

# Operation Guide 5423

Congratulations upon your selection of this CASIO watch.

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.

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 your watch or its malfunction.

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## About This Manual

Button operations are indicated using the letters (A) through (D) shown in the illustration.

**Hand Functions**

- 1 Hour Hand
- 2 Second Hand
- 3 Minute Hand
- 4 24-hour Hand: Indicates the current 24-hour timekeeping hour.
- 5 Left Dial Hands: Indicate a time, in 24-hour format, depending on the current mode.
- 6 Right Dial Hand: Indicates the current day of the week and current mode.
- 7 Day Indicator

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

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## Things to check before using the watch

1. Hold down (C) for about two seconds to enter the Timekeeping Mode, and then observe the movement of the 2 Second Hand.

```

    graph TD
      Q1[Is the 2 Second Hand moving smoothly in one-second intervals?] -- NO --> Q2[Is the 2 Second Hand moving at two-second intervals or is it stopped completely?]
      Q1 -- YES --> Q3[The watch is charged sufficiently. For details about charging, see "Charging the Watch" (page E-9).]
      Q2 -- YES --> Q3
      Q2 -- NO --> Q4[Power is low. Charge the watch by placing it in a location where it is exposed to light. For details, see "Charging the Watch" (page E-9).]
      Q3 -- NEXT --> Q5[Go to step 2.]
      Q4 -- NEXT --> Q5
  
```

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### 2. Check the Home City and the daylight saving time (DST) setting.

Use the procedure under "To configure Home City settings" (page E-32) to configure your Home City and daylight saving time settings.

#### Important!

Proper time calibration signal reception and World Time settings depend on correct Home City, time, and date 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-21).
- To set the time manually  
See "Configuring Current Time and Date Settings Manually" (page E-36).

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### The watch is now ready for use.

- For details about the watch's radio controlled timekeeping feature, see "Radio Controlled Atomic Timekeeping" (page E-16).

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## 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-14) if its face is blocked by your sleeve even only partially.

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### Warning!

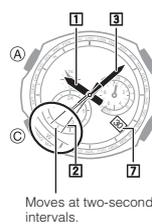
Leaving the watch in bright light for charging can cause it to become quite hot. Take care when handling the watch to avoid burn injury. The watch can become particularly hot when exposed to the following conditions for long periods.

- 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.

### Power Levels



You can get an idea of the watch's power level by observing the movement of the **[2] Second Hand** in the Timekeeping Mode.

- If the **[2] Second Hand** is moving normally in 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 (Low battery alert). Expose the watch to light as soon as possible so it can charge.

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Level	Hand Movement	Function Status
1	Normal.	All functions enabled.
2	<b>[2] Second Hand</b> moving at two-second intervals. <b>[7] Day Indicator</b> changes to <b>1</b> (home position).	Time calibration signal reception.
3	<b>[2] Second Hand</b> stopped. <b>[1] Hour Hand</b> and <b>[3] Minute Hand</b> stopped at 12 o'clock.	All functions disabled.

- When power drops to Level 3, all functions will be disabled but the watch will continue to keep time internally for about one week. If you recharge the battery sufficiently during this period, the analog hands will move automatically to the correct setting and regular timekeeping will resume. After one week, all settings (including timekeeping) will be cleared. Recharging the battery will reset all settings to their initial factory defaults.

### Charging Times

Exposure Level (Brightness)	Daily Operation <sup>*1</sup>	Level Change <sup>*2</sup>		
		Level 3	Level 2	Level 1
Outdoor sunlight (50,000 lux)	8 minutes		2 hours	24 hours
Window sunlight (10,000 lux)	30 minutes		6 hours	89 hours
Window sunlight on cloudy day (5,000 lux)	48 minutes		9 hours	144 hours
Indoor fluorescent lighting (500 lux)	8 hours		97 hours	---

<sup>\*1</sup> Approximate exposure each day to generate power for normal daily operation.

<sup>\*2</sup> Approximate amount exposure time required to take power up one level.

- The above exposure times all are for reference only. Actual exposure 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-70).

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### Power Saving

Power Saving enters a sleep state automatically whenever the watch is left for a certain period in an area where it is dark. The table below shows how watch functions are affected by Power Saving.

- There actually are two sleep state levels: "second hand sleep" and "function sleep".

Elapsed Time in Dark	Operation
60 to 70 minutes (second hand sleep)	<b>[2] Second Hand</b> only stopped at 12 o'clock, all other functions enabled
6 or 7 days (function sleep)	<ul style="list-style-type: none"> <li>• All functions, including analog timekeeping, disabled</li> <li>• Internal timekeeping maintained</li> </ul>

- The watch will not enter a sleep state between 6:00 a.m. and 9:59 p.m. If the watch is already in a sleep state when 6:00 a.m. arrives, however, it will remain in the sleep state.

- The watch will not enter a sleep state while it is in the Stopwatch Mode.

### To recover from the sleep state

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

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### 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 Date Settings Manually" (page E-36) 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:
LONDON (LON), PARIS (PAR), ATHENS (ATH)	Anthorn (England), Mainflingen (Germany)
HONG KONG (HKG)	Shangqiu City (China)
TOKYO (TYO)	Fukushima (Japan), Fukuoka/Saga (Japan)
HONOLULU (HNL), ANCHORAGE (ANC), LOS ANGELES (LAX), DENVER (DEN), CHICAGO (CHI), NEW YORK (NYC)	Fort Collins, Colorado (United States)

### Important!

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

- When **HONOLULU (HNL)** or **HONG KONG (HKG)** is selected as the Home City, only the time and date are adjusted according to the time calibration signal. You need to switch manually between standard time and daylight saving time (DST) if required. See "To toggle the Home City time between standard time and daylight saving time" (page E-34) for information about how to do this.

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### Approximate Reception Ranges



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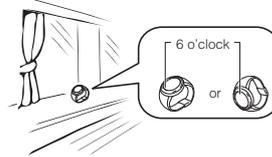
- Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference may also cause problems with reception.
  - Mainflingen (Germany) or Anhorn (England) transmitters: 500 kilometers (310 miles)
  - Fort Collins (United States) transmitter: 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 2013, 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.

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- Using this watch in a country covered by a time calibration that is different from the countries it supports may result in incorrect time indication due to local application of 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 **C** for about 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 6 o'clock pointed towards a window. Make sure there are no metal objects nearby.
- Signal reception normally is better at night.

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- The receive operation takes from two to seven minutes, but in some cases it can take as long as 14 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

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**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-23 for details.
- Manual Receive: Perform the operation under "To perform manual receive" on page E-24.

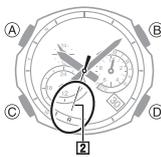
**Auto Receive**

- 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 or World Time Mode. The receive operation is not performed if a calibration time is reached while you are configuring settings.

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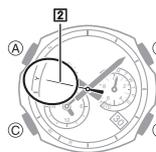
**To perform manual receive**

1. In the Timekeeping Mode, keep **A** depressed (for about two seconds) as the **[2] Second Hand** goes through the following sequence.
  - Moves to **Y** (or **YES** for some models) 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 <b>[2] Second Hand</b> is pointed here:	It means this:
R (READY)	Watch is setting up for reception.
W (WORK)	Reception is in progress.
Y (YES)	Reception was completed successfully.
N (NO)	Reception failed for some reason.

- If signal reception is unstable, the **[2] Second Hand** may move between **W** (**WORK**) and **R** (**READY**).



**3. The receive operation is complete when the **[2] Second Hand** moves to **Y** (**YES**) or **N** (**NO**) for about five seconds, and then resumes regular timekeeping.**

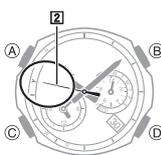
- You can return to the Timekeeping Mode manually by pressing **A** while the **[2] Second Hand** is pointing to **Y** (**YES**) or **N** (**NO**).
- When the receive operation is successful, the watch adjusts the time setting accordingly. It does not adjust the setting if the operation failed.

**Note**

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

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**To check the result of the latest receive operation**  
In the Timekeeping Mode, press **A**.

- The **[2] Second Hand** will move to **Y** (**YES**) for five seconds if the latest receive operation was successful, or **N** (**NO**) if it was not. After that, regular timekeeping will resume.
- You can return to the Timekeeping Mode manually by pressing **A** while the **[2] Second Hand** is pointing to **Y** (**YES**) or **N** (**NO**).

**Note**

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

**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 the date and day of the week automatically for the period January 1, 2000 to December 31, 2099. Updating of the date 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-69).
- The receive operation is disabled under any of the following conditions.
  - While power is at Level 2 or lower (page E-11)
  - When the watch is in the function sleep state (Power Saving, page E-14)

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**Mode Reference Guide**

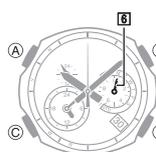
Your watch has three "modes". The mode you should select depends on what you want to do.

To do this:	Enter this mode:	See:
<ul style="list-style-type: none"> <li>• View the current time in your Home City and in one of 29 other cities around the globe</li> <li>• View the current date in the Home City</li> <li>• Configure Home City and daylight saving time (DST) settings</li> <li>• Perform a time calibration receive operation</li> <li>• Configure time and date settings manually</li> </ul>	Timekeeping Mode	E-31
Use the stopwatch to measure elapsed time	Stopwatch Mode	E-43
View the current time in one of 29 cities (time zones) around the globe	World Time Mode	E-46

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**Selecting a Mode**

With this watch, everything starts from the Timekeeping Mode.



**To determine the watch's current mode**

Check the position of the **[2] Right Dial Hand** as shown under "To select a mode" (page E-30).

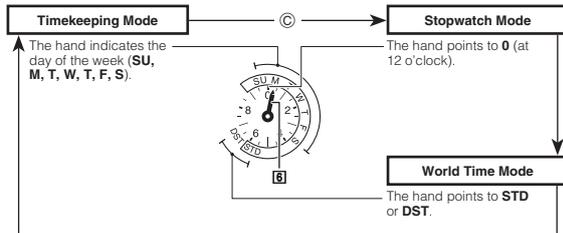
**To return to the Timekeeping Mode from any other mode**

Hold down **C** at least two seconds to enter the Timekeeping Mode.

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### To select a mode

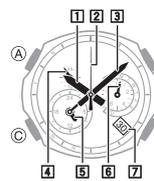
Press **(C)** to cycle between the modes as shown below. The **(6)** Right Dial Hand indicates the currently selected mode.



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### Timekeeping

Use the Timekeeping Mode to view the current time and date. To enter the Timekeeping Mode from any other mode, hold down **(C)** for about two seconds.



#### Hand Functions

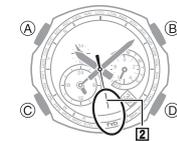
- 1 Hour Hand
- 2 Second Hand
- 3 Minute Hand
- 4 24-hour Hand
- 5 Left Dial Hands: Indicate the current time in the World Time City (page E-46) in 24-hour format.
- 6 Right Dial Hand: Indicates the day of the week.
- 7 Day Indicator

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### Configuring Home City Settings

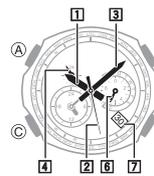
There are two Home City settings: actually selecting the Home City and selecting either standard time or daylight saving time (DST).

#### To configure Home City settings



##### Note

- This watch does not have a city code that corresponds to Newfoundland.
- 1. In the Timekeeping Mode, keep **(A)** depressed (for about five seconds) as the **(2)** Second Hand goes through the following sequence.
  - Moves to **Y** (or **YES** for some models) or **N (NO)** to indicate the last signal reception result, then to **R (READY)**, and then to the city code of the currently selected Home City.
  - This indicates the city code setting mode.



- The watch will exit the setting mode automatically if you do not perform any operation for about two or three minutes.
- For details about city codes, see the "City Code Table" at the back of this manual.
- 2. To change the Home City setting, press **(D)** to move the **(2)** Second Hand clockwise.
  - Keep pressing **(D)** until the **(2)** Second Hand is pointing at 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, **(4)** 24-hour Hand and **(7)** Day Indicator move to the current time and date for that city code. Do not perform the next operation until these hands stop moving.

- 3. Press **(B)** to toggle the time for the currently selected city code between **STD** (standard time)/**DST** (daylight saving time).

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- In the city code setting mode, the **(6)** Right Dial Hand indicates the current daylight saving time setting as **STD** (standard time) or **DST** (daylight saving time).
- Note that you cannot switch between **STD** (standard time)/**DST** (daylight saving time) while **UTC** is selected as your Home City.
- 4. After all the settings are the way you want, press **(A)** to return to the Timekeeping Mode.

#### To toggle the Home City time between standard time and daylight saving time

1. Perform the step 1 under "To configure Home City settings" on page E-32.
  - Each time you select a city code, the **(1)** Hour Hand, **(3)** Minute Hand, and **(4)** 24-hour Hand move to the current time for that city code. Do not perform the next operation until these hands stop moving.
2. Press **(B)** to toggle the time for the city code of the currently selected Home City between **STD** (standard time)/**DST** (daylight saving time).

- In the city code setting mode, the **(6)** Right Dial Hand indicates the current daylight saving time setting as **STD** (standard time) or **DST** (daylight saving time).
- Note that you cannot switch between **STD** (standard time)/**DST** (daylight saving time) while **UTC** is selected as your Home City.
- 3. After the setting is the way you want, press **(A)** to return to the Timekeeping Mode.

##### Note

- After you specify a city code, the watch will use UTC\* offsets in the World Time Mode to calculate the current time for other time zones based on the current time in your Home City.
- Selecting some city codes makes it possible for the watch to receive the time calibration signal for the corresponding area automatically. See page E-16 for details.
- \* Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.

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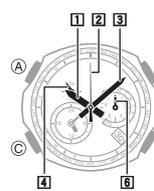
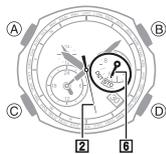
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### Configuring Current Time and Date Settings Manually

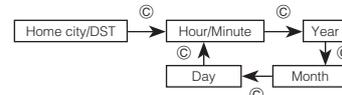
You can configure current time and date settings manually when the watch is unable to receive a time calibration signal.

#### To change the current time setting manually

1. In the Timekeeping Mode, keep **(A)** depressed (for about five seconds) as the **(2)** Second Hand goes through the following sequence.
  - Moves to **Y** (or **YES** for some models) or **N (NO)** to indicate the last signal reception result, then to **R (READY)**, and then to the city code of the currently selected Home City.
  - At this time, the **(6)** Right Dial Hand will indicate the Home City's current daylight saving time setting (**STD** or **DST**).



2. Change the Home City and daylight saving time (DST) settings, if you want.
  - For details about these settings, see steps 2 and 3 under "To configure Home City settings" (page E-32).
  - In the following steps, each press of **(C)** cycles between settings as shown below.



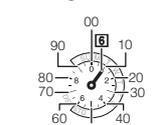
3. Press **(C)**.
  - The **(2)** Second Hand and **(6)** Right Dial Hand will move to their 12 o'clock positions. This is the time setting mode.

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4. Use **(D)** (+) and **(B)** (-) to change the time (hour and minute) setting.
  - Each press of either button will move the hands **(1)** Hour Hand and **(3)** Minute Hand one minute.
  - Holding down **(D)** or **(B)** will start high-speed **(1)** Hour Hand and **(3)** Minute Hand movement in the applicable direction. To stop high-speed hand movement, press any button.
  - The **(4)** 24-hour Hand and **(1)** Hour Hand move in sync with each other.
  - When setting the time, make sure that the **(4)** 24-hour Hand indicates the proper a.m./p.m. hour.
  - If you want to change the date setting at this time, press **(C)** and perform the procedure starting from step 3 under "To change the current date setting manually" (page E-39).
5. After the time setting is the way you want, press **(A)** to return to the Timekeeping Mode.
  - This will cause the **(2)** Second Hand to move automatically to 12 o'clock and resume movement from there.

#### To change the current date setting manually

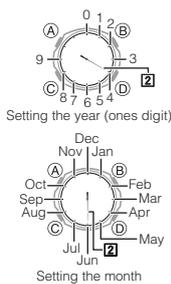


Setting the year (tens digit)

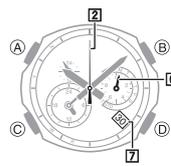
1. In the Timekeeping Mode, keep **(A)** depressed (for about five seconds) as the **(2)** Second Hand goes through the following sequence.
  - Moves to **Y** (or **YES** for some models) or **N (NO)** to indicate the last signal reception result, then to **R (READY)**, and then to the city code of the currently selected Home City.
2. Press **(C)** twice so the **(6)** Right Dial Hand moves to the tens digit and the **(2)** Second Hand moves to the ones digit of the current year setting.
  - This is the year setting mode.
  - The year can be set in the range of 2000 to 2099.
3. Use **(D)** and **(B)** to change the year setting.
  - Each press of **(B)** will move the **(6)** Right Dial Hand and change the tens digit of the year setting.

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- Each press of (D) will move the [2] Second Hand and change the ones digit of the year setting.
- After the year setting is the way you want, press (C).
    - This is the month setting mode.
  - Use (D) to move the [2] Second Hand to the month setting you want.
  - After the month setting is the way you want, press (C).
    - The [2] Second Hand will move to 12 o'clock, and the watch will enter the day setting mode.



- Use (D) (+) and (B) (-) to change the [7] Day Indicator setting.
  - If you want to change the time setting at this time, press (C) and then perform the procedure starting from step 3 under "To change the current time setting manually" (page E-36).
- After the settings are the way you want, press (A) to return to the Timekeeping Mode.
  - This will cause the [2] Second Hand to move automatically to 12 o'clock and resume movement from there.
  - The day of the week indicated by the [6] Right Dial Hand changes automatically in accordance with the date (year, month, and day).

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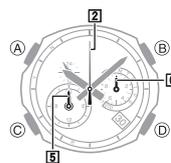
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**Note**

• The watch's built-in full 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 the watch's rechargeable battery replaced or after power drops to Level 3.

**Using the Stopwatch**

The stopwatch measures elapsed time and split times.



**Hand Functions**

- [2] Second Hand: Indicates the stopwatch seconds count.
- [5] Left Dial Hands: Indicate the stopwatch hours and minutes.
- [6] Right Dial Hand: Indicates the stopwatch 1/20-second count.

E-42

E-43

**To perform elapsed time measurement**

- Use (C) to move the [6] Right Dial Hand to 0.
- Now you can perform either of following stopwatch operations.

**To perform an elapsed time operation**



**To pause at a split time**



**Note**

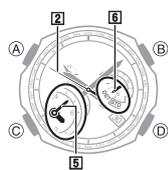
- The Stopwatch Mode can indicate elapsed time up to 23 hours, 59 minutes, 59.95 seconds.
- (D) button operation (split, reset) is disabled while hands are moving at high speed following a reset operation and when transitioning from a split time back to normal elapsed timekeeping.
- Once started, stopwatch timing continues until you press (B) to stop it, even if you exit the Stopwatch Mode to another mode and even if timing reaches the stopwatch limit defined above.
- You can press (B) to start an elapsed time operation immediately after entering the Stopwatch Mode, even if the watch's hands are still moving to their initial Stopwatch Mode positions. Note, however, that if the stopwatch was not reset after the last elapsed time operation, timing will restart from where it was last stopped, and not from 0.
- The [6] Right Dial Hand indicates the 1/20-second count for the first 30 seconds of a stopwatch elapsed time operation. After that, the hand stops at 0. 1/20-second timing continues internally after the first 30 seconds, and the [6] Right Dial Hand will move to the current value whenever (B) (Stop) or (D) (Split) is pressed.

E-44

E-45

**Checking the Current Time in a Different Time Zone**

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



**Hand Functions**

- [2] Second Hand: Indicates the currently selected World Time City.
- [5] Left Dial Hands: Indicate the current time in the selected World Time City in 24-hour format.
- [6] Right Dial Hand: Indicates the current STD (standard time) or DST (daylight saving time) setting of the currently selected time zone.

**To view the time in another time zone**

- Use (C) to move the [6] Right Dial Hand to STD or DST.
  - The [2] Second Hand will move to the city code of the currently selected World Time City.
- Use (D) to move the [2] Second Hand to the city code you want to select as the World Time City.
  - The [5] Left Dial Hands will move to the current time in the time zone of the current city code. At this time, the [1] Hour Hand and [3] Minute Hand will continue to indicate the current time in the Home City.
  - For full information on city codes, see the "City Code Table" at the back of this manual.
  - If you think that the time indicated for the selected time zone 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-32) to correct the Home City settings.

E-46

E-47

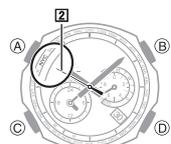
**To specify standard time or daylight saving time (DST) for a city**

- In the World Time Mode, use (D) to select the city code whose setting you want to change.
  - Wait until the [5] Left Dial Hands complete their move to the time in the currently selected World Time City. You will not be able to perform step 2 of this procedure until the hands stop moving.
- Hold down (A) for about two seconds until the [6] Right Dial Hand toggles to STD (standard time) or DST (daylight saving time).
  - Note that you cannot switch between STD (standard time)/DST (daylight saving time) while UTC is selected as the World Time City.
  - Note that the STD (standard time)/DST (daylight saving time) setting affects only the currently selected time zone. Other time zones are not affected.

E-48

**Swapping your Home City and World Time City**

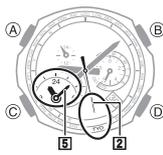
You can use the procedure below to swap your Home City and World Time City. This capability can come in handy when you frequently travel between two locations in different time zones.



The following example shows what happens when the Home City and World Time City are swapped while the Home City originally is TOKYO (TYO) and the World Time City is NEW YORK (NYC).

	Home City	World Time City
Before swapping	TOKYO (TYO) 10:08 p.m. (Standard time)	NEW YORK (NYC) 9:08 a.m. (Daylight saving time)
After swapping	NEW YORK (NYC) 9:08 a.m. (Daylight saving time)	TOKYO (TYO) 10:08 p.m. (Standard time)

E-49



### To swap your Home City and World Time City

- In the World Time Mode, use (D) to select the World Time City you want.
  - In this example, you would move the (2) Second Hand to NEW YORK (NYC) in order to select New York as the World Time City.
  - Wait until the (5) Left Dial Hands complete their move to the time in the currently selected World Time City. You will not be able to perform step 2 of this procedure until the hands stop moving.
- Hold down (B) for about three seconds until the (2) Second Hand starts to move.
  - This will make the World Time City (NEW YORK (NYC) in this example) your new Home City. At the same time, it will change the Home City you had selected prior to step 2 (TOKYO (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 (TOKYO (TYO) in this example).

E-50

- The (5) Left Dial Hands will indicate the current time in your new World Time City.

### Note

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

E-51

## Auto Correction of Hand Home Positions

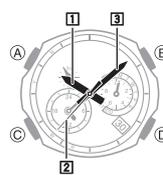
Strong magnetism or impact can cause the hands and/or day setting to be off, even if the watch is able to perform the signal receive operation. Auto correction of hand home positions corrects the hand position automatically.

- Auto correction is performed in the Timekeeping Mode only.
- Auto correction corrects the positions of the (1) Hour Hand, (3) Minute Hand, and (2) Second Hand. For the dial hands and day, you must perform the manual adjustment procedure under "Adjusting Home Positions Manually" (page E-55).
- Each hour, the watch performs automatic correction of the hand positions from -55 minutes to +5 minutes.
- You also can trigger auto correction of hand home positions manually, if you want. See "To trigger auto correction of hand home positions" (page E-53) for more information.
- Auto correction of hand home positions can take up to three and a half minutes to complete.

E-52

- If hand positions are off by one hour or more, correct them using the procedure under "To trigger auto correction of hand home positions" (page E-53) or "Adjusting Home Positions Manually" (page E-55).

### To trigger auto correction of hand home positions



- Perform the following procedure when the time setting is off.

In the Timekeeping Mode, hold down (D) for about six seconds until the (2) Second Hand completes one full revolution.

- Though the (2) Second Hand will stop momentarily about three seconds after you hold down (D), do not release the button yet. Wait until the (2) Second Hand completes a full revolution before you release (D).
- To interrupt an ongoing correction operation and return to the Timekeeping Mode, press (D) again.

E-53

- If you release (D) when the (2) Second Hand stops the first time (after about three seconds) in the above operation, the watch will enter the home position adjustment mode, which is described under "Adjusting Home Positions Manually" (page E-55). If this happens, press (A) to return to the Timekeeping Mode and then perform the above operation again.
- Manually triggered auto correction of hand home positions performs the following two steps.

- The hands will move automatically in order to determine the home positions of the watch.
- After the hand home positions are determined, the watch will return to normal timekeeping automatically. This completes the correction operation.

E-54

## Adjusting Home Positions Manually

Strong magnetism or impact can cause the hands and/or date of the watch to be off, even if the watch is able to perform the signal receive operation. If this happens, perform the applicable home position adjustment procedures in this section.

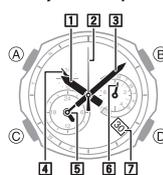
- Hand home position adjustment is not required if the time and day settings are correct.
- You also can use auto correction of the hand home positions (page E-52) to correct the home positions of the (1) Hour Hand, (3) Minute Hand, and (2) Second Hand.

### Note

- Any time after you enter the home position adjustment mode in step 1 of the following procedure, you can return to the Timekeeping Mode by pressing (A). The watch also will return to the Timekeeping Mode automatically if you do not perform any operation for about two or three minutes in the home position adjustment mode. In either case, any adjustments you made before the watch returned to the Timekeeping Mode will be applied.

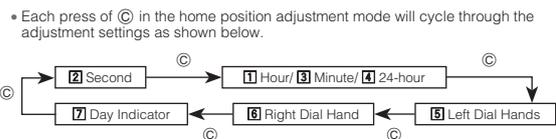
E-55

### To adjust home positions manually



- Hold down (C) for about two seconds until the (2) Second Hand stops and then starts moving again.
- Hold down (D) for about three seconds.
  - The (2) Second Hand will start to move when you first press (D). Keep (D) depressed until the (2) Second Hand stops.
  - The watch is now in the home position adjustment mode.
  - The watch will exit the adjustment mode automatically if you do not perform any operation for about two or three minutes.
  - First is (2) Second Hand home position adjustment.
  - If the (2) Second Hand moves to 12 o'clock, it is in the correct home position. If it doesn't, use (D) to move it to 12 o'clock.

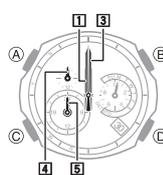
E-56



- When adjusting a hand or the date home position, it is recommended that after you move to a proper home position, you press (B) to move the setting back one step. Next, press (D) again to return it to the home position. This helps to ensure better home position adjustment accuracy.

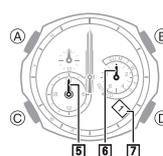
E-57

- After confirming that the (2) Second Hand is at the proper home position, press (C). This will switch to (1) Hour Hand and (3) Minute Hand home position adjustment.
  - The (1) Hour Hand and (3) Minute Hand are at their proper home positions if they both move to 12 o'clock. The (4) 24-hour Hand also will move along with (1) Hour Hand movement, and cannot be adjusted individually. If the hands are not positioned correctly, use (D) (+) and (B) (-) to move them to their proper home positions.



- After confirming that the (1) Hour Hand and (3) Minute Hand are in their correct home positions, press (C). This will switch to (5) Left Dial Hands home position adjustment.
  - The (5) Left Dial Hands are at their proper home positions if they both move to 24. If the hands are not positioned correctly, use (D) (+) and (B) (-) to move them to 24.

E-58



- After confirming that the (5) Left Dial Hands are in the correct home position, press (C). This will advance to (6) Right Dial Hand home position adjustment.
  - The (6) Right Dial Hand is in the correct home position if it is pointing at 0. If it isn't, use (D) (+) and (B) (-) to move it to 0.
- After confirming that the (6) Right Dial Hand is in the correct home position, press (C). This will advance to day home position adjustment.
  - The (7) Day Indicator is in the correct home position if it shows 1. If the 1 is not in the center of the (7) Day Indicator, use (D) (+) and (B) (-) to center it.

- Press (A) to return to the Timekeeping Mode.
  - The (7) Day Indicator moves to the current day, and then the (1) Hour Hand and the (3) Minute Hand will move to the current time. Wait until everything stops moving.

E-59

## Troubleshooting

### Hand Movement and Position

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

Refer to "To select a mode" (page E-30). To return directly to the Timekeeping Mode from any other mode, hold down **Ⓞ** for about two seconds.

■ **The **Ⓜ** 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.**  
Power may be low. Expose the watch to light until the **Ⓜ** Second Hand starts moving normally, at one-second intervals (page E-11).

E-60

■ **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-32).  
If you are using the watch in an area where time calibration signal reception is not possible, you may need to change your Home City's **STD** (standard time)/**DST** (daylight saving time) setting manually. Use the procedure under "To toggle the Home City time between standard time and daylight saving time" (page E-34) to change the **STD/DST** setting.

■ **The hands and/or day indications 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 alignment. Adjust the watch's hand and day home position alignment (page E-52).

E-62

■ **The **Ⓜ** 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 at the Home City. You need to adjust the current time manually when any other city is selected as the Home City.

E-64

■ **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-23), 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-32).

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

Possible Cause	Remedy	Page
Signal reception on a day for switching between <b>STD</b> (standard time)/ <b>DST</b> (daylight saving time) may have failed for some reason.	Perform the operation under "To get ready for a receive operation". The time setting will be adjusted automatically as soon as signal reception is successful.	E-21
	If you are unable to receive the time calibration signal, change the <b>STD</b> (standard time)/ <b>DST</b> (daylight saving time) setting manually.	E-34

E-66

■ **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-32
The watch may have been exposed to magnetism or strong impact, which has caused problems with proper hand and day alignment.	Adjust the watch's hand and day home positions.	E-55

E-68

■ **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-14).
- The time setting is being adjusted following a successful auto time calibration signal receive operation (page E-16).

■ **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-32).

E-61

### World Time Mode

■ **The World Time indicated by the **Ⓜ** Left Dial Hands in the World Time Mode is one hour off from the actual time in the selected time zone.**

The **STD** (standard time)/**DST** (daylight saving time) setting of the selected World Time City may be wrong. Select the correct **STD** (standard time)/**DST** (daylight saving time) setting (page E-48).

■ **The World Time indicated by the **Ⓜ** Left Dial Hands in the World Time Mode is off.**

Your Home City setting may be wrong. Check your Home City setting and correct it, if necessary (page E-32).

### 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-11). Continue exposing the watch to light until the **Ⓜ** Second Hand starts moving normally (at one-second intervals).

E-63

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

Possible Cause	Remedy	Page
<ul style="list-style-type: none"> <li>• You are wearing or moving the watch, or performing a button operation during the signal receive operation.</li> <li>• The watch is in an area with poor reception conditions.</li> </ul>	Keep the watch in an area where reception conditions are good while the signal receive operation is being performed.	E-21
You are in an area where signal reception is not possible for some reason.	See "Approximate Reception Ranges".	E-18
The calibration signal is not being transmitted for some reason.	<ul style="list-style-type: none"> <li>• Check the website of the organization that maintains the time calibration signal in your area for information about its down times.</li> <li>• Try again later.</li> </ul>	—

E-65

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

Possible Cause	Remedy	Page
The watch is in the Stopwatch Mode.	Auto Receive is not performed while the watch is in the Stopwatch Mode. Hold down <b>Ⓞ</b> for about two seconds to enter the Timekeeping Mode.	E-29
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-32
There is not enough power for signal reception.	Expose the watch to light to charge it.	E-9

E-67

## Specifications

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

**Timekeeping:** Hour, minutes (hand moves every 10 seconds), seconds, 24-hour, day, day of the week

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) / Standard Time

**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)

E-69

**Stopwatch:** Measuring capacity: 23:59'59.95"

Measuring unit: 1/20 second

Measuring mode: Elapsed time, split time

**World Time:** 29 cities (29 time zones) and Coordinated Universal Time

Other: Standard Time/Daylight Saving Time (summer time); Home City/World Time City swapping

**Other:** Power Saving; Low Battery Alert; Auto Correction of Hand Home Positions

**Power Supply:** Solar panel and one rechargeable battery

Approximate battery operating time: 5 months (no exposure to light after a full charge; one signal reception of approximately 4 minutes per day)



## City Code Table



E-70

L-1

### City Code Table

City Code	City	UTC Offset/GMT Differential
PAGO PAGO ( P P G )	Pago Pago	-11
HONOLULU ( H N L )	Honolulu	-10
ANCHORAGE ( A N C )	Anchorage	-9
LOS ANGELES ( L A X )	Los Angeles	-8
DENVER ( D E N )	Denver	-7
CHICAGO ( C H I )	Chicago	-6
NEW YORK ( N Y C )	New York	-5
SANTIAGO ( S C L )	Santiago	-4
RIO	Rio De Janeiro	-3
F. DE NORONHA ( F E N )	Fernando de Noronha	-2
PRAIA ( R A I )	Praia	-1
UTC		0
LONDON ( L O N )	London	+1
PARIS ( P A R )	Paris	+1
ATHENS ( A T H )	Athens	+2

L-2

City Code	City	UTC Offset/GMT Differential
JEDDAH ( J E D )	Jeddah	+3
TEHRAN ( T H R )	Tehran	+3.5
DUBAI ( D X B )	Dubai	+4
KABUL ( K B L )	Kabul	+4.5
KARACHI ( K H I )	Karachi	+5
DELHI ( D E L )	Delhi	+5.5
DHAKA ( D A C )	Dhaka	+6
YANGON ( R G N )	Yangon	+6.5
BANGKOK ( B K K )	Bangkok	+7
HONG KONG ( H K G )	Hong Kong	+8
TOKYO ( T Y O )	Tokyo	+9
ADELAIDE ( A D L )	Adelaide	+9.5
SYDNEY ( S Y D )	Sydney	+10
NOUMEA ( N O U )	Noumea	+11
WELLINGTON ( W L G )	Wellington	+12

L-3

- Based on data as of December 2013.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.

L-4