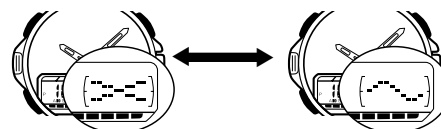


This message indicates malfunction of the watch's pressure sensor circuitry. When sensor malfunction initially occurs, the watch stops taking measurements, the "Err" message appears, and a buzzer sounds for about three seconds.

- If the sensor is malfunctioning when it comes time for a barometric pressure measurement to be taken, the barometric pressure value appears as "----" on the display and the corresponding point on the barometric pressure graph is left blank.
- Whenever there is a sensor malfunction, be sure to take the watch to an authorized CASIO distributor or Service Center as soon as possible.

Alteration of and Graph – Temporary Low Power Warning

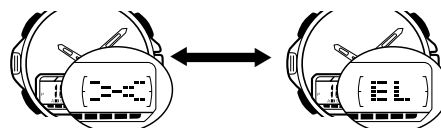
Temporary low power is indicated on the display when the battery level temporarily drops below a certain level.



- Sensors are disabled while the temporary low power warning is being indicated, but the light and tones are operational.
- Very low temperature can cause the low power warning to appear even though battery power is not low. The low power warning should disappear when the watch is restored to normal temperature.
- If the low power warning appears under normal temperature, replace the battery as soon as possible.

Alteration of and EL – Battery Usage Warning

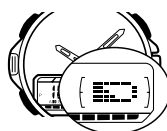
The watch automatically monitors your use of certain high battery drain functions. The battery usage warning display appears whenever the watch determines that your use of these functions is putting a heavy load on the battery.



- Sensors, the light, and tones are disabled while the battery usage warning is on the display.
- The following are the trigger values for the functions that are monitored for battery usage.

Light: 100	Sensor Operations: 1,000
Alarm: 100	Mode Change: 1,000
- The battery usage warning appears whenever any single function is performed the number of times noted above, or for any proportional number of operations of multiple functions (such as 50 light operations and 50 alarm operations, 50 light operations and 500 mode change operations, etc.).
- The monitor counter continues to be incremented as long as the duration between two high power drain operations is less than 15 minutes. The counter is reset to 0 whenever 15 minutes pass between operations.

Display – Low Power Warning



The low power warning appears to let you know that battery power is low.

- Sensors, the light, and tones are disabled while the low power warning is on the display.
- The low power warning may appear under very low temperatures, although battery power is not low. Correct operation should resume when the watch returns to normal temperature.
- If the low power warning appears under normal temperatures, have the watch's battery replaced as soon as possible.
- Be sure to read "BATTERY REPLACEMENT" before trying to replace the battery.

ABOUT ALTITUDE AND BAROMETRIC PRESSURE

Generally, barometric pressure and temperature decrease as altitude increases.

ALTITUDE	BAROMETRIC PRESSURE	TEMPERATURE
6000 m	472 hPa/mb	About 6.7 hPa/mb per 100 m -24°C
5500 m		
5000 m	540 hPa/mb	About 7 hPa/mb per 100 m -17.5°C
4500 m		
4000 m	616 hPa/mb	About 8 hPa/mb per 100 m -11°C
3500 m		
3000 m	701 hPa/mb	About 9 hPa/mb per 100 m -4.5°C
2500 m		About 6.5°C per 1000 m
2000 m	795 hPa/mb	About 10 hPa/mb per 100 m 2°C
1500 m		
1000 m	899 hPa/mb	About 11 hPa/mb per 100 m 8.5°C
500 m		
0 m	1013 hPa/mb	About 12 hPa/mb per 100 m 15°C

Source: International Civil Aviation Organization

ALTITUDE	BAROMETRIC PRESSURE	TEMPERATURE
20000 ft	13.76 inHg	About 0.119 inHg per 200 ft -12.2°F
18000 ft		
16000 ft	16.22 inHg	About 0.1315 inHg per 200 ft 2.0°F
14000 ft		
12000 ft	19.03 inHg	About 0.15 inHg per 200 ft -16.2°F
10000 ft		
8000 ft	22.23 inHg	About 0.17 inHg per 200 ft -30.5°F
6000 ft		
4000 ft	25.84 inHg	About 0.192 inHg per 200 ft 44.7°F
2000 ft		
0 ft	29.92 inHg	About 0.21 inHg per 200 ft 59.0°F

Source: International Civil Aviation Organization

Barometer

Barometric pressure indicates changes in the atmosphere, and by monitoring these changes you can predict the weather with reasonable accuracy. Rising barometric pressure indicates good weather, while falling pressure indicates deteriorating weather conditions.

The barometric pressures that you see in the newspaper and on the TV weather report are measurements corrected to values measured at 0 m sea level.