GETTING ACQUAINTED

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to carefully read this manual and keep it on hand for later reference when necessary.

Applications

The built in sensors of this watch measure altitude, barometric pressure, and temperature. Measured values are then shown on the display. Such features make this watch useful when hiking, mountain climbing, or when engaging in other such outdoor activities.

Warning!
- The measurement functions built into this watch are not intended for taking measurements that require professional or industrial precision. Values produced by this watch should be considered as reasonable representations only.
- CASIO COMPUTER CO., LTD. assumes no responsibility for any loss, or any claims by third parties that may arise through the use of this watch.
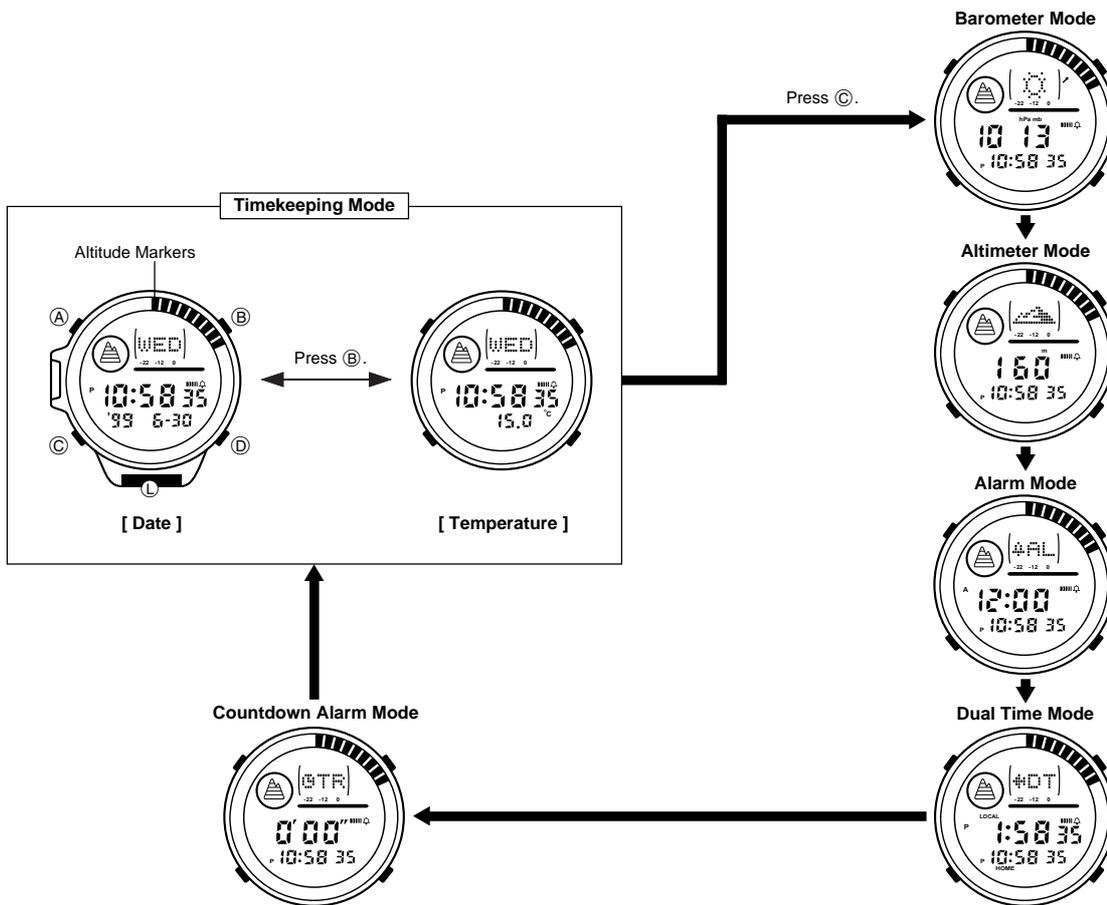
About This Manual

- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "REFERENCE" section.

GENERAL GUIDE

- Press Ⓒ to change from mode to mode.
- If the mode does not change when you press Ⓒ, it may mean that Auto Display is turned on. See "Auto Display" for information about how to turn it off.
- In any mode, press Ⓛ to illuminate the display.

Timekeeping Mode

Altitude Markers

Press Ⓑ.

[Date]   **[Temperature]**

Press Ⓒ.

Barometer Mode

Altimeter Mode

Alarm Mode

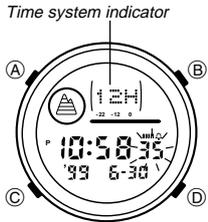**Dual Time Mode**

Countdown Alarm Mode

TIMEKEEPING

In addition to normal timekeeping, use the Timekeeping Mode to set the current time and date.

Calibrating the Seconds Count

Use the following procedure to calibrate the seconds count. You can also specify whether you prefer to use 12-hour or 24-hour timekeeping for all screen that show times.
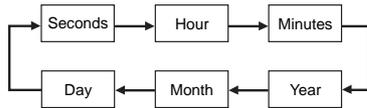
Time system indicator

1. In the Timekeeping Mode, hold down Ⓐ until the seconds digits start to flash.
2. Press Ⓓ to set the seconds count to `00`.
   - Pressing Ⓓ while the seconds count is in the range of 30 to 59 resets the seconds to `00` and adds 1 to the minutes. If the seconds count is in the range of 00 to 29, the minutes count is unchanged.
   - While the seconds digits are flashing, press Ⓑ to toggle between 12-hour (`12H`) and 24-hour (`24H`) timekeeping.
3. Press Ⓐ to return to the current time screen.

Setting the Current Time and Date

Hour : Minutes   Seconds
Day of week
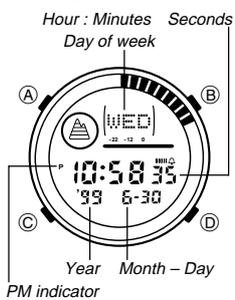
1. In the Timekeeping Mode, hold down Ⓐ until the seconds digits start to flash.
   - The seconds digits are flashing because they are *selected.*
2. Press Ⓒ to move the flashing in the sequence shown below to select other settings.

Year   Month – Day
PM indicator

Seconds → Hour → Minutes → Year → Month → Day → (back to Seconds)

3. While hour, minutes, year, month, or day is selected (flashing), press Ⓓ to increase the setting or Ⓑ to decrease it.
4. After the time and date are set the way you want them, press Ⓐ to return to the current time screen.

Notes
- The day of the week is automatically displayed in accordance with the date (year, month, and day) setting.
- The year can be set in the range of 1995 to 2039.
- The watch's built-in full automatic calendar automatically make allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after replacement of the watch's batteries.

THERMOMETER

A built-in temperature sensor measures temperature and shows the measured value on the display. You can calibrate the temperature sensor if you suspect the temperature reading is incorrect.

Understanding the Temperature Screen

1. Use Ⓒ to enter the Timekeeping Mode.
2. Press Ⓑ to display the Temperature screen.
   - Temperature is displayed in units of 0.1°C (or 0.2°F).
   - The displayed temperature value changes to `--.-` °C (or °F) if a measured temperature falls outside the range of –10.0°C to 60.0°C (14.0°F to 140.0°F). The temperature value will be displayed again as soon as the measured temperature is within the allowable range.

Temperature

About Temperature Measurements
- When you first display the Temperature screen, it shows the current temperature at that time. If you leave the Temperature screen on the display, temperature measurements are taken every five seconds for the first three minutes. After that, temperature measurements are taken every five minutes.
- 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 actual surrounding temperature.
- You can change the measured temperature value displayed by this watch between Celsius (°C) and Fahrenheit (°F). See "Changing the Temperature Units" .

BAROMETER

This watch uses a pressure sensor to measure air pressure. You can calibrate the pressure sensor if you suspect the barometric pressure reading is incorrect.

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

Important!
- The pressure sensor built into this watch measures changes in air 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.
- The barometric pressures that you see in the newspaper and on the TV weather report are measurements corrected to values measured at 0m sea level.

Understanding the Barometer Screen

Barometric pressure graph
Weather graphic
Pressure tendency indicator
Current time
Barometic pressure
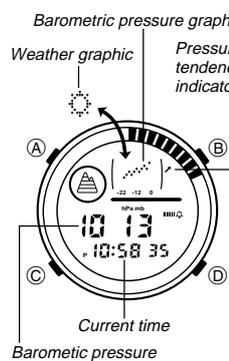
Use Ⓒ to enter the Barometer Mode.
- Barometric pressure is displayed in units of 1hPa/mb (or 0.05inchesHg).
- The displayed barometric pressure value changes to `----` hPa/mb (or inHg) if a measured barometric pressure falls outside the range of 460hPa/mb to 1100hPa/mb (13.55inHg to 32.45inHg). The barometric pressure value will be displayed again as soon as the measured barometric pressure is within the allowable range.
- In the Barometer Mode, the top part of the display alternates between a barometric pressure graph and a weather graphic. A pressure tendency indicator is also shown on the display.

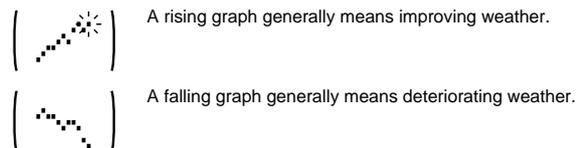### Weather Graphic and Pressure Tendency Indicator
The watch automatically takes a barometric pressure reading every two hours. It compares the current reading with the last one. If the difference is greater than ±2hPa/mb (0.05inHg), the graphic and tendency indicator are changed accordingly.

	Improving	No Change	Deteriorating
Weather Graphic	☼ → ☼	/	☼ → ▦
Tendency Indicator	↗	→	↘

- If the difference between two readings is less than ±2hPa/mb (0.05inHg) or if the watch was unable to make a successful reading for some reason, the graphic remains the same and the tendency indicator shows →.
- The "Improving" graphic and rising tendency indicator are shown immediately after replacement of the watch batteries.

Barometric pressure graph
Barometric pressure indicates changes in the atmosphere. By monitoring these changes you can predict the weather with reasonable accuracy.
The barometric pressure graph shows the barometric readings for the past 20 hours. The flashing point on the right of the display is the point for the last measurement. The following shows how to interpret the data that appears on the barometric pressure graph.

A rising graph generally means improving 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 conditions stabilize.

Not visible on the display.

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 (460hPa/mb to 1100hPa/mb or 13.55inHg to 32.45inHg)
- Sensor malfunction
- Dead batteries

About Barometric Measurements

- The barometer automatically takes measurements every two hours (starting from midnight), regardless of what mode you are in. The results of these measurements are used for the weather graphic, pressure tendency indicator, and barometric pressure graph.
- Barometric pressure measurements are also taken every five seconds for three minutes after you enter the Barometer Mode. After that, the measurements are taken every five minutes. The results of these measurements are used to produce the numeric barometric pressure values that appear on the display.
- You can also perform a barometric pressure measurement at any time by pressing Ⓓ in the Barometer Mode. A manual measurement updates the barometric pressure value on the display.
- You can change the measured barometric pressure unit between hecto-pascals/millibars (hPa mb) and inchesHg (inHg). See "Changing the Barometric Pressure Units" for details.
- Some countries refer to the barometric pressure unit hecto-pascal (hPa) as millibars (mb). It really makes no difference, because 1hPa = 1mb. In this manual, we use hPa/mb or hPa (mb).
- Sudden temperature changes can affect pressure sensor readings.
- Attaching the watch to or removing it from your wrist causes a sudden change in watch temperature, which can result in incorrect indications by the weather graphic and pressure tendency indicator.

ALTIMETER

A built-in altimeter uses a pressure sensor to detect the current air pressure, which is then used to estimate the current altitude. The watch is pre-programmed with ISA (International Standard Atmosphere) preset values, which are used to convert air pressure readings to altitude values. You should remember, however, that conversion values are based on ideal conditions. The air pressure readings taken by the watch are also affected by weather, temperature, and other factors, beside altitude. To overcome this, you can set a *reference altitude* based on a known value, which is used by the watch to make the necessary adjustments for non-altitude factors.
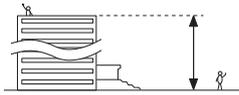
How the Altimeter Mode Works

With the Preset Values (No Reference Altitude)
- The watch measures the air pressure at your current location and uses the built-in ISA values to convert it to the equivalent altitude.
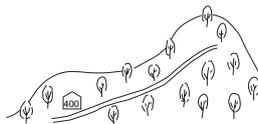
With a Reference Altitude
- After you set the reference altitude, the watch adjusts its air pressure to altitude conversion calculation accordingly.
- To determine the height of a tall building, set the reference altitude to 0 on the ground floor. Note, however, that you may not be able to get a good reading if the building is pressurized or air conditioned.
- When mountain climbing, you can set the reference value in accordance with a marker along the way or altitude information from a map. After you do this, the altitude readings produced by the watch will be more accurate than they would without a reference altitude.
- Note that the following conditions will prevent you from obtaining accurate readings:
  When air pressure changes because of changes in the weather
  Extreme temperature changes
 *When the watch itself is subjected to strong impact*

Understanding the Altimeter Screen

Altitude graph
Altitude markers
Ⓐ Ⓑ
Ⓒ Ⓓ
Current time
Altitude indicator
Altitude
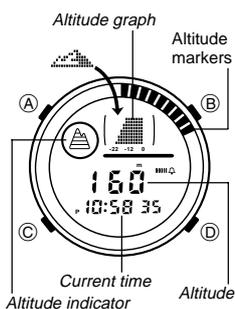
Use Ⓒ to enter the Altimeter Mode.
- Altitude is displayed in units of 5 meters (20 feet).
- The measurement range for altitude is 0 to 6,000 meters (0 to 19,680 feet).
- The displayed altitude value changes to **- - - -** meters (or feet) if a measured altitude falls outside the measurement range. The altitude value will be displayed again as soon as the measured altitude is within the allowable range.
- The measured altitude may be a negative value in cases where there is a reference altitude value set or because of certain atmospheric conditions.
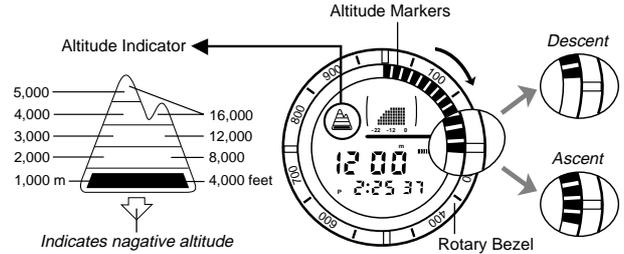
About the Altitude Graph

The altitude graph shows the results of altitude measurement readings taken every two hours. The value of each dot on the graph is equivalent to the difference between the highest altitude and lowest altitude measured divided by 9.
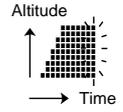
Altitude
Time

- The flashing dots at the far right of the graph indicate the most recent measurement.
- On the altitude graph, the highest altitude measured is shown with nine dots, while the lowest altitude is shown with one dot.

Altitude Indicator and Altitude Markers

The latest altitude measurement is shown by the altitude indicator and markers.

Altitude Markers
Altitude Indicator
Descent
Ascent
5,000
4,000 — 16,000
3,000 — 12,000
2,000 — 8,000
1,000 m — 4,000 feet
Indicates nagative altitude
Rotary Bezel

- The altitude indicator shows altitude in 1,000-meter (4,000-foot) units, while the altitude markers show altitude in 20-meter (80-foot) units.
- You can rotate the bezel so its pointer ( ) is pointed at a marker you want to use as a reference point. After that, changes in the markers relative to the pointer indicate whether you are ascending or descending.
- The altitude indicator flashes when the last altitude reading is outside the display range.
- The altitude indicator and altitude markers remain on the display in all modes.

Setting a Reference Altitude

After you set a reference altitude, the watch adjusts is air pressure to altitude conversion calculation accordingly. The altitude measurements produced by this watch are subject to error caused by changes in air pressure. Because of this, we recommend that you update the reference altitude whenever one is available during your climb.

Ⓐ Ⓑ
Ⓒ Ⓓ
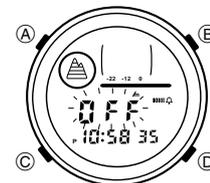
1. In the Altimeter Mode, hold down Ⓑ (or Ⓓ) until the watch beeps. After a few moments, the message **OFF** appears (flashing).
- A reference altitude value appears instead of **OFF** (no reference altitude) if there is already a reference altitude set.
- If you do not operate any button for about five seconds while **OFF** or reference altitude value is flashing, the flashing stops and the watch goes back to the Altitude screen.
2. Press Ⓓ to increase the current reference altitude value by 5 meters (or 20 feet) or Ⓑ to decrease it.
- You can set the reference altitude within the range of –6,000 to 6,000 meters (–19,680 to 19,680 feet).
- Pressing Ⓑ and Ⓓ at the same time clears the reference altitude, so the watch performs air pressure to altitude conversions based on preset data only.
3. After setting the reference altitude you want, press Ⓐ to return to the Altitude screen.

About Altitude Measurements

- The altimeter automatically takes measurements every two hours (starting from midnight), regardless of what mode you are in. The results of these readings are used for the altitude graph, altitude indicator, and altitude markers.
- Altitude measurements are also taken every five seconds for three minutes after you enter the Altimeter Mode. After that, the measurements are taken every five minutes. The results of these measurements are used to produce the numeric altitude value that appears on the display.
- You can also perform an altitude measurement at any time by pressing Ⓑ or Ⓓ in the Altimeter Mode. A manual measurement updates the altitude value on the display.
- Certain atmospheric conditions can cause the measured altitude value to be negative.
- You can change the unit of measurement for the displayed altitude values between meters (m) and feet (ft). See "Changing the Altitude Units".
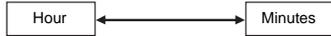
ALARM

Alarm on indicator
Hour : Minutes
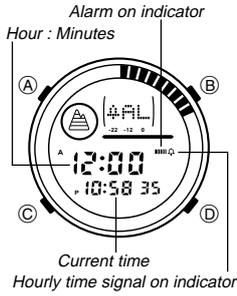
You can set a Daily Alarm that sounds at the same time each day, while it is turned on. You can also turn on an Hourly Time Signal that causes the watch to beep twice every hour on the hour.

Current time
Hourly time signal on indicator

Setting the Alarm Time

1. Use Ⓒ to enter the Alarm Mode.
2. Hold down Ⓐ until the hour digits of the alarm time start to flash.
- The hour digits are flashing because they are *selected*.
- This operation automatically turns on the Daily Alarm.
3. Press Ⓒ to move the flashing in the sequence shown below to select other digits.

Hour	⟷	Minutes

4. While hour or minutes is selected (flashing), press Ⓓ to increase the setting or Ⓑ to decrease it.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (**A** indicator) or p.m. (**P** indicator).
5. After the alarm time is the way you want it, press Ⓐ to return to the Alarm Mode screen.
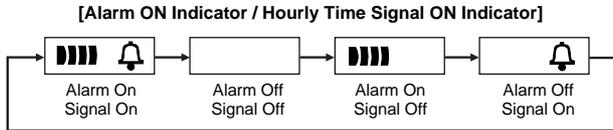
Daily Alarm Operation

The alarm sounds at the preset time each day for about 20 seconds, or until you stop it by pressing any button.
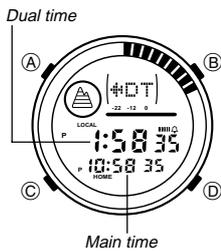
To test the alarm

Hold down Ⓑ to sound the alarm.

Turning the Daily Alarm and Hourly Time Signal on and off

In the Alarm Mode, press Ⓓ to cycle through the on and off settings as shown below.

[Alarm ON Indicator / Hourly Time Signal ON Indicator]

▮▮▮▮ 🔔		▮▮▮▮		🔔
Alarm On Signal On	Alarm Off Signal Off	Alarm On Signal Off	Alarm Off Signal On

DUAL TIME

Dual time

Dual time lets you keep track of time in two different time zones.

Main time

## Setting the Dual Time

1. Use Ⓒ to enter the Dual Time Mode.
2. Hold down Ⓐ until the hour digits of the dual time start to flash.
3. Press Ⓒ to move the flashing in the sequence shown below to select other digits.

Hour	⟷	Minutes

4. While hour or minutes is selected (flashing), press Ⓓ to increase the setting or Ⓑ to decrease it.
- When setting the dual time using the 12-hour format, take care to set the time correctly as a.m. (**A** indicator) or p.m. (**P** indicator).
5. After the dual time is the way you want it, press Ⓐ to return to the Dual Time Mode screen.
- The seconds count of the dual time is synchronized with the seconds count of the main time set in the Timekeeping Mode.

COUNTDOWN ALARM
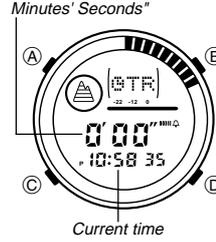
Minutes' Seconds"

The countdown timer can be set within a range of 1 minute to 60 minutes. When the countdown reaches zero, an alarm sounds for 10 seconds or until you stop it by pressing any button.

Current time

Setting the Countdown Time

1. Use Ⓒ to enter the Countdown Alarm Mode.
2. Hold down Ⓐ until the minutes digit of the countdown time starts to flash.
3. While minutes digit is selected (flashing), press Ⓓ to increase the setting or Ⓑ to decrease it.
- To set the starting value of the countdown time to 60 minutes, set ⁰⁰⁰˝.
4. After the countdown time is the way you want it, press Ⓐ to return to the Countdown Alarm Mode screen.

Using the Countdown Timer

Press Ⓓ to start the countdown timer.
- Press Ⓓ while a countdown operation is in progress to pause it. Press Ⓓ again to resume the countdown.
- To completely stop a countdown operation, first pause it (by pressing Ⓓ), and then press Ⓑ. This returns the countdown time to its starting value.

BACKLIGHT

Auto light switch on indicator

The backlight uses an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark. The watch's auto light switch automatically turns on the backlight when you angle the watch towards your face.
- The auto light switch must be turned on (indicated by the auto light switch on indicator) for it to operate.
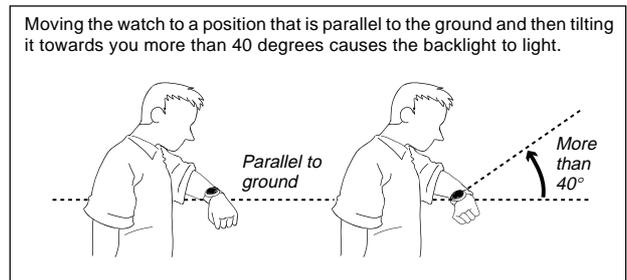
Turning on the Backlight Manually

In any mode, press Ⓛ to illuminate the display for about two seconds.
- The above operation turns on the backlight regardless of the current auto light switch setting.

About the Auto Light Switch

Turning on the auto light switch causes the backlight to turn on for about two seconds, whenever you position your wrist as described below in any mode.
- See "Backlight Precautions" for other important information about using the backlight.

Moving the watch to a position that is parallel to the ground and then tilting it towards you more than 40 degrees causes the backlight to light.

Parallel to ground
More than 40°

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 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 auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.**

To turn the auto light switch on and off

In the Timekeeping Mode's Date screen, hold down Ⓓ for two seconds to turn the auto light switch on (AUTO displayed) and off (AUTO not displayed).

- In order to protect against running down the batteries, 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.
- The auto light switch on indicator (AUTO) is on the display in all modes while the auto light switch is turned on.

REFERENCE

This section contains more detailed and technical information about watch operation. It also contains important precautions and notes about the various features and functions of this watch.

Auto Display

Auto Display automatically switches between the Barometer Mode's weather graphic and the barometric pressure graph. Note that you cannot use any of the watch's other functions while Auto Display is turned on.

To turn the Auto Display off

Hold down Ⓒ for about two seconds until the watch beeps.

To turn the Auto Display on

In the Timekeeping Mode's Date screen, hold down Ⓒ for about three seconds until the watch beeps.

- Note that Auto Display cannot be turned on while you are making watch settings.

Auto Return Feature

- After you perform an operation in any mode (except for the backlight operation), pressing Ⓒ returns to the Timekeeping Mode.
- If you leave a screen with flashing digits on the display for two or three minutes without performing any operation, the watch automatically saves anything you have input up to that point and exits the setting screen.
- If you leave the Temperature screen displayed without performing any operation for about 10 or 11 hours, the watch beeps and automatically returns to the Timekeeping Mode's Date screen. If the watch is in another mode (other than the Timekeeping, Barometer, and Altimeter Modes), the watch beeps but the mode does not change.
- Note that once you enter the Barometer and Altimeter Modes, the watch beeps and automatically returns to the Timekeeping Mode if you do not press any button for 10 or 11 hours.

Data and Setting Scrolling

The Ⓑ and Ⓓ buttons are used in various setting screens to scroll through data. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed.

12-hour/24-hour Timekeeping Formats

The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.

- With the 12-hour format, the **P** (PM) indicator appears to the left of the hour digits for times in the range of noon to 11:59 p.m. and the **A** (AM) indicator appears to the left of the hour digits for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are indicated in the range of 00:00 to 23:59, without any indicator.

Changing the Temperature Units

1. In the Timekeeping Mode, press Ⓑ to display the Temperature screen.
2. Hold down Ⓐ until the OFF message appears (flashing).
- A temperature value appears instead of OFF (factory calibration) if you previously calibrated the temperature sensor.
3. Press Ⓒ to move the flashing to the unit setting (°**C** or °**F**).
4. Press Ⓓ toggle between the two settings.
5. Press Ⓐ to return to the Temperature screen.
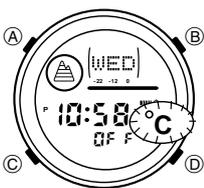
Calibrating the Temperature Sensor

The temperature sensor of this watch is calibrated at the factory before shipment and further adjustment is normally not required. If you notice serious errors in the temperature readings produced by the watch, you can calibrate the sensor to correct the errors.

Important!

Incorrectly calibrating the temperature sensor can result in incorrect readings. Carefully read the following before doing anything.

- Compare the readings produced by the watch with those of another reliable and 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. In the Timekeeping Mode, press Ⓑ to display the Temperature screen.
2. Hold down Ⓐ until the OFF message appears (flashing).
- A temperature value appears instead of OFF (factory calibration) if you previously calibrated the temperature sensor.
3. Each press of Ⓓ increases the displayed temperature by 0.1°C (or 0.2°F) while pressing Ⓑ decreases it.
- Pressing Ⓑ and Ⓓ at the same time returns to the factory calibration (OFF).
4. After calibrating the temperature, press Ⓐ to return to the Temperature screen.

Changing the Barometric Pressure Units

Changing the barometric pressure units automatically restarts the barometric pressure graph and the altitude graph.

1. Use Ⓒ to enter the Barometer Mode.
2. Hold down Ⓐ until the watch beeps. After a few moments, the message OFF appears (flashing).
- A barometric pressure value appears instead of OFF (factory calibration) if you previously calibrated the barometric pressure sensor.
3. Press Ⓒ to move the flashing to the unit setting you want (**hPa mb** or **inHg**).
4. Press Ⓓ select the unit you want.
5. Press Ⓐ to return to the Barometer Mode screen.
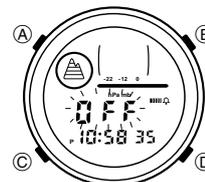
Calibrating the Barometric Pressure Sensor

The pressure sensor of this watch is calibrated at the factory before shipment and further adjustment is normally not required. If you notice serious errors in the barometric pressure readings produced by the watch, you can calibrate the sensor to correct the errors.

Important!

Incorrectly calibrating the barometric pressure sensor can result in incorrect readings. Before performing the calibration procedure, compare the readings produced by the watch with those of another reliable and accurate barometer.

To calibrate the barometric pressure

1. Use Ⓒ to enter the Barometer Mode.
2. Hold down Ⓐ until the watch beeps. After a few moments, the message OFF appears (flashing).
- A barometric pressure value appears instead of OFF (factory calibration) if you previously calibrated the barometric pressure sensor.
3. Each press of Ⓓ increases the displayed barometric pressure by 1hPa/mb (0.05inHg), while pressing Ⓑ decreases it.
- Pressing Ⓑ and Ⓓ at the same time returns to the factory calibration (OFF).
4. After calibrating the barometric pressure, press Ⓐ to return to the Barometric Pressure screen.

Changing the Altitude Units

Changing the altitude units automatically restarts the altitude graph and the barometric pressure graph.

1. Use Ⓒ to enter the Altimeter Mode.
2. Hold down Ⓐ until the altitude unit (**m** or **ft**) starts to flash.
3. Press Ⓓ to select the unit you want.
4. Press Ⓐ to return to the Altimeter Mode screen.
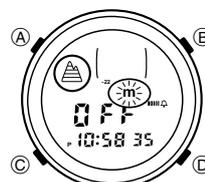
Altimeter Mode Precautions

Generally, air pressure and temperature decrease as altitude increases. This watch bases its altitude measurements on International Standard Atmosphere (ISA) values stipulated by the International Civil Aviation Organization (ICAO). These values define relationships between altitude, air pressure, and temperature.

ALTITUDE	AIR PRESSURE		TEMPERATURE	
6,000 m	472hPa/mb		−24°C	
5,500 m		About 6.7hPa/mb per 100 m		
5,000 m	540hPa/mb		−17.5°C	
4,500 m		About 7hPa/mb per 100 m		
4,000 m	616hPa/mb		−11°C	
3,500 m		About 8hPa/mb per 100 m		
3,000 m	701hPa/mb		−4.5°C	About 6.5°C per 1,000 m
2,500 m		About 9hPa/mb per 100 m		
2,000 m	795hPa/mb		2°C	
1,500 m		About 10hPa/mb per 100 m		
1,000 m	899hPa/mb		8.5°C	
500 m		About 11hPa/mb per 100 m		
0 m	1013hPa/mb	About 12hPa/mb per 100 m	15°C	

Source: International Civil Aviation Organization

ALTITUDE	AIR PRESSURE		TEMPERATURE	
20,000 ft	13.76inHg		−12.2°F	
18,000 ft		About 0.119inHg per 200 ft		
16,000 ft	16.22inHg		2.0°F	
14,000 ft		About 0.1315inHg per 200 ft		
12,000 ft	19.03inHg		16.2°F	
10,000 ft		About 0.15inHg per 200 ft		
8,000 ft	22.23inHg		30.5°F	About 3.6°F per 1,000 ft
6,000 ft		About 0.17inHg per 200 ft		
4,000 ft	25.84inHg		44.7°F	
2,000 ft		About 0.192inHg per 200 ft		
0 ft	29.92inHg	About 0.21inHg per 200 ft	59.0°F	

Source: International Civil Aviation Organization

There are two standard methods of expressing altitude: Absolute altitude and relative altitude. Absolute altitude expresses an absolute height above sea level. Relative altitude expresses the difference between the height of two different places.

Height of building 130 m (Relative altitude)

Rooftop at an altitude of 230 m above sea level (Altitude above sea level)

Sea
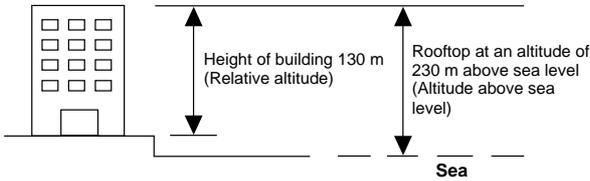
Important!
- This watch estimates altitude based on air pressure. This means that altitude readings for the same location may vary if air pressure changes.
- This watch employs a semiconductor pressure sensor, which is affected by temperature changes. When taking altitude measurements, be sure to do so while ensuring that the watch is not exposed to temperature changes.
- Do not rely upon this watch for altitude measurements or perform button operations while engaging in sports where there are sudden altitude changes, while sky diving, hang gliding, or paragliding, or while riding a gyrocopter, glider, or any other aircraft.
- Do not use this watch for measuring altitude in applications that demand professional or industrial level precision.

Precautions Concerning Simultaneous Measurement of Altitude and Temperature

Though you can perform altitude and temperature measurements at the same time, you should remember that each of these measurements require different conditions for best results. With temperature measurement, it is best to remove the watch from your wrist in order to eliminate the effects of body heat. In the case of altitude measurement, on the other hand, it is better to leave the watch on your wrist, because doing so keeps the watch at a constant temperature, which contributes to more accurate altitude measurements. The following describes what you should do to give priority to either altitude or temperature.
- To give altitude measurement priority, leave the watch on your wrist or in any other location where the temperature of the watch is kept constant.
- To give temperature measurement priority, remove the watch from your wrist and allow it to hand freely from your bag or in another location where it is not exposed to direct sunlight. Note that removing the watch from your wrist can momentarily affect pressure sensor readings.

Error Warnings

This watch is designed to automatically stop taking measurements when there is a sensor malfunction, when battery power drops below a certain level, or when battery output is affected by very cold temperatures.

[Sensor Malfunction]   **[Low Batteries]**

Important!
- Should a sensor malfunction, the watch beeps for about three seconds to alert you.
- If a sensor malfunctions or if battery power is low when it comes time for a measurement to be taken, the measurement value appears as – – on the display. In the case of barometric pressure measurement, the corresponding point on the barometric pressure graph is left blank.
- There may be cases where the ERR (sensor malfunction) or BAT (low batteries) message is cleared once you change modes. In this case, you can continue using the watch normally unless the error warning message reappears.

Whenever there is a sensor malfunction, be sure to take the watch to an authorized CASIO distributor or service provider as soon as possible. If the appearance of the BAT message is caused by extremely low temperature, the message should clear from the display when normal temperature returns. It is recommended, however, that you still have the watch checked by an authorized CASIO distributor or service provider.

Backlight Precautions

- The electro-luminescent (EL) panel loses illuminating power after very long use.
- 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.

Auto light switch precautions
- Avoid wearing the watch on the inside of your wrist while the auto light switch feature is turned on. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life. If you want to wear the watch on the inside of your wrist, turn off the auto light switch feature.
- The backlight turns off in about two seconds, even if you keep the watch pointed towards your face.
- The backlight may not light if the face of the watch is more than 15 degrees off the parallel as shown below. Make sure that the back of your hand is parallel to the ground.
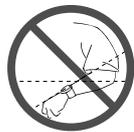
Parallel to ground   *More than 15 degrees too high*   *More than 15 degrees too low*

- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If the backlight does not light, try moving the watch back to the starting position (parallel with the ground) and then tilt it back toward 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.