

Operation Guide 5311

CASIO

ENGLISH

Congratulations upon your selection of this CASIO watch.

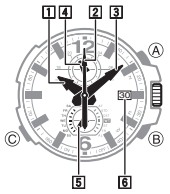
- Note that the product illustrations in this manual are intended for reference only, and so the actual product may appear somewhat different than depicted by an illustration.

This watch does not have a city code that corresponds to the UTC offset of –3.5 hours. Because of this, the radio-controlled atomic timekeeping function will not display the correct time for Newfoundland, Canada.

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.
- To ensure correct direction readings by this watch, be sure to perform bidirectional calibration before using it. The watch may produce incorrect direction readings if you do not perform bidirectional calibration. For more information, see "To perform bidirectional calibration" (page E-56).
- 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.

About This Manual



Operations are performed using the watch's crown, and the three buttons indicated by the letters Ⓐ, Ⓑ and Ⓒ in this manual.

Hands and Indicators

1 Hour Hand
2 Second Hand
3 Minute Hand
4 Upper Dial Hand: Indicates a time, in 24-hour format, depending on the current mode.
5 Lower Dial Hand: Indicates the current mode.
6 Day Indicator

This User's Guide uses numbers shown above to identify watch hands and indicator.

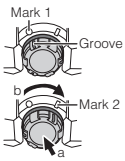
Using the Crown

This watch has a lock-type crown.

Important!

- You should normally have the crown locked during normal daily use. Leaving the crown unlocked creates the risk of unintended operations or even damage due to impact.

To lock the crown



1. Push the crown back in (see "To pull out, rotate, or push the crown in" below).
   - Note that attempting to lock the crown when it is not pushed in can cause unexpected watch operation.
2. Rotate the crown so any one of its three grooves is aligned with Mark 1.
3. While pushing in on the crown (a), rotate it to the right (b) until it stops, and align the groove with Mark 2.

4. Gently pull on the crown to make sure it is securely locked and does not come out.

To unlock the crown

Rotate the crown so the groove aligns with Mark 1.

To pull out, rotate, or push the crown in

Important!

- Before performing any of these operations, first unlock the crown.

The illustrations below show the different crown operations.

Pull out	Rotate	Push in
		

High-speed Movement

When rotating the crown to move the hands of the watch, you can use the operations described below to move the hands at high speed, either forward or back. There are two high-speed levels: HS1 and HS2 (faster than HS1).

To start HS1 high-speed movement

While the crown is pulled out, rotate it rapidly three turns away from you (for forward movement) or towards you (for reverse movement). High-speed movement will continue even if you release the crown.

To start HS2 high-speed movement

While HS1 high-speed movement is in progress, again rotate the crown rapidly three turns in the same direction as the current HS1 movement (away from you for forward movement or towards you for reverse movement).

To stop high-speed movement

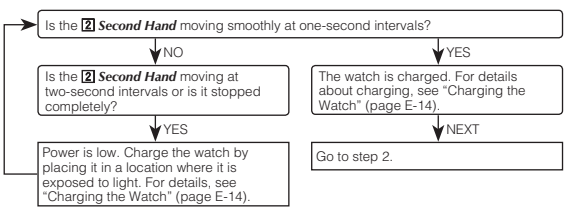
Rotate the crown in the direction that is opposite that of the current high-speed movement or press any button.

Note

- If you do not perform any operation for more than two minutes after pulling out the crown, crown operations will become disabled automatically. If this happens, push the crown back in and then pull it out again to re-enable crown operations.
- You can use high-speed hand movement when configuring time settings in the Timekeeping Mode, Alarm Mode, or Countdown Timer Mode.
- Button operations become disabled after you perform a crown operation. If this happens, rotate the crown slightly. This should restore button operations.

Things to check before using the watch

1. Hold down Ⓒ at least two seconds to enter the Timekeeping Mode, and then observe the movement of the 2 *Second Hand*.



2. Check the Home City.

Use the procedure under "To configure Home City settings" (page E-36) to configure your Home City.

Important!

- Proper time calibration signal reception depends on correct Home City, time, and day settings in the Timekeeping Mode. Make sure you configure these settings correctly.

3. Set the current time.

- **To set the time using a time calibration signal**
  See "To get ready for a receive operation" (page E-25).
- **To set the time manually**
  See "Configuring Current Time and Day Settings Manually" (page E-41).

The watch is now ready for use.

- For details about the watch's radio controlled timekeeping feature, see "Radio Controlled Atomic Timekeeping" (page E-20).

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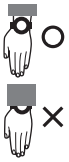
Contents

Charging the Watch

The face of the watch is a solar panel that generates power from light. The generated power charges a built-in rechargeable battery, which powers watch operations. The watch charges whenever it is exposed to light.

Charging Guide

Whenever you are not wearing the watch, be sure to leave it in a location where it is exposed to light.
- Best charging performance is achieved by exposing the watch to light that is as strong as possible.



When wearing the watch, makes sure that its face is not blocked from light by the sleeve of your clothing.
- The watch may enter a sleep state (page E-19) if its face is blocked by your sleeve even only partially.

Warning!

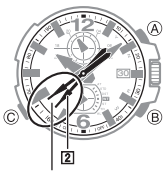
Leaving the watch in bright light for charging can cause it to become quite hot. Take care when handling the watch to avoid burn injury. The watch can become particularly hot when exposed to the following conditions for long periods.
- On the dashboard of a car parked in direct sunlight
- Too close to an incandescent lamp
- Under direct sunlight

Important!
- Keep the watch in an area normally exposed to bright light when storing it for long periods. This helps to ensure that power does not run down.
- Storing the watch for long periods in an area where there is no light or wearing it in such a way that it is blocked from exposure to light can cause power to run down. Make sure that the watch is exposed to bright light whenever possible.

Checking the Current Power Level

Certain functions will be disabled when the power level is low. If the power level is low, leave the watch in a location where its face (solar panel) is exposed to light.

Low Power



Moves at two-second intervals.

Low power conditions are indicated by the movement of the 2 ***Second Hand*** in the Timekeeping Mode.
- If the 2 ***Second Hand*** is moving normally at one-second intervals, power is at Level 1.
- If the 2 ***Second Hand*** is moving at two-second intervals, power is at Level 2, which is quite low. Expose the watch to light as soon as possible so it can charge.

Low Battery Alert (Hand Movement and Function Status)

Level	Hand Movement	Function Status
1	Normal.	All functions enabled
2	2 ***Second Hand*** moves at two-second intervals.	Beeper and time calibration signal reception disabled.
3	2 ***Second Hand*** stopped.	All functions disabled

- When power drops to Level 3, all settings (including timekeeping) will be cleared. Recharging the battery will reset all settings to their initial factory defaults.
- When the watch is at Level 3, exposing it to light for a while will cause the 2 ***Second Hand*** to move to the position of second 57. This indicates that charging has started.

Power Recovery Mode

The watch is designed to go into a power recovery mode that stops hand operation temporarily whenever power suddenly drops below a certain level due to continuous signal reception or other operations over a short period. Note that all operations are disabled while the watch is in the power recovery mode.
The hands will move to the correct positions and the watch will resume normal operation after power recovers (in about 15 minutes). Putting the watch in a location where it is exposed to light will help power to recover sooner.

Charging Times

Exposure Level (Brightness)	Daily Operation *1	Level Change *2		
		Level 3	Level 2	Level 1
		→		→
Outdoor sunlight (50,000 lux)	8 minutes	2 hours		27 hours
Window sunlight (10,000 lux)	30 minutes	6 hours		99 hours
Window sunlight on cloudy day (5,000 lux)	48 minutes	10 hours		161 hours
Indoor fluorescent lighting (500 lux)	8 hours	111 hours		– – –

* *1 Approximate exposure each day to generate power for normal daily operation.*
* *2 Approximate exposure to take power up one level.*
- The above times are for reference only. Actual times depend on lighting conditions.
- For details about the operating time and daily operating conditions, see the "Power Supply" section of the Specifications (page E-97).

Power Saving

Power Saving enters a sleep state (second hand sleep or function sleep) whenever the watch is left for a certain period in an area where it is dark.

Elapsed Time in Dark	Operation
60 to 70 minutes (second hand sleep)	2 ***Second Hand*** only stopped at 12 o'clock, all other functions enabled
6 or 7 days (function sleep)	• All functions, including analog timekeeping, disabled • Internal timekeeping maintained

- The watch will not enter a sleep state between 6:00 AM and 9:59 PM. If the watch is already in a sleep state when 6:00 AM arrives, however, it will remain there.
- The watch will not enter a sleep state while it is in the Stopwatch Mode or Countdown Timer Mode.

To recover from the sleep state

Move the watch to a well-lit area or press any button.

Radio Controlled Atomic Timekeeping

This watch receives a time calibration signal and updates its time setting accordingly. However, when using the watch outside of areas covered by time calibration signals, you will have to adjust the settings manually as required. See “Configuring Current Time and Day Settings Manually” (page E-41) for more information.

This section explains how the watch updates its time settings when the city code selected as the Home City is in Japan, North America, Europe, or China, and is one that supports time calibration signal reception.

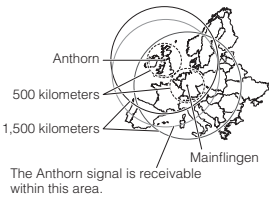
If your Home City Code setting is this:	The watch can receive the signal from the transmitter located here:
LON (LONDON), PAR (PARIS), ATH (ATHENS)	Anthorn (England), Mainflingen (Germany)
HKG (HONG KONG)	Shangqiu City (China)
TYO (TOKYO)	Fukushima (Japan), Fukuoka/Saga (Japan)
HNL (HONOLULU), ANC (ANCHORAGE), LAX (LOS ANGELES), DEN (DENVER), CHI (CHICAGO), NYC (NEW YORK)	Fort Collins, Colorado (United States)

Important!

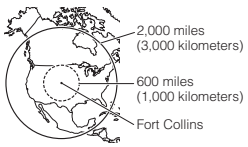
- The areas covered by **HNL** (**HONOLULU**) and **ANC** (**ANCHORAGE**) are quite far from the calibration signal transmitters, so certain conditions may cause reception problems.

Approximate Reception Ranges

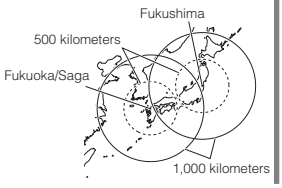
UK and German Signals



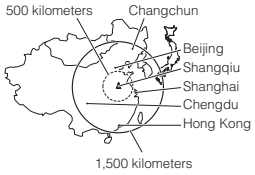
North American Signal



Japanese Signals



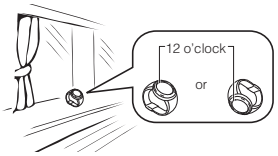
Chinese Signal



- Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference may also cause problems with reception.
  - Mainflingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles)
  - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
  - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles)
  - Shangqiu (China) transmitter: 500 kilometers (310 miles)
- As of December 2012, China does not use Daylight Saving Time (DST). If China does go to the Daylight Saving Time system in the future, some functions of this watch may no longer operate correctly.
- Using this watch in a country covered by a time calibration signal that is different from the countries it supports may result in incorrect time indication due to local application of daylight saving time (summer time), etc.

To get ready for a receive operation

1. Confirm that the watch is in the Timekeeping Mode. If it isn’t, hold down Ⓒ for at least two seconds to enter the Timekeeping Mode.
2. Place the watch in a location where signal reception is good.



- Position the watch as shown in the nearby illustration, with 12 o’clock pointed towards a window. Make sure there are no metal objects nearby.
- Signal reception normally is better at night.
- The receive operation takes from two to 10 minutes, but in some cases it can take as long as 20 minutes. Take care that you do not perform any button operation or move the watch during this time.

- Signal reception may be difficult or even impossible under the conditions described below.

Inside or among buildings | Inside a vehicle | Near household appliances, office equipment, or a mobile phone | Near a construction site, airport, or other sources of electrical noise | Near high-tension power lines | Among or behind mountains

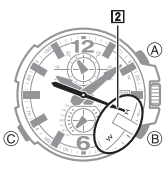
3. What you should do next depends on whether you are using Auto Receive or Manual Receive.
   - Auto Receive: Leave the watch over night in the location you selected in step 2. See “Auto Receive” on page E-27 for details.
   - Manual Receive: Perform the operation under “To perform manual receive” on page E-28.

Auto Receive

- With Auto Receive, the watch performs the receive operation each day automatically up to six times (up to five times for the Chinese calibration signal) between the hours of midnight and 5 a.m. (according to the Timekeeping Mode time). When any receive operation is successful, none of the other receive operations for that day are performed.
- When a calibration time is reached, the watch will perform the receive operation only if it is in the Timekeeping Mode. The receive operation is not performed if a calibration time is reached while you are configuring settings.

To perform manual receive

1. In the Timekeeping Mode (page E-35), keep Ⓑ depressed (for about two seconds) as the 2 ***Second Hand*** goes through the following sequence.
   - Moves to **Y** (**YES**) or **N** (**NO**) to indicate the last signal reception result, then to **R** (**READY**).
2. The 2 ***Second Hand*** indicates the operations the watch is currently performing.



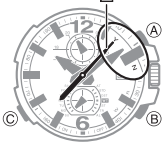
When the 2 *Second Hand* is pointed here:	It means this:
R (READY)	Watch is setting up for reception.
W (WORK)	Reception is in progress.

- If signal reception is unstable, the 2 ***Second Hand*** may move between **W** (**WORK**) and **R** (**READY**).
- When the receive operation is successful, the watch adjusts the time setting accordingly, and then resumes regular timekeeping. It does not adjust the setting if the operation failed.

Note

- To interrupt a receive operation and return to the Timekeeping Mode, press any button.

To check the result of the latest receive operation



In the Timekeeping Mode, press Ⓑ. The 2 ***Second Hand*** will move to **Y** (**YES**) or **N** (**NO**) to indicate the last calibration signal receive result.

- The 2 ***Second Hand*** will move to **Y** (**YES**) if the latest receive operation was successful, or **N** (**NO**) if it was not. After about 10 seconds, regular timekeeping will resume.
- Press Ⓑ to return to regular timekeeping. The watch will also return to regular timekeeping if you do not perform any operation for about 10 seconds.

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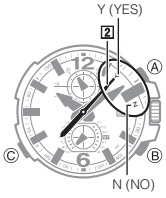
Note

- The 2 ***Second Hand*** will indicate **N** (**NO**) if you have adjusted the time or day setting manually since the latest receive operation.

To turn auto receive on and off



1. In the Timekeeping Mode, press Ⓑ. The 2 ***Second Hand*** will move to **Y** (**YES**) or **N** (**NO**) to indicate the last calibration signal receive result.
2. Pull out the crown.
   The 2 ***Second Hand*** will perform one full revolution and then stop at the current on/off setting.
3. Rotate the crown to move the 2 ***Second Hand*** to the setting you want.
   - To turn on auto receive, select **Y** (**YES**).
   - To turn off auto receive, select **N** (**NO**).
4. Push the crown back in to return to the Timekeeping Mode.

Radio-controlled Atomic Timekeeping Precautions

- Strong electrostatic charge can result in the wrong time setting.
- Even if a receive operation is successful, certain conditions can cause the time setting to be off by up to one second.
- The watch is designed to update its day setting automatically for the period from January 1, 2000 to December 31, 2099. Updating of the day setting by signal reception will no longer be performed starting from January 1, 2100.
- If you are in an area where signal reception is not possible, the watch keeps time with the precision noted in “Specifications” (page E-95).
- The receive operation is disabled under any of the following conditions.
  – While power is at Level 2 or lower (page E-16)
  – While the watch is in the power recovery mode (page E-17)
  – While the watch is in the function sleep state (power saving, page E-19)
  – While the watch is not in the Timekeeping Mode
  – While a direction reading or Countdown Timer operation is in progress (even if the watch is in the Timekeeping Mode)
- A receive operation is cancelled if an alarm sounds while it is being performed.

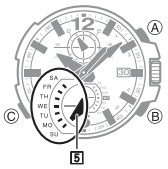
Mode Reference Guide

Your watch has five “modes”. The mode you should select depends on what you want to do.

To do this:	Enter this mode:	See:
• Configure Home City and DST (daylight saving time) settings • Perform a time calibration signal receive operation or view the last receive result • Change the Auto Receive on/off setting • Configure time and day settings manually • Determine magnetic north	Timekeeping Mode	E-35 E-48
• View the current time in one of 29 cities around the globe • Configure World Time City and summer time settings • Swap the Home City and World Time City	World Time Mode	E-63 E-64 E-67
Use the stopwatch to measure elapsed time	Stopwatch Mode	E-69
Use the countdown timer	Countdown Timer Mode	E-72
• Set an alarm time • Turn the alarm ON or OFF	Alarm Mode	E-75 E-78

Selecting a Mode

With this watch, everything starts from the Timekeeping Mode.



To determine the watch’s current mode

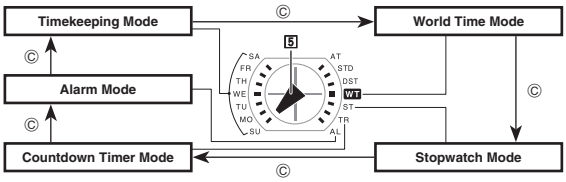
Check what the 5 ***Lower Dial Hand*** is indicating as shown under “To select a mode” (page E-34).

To return to the Timekeeping Mode from any other mode

Hold down Ⓒ for at least two seconds.

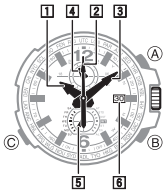
To select a mode

Each press of Ⓒ will cycle between modes. The currently selected mode is indicated by the 5 ***Lower Dial Hand***.



Timekeeping

To enter the Timekeeping Mode, hold down Ⓒ at least two seconds.



Hand Functions

1 Hour Hand
2 Second Hand
3 Minute Hand
4 Upper Dial Hand: Indicates the current hour in the Home City time in 24-hour format.
5 Lower Dial Hand: Points to the day of the week.
6 Day Indicator

Configuring Home City Settings

The Home City is location where you will normally use the watch. You can choose from a selection of city codes that represent 29 cities around the globe.

To configure Home City settings

Note

- This watch does not have a city code that corresponds to Newfoundland.

1. Pull out the crown.
   - This will cause the 2 ***Second Hand*** to move to the city code of the currently selected Home City.
   - This indicates the city code setting mode.

- If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
- For details about city codes, see the “City Code Table” at the back of this manual.

2. Rotate the crown to move the 2 ***Second Hand*** to the city code you want to select as your Home City.
   - Each time you select a city code, the 1 ***Hour Hand***, 3 ***Minute Hand*** and 6 ***Day Indicator*** move to the current time and day for that city code.
3. Push the crown back in to return to the Timekeeping Mode.

STD/DST Switching

You can select summer time or standard time independently for each city. The initial default setting for all cities is **AT** (**AUTO**).
Normally you should use the **AT** (**AUTO**) setting because it automatically switches between summer time and standard time. You should change the setting to **STD** (standard time) or **DST** (summer time) in the following cases.

– When using a time of a location that is not included in the watch’s list of 29 cities
– When the preset AUTO standard time/summer time timing is incorrect for some reason

Daylight Saving Time (DST)

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.

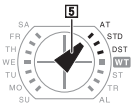
- Note that you cannot switch between **STD** (standard time) and **DST** (daylight saving time) while **UTC*** is selected as your Home City.

* *Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.*

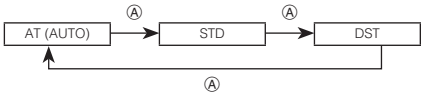
To switch between standard time and summer time manually

1. Perform steps 1 and 2 under “To configure Home City settings” (page E-36).
   - Selecting a city code will cause the 1 ***Hour Hand***, 3 ***Minute Hand***, and 4 ***Upper Dial Hand*** to move automatically to the current time for the selected city code.
   - If you will use the watch in a city that is not included in the city code list, select a city code that is in the same time zone as your city.
   - Displaying the Home City Settings screen will cause the 5 ***Lower Dial Hand*** to move to **AT** (auto switching), **STD** (standard time), or **DST** (daylight saving time).

AT (AUTO)	The watch automatically switches between standard time and daylight saving time in accordance with its calendar.
STD	The watch always shows standard time.
DST	The watch always shows daylight saving time.



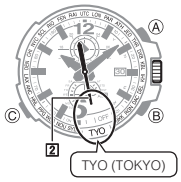
2. Hold down Ⓐ for about one second to cycle through the summer time settings as shown below.



3. After the setting is way you want, push the crown back in.

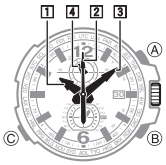
Configuring Current Time and Day Settings Manually

You can configure current time and day settings manually when the watch is unable to receive a time calibration signal.

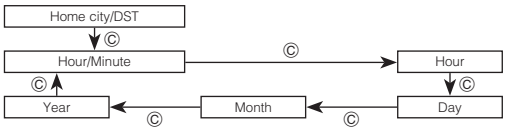


To change the current time setting manually

1. Pull out the crown.
   - This will cause the 2 ***Second Hand*** to move to the city code of the currently selected Home City.
   - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.

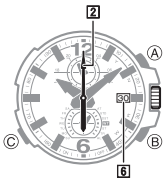


2. Change the Home City settings, if you want.
   - For details about these settings, see step 2 under "To configure Home City settings" (page E-36).
3. Hold down Ⓒ for about one second until the watch beeps and the 2 ***Second Hand*** moves to 12 o'clock.
   - This indicates the manual time setting mode.
   - In the following steps, each press of Ⓒ cycles between settings as shown below.

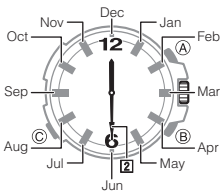


4. Rotate the crown to adjust the time (hour and minute) setting.
   - See "Using the Crown" (page E-4) for information about high-speed hand movement.
   - The 4 ***Upper Dial Hand*** is synchronized with the 1 ***Hour Hand***.
   - When adjusting the setting, check to make sure that the 4 ***Upper Dial Hand*** correctly indicates an a.m. time or p.m. time.
   - If you want to change the day setting at this time, press Ⓒ and perform the procedure starting from step 3 under "To change the current day setting manually" (page E-44).
5. After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
   - This causes timekeeping to resume with the 2 ***Second Hand*** starting from 12 o'clock.

To change the current day setting manually



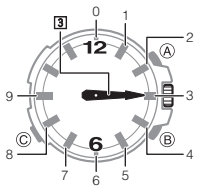
1. Pull out the crown.
   - This will cause the 2 ***Second Hand*** to move to the city code of the currently selected Home City.
2. Hold down Ⓒ for about one second until the watch beeps and the 2 ***Second Hand*** moves to 12 o'clock.
   - This indicates the manual time setting mode.
3. Press Ⓒ twice. This will enter the day setting mode.
   - The 6 ***Day Indicator*** will move slightly to indicate the setting mode.
4. Rotate the crown to adjust the day setting.



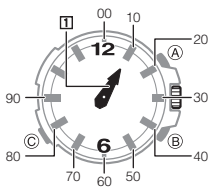
Setting the month

5. After the 6 ***Day Indicator*** stops moving, press Ⓒ. This will enter the month setting mode.
   - The 2 ***Second Hand*** will move to the currently selected month.
6. Rotate the crown to adjust the month setting.
7. Press Ⓒ. This will enter the year setting mode.
   - The 1 ***Hour Hand*** will move to the number that represents the tens digit of the year and the 3 ***Minute Hand*** will move to the number that represents the ones digit. The 2 ***Second Hand*** will move to 12 o'clock and stop there.

8. Rotate the crown to adjust the year setting.
   - If you want to change the time setting at this time, press Ⓒ and then perform the procedure starting from step 4 under "To change the current time setting manually" (page E-41).



Year setting (ones digit)



Year setting (tens digit)

9. After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
   - This causes timekeeping to resume with the 2 ***Second Hand*** starting from 12 o'clock.

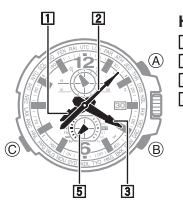
Note

- The watch's built-in full automatic calendar makes allowances for different month lengths and leap years. Once you set the day, there should be no reason to change it except after you have the watch's rechargeable battery replaced or after power drops to Level 3.

Taking Direction Readings

The watch has a magnetic sensor that makes it possible to take digital compass readings. You can use the digital compass to find the direction to a specific objective and to determine your current position.

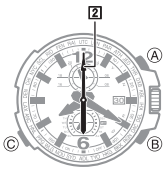
- See "Magnetic North and True North" (page E-60) for information about the two types of north. For information about maximizing digital compass accuracy, see "Calibrating Direction Readings" (page E-53) and "Digital Compass Precautions" (page E-60).



Hand Indicators

1 Hour Hand
2 Second Hand: Points to magnetic north.
3 Minute Hand
5 Lower Dial Hand: Points to the day of the week.

To take a direction reading



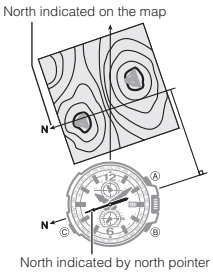
1. Point the 12 o'clock position of the watch in the direction you want to read.
2. In the Timekeeping Mode, keep the watch horizontal as you press Ⓐ.
   - The 2 ***Second Hand*** will move to 12 o'clock* and the direction reading operation will start. After about two seconds, the 2 ***Second Hand*** will move to indicate north.

   * *If the 2 **Second Hand** does not point to 12 o'clock, it could mean that the hand is out of position. Use the procedure under "To adjust home positions" (page E-81) to correct the hand position.*

   - The 2 ***Second Hand*** indicates magnetic north.
   - The 2 ***Second Hand*** will continue to move for about 20 seconds after you start the digital compass operation as it adjusts its magnetic north reading. After that, the hand will stop at the final reading.
   - To take another direction reading, press Ⓐ again.
   - To stop an ongoing direction reading operation and return to the Timekeeping Mode, press Ⓒ.
   - If you do not perform any operation, the watch will return to normal timekeeping after about one or two minutes.
3. Press Ⓒ to return to the Timekeeping Mode.

Note

- If the 1 ***Hour Hand*** stops at 6 o'clock and the 3 ***Minute Hand*** stops at 12 o'clock, it could mean that the watch has detected abnormal magnetism. For more information, see "Abnormal magnetism detection is indicated." (page E-87).



Example: Determining your current position and your objective on a map

Having an idea of your current location and the direction to your destination is important when mountain climbing or hiking. In this example, we show you how to plot directions on a map and determine your current location using direction measurements taken by the watch.

1. In the Timekeeping Mode, press Ⓐ.
2. Rotate the map (without moving the watch) until north on the map is aligned with north as indicated by the watch's second hand. Depending on how the watch is set up, it may be indicating magnetic north or true north.

   Magnetic north: Indicates north in accordance with the Earth's magnetic field.
   True north: Indicates the direction to the North Pole.
   - For information about setting the watch up to indicate magnetic north or true north, see "Magnetic North and True North" (page E-60).
3. Determine your location and destination by checking the map and the geographic contours around you.

Calibrating Direction Readings

You can use the information in this section to calibrate direction readings, which helps to improve digital compass accuracy.

Direction Reading Calibration Methods

Important!

- To ensure correct direction readings by this watch, be sure to perform bidirectional calibration before using it. The watch may produce incorrect direction readings if you do not perform bidirectional calibration.

- Keep the watch away from audio speakers, magnetic necklace, cell phone, and other devices that generate strong magnetism. Exposure to strong magnetism can magnetize the watch and cause incorrect direction readings. If incorrect readings continue even after you perform bidirectional calibration, it could mean that your watch has been magnetized. If this happens, contact your original retailer or an authorized CASIO Service Center.

Bidirectional Calibration

- Use this method when using the watch to take readings in an area where magnetic force is present, or if you notice that the readings produced by the watch are different from another compass.

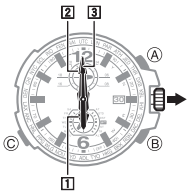
Northerly Calibration

- Use this method to calibrate the watch to detect true north (when it is known by you).

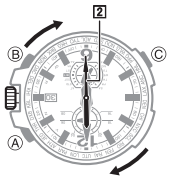
Precautions about bidirectional calibration

- You can use any two opposing directions for bidirectional calibration. You must, however, make sure that they are 180 degrees opposite each other. Remember that if you perform the procedure incorrectly, you will get wrong bearing sensor readings.
- Do not move the watch while calibration of either direction is in progress.
- You should perform bidirectional calibration in an environment that is the same as that where you plan to be taking direction readings. If you plan to take direction readings in an open field, for example, calibrate in an open field.

To perform bidirectional calibration



1. In the Digital Compass Mode, pull out the crown.
   - The 2 ***Second Hand*** and 3 ***Minute Hand*** will move to 12 o'clock, and the 1 ***Hour Hand*** will move to 6 o'clock.
2. Press Ⓐ to start calibration of Point 1.
   - After about seven seconds, the 2 ***Second Hand*** will move to **Y** (**YES**) if Point 1 calibration was successful or to **N** (**NO**) if it was not successful.
   - If the 2 ***Second Hand*** is pointing at **N** (**NO**) (unsuccessful), press Ⓐ to perform Point 1 calibration again.
   - If the 2 ***Second Hand*** is pointing at **Y** (**YES**) (successful), it will move to 6 o'clock after about two seconds.

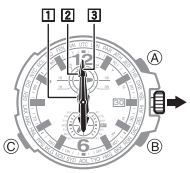


3. Rotate the watch 180 degrees.
4. Press Ⓐ to start calibration of Point 2.
   - After about seven seconds, the 2 ***Second Hand*** will move to **Y** (**YES**) if Point 2 calibration was successful or to **N** (**NO**) if it was not successful.
   - If the 2 ***Second Hand*** is pointing at **N** (**NO**) (unsuccessful), press Ⓐ to return to Point 1 calibration.
5. After calibration is complete, push the crown back in and then lock it.
   - This will start a magnetic north reading operation.
   - Press Ⓒ to return to the Timekeeping Mode.

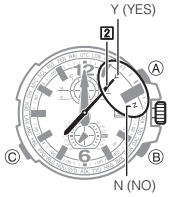
To perform northerly calibration

Important!

- If you want to perform both northerly and bidirectional calibration, perform bidirectional calibration first, and then perform northerly calibration. This is necessary because bidirectional calibration cancels any existing northerly calibration setting.



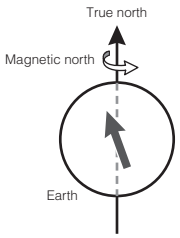
1. In the Digital Compass Mode, pull out the crown.
   - The 2 ***Second Hand*** and 3 ***Minute Hand*** will move to 12 o'clock, and the 1 ***Hour Hand*** will move to 6 o'clock.
2. Press Ⓒ. The 1 ***Hour Hand*** will move to 12 o'clock.
3. Place the watch on a level surface, and position it so that its 12 o'clock position points north (as measured with another compass).



4. Press Ⓐ to start calibration.
   - After about seven seconds, the 2 ***Second Hand*** will move to **Y** (**YES**) if calibration was successful or to **N** (**NO**) if it was not successful.
   - If the 2 ***Second Hand*** is pointing at **N** (**NO**) (unsuccessful), press Ⓐ to perform calibration again.
5. After calibration is complete, push the crown back in and then lock it.
   - This will start a magnetic north reading operation.
   - Press Ⓒ to return to the Timekeeping Mode.

Digital Compass Precautions

Magnetic North and True North



The northerly direction can be expressed either as magnetic north or true north, which are different from each other. Also, it is important to keep in mind that magnetic north moves over time.

- Magnetic north is the north that is indicated by the needle of a compass.
- True north, which is the location of the North Pole of the Earth's axis, is the north that is normally indicated on maps.
- The difference between magnetic north and true north is called the "declination". The closer you get to the North Pole, the greater the declination angle.

Location

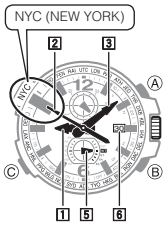
- Taking a direction reading when you are near a source of strong magnetism can cause large errors in readings. Because of this, you should avoid taking direction readings while in the vicinity of the following types of objects: permanent magnets (magnetic necklaces, etc.), concentrations of metal (metal doors, lockers, etc.), high tension wires, aerial wires, household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Accurate direction readings are impossible while in a train, boat, air plane, etc.
- Accurate readings are also impossible indoors, especially inside ferroconcrete structures. This is because the metal framework of such structures picks up magnetism from appliances, etc.

Storage

- The precision of the bearing sensor may deteriorate if the watch becomes magnetized. Because of this, you should store the watch away from magnets or any other sources of strong magnetism, including: permanent magnets (magnetic necklaces, etc.) and household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Whenever you suspect that the watch may have become magnetized, perform the procedure under "To perform bidirectional calibration" (page E-56).

Checking the Current Time in a Different Time Zone

You can use World Time to view the current time in one of 29 time zones around the globe. The currently selected city is called the "World Time City".



Hands and Indicators

1 Hour Hand: Indicates the hour of the current time in the World Time City.
2 Second Hand: Indicates the current World Time City for about three seconds after the World Time mode is entered.
3 Minute Hand
5 Lower Dial Hand: Points to **WT**.
6 Day Indicator

- Pressing Ⓐ causes the 2 ***Second Hand*** to move to the current World Time City for about three seconds.

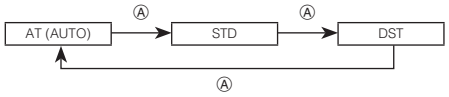
Important!

- Time calibration signal reception is disabled while the watch is in the World Time Mode.

To view the time in another time zone

1. In the Timekeeping Mode, press Ⓒ once to enter the World Time Mode.
   - The 5 ***Lower Dial Hand*** will move to **WT**.
   - To select the UTC zone as your World Time, simply hold down Ⓑ for about three seconds. No other operation is required.
2. Pull out the crown.
   - The 2 ***Second Hand*** points to the currently selected World Time city code.
   - The 5 ***Lower Dial Hand*** will indicate **AT** (**AUTO**), **STD** (standard time) or **DST** (daylight saving time), which indicates the current daylight saving time setting.
   - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the watch hands will no longer move when you rotate the crown. If this happens, push the crown back in and then pull it out again.

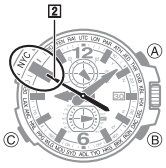
3. Rotate the crown to move the 2 ***Second Hand*** to the city code you want to select as the World Time City.
   - Each time you select a city code, the 1 ***Hour Hand***, 3 ***Minute Hand***, and 6 ***Day Indicator*** move to the current time and day for that city code. For details about city codes, see the "City Code Table" at the back of this manual.
   - If you think that the time indicated for the selected World Time City is not correct, it probably means that there is something wrong with your Home City settings. Use the procedure under "To configure Home City settings" (page E-36) to correct the Home City settings.
4. Hold down Ⓐ for about one second to cycle through the summer time settings as shown below.



5. After selecting the city you want, push the crown back in to return to the World Time Mode.

Swapping your Home City and World Time City

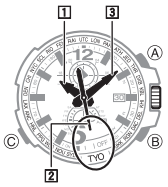
You can use the procedure below to swap your Home City and World Time City. This capability can come in handy when you frequently travel between two locations in different time zones.



The following example shows what happens when the Home City and World Time City are swapped while the Home City originally is **TYO** (Tokyo) and the World Time City is **NYC** (New York).

	Home City	World Time City
Before swapping	Tokyo 10:08 p.m. (Standard time)	New York 9:08 a.m. (Daylight saving time)
After swapping	New York 9:08 a.m. (Daylight saving time)	Tokyo 10:08 p.m. (Standard time)

To swap your Home City and World Time City



1. In the World Time Mode, pull out the crown.
2. Rotate the crown to move the 2 ***Second Hand*** to the city you want to select as your World Time City.
   - In this example, you would move the 2 ***Second Hand*** to **NYC** in order to select New York as the World Time City.
   - Wait until the 1 ***Hour Hand*** and 3 ***Minute Hand*** complete their move to the time in the currently selected World Time City. You will not be able to perform step 4 of this procedure until the hands stop moving.
3. Push the crown back in.

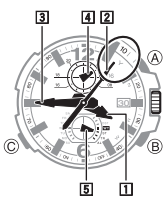
4. Hold down Ⓐ for about three seconds until the watch beeps.
   - This will make the World Time City (**NYC** in this example) your new Home City. At the same time, it will change the Home City you had selected prior to step 4 (**TYO** in this example), to your World Time City.
   - After swapping the Home City and World Time City, the watch will stay in the World Time Mode. The 2 ***Second Hand*** will point to your new World Time City (**TYO** in this example).

Note

- If your current World Time City supports time calibration signal reception, making it your Home City enables calibration signal reception for that city.

Using the Stopwatch

You can use the stopwatch to measure elapsed times. A flyback feature (page E-70) lets you reset the stopwatch to zero without stopping time measurement.



Hands and Indicators

1 Hour Hand: Indicates the stopwatch minute count (1 revolution = 60 minutes).
2 Second Hand: Indicates the 1/20 (0.05)-second count during stopwatch operation.
3 Minute Hand: Indicates the stopwatch seconds count.
4 Upper Dial Hand: Indicates the stopwatch minute count (1 revolution = 120 minutes).
5 Lower Dial Hand: Points to **ST**.

To enter and exit the Stopwatch Mode

In the Timekeeping Mode, press Ⓒ twice to enter the Stopwatch Mode.

- The 5 ***Lower Dial Hand*** will move to **ST**.

To perform an elapsed time operation

Ⓐ (Start) → Ⓐ (Stop) → Ⓐ (Restart) → Ⓐ (Stop) → Ⓑ (Zero Reset)

To perform flyback timing

Pressing Ⓑ while an elapsed time operation is in progress performs zero reset and immediately resumes timing from there. You can do this as many times as you want.

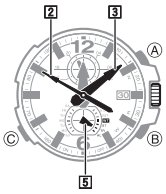
Ⓐ (Start 1) → Ⓑ (Start 2) → Ⓑ (Start 3) . . . . . → Ⓐ (Stop) → Ⓑ (Zero Reset)

- An ongoing elapsed time measurement operation is not affected by pulling out the crown.

- The 2 ***Second Hand***, which indicates the 1/20 (0.05)-second count during stopwatch operation, moves only 30 seconds after an elapsed time measurement operation is started or restarted. After that, the 2 ***Second Hand*** stops.

Using the Countdown Timer

The countdown timer can be configured within a range of one minute to 60 minutes. An alarm sounds for about 10 seconds when the timer reaches zero.

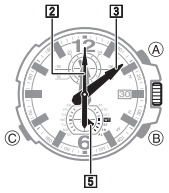


Hands and Indicators

2 Second Hand: Indicates countdown or elapsed seconds.
3 Minute Hand: Indicates countdown or elapsed minutes.
5 Lower Dial Hand: Points to **TR**.

- All hands move counterclockwise during a countdown.

To specify the countdown start time



1. In the Timekeeping Mode, press Ⓒ three times to enter the Countdown Timer Mode.
   - The 5 ***Lower Dial Hand*** will move to **TR**.
2. In the Countdown Timer Mode, pull out the crown. This enters the countdown start time setting mode.
   - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
3. Rotate the crown to set the countdown start time.
   - The maximum countdown start time setting is 60 minutes. To set a countdown start time of 60 minutes, move the 3 ***Minute Hand*** to 12 o'clock.
   - See "Using the Crown" (page E-4) for information about high-speed hand movement.

To perform a countdown timer operation

Ⓐ (Start) → Ⓐ (Stop) → Ⓑ (Zero Reset)

- A time-up alert sounds for 10 seconds when the countdown reaches 0, and then the timer displays the start time.
- The alarm will not sound if battery power is low.
- Pulling out the crown while a countdown is in progress will stop the countdown and enter the countdown start time setting mode.

Important!

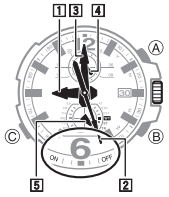
- Time calibration signal reception is disabled while the watch is in the Countdown Timer Mode.

To stop the alarm

Press any button.

Using the Alarm

When the alarm is turned on, an alarm will sound for about 10 seconds each day when the time in the Timekeeping Mode reaches the preset alarm time. This is true even if the watch is not in the Timekeeping Mode.



Hands and Indicators

1 Hour Hand: Indicates the currently set alarm time hour.
2 Second Hand: Indicates the current alarm ON/OFF setting.
3 Minute Hand: Indicates the currently set alarm time minute.
4 Upper Dial Hand: Indicates the hour setting of the current alarm time in 24-hour format.
5 Lower Dial Hand: Points to **AL**.

To change the alarm time setting

1. In the Timekeeping Mode, press Ⓒ four times to enter the Alarm Mode.
   - The 5 ***Lower Dial hand*** will move to **AL**.
2. Pull out the crown to enter the alarm setting mode.
   - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the watch hands will no longer move when you rotate the crown. If this happens, push the crown back in and then pull it out again.
   - You can toggle between the hour and minute setting mode, and the hour only setting mode by pressing Ⓒ.

Hour/Minute ⇄ (Ⓒ) Hour

3. Rotate the crown to set the alarm time.
   - The 1 ***Hour Hand*** will also move.

   - See "Using the Crown" (page E-4) for information about high-speed hand movement.
4. Press Ⓒ to switch to the hour setting mode.
   - The 1 ***Hour Hand*** will move slightly left and right to indicate the 1 ***Hour Hand*** setting mode.
   - Check the 24-hour time indicated by the 4 ***Upper Dial Hand*** to see if the current setting is a.m. or p.m.
5. Rotate the crown to adjust the hour setting only.
   - See "Using the Crown" (page E-4) for information about high-speed hand movement.
6. After the setting is the way you want, push the crown back in to exit the alarm setting mode.
   - The alarm always works based on the time kept in the Timekeeping Mode.
   - The watch will return to the Timekeeping Mode automatically if you do not perform any operation in the Alarm Mode for about two or three minutes.

To turn the alarm on or off

In the Alarm Mode, press Ⓐ to toggle the alarm between on and off. The 2 ***Second Hand*** will indicate the current ON/OFF setting.

Note

- The alarm will not sound if battery power is low.
- The alarm will not sound if the watch is in the Power Saving sleep state.

To stop the alarm

Press any button.

Adjusting Home Positions

Strong magnetism or impact can cause the hands and/or day indicator setting to be off, even if the watch is able to perform the time calibration signal receive operation.

Auto Home Position Adjustment

Auto correction of hand home positions corrects the hand position automatically.

- Auto correction is performed in the Timekeeping Mode only.
- Auto correction corrects the positions of all hands. For the day Indicator, you must perform the manual adjustment procedure under "To adjust home positions" (page E-81).
- If the 4 ***Upper Dial Hand*** is 12 hours off of the current correct time, correct the setting using the procedure under "To adjust home positions" (page E-81).

Manual Home Position Adjustment

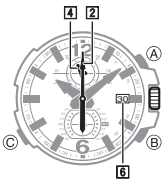
Perform the procedure in this section if auto home position adjustment is not possible for some reason.

- Hand home position adjustment is not required if the time and day settings are correct.

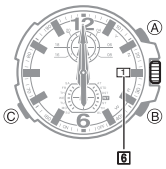
Note

- Any time after you enter the home position adjustment mode in step 2 of the following procedure, you can return to the Timekeeping Mode by pushing the crown back in. In this case, any adjustments you made before the watch returned to the Timekeeping Mode will be applied.
- If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and hands will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.

To adjust home positions



1. Pull out the crown.
2. Hold down Ⓑ for at least five seconds until the watch beeps and the 2 ***Second Hand*** moves to 12 o'clock.
   - Automatic home position adjustment of all of the hands (but not the 6 ***Day Indicator***) will start.
   - If all hands are at 12 o'clock (the proper home hand home position), advance directly to step 3.
   - If the 4 ***Upper Dial Hand*** is not pointing at **24**, which is its home position, hold down Ⓐ for about two seconds to move it there.



3. Press Ⓒ.
   - This enters the 6 ***Day Indicator*** home position adjustment mode.
4. Check the 6 ***Day Indicator*** to confirm that it is **1**, which is its home position.
   - If the **1** is not in the center of the 6 ***Day Indicator***, rotate the crown to center it.
   - Rotating the crown three full consecutive turns clockwise will cause the 6 ***Day Indicator*** to start changing in a forward direction (increment).
   - To stop 6 ***Day Indicator*** movement, press any button.
5. Push the crown back in to return to the Timekeeping Mode.
   - This will cause the hands to return to their normal positions and resume regular timekeeping. Wait until everything stops moving before performing any other operation.

Troubleshooting

Hand Movement and Position

■ I lost track of what mode the watch is in.

Refer to "Mode Reference Guide" (page E-32). To return directly to the Timekeeping Mode, hold down Ⓒ at least two seconds.

■ The 2 *Second Hand* is moving at two-second intervals.

■ All the watch's hands are stopped at 12 o'clock and none of the buttons work (2 *Second Hand* stopped at 57, 58, 59, or 00).

Power may be low. Expose the watch to light until the 2 ***Second Hand*** starts moving normally, at one-second intervals (page E-16).

■ The hands of the watch suddenly start moving at high speed, even when I do not perform any operation.

This could be due to any one of the following causes. In all cases, the hand movement does not indicate malfunction, and should stop shortly.

- The watch is recovering from a sleep state (page E-19).

- The time setting is being adjusted following a successful auto time calibration signal receive operation (page E-20).

■ Hands suddenly stop moving. Button operation also is disabled.

The watch may be in the power recovery mode (page E-17). Do not perform any operation until the hands return to their normal positions (in about 15 minutes). The hands should return to their correct positions when normal operation returns. To help power recover, leave the watch in a location where it is exposed to light.

■ The current time setting is off by hours.

- Your Home City setting may be wrong. Check your Home City setting and correct it, if necessary (page E-36).

■ The current time setting is off by one hour.

- If you are using the watch in an area where time calibration signal reception is possible, see "To configure Home City settings" (page E-36).

- The period when summer time is applied in the location where you are using the watch may be different from the period set for your currently selected Home City. Use the procedure under "To switch between standard time and summer time manually" (page E-39) to switch from **AT** (**AUTO**) to **STD** (for standard time) or **DST** (for summer time).

■ The time and date settings are off.

This could indicate that the watch has been exposed to magnetism or strong impact, which has caused problems with proper hand and day indicator alignment. Adjust the watch's hand and day indicator home position alignment (page E-79).

Sensor modes

■ An error is indicated during sensor operation.

Subjecting the watch to strong impact can cause sensor malfunction or improper contact of internal circuitry. When this happens an error is indicated and the sensor operation cannot be performed. The illustrations below how sensor mode errors are indicated.

Digital Compass Mode

- During digital compass operations, nearby strong magnetism can cause an error to be indicated.
- If the error is indicated during a measurement, restart the measurement. If an error is indicated when you restart the measurement, it probably means that there is a problem with the sensor or internal circuitry.

■ Abnormal magnetism detection is indicated.

Digital Compass Mode

- Move the watch away from magnetic accessories, electric devices, computers, and any other devices that generate strong magnetism, and try performing the sensor operation again.
- If abnormal magnetism detection is indicated again, it may mean that the watch case may have become magnetized or that magnetism conditions are completely different from those where you last performed bidirectional calibration. Perform bidirectional calibration using the procedure under "To perform bidirectional calibration" (page E-56).

Whenever you have a sensor malfunction, take the watch to your original dealer or nearest authorized CASIO distributor as soon as possible.

■ What causes incorrect direction readings?

- The watch may have been exposed to magnetism. Calibrate the direction sensor.
- A nearby source of strong magnetism, such as a household appliance, a large steel bridge, a steel beam, overhead wires, etc., or an attempt to perform direction measurement on a train, boat, etc. Move away from such objects and try again.

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

- Magnetism generated by nearby digital noise sources (such as high-tension power lines) can interfere with the detection of terrestrial magnetism. Move away from the source of the digital noise and try again.

■ Why am I having problems taking direction readings indoors?

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.

Indoor 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.

Charging

■ The watch does not resume operation after I expose it to light.

This can happen after the power level drops to Level 3 (page E-16). Continue exposing the watch to light until the 2 ***Second Hand*** starts moving normally (at one-second intervals).

■ The 2 *Second Hand* starts to move at one-second intervals, but then suddenly returns to moving at two-second intervals.

The watch probably is not sufficiently charged yet. Continue keeping it exposed to light.

Time Calibration Signal

The information in this section applies only when **LONDON** (**LON**), **PARIS** (**PAR**), **ATHENS** (**ATH**), **HONOLULU** (**HNL**), **ANCHORAGE** (**ANC**), **LOS ANGELES** (**LAX**), **DENVER** (**DEN**), **CHICAGO** (**CHI**), **NEW YORK** (**NYC**), **HONG KONG** (**HKG**), or **TOKYO** (**TYO**) is selected as the Home City. You need to adjust the current time manually when any other city is selected as the Home City.

■ **The 2 *Second Hand* indicates N (NO) when I check the result of the latest receive operation.**

Possible Cause	Remedy	Page
• You are wearing or moving the watch, or performing a button operation during time calibration signal receive operation. • The watch is in an area with poor reception conditions.	Keep the watch in an area where reception conditions are good while time calibration signal receive operation is being performed.	E-25
You are in an area where signal reception is not possible for some reason.	See “Approximate Reception Ranges”.	E-22
The alarm time was reached during time calibration signal reception.	The alarm sounded during time calibration signal reception, causing reception to be canceled.	—
The calibration signal is not being transmitted for some reason.	• Check the website of the organization that maintains the time calibration signal in your area for information about its down times. • Try again later.	—

■ **The current time setting changes after I set it manually.**

You may have the watch configured for Auto Receive of the time calibration signal (page E-27), which will cause the time to be adjusted automatically according to your currently selected Home City. If this results in the wrong time setting, check your Home City setting and correct it, if necessary (page E-36).

■ **The current time setting is off by one hour.**

Possible Cause	Remedy	Page
The period when summer time is applied in the location where you are using the watch may be different from the period set for your currently selected Home City.	Use the procedure under “To switch between standard time and summer time manually” to switch from **AT** (**AUTO**) to **STD** (for standard time) or **DST** (for summer time).	E-39

■ **Auto Receive is not performed or I cannot perform Manual Receive.**

Possible Cause	Remedy	Page
The watch is in the World Time Mode. The watch is in the Stopwatch Mode.	Auto Receive is not performed while the watch is in the World Time Mode or Stopwatch Mode. Hold down Ⓒ at least two seconds to enter the Timekeeping Mode.	E-27 E-34
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-20 E-36
Auto time calibration signal reception is OFF.	Check the auto time calibration signal reception setting.	E-30
A direction reading or countdown timer operation is in progress.	Stop the ongoing operation.	E-48 E-72
There is not enough power for signal reception.	Expose the watch to light to charge it.	E-14

■ **Signal reception is being performed successfully, but the time and/or day is wrong.**

Possible Cause	Remedy	Page
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-20 E-36
The watch may have been exposed to magnetism or strong impact, which has caused problems with proper hand and day indicator alignment.	Adjust the watch’s hand and day indicator home positions.	E-79

World Time

■ **The indicated World Time is wrong.**

There is a problem with your Home City settings.
Check your Home City settings.
See “To configure Home City settings” (page E-36).

■ **The indicated World Time is one hour off.**

The daylight saving time (summer time) setting for the World Time city is wrong.
See “To view the time in another time zone” (page E-64).

Alarm

■ **The alarm does not sound.**

- Power may be low. Expose the watch to light until the 2 ***Second Hand*** starts moving normally, at one-second intervals (page E-16).
- The time setting is wrong in terms of a.m. and p.m.
- The crown may be pulled out. Push the crown back in.

Specifications

Accuracy at normal temperature: ±15 seconds a month (with no signal calibration)

Timekeeping: Hour, minutes (hand moves every 10 seconds), seconds, day
Calendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099
Other: Home City code (can be assigned one of 29 city codes and Coordinated Universal Time); Daylight Saving Time (summer time) auto switching / Standard time, Day of the week

Time Calibration Signal Reception: Auto receive up to six times a day (5 times a day for the Chinese calibration signal; Remaining auto receives cancelled as soon as one is successful); Manual receive
Receivable Time Calibration Signals:
Mainflingen, Germany (Call Sign: DCF77, Frequency: 77.5 kHz); Anthorn, England (Call Sign: MSF, Frequency: 60.0 kHz); Fukushima, Japan (Call Sign: JJY, Frequency: 40.0 kHz); Fukuoka/Saga, Japan (Call Sign: JJY, Frequency: 60.0 kHz); Fort Collins, Colorado, the United States (Call Sign: WWVB, Frequency: 60.0 kHz); Shangqiu City, Henan Province, China (Call Sign: BPC, Frequency: 68.5 kHz)

Compass: 20 seconds continuous reading; North indication by hand; Calibration (bidirectional, northerly); Manual reading

World Time: 29 cities (29 time zones) and Coordinated Universal Time
Other: Daylight Saving Time (summer time) / Standard Time

Stopwatch: Measuring capacity: 1:59'59.95"
Measuring unit: 1/20 (0.05) seconds
Measuring mode: Elapsed time
Flyback timing

Countdown Timer:
Measuring unit: 1 second
Input range: 1 to 60 minutes (1-minute increments)

Alarm: Daily alarm

Other: Power Saving; Auto Correction of Hand Home Positions

Power Supply: Solar panel and one rechargeable battery
Approximate battery operating time: 6 months (no exposure to light after a full charge; 10 seconds beeper operation, one signal reception of approximately 4 minutes per day; 20 direction reading operations per month)

City Code Table

City Code Table

City Code	City	UTC Offset/ GMT Differential	Summer Time Period	
			Summer Time Start	Summer Time End
PAGO PAGO (PPG)	Pago Pago	–11	None	None
HONOLULU (HNL)	Honolulu	–10		
ANCHORAGE (ANC)	Anchorage	–9	02:00, second Sunday in March	02:00, first Sunday in November
LOS ANGELES (LAX)	Los Angeles	–8		
DENVER (DEN)	Denver	–7		
CHICAGO (CHI)	Chicago	–6		
NEW YORK (NYC)	New York	–5		
SANTIAGO (SCL)	Santiago	–4	24:00, second Saturday in October	24:00, second Saturday in March
RIO	Rio De Janeiro	–3	0:00, third Sunday in October	0:00, third Sunday in February or 0:00, fourth Sunday in February

City Code	City	UTC Offset/ GMT Differential	Summer Time Period	
			Summer Time Start	Summer Time End
F. DE NORONHA (FEN)	Fernando de Noronha	–2	None	None
PRAIA (RAI)	Praia	–1		
UTC		0		
LONDON (LON)	London		01:00, last Sunday in March	02:00, last Sunday in October
PARIS (PAR)	Paris	+1	02:00, last Sunday in March	03:00, last Sunday in October
ATHENS (ATH)	Athens	+2	03:00, last Sunday in March	04:00, last Sunday in October
JEDDAH (JED)	Jeddah	+3	None	None
TEHRAN (THR)	Tehran	+3.5	0:00, March 22 or 0:00, March 21	0:00, September 22 or 0:00, September 21

City Code	City	UTC Offset/ GMT Differential	Summer Time Period	
			Summer Time Start	Summer Time End
DUBAI (DXB)	Dubai	+4	None	None
KABUL (KBL)	Kabul	+4.5		
KARACHI (KHI)	Karachi	+5		
DELHI (DEL)	Delhi	+5.5		
DHAKA (DAC)	Dhaka	+6		
YANGON (RGN)	Yangon	+6.5		
BANGKOK (BKK)	Bangkok	+7		
HONG KONG (HKG)	Hong Kong	+8		
TOKYO (TYO)	Tokyo	+9		
ADELAIDE (ADL)	Adelaide	+9.5	02:00, first Sunday in October	03:00, first Sunday in April
SYDNEY (SYD)	Sydney	+10		
NOUMEA (NOU)	Noumea	+11	None	None
WELLINGTON (WLG)	Wellington	+12	02:00, last Sunday in September	03:00, first Sunday in April

- This table shows the city codes of this watch. (As of December 2012)
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.
- The summer time periods in this table are applicable to specific cities. For cities not included in the list, select the list city that is in the same time zone as the desired city and perform STD/DST settings manually.