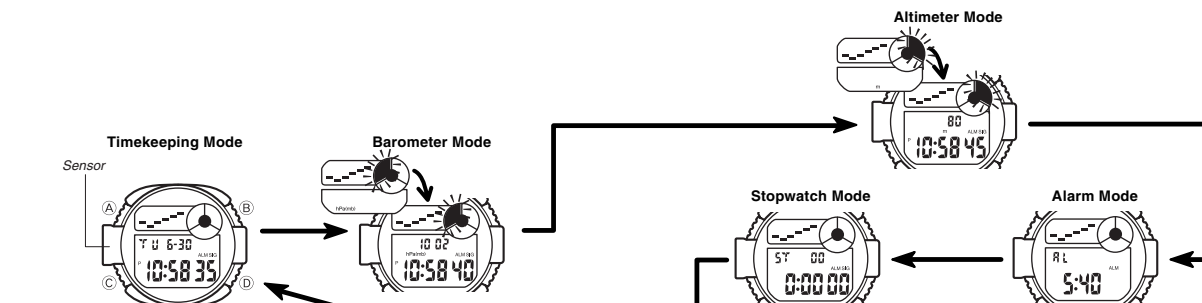
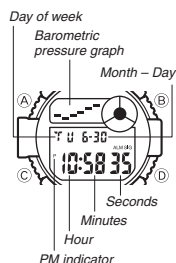


GENERAL GUIDE

- Press **(C)** to change from mode to mode.
- After you perform an operation in any mode, pressing **(C)** returns to the Timekeeping Mode.
- While in the Timekeeping Mode, Barometer Mode and Alarm Mode, press **(B)** to illuminate the display for about 1.5 seconds.



TIMEKEEPING FUNCTION

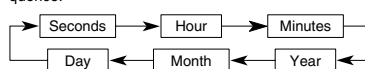


While in the Timekeeping Mode, press **(B)** to switch between the 12-hour and 24-hour formats.

- When 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.

To set the time and date

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



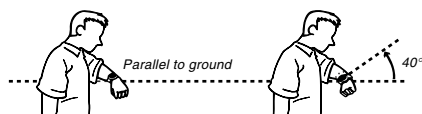
3. While the seconds digits are selected (flashing), press **(B)** to reset the seconds to "00". If you press **(B)** while the seconds count is in the range of 30 to 59, the seconds are reset to "00" and 1 is added to the minutes. If the seconds count is in the range of 00 to 29, the minutes count is unchanged.
 4. While any other digits (besides seconds) are selected (flashing), press **(B)** to increase the number or **(D)** to decrease it. Holding down either button changes the current selection at high speed.
 5. After you make your settings, 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, 2000 to December 31, 2039.
 - 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.

ABOUT THE BACKLIGHT

About the Auto Light Switch Function

When the auto light switch function is turned on, the backlight automatically turns on for two seconds under the conditions described below. Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when not needed, which shortens battery life.

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



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

Parallel to ground

More than 15 degrees too high

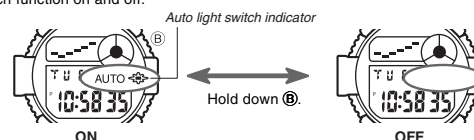
More than 15 degrees too low



- Static electricity or magnetic force can interfere with proper operation of the auto backlight function. If the auto backlight does not illuminate, 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.

To switch the auto light switch function on and off

In the Timekeeping Mode, hold down **(B)** for one or two seconds to turn the auto light switch function on and off.



- The auto light switch indicator is shown on the display in all modes while the auto light switch function is on.
- In order to protect against running down the battery, the auto light switch function is automatically turned off approximately six hours after you turn it on. Repeat the above procedure to turn the auto light switch function back on if you want.
- While in the Timekeeping Mode, Barometer Mode and Alarm Mode, press **(B)** to illuminate the display for about 1.5 seconds, regardless of the auto light switch's on/off setting.

Caution

- The backlight of this watch employs an electro-luminescent (EL) light, which loses its illuminating power after very long term use.
- Frequent use of the backlight shortens the battery life.
- The watch emits an audible sound whenever the display is illuminated. This is because the EL light vibrates slightly when lit. It does not indicate malfunction of the watch.

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 on a roadside or in any other location 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 function 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.

BAROMETER FUNCTIONS

This watch uses a pressure sensor to measure barometric pressure. The readout from the pressure sensor can also be switched between **hPa(mb)** and **inHg**. The barometer can be calibrated 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.

How to interpret barometric readings

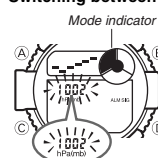
- Barometric pressure indicates changes in barometric conditions, and you can predict weather with reasonable accuracy by monitoring these changes. Rising barometric pressure indicates good weather, while falling pressure indicates deteriorating weather conditions.
- The barometric pressure you see in the newspaper and on TV weather reports are measurements that are corrected to 0 m sea level values.

Example barometer applications

- Measurement of barometric changes while hiking to predict coming weather.
- Measurement of barometric differences at different altitudes while mountain climbing.
- Prediction of weather for golf or other outdoor activities.

Switching between hPa(mb) and inHg

1. Use **(C)** to enter the Barometer Mode.
2. Hold down **(A)** for about two seconds. In about 6 seconds, the barometric pressure value should start flashing on the display.
3. Press **(C)** to select either "hPa(mb)" and "inHg".
4. After you select "hPa(mb)" or "inHg", press **(A)** to return to the Barometer Mode.



Barometric Pressure Monitor Function

The Barometric Pressure Monitor Function automatically takes barometric readings every three hours (starting from midnight). The measured values are shown on a barometric pressure graph that shows changes in pressure at a glance.

- The barometric pressure graph is shown on the display in any mode.

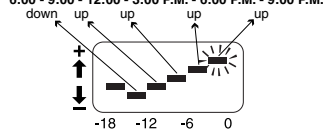
Reading the barometric pressure graph

Barometric pressure graph



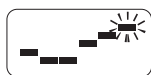
Example: When the current time is 10:58 PM.

6:00 - 9:00 - 12:00 - 3:00 P.M. - 6:00 P.M. - 9:00 P.M.



- The barometric pressure graph shows data for the past 15 hours.
- The flashing point on the right of the display is the point for the last measurement.
- The graph shows upward or downward movement whenever the current measurement is at least approximately 2 hPa(mb) (or 0.05 inHg) greater or less than the previous reading.
- Extreme barometric pressure changes can cause the graph to shift upwards or downwards, causing parts of the graph to no longer be visible. The entire graph will become visible once barometric conditions stabilize.

Using the barometric pressure graph



A rising graph generally means better weather.



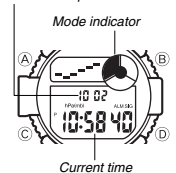
A falling graph generally means deteriorating weather.

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 (600 to 1,100 hPa(mb) / 17.70 to 32.45 inHg).
- Sensor malfunction
- Dead battery

Barometer Mode

Barometric pressure



Current time

[Barometer Mode Display]

In addition to readings taken for the barometric pressure graph, there is also a Barometer Mode that you can use for measuring barometric pressure. When you enter the Barometer Mode, measurements are taken every 4 seconds for the first four minutes. After that, measurements are taken every minute. The display unit for Barometer Mode measurements is 1 hPa(mb) (or 0.05 inHg), and the display range is 600 to 1,100 hPa(mb) / 17.70 to 32.45 inHg.

- The display shows "----" if a measured value falls outside the range of 600 to 1,100 hPa(mb) / 17.70 to 32.45 inHg. The normal display will return as soon as the pressure returns within the allowable range.
- If you do not press any button for 5 or 6 hours in the Barometer Mode, the display returns to the Timekeeping Mode automatically.

Measurement formats and ranges

Display range: 600 to 1,100 hPa(mb) / 17.70 to 32.45 inHg

Display unit: 1 hPa(mb) (or 0.05 inHg)

Measuring range: 600 to 1,100 hPa(mb) / 17.70 to 32.45 inHg

Barometric pressure change display

When you start measurement (step 2 in the procedure below), the first barometric pressure measurement is used as a base. Then, each subsequent measurement is compared with the base, and the difference is shown on the display. Measurements are taken every 2 seconds for the first four minutes. After that, measurements are taken every minute.

To use the barometric pressure change display

- Use **(C)** to enter the Barometer Mode.
- Press **(B)** to change to the barometric pressure change display. At this time, the watch also starts to measure the elapsed time.
- You can press **(B)** at any time to stop the elapsed time measurement (though timing continues internally). To resume timing (from the time being kept internally), press **(B)** again.
- You can press **(D)** to change to the normal Barometer Mode display (showing the current time). Though the display changes, elapsed time measurement continues internally. To return to the pressure change display, press **(B)** again.
- Press **(A)** to stop the measurement and switch to the normal Barometer Mode display.

- Whenever the elapsed time passes the 60-minute mark, the display changes automatically from showing minutes, seconds and 1/10 second, to hours, minutes, seconds.
- You can perform barometric change measurement for up to 23 hours, 59 minutes, 59 seconds. Whenever the elapsed time passes the 24-hour mark, measurement is stopped automatically and the normal Barometer Mode display appears.

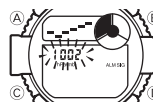
Calibrating the barometric pressure measurement

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 adjusting 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.
- Though you should not try to perform calibration while the barometric pressure change display is shown, you can perform calibration while the barometric pressure change operation is being performed internally, without affecting the operation.

To calibrate the barometer



- Enter the Barometer Mode and confirm that the normal Barometer Mode display (showing the current time) is shown.
- Hold down **(A)** for about two seconds. In about 6 seconds, the barometric pressure value should start flashing on the display.
- Each press of **(B)** 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 you have selected inHg as your unit of measurement, the above operations change the reading by 0.05 inHg.

- Barometric pressure can be calibrated within the range of 600 hPa(mb) to 1,100 hPa(mb) (or 17.70 inHg to 32.45 inHg).
- Pressing **(B)** and **(D)** at the same time resets the watch to its factory calibration.

- After calibrating the barometer, press **(A)** to return to the normal Barometer Mode display.

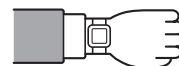
- If you do not operate any button for a few minutes while the barometric pressure digits are flashing, the flashing stops and the watch returns to the normal Barometer Mode display.

ALTIMETER FUNCTIONS

A built-in altimeter uses a pressure sensor to detect the current air pressure, which is then used to estimate the current altitude in accordance with ISA (International Standard Atmosphere) values for altitude and barometric pressure. The readout from the pressure sensor can be switched between meters (m) and feet (ft.).

Important!

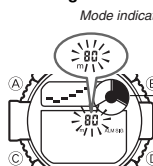
- This watch estimates altitude based on barometric pressure. This means that altitude readings for the same location may vary if barometric pressure changes.
- Sudden changes in the weather make it impossible to produce accurate altitude readings.
- Do not use this watch while participating in sports where there are sudden altitude changes. Also, do not use this watch for applications that demand professional or industrial level precision. This watch should not be used while engaging in the following activities: sky diving, hang gliding, paragliding, gyrocopter riding, glider riding, etc.
- In order to avoid measurement problems caused by differences in the watch's temperature, be sure to wear the watch so that it comes into direct contact with your skin.



Example altimeter applications

- Measurement of altitudes during hiking or mountain climbing.
- Calculation of average ascending and descending speeds while driving in the mountains.
- Measurement of the height of a building.

Switching between meters and feet



- Use **(C)** to enter the Altimeter Mode.
- Hold down **(A)** for about two seconds. In about 6 seconds, the altitude value should start flashing on the display.
- Press **(C)** to select either meters (m) and (ft.).
- After you select "m" or "ft.", press **(A)** to return to the Altimeter Mode.

Altimeter Mode

The Altimeter Mode automatically measures your current altitude. When you enter the Altimeter Mode, measurements are taken every three seconds for the first five minutes.

After that, measurements are taken every minute.

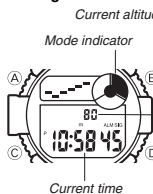
Measurement formats and ranges

Display range: -4,000 to 4,000 m (or -13,120 to 13,120 ft.)

Display unit: 5 m (or 20 ft.)

Measuring range: 4,000 m (or 13,120 ft.), within the range of -4,000 to 4,000 m (or -13,120 to 13,120 ft.).

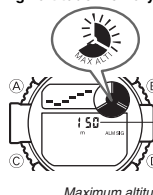
Reading the altimeter display



Use **(C)** to enter the Altimeter Mode.

- If you do not press any button for 5 or 6 hours in the Altimeter Mode, the display returns to the Timekeeping Mode automatically.
- The display shows "----" if a measured value falls outside the measuring range. The normal display will return as soon as the pressure returns within the allowable range.

High altitude memory



The high altitude memory automatically stores the highest measured altitude into memory. To display the currently stored high altitude, enter the Altimeter Mode and press **(B)**. To return to the normal Altimeter Mode display, press **(B)** again. To clear the current high altitude value from memory, display the value and then hold down **(D)** until the watch beeps. As soon as you clear the memory, the next measurement of an altitude is automatically stored as the new high altitude.

[High Altitude Display]

Altitude change display

When you start measurement (step 2 in the procedure below), the first altitude measurement is used as a base. Then, each subsequent measurement is compared with the base, and the difference is shown on the display. Measurements are taken every 2 seconds for the first five minutes. After that, measurement are taken every minute.

To use the altitude change display

1. Use **(C)** to enter the Altimeter Mode.
 2. Press **(D)** to change to the altitude change display. At this time, the watch also starts to measure the elapsed time.
 - You can press **(D)** to change to the normal Altimeter Mode display (showing the current time). Though the display changes, elapsed time measurement continues internally. To return to the altitude change display, press **(D)** again.
 3. Press **(A)** to stop the measurement and switch to the normal Altimeter Mode display.
 - Whenever the elapsed time passes the 60-minute mark, the display changes automatically from showing minutes, seconds and 1/10 second, to hours, minutes, seconds.
- You can perform altitude change measurements for up to 23 hours, 59 minutes, 59 seconds. Whenever the elapsed time passes the 24-hour mark, measurement is stopped automatically and the normal Altimeter Mode display appears.

To perform speed measurements

1. Use **(C)** to enter the Altimeter Mode.
2. Press **(D)** to change to start measurement of elapsed time.
3. Press **(B)** to stop the elapsed time measurement (timing continues internally).
 - At this time, the average ascending and descending speed appears on the display.
4. Press **(B)** again to resume timing from the time being kept internally.
 - You can repeat steps 3 and 4 as many times as you want.
5. Press **(A)** to stop the measurement and switch to the normal Altimeter Mode display.

Notes

- The watch is not designed to measure speeds when the altitude changes suddenly over a short period of time.
- Depending on conditions, the display may show the speed in terms of hours or minutes. Note the following.

Speed	Unit Used
0 to ±999 m/hour	m/h
More than ±999 m/hour	m/min.
Above ±999 m/minute	----

Speed	Unit Used
0 to ±2,999 ft./hour	ft./h
More than ±2,999 ft./hour	ft./min.
Above ±2,999 ft./minute	----

Calibrating the altimeter

The altitude measurements produced on this watch may be affected by barometric pressure. Because of this, we suggest that you calibrate the altimeter using information available from a map or other source.

Notes

- Calibration is performed in the Altimeter Mode, while the normal Altimeter Mode display is shown. Do not try to perform calibration while the altitude change display is shown.
- Though you should not try to perform calibration while the altitude change display is shown, you can perform calibration while the altitude change operation is being performed internally, without affecting the operation.

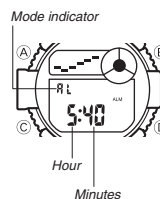
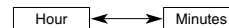
To calibrate the altimeter

1. Enter the Altimeter Mode and confirm that the normal Altimeter Mode display (showing the current time) is shown.
 2. Hold down **(A)** for about two seconds. In about 6 seconds, the altitude value should start flashing on the display.
 3. Each press of **(D)** increases the displayed altitude value by 5 m, while pressing **(B)** decreases it. Holding down either button changes the value at high speed.
- If you have selected feet as your unit of measurement, the above operations change the reading by 20 ft.
 - You can calibrate the altitude within the range of -4,000 m to 4,000 m (of -13,120 ft. to 13,120 ft.).
 - Pressing **(B)** and **(D)** at the same time resets the watch to its factory calibration.
 - 4. After calibrating the altimeter, press **(A)** to return to the normal Altimeter Mode display.
 - If you do not operate any button for a few minutes while the altitude digits are flashing, the flashing stops and the watch returns to the normal Altimeter Mode display.

ALARM FUNCTIONS

When the Daily Alarm is turned on, an alarm sounds for 20 seconds at the preset time each day. When the Hourly Time Signal is turned on, the watch beeps every hour on the hour.

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 switched on.
2. Press **(C)** to change the selection in the following sequence.



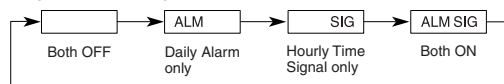
3. Press **(D)** to increase the number or **(B)** to decrease it. Holding down either button changes the current number at high speed.
- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take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

To stop the alarm

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

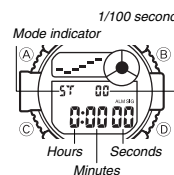
To turn the Daily Alarm and Hourly Time Signal on and off

Press **(D)** while in the Alarm Mode to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.

**To test the alarm**

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

Note that this operation also changes the Daily Alarm and Hourly Time Signal on/off setting.

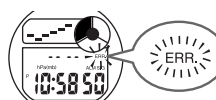
STOPWATCH FUNCTIONS

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**(b) Split time measurement****(c) Split time and 1st-2nd place times****ERROR WARNING FUNCTION**

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 temperature drops below -10°C (or 14°F).

Sensor malfunction
Example: Barometer Mode



Low battery or Low temperature
Example: Altimeter Mode

**Important!**

- When a sensor malfunction initially occurs, the "ERR." message flashes and a buzzer sounds for three seconds.
- If the sensor is malfunctioning when it comes time for an barometric pressure measurement to be taken, the corresponding point on the barometric pressure graph is left blank.
- There may be cases where the "ERR." or "BATT." 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 Center as soon as possible. If the appearance of the "BATT." 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 Center.

THINGS TO KNOW ABOUT ALTITUDES

Relationships between altitude, barometric pressure, and temperature
Generally, barometric 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), which define relationships between altitude, barometric pressure, and temperature.

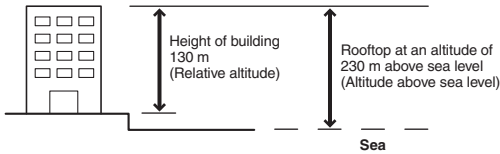
ALTITUDE	BAROMETRIC PRESSURE		TEMPERATURE	
4,000 m		616 hPa(mb)	About 8 hPa(mb) per 100m	-11 °C
3,500 m		701 hPa(mb)	About 9 hPa(mb) per 100m	-4.5 °C
3,000 m		795 hPa(mb)	About 10 hPa(mb) per 100m	2 °C
2,500 m		899 hPa(mb)	About 11 hPa(mb) per 100m	8.5 °C
2,000 m		899 hPa(mb)	About 11 hPa(mb) per 100m	8.5 °C
1,500 m		899 hPa(mb)	About 11 hPa(mb) per 100m	8.5 °C
1,000 m		899 hPa(mb)	About 11 hPa(mb) per 100m	8.5 °C
500 m		899 hPa(mb)	About 11 hPa(mb) per 100m	8.5 °C
0 m		1,013 hPa(mb)	About 12 hPa(mb) per 100m	15 °C

About 6.5 °C per 1,000 m

Source: International Civil Aviation Organization

How altitude is expressed

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.



Example: To obtain readings that are close to absolute altitude. When you are out hiking or mountain climbing, calibrate the altimeter using an altitude value from another source (a signpost or map, for example). Do this just before you start your altitude measurements.

-
1. At point **A**, calibrate the altimeter to 400 meters.
 2. Proceed from Point **A** to Point **B**, taking altimeter measurements along the way.
- If you also have altitude data for Point **B**, you should again calibrate the altimeter there.
 - Be sure to recalibrate at Point **B** if changing weather conditions produce reading errors.
- The following conditions will prevent you from obtaining accurate readings.
 - When barometric pressure changes because of change in the weather
 - Extreme temperature changes
 - When the watch itself is subjected to strong impact