Getting Acquainted

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully.

Applications

The built-in sensors of this watch measure direction 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 use in taking measurements that require professional or industrial precision. Values produced by this watch should be considered as reasonably accurate representations only.
- When engaging in mountain climbing or other activities in which losing your way can create a dangerous or life-threatening situation, always be sure to use a second compass to confirm direction readings.
- Note that CASIO COMPUTER CO., LTD. assumes no responsibility for any damage or loss suffered by you or any third party arising through the use of this product or its malfunction.

General Guide

- The illustration below shows which buttons you need to press to navigate between modes.
- In any mode (except when a setting screen is on the display), press \( \text{C} \) to illuminate the display.
- You can enter the Digital Compass/Thermometer Mode from the Timekeeping Mode by pressing \( \text{C} \). To enter from another mode, first use \( \text{D} \) to enter the Timekeeping Mode, and then press \( \text{C} \).

Digital Compass/Thermometer Mode

- \( \text{A} \) indicates the setting screen.
- \( \text{B} \) indicates city codes are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.
- \( \text{C} \) indicates the DST setting.
- \( \text{D} \) indicates the On/Off status.
- \( \text{E} \) indicates the Unit of Temperature display.

Timekeeping Mode

- Use the Timekeeping Mode to set and view the current time and date.

Read This Before You Set the Time and Date!

1. While in the Timekeeping Mode, hold down \( \text{D} \) until the city code starts to flash, which indicates the setting screen.
2. Use \( \text{A} \) and \( \text{B} \) to select the city code you want.
3. \( \text{C} \) will move the flashing in the sequence shown below to select the other settings.

- City Code
- \( \text{D} \) is for Daylight Saving Time (DST) Setting
- \( \text{E} \) is for Temperature display

To set the time and date

1. In the Timekeeping Mode, hold down \( \text{D} \) until the city code starts to flash, which indicates the setting screen.
2. Use \( \text{A} \) and \( \text{B} \) to select the city code you want.
3. Make sure you select your Home City code before changing any other setting.
4. For full information on city codes, see the “City Code Table.”
5. \( \text{C} \) will move the flashing in the sequence shown below to select the other settings.

Screen

<table>
<thead>
<tr>
<th>To do this:</th>
<th>Do this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYO</td>
<td>Change the city code</td>
</tr>
<tr>
<td>OFF</td>
<td>Use ( \text{A} ) (on) and ( \text{B} ) (off)</td>
</tr>
<tr>
<td>Toggle between Daylight Saving Time and Standard Time</td>
<td>Press ( \text{C} ).</td>
</tr>
<tr>
<td>12H</td>
<td>Change the hour or minute</td>
</tr>
<tr>
<td>24H</td>
<td>Change the year</td>
</tr>
<tr>
<td>50</td>
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<tr>
<td>1058</td>
<td>Change the month or day</td>
</tr>
<tr>
<td>6:30</td>
<td>Change the month or day</td>
</tr>
</tbody>
</table>

- \( \text{D} \) to enter the setting screen.
- For details about configuring temperature display settings, see “To specify the temperature display.”
- See “Daylight Saving Time (DST) Setting” below for details about the DST setting.

About This Manual

- Depending on the model of your watch, display text appears either as dark figures on a light background or light figures on a dark background. All sample displays in this manual are shown using dark figures on a light background.
- 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.

Daylight Saving Time (DST) Setting

Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

To toggle the Timekeeping Mode time between DST and Standard Time

1. In the Timekeeping Mode, hold down \( \text{D} \) until the city code starts to flash, which indicates the setting screen.
2. Press \( \text{D} \) once and the DST setting screen appears.
3. Press \( \text{D} \) to toggle between Daylight Saving Time (ON displayed) and Standard Time (OFF displayed).
4. Press \( \text{C} \) to exit the setting screen.
- The DST indicator appears to indicate that Daylight Saving Time is turned on.

Digital Compass/Thermometer

You can take direction readings and temperature readings in the Digital Compass/Thermometer Mode. Direction readings are taken by the watch’s built-in magnetic bearing sensor and displayed as one of 16 directions. A temperature sensor is used for temperature readings.

- See “Digital Compass” for more information about the digital compass.
- See “Thermometer” for more information about the thermometer.

To enter and exit the Digital Compass/Thermometer Mode

1. While in the Timekeeping Mode, press \( \text{D} \) to enter the Digital Compass/Thermometer Mode.
2. The watch will start to take direction and temperature readings. After about two seconds, the direction that the 12 o’clock position of the watch is facing will be indicated and the current temperature reading will appear on the display.
3. Direction readings will be taken each second for about 10 seconds, and then stop automatically.
4. Temperature readings will be taken every two seconds for about 10 seconds, and then stop automatically.
5. To perform direction and temperature readings for another 10 seconds, press \( \text{D} \) again.
6. Press \( \text{C} \) to return to the Timekeeping Mode.
7. For information about using the digital compass, see “To take a direction reading.”
8. For information about using the thermometer, see “To take a temperature reading.”

Thermometer

The watch takes temperature readings automatically whenever you enter the Digital Compass/Thermometer Mode. In addition, you can take readings manually by performing the procedure below.

- You can calibrate the temperature sensor if you think readings are wrong for some reason.
- You can select either Celsius (°C) or Fahrenheit (°F) as the temperature unit.
To take a temperature reading

In the Digital Compass/Thermometer Mode, press \( \text{C} \).

- This will display the temperature measurement.
- After the first reading, the watch will continue to take readings every two seconds for about 10 seconds.
- After the temperature reading is complete, the temperature display will show \( \text{CAL} \).
- To perform temperature readings for another 10 seconds, press \( \text{C} \) again.
- The temperature is displayed in units of 0.1°C (or 0.2°F).
- The display range of the Thermometer sensor is \(-10.0°C \) to \(60.0°C \) or 14.0°F to 140.0°F.
- The temperature display will show \( \text{CAL} \) if a temperature reading is outside the allowable range.

Temperature Sensor Calibration

The temperature sensor built into the watch is calibrated at the factory, and normally does not require adjustment. However, if you feel that readings being produced by the watch are not correct for some reason, you can calibrate the temperature sensor to correct them.

- 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 sensor

1. In the Digital Compass/Thermometer Mode, hold down \( \text{A} \) until the indicator at the 12 o’clock position starts to flash.
2. Press \( \text{B} \) twice and the current temperature calibration value will flash on the display. This is the temperature sensor calibration screen.
3. Use \( \text{C} \) (left) and \( \text{D} \) (right) to change the calibration value.
4. To return the temperature sensor to its factory default setting (indicated by \( \text{D} \) on the display), press \( \text{A} \) and \( \text{B} \) at the same time.
5. To exit the calibration screen, press \( \text{C} \).

To specify the temperature display unit

1. Enter the Timekeeping Mode.
2. Hold down \( \text{A} \) until the city code starts to flash, which indicates the setting screen.
3. Press \( \text{B} \) nine times until the temperature display unit flashes on the display.
4. Press \( \text{C} \) to select the unit.

Digital Compass

This watch takes digital compass readings automatically whenever you enter the Digital Compass/Thermometer Mode. In addition, you can take readings manually by performing the procedure below.

- See “Digital Compass Precautions” for important information about using the digital compass.
- You can calibrate the bearing sensor if you find that readings being produced by the watch are not correct for some reason, you can calibrate the bearing sensor to correct them. You can use either of two methods to calibrate the bearing sensor: bearing sensor correction or magnetic declination correction. You also need to calibrate the bearing sensor if 100 days pass without calibration, and after you have the watch’s battery replaced. The message \( \text{CAL} \) will appear on the display to remind you to calibrate.

Calibrating the Bearing Sensor

If you feel that direction readings being produced by the watch are not correct for some reason, you can calibrate the bearing sensor to correct them. You can use either of two methods to calibrate the bearing sensor: bearing sensor correction or magnetic declination correction. You also need to calibrate the bearing sensor if 100 days pass without calibration, and after you have the watch’s battery replaced. The message \( \text{CAL} \) will appear on the display to remind you to calibrate.

Bearing Sensor Correction

With bearing sensor correction, you rotate the watch in accordance with the movement of an on-screen indicator. Doing this will recalibrate the magnetic sensor of the watch with magnetic North for the area where you are located.

Magnetic Declination Correction

With magnetic declination correction, you input a magnetic declination angle (difference between magnetic north and true north), which allows the watch to indicate true north.

You perform this procedure when the magnetic declination angle is indicated on the map you are using. Note that you can input the declination angle in degree units only, so you may need to round off the value specified on the map. If your map indicates the declination angle as 7.4°, you should input 7°. In the case of 7.6° input 8°, for 7.5° you can input 7° or 8°.

To calibrate the bearing sensor

1. Remove the watch from your wrist, and position it so its back is parallel with the ground and the 12 o’clock position is pointed away from you.
2. In the Digital Compass/Thermometer Mode, hold down \( \text{A} \) until the indicator at the 12 o’clock position starts to flash. This is the calibration screen.
3. Press \( \text{B} \).
4. The flashing indicator will move clockwise on the face of the watch with each passing second.
5. Each time the indicator moves, rotate the watch so the indicator remains pointed away from you.
6. After the flashing indicator completes two full trips around the display (and you rotate the watch twice), press \( \text{C} \).

This completes calibration of the bearing sensor. The message \( \text{CAL} \) will appear on the display for about one second, and then a direction reading operation will be performed automatically.
To perform magnetic declination correction

1. In the Digital Compass/Thermometer Mode, hold down A until the indicator at the 12 o'clock position starts to flash. This is the calibration screen.
2. Press C.
3. The magnetic declination angle and magnetic declination angle direction will flash on the display.
4. Use (+) and (-) to change the magnetic declination angle and magnetic declination angle direction settings.

You can select a value within the range of 0°W to 90°E with these settings.

The following explains magnetic declination angle direction settings.

• OFF: No magnetic declination correction performed. The magnetic declination angle with this setting is 0°.
• E: When magnetic north is to the east (west declination).
• W: When magnetic north is to the west (east declination).

You can turn off (OFF) magnetic declination correction (which effectively makes the magnetic declination angle 0°) by pressing C and A at the same time.

The illustration, for example, shows the value you should input and the direction setting when the map shows a magnetic declination of 1° "West."

4. When the setting is the way you want, press A to exit the setting screen.

Using the Digital Compass While Mountain Climbing or Hiking

This section describes three real-life situations where you could use the watch’s built-in digital compass.

To set a map and find your current location

Having an idea of your current location is important when mountain climbing or hiking. To do this, you need to "set the map," which means to align the map so the directions indicated on it are aligned with the actual directions of your location.

Basically what you are doing is aligning north on the map with north as indicated by the watch, and determine your current location.

Directions indicated on it are aligned with the actual directions of your location. Having an idea of your current location is important when mountain climbing or hiking. To do this, you need to "set the map," which means to align the map so the directions indicated on it are aligned with the actual directions of your location. Basically what you are doing is aligning north on the map with north as indicated by the watch.

1. Take a compass reading and then set the map so its northerly indication is aligned with north as indicated by the watch, and determine your current location.
2. Set the map so the direction you want to travel on the map is pointed straight in front of you.
3. With the watch on your wrist, position it so the face is horizontal.
4. In the Timekeeping Mode, press A to take a compass reading.
5. The reading will appear on the display after about two seconds.
6. Rotate the map without moving the watch so the northerly direction indicated on the map matches north as indicated by the watch.
7. If the watch is configured to indicate magnetic north, align the map's magnetic north with the watch indication. If the watch has been configured with a declination to correct to true north, align the map's true north with the watch indication.
8. This will position the map in accordance with your current location.
9. Determine your location as you check the geographic contours around you.

To find the bearing to an objective

1. Take a compass reading and then set the map so its northerly indication is aligned with north as indicated by the watch, and determine your current location.
2. Set the map so the direction you want to travel on the map is pointed straight in front of you.
3. With the watch on your wrist, position it so the face is horizontal.
4. In the Timekeeping Mode, press A to take a compass reading.
5. The reading will appear on the display after about two seconds.
6. Still holding the map in front of you, turn your body until north as indicated by the watch and the northerly direction on the map are aligned.
7. This will position the map relative to your current location, so the bearing to your objective is straight ahead of you.

Questions & Answers

Question: What causes incorrect direction readings?

Answer: Nearby sources of strong magnetism, such as a household appliance, a large steel bridge, a railroad or subway wire, etc., or an attempt to perform direction measurement on a train, boat, etc. Move away from large metal objects and try again. Note that digital compass operation cannot be performed inside a train, boat, etc.

Question: What causes different direction readings to produce different results at the same location?

Answer: Magnetism generated by nearby high tension wires is interfering with detection of terrestrial magnetism. Move away from the high tension wires and try again.

Question: Why am I having problems taking direction readings indoors?

Answer: A TV, personal computer, speakers, or some other object is interfering with terrestrial magnetism readings. Move away from the object causing the interference or take the direction reading outdoors. Induced direction readings are particularly difficult inside ferro-concrete structures. Remember that you will not be able to take direction readings inside of trains, airplanes, etc.

World Time

World Time displays the current time in 48 cities (29 time zones) around the world.

• If the current time shown for a city is wrong, check your Home City time settings and make the necessary changes.
• All of the operations in this section are performed in the World Time Mode, which you enter by pressing B.

To view the time in another city

In the World Time Mode, use A (east) to scroll through cities (time zones).

For full information on city codes, see the “City Code Table.”

Stopwatch

The stopwatch lets you measure elapsed time, split times, and two finishes.

To measure times with the stopwatch

1. In the Time Mode, use A (east) to display the city code (time zone) whose Standard Time/Daylight Saving Time setting you want to change.
2. Hold down A to toggle between Daylight Saving Time (DST indicator displayed) and Standard Time (DST indicator not displayed).
3. The DST indicator appears on the display whenever you display a city code for which Daylight Saving Time is turned on.

Note that the DST/Standard Time setting affects only the currently displayed city code. Other city codes are not affected.

Stopwatch

You can select a value within the range of 0° to 90° W.

The declination angle with this setting is 0°.

To cancel bearing sensor correction, press C.

If the watch is configured to indicate magnetic north, the declination angle direction will flash on the display.

– You can turn off (OFF) magnetic declination correction (which effectively makes the magnetic declination angle 0°) by pressing C and A at the same time.
– The illustration, for example, shows the value you should input and the direction setting when the map shows a magnetic declination of 1° "West."

4. When the setting is the way you want, press A to exit the setting screen.
To use the countdown timer
Press (A) while in the Countdown Timer Mode to start the countdown timer.
- When the end of the countdown is reached and auto-repeat is turned on, the alarm sounds for 10 seconds or until you stop it by pressing any button. The countdown time is automatically reset to its starting value after the alarm stops.
- When auto-repeat is turned on, the countdown will restart automatically without pausing when it reaches zero. The alarm sounds to signal when the countdown reaches zero.
- The countdown timer measurement operation continues even if you exit the Countdown Timer Mode.
- To stop a countdown operation completely, first pause it by pressing (A), and then press (A) again. This returns the countdown time to its starting value.

Alarms

To set an alarm time
1. In the Alarm Mode, use (B) to scroll through the alarm screens until the one whose time you want to set is displayed.
2. Hold down (B) until the hour setting of the alarm time starts to flash, which indicates the setting screen.
3. This automatically turns on the alarm.
4. Press (B) to move the flashing between the hour and minute settings.
5. When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (P indicator).
6. Press (A) to exit the setting screen.

Alarm Operation

The alarm tone sounds at the preset time for 10 seconds, regardless of the mode the watch is in. In the case of the snooze alarm, the alarm operation is performed a total of seven times, every five minutes, until you turn the alarm off.
- Alarm and hourly time signal operations are performed in accordance with the Timekeeping Mode.
- To stop the alarm tone after it starts to sound, press any button.
- Performing any one of the following operations during a 5-minute interval between snooze alarms cancels the current alarm: pressing any button in the alarm, using (C) or (D) to change the time setting.
- If an error occurs or the battery goes low during sensor operation, the alarm, hourly time signal, and Countdown Timer Mode alarm all operate normally. Even if you turn off the button operation tone, the alarm, hourly time signal, and Countdown Timer Mode alarm all operate normally.

Alarm on indicator

To test the alarm
In the Alarm Mode, hold (B) to sound the alarm.

To turn an alarm and the hourly time signal on and off
1. In the Alarm Mode, use (B) to select an alarm or the hourly time signal.
2. When the alarm or the hourly time signal you want is selected, press (B) to toggle it on and off.

Alarm on indicator

To turn on Illumination
In any mode (except when a setting screen is on the display), press (B) to illuminate the display for about one second.

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 Return Feature
- The watch will return to the Timekeeping Mode automatically if you do not perform any operation for about two or three minutes while in the Digital Compass/Thermometer Mode or Alarm Mode.
- If you leave a screen with flashing digits on the display without performing any operation for two or three minutes, the watch saves any settings you have made up to that point and exits the setting screen automatically.

Button Operation Tone

The button operation tone sounds any time you press one of the watch’s buttons. You can turn the button operation tone on or off as desired.
- To turn on illumination
- To stop a countdown operation completely, first pause it by pressing (B), then press (B) to toggle the button operation tone on (A) or off (B), displayed.
- In any mode (except when a setting screen is on the display), hold down (B) to toggle the button operation tone on (A) or off (B) displayed.

Data and Setting Scrolling
The (A) and (B) buttons are used in various modes and setting screens to scroll through data on the display. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed.

Sensor Error and Low Battery Displays
Subjecting the watch to strong impact can damage the sensor or cause internal connection problems. These conditions will cause ERR (error) to appear on the display, indicating that sensor operation is disabled.
- Sensor operation is also disabled whenever (B) battery is on the display, which indicates insufficient battery power or voltage due to a low battery or a cold environment.

When auto-repeat is turned on, the alarm, hourly time signal, and Countdown Timer Mode alarm all operate normally. Even if you turn off the button operation tone, the alarm, hourly time signal, and Countdown Timer Mode alarm all operate normally.

Timekeeping
- Resetting the seconds to 00 while the current count is in the range of 30 to 59 causes the minutes to be increased by 1. In the range of 00 to 29, the seconds are reset to 00 without changing the minutes.
- With the 12-hour format, the P (PM) indicator appears on the display for times in the range of noon to 11:59 p.m. and no indicator appears for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.
- The year can be set in the range of 2000 to 2099.
- The watch’s built-in automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have replaced the battery.
- The times for the Timekeeping Mode and all the city codes of the World Time Mode are calculated in accordance with each city’s UTC offset.
- The UTC offset is a value that indicates the time difference between a reference point in Greenwich, England, and the time zone where a city is located.
- The letters UTC is the abbreviation for Coordinated Universal Time, which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth’s rotation.
## City Code Table

<table>
<thead>
<tr>
<th>City Code</th>
<th>City</th>
<th>UTC Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPS</td>
<td>Pago Pago</td>
<td>–11.0</td>
</tr>
<tr>
<td>HNL</td>
<td>Honolulu</td>
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</tr>
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• Based on data as of March 2008.
• UTC offsets and the use of summer time are subject to change in the country where they are used.