

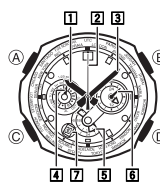
Congratulations upon your selection of this CASIO watch.

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 this product 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

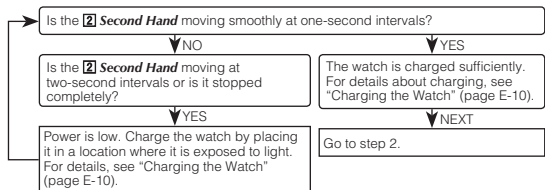
- 1 Hour Hand
- 2 Second Hand
- 3 Minute Hand
- 4 Left Dial Hand: Indicates the current mode.
- 5 Lower Dial Hand
- 6 Right Dial Hands
- 7 Day Indicator

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

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



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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-34) 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-23).
- To set the time manually  
See "Configuring Current Time and Date Settings Manually" (page E-38).

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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-18).

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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.



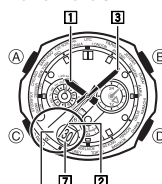
When wearing the watch, make sure that its face is not blocked from light by the sleeve of your clothing.

- The watch may enter a sleep state (page E-16) if its face is blocked by your sleeve even only partially.

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## Power Levels



Moves at two-second intervals.

You can get an idea of the watch's power level by observing the movement of the **[2] Second Hand** in the Timekeeping Mode. See "Hand Movement and Function Status" (page E-13).

If the **[2] Second Hand** is moving normally at one-second intervals, power is at Level 1.

### Low Battery Alert

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.

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## 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 overuse of the alarm tone 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.

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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 or Countdown Timer Mode.

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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-38) 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.

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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.

## Hand Movement and Function Status

Level	Hand Movement	Function Status
1	Normal.	All functions enabled.
2	<ul style="list-style-type: none"> <li><b>[2] Second Hand</b> moving at two-second intervals.</li> <li><b>[7] Day Indicator</b> changes to 1 (home position).</li> </ul>	Beeper, time calibration signal reception, and countdown timer operation disabled.
3	<ul style="list-style-type: none"> <li><b>[2] Second Hand</b> stopped.</li> <li><b>[1] Hour Hand</b> and <b>[3] Minute Hand</b> stopped at 12 o'clock.</li> </ul>	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 *1	Level Change *2		
		Level 3	Level 2	Level 1
Outdoor sunlight (50,000 lux)	8 minutes		2 hours	23 hours
Window sunlight (10,000 lux)	30 minutes		6 hours	85 hours
Window sunlight on cloudy day (5,000 lux)	48 minutes		8 hours	138 hours
Indoor fluorescent lighting (500 lux)	8 hours		92 hours	--

\* 1 Approximate exposure each day to generate power for normal daily operation.

\* 2 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-77).

## To recover from the sleep state

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

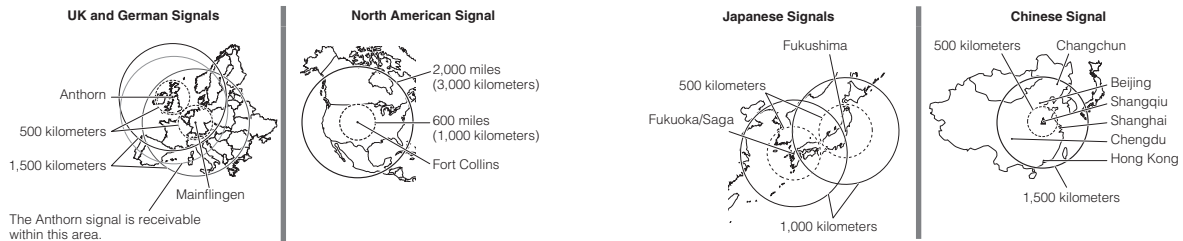
If your Home City Code setting is this:	The watch can receive the signal from the transmitter located here:
LONDON (LON), PARIS (PAR), ATHENS (ATH)	Anthorn (England), Mainflingen (Germany)
HONG KONG (HKG)	Shangqiu City (China)
TOKYO (TYO)	Fukushima (Japan), Fukuoka/Saga (Japan)
HONOLULU (HNL), ANCHORAGE (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-36) for information about how to do this.

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## Approximate Reception Ranges



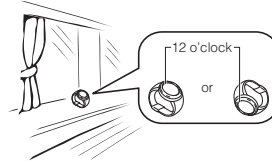
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- Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference may also cause problems with reception.
  - Mainflingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles)
  - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
  - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles)
  - Shanghai (China) transmitter: 500 kilometers (310 miles)
- As of December 2010, 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 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

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

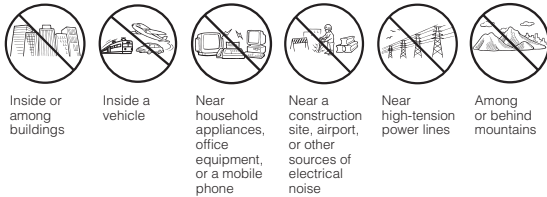


- Position the watch as shown in the nearby illustration, with 12 o'clock pointed towards a window. Make sure there are no metal objects nearby.
- Signal reception normally is better at night.
- The receive operation takes from two to seven minutes, but in some cases it can take as long as 14 minutes. Take care that you do not perform any button operation or move the watch during this time.

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- 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-25 for details.
- Manual Receive: Perform the operation under "To perform manual receive" on page E-26.

### Auto Receive

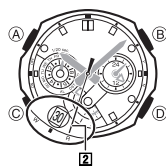
- With Auto Receive, the watch performs the receive operation each day automatically up to six times (up to five times for the Chinese calibration signal) between the hours of midnight and 5 a.m. (according to the Timekeeping Mode time). When any receive operation is successful, none of the other receive 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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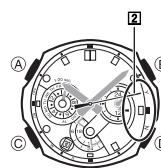
### To perform manual receive

- In the Timekeeping Mode, keep **A** depressed (for about two seconds) as the **2 Second Hand** goes through the following sequence.
  - Moves to **YES (Y)** or **Y** for some models) or **NO (N)** to indicate the last signal reception result, then to **READY (R)**.
- 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:
READY (R)	Watch is setting up for reception.
WORK (W)	Reception is in progress.
YES (Y)	Reception was completed successfully.
NO (N)	Reception failed for some reason.

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



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

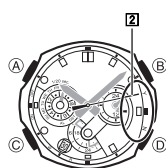
- You can return to the Timekeeping Mode manually by pressing **A** while the **2 Second Hand** is pointing to **YES (Y)** or **NO (N)**.
- When the receive operation is successful, the watch adjusts the time setting accordingly. It does not adjust the setting if the operation failed.

### 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 **YES (Y)** for five seconds if the latest receive operation was successful, or **NO (N)** 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 **YES (Y)** or **NO (N)**.

### Note

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

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### 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-76).
- The receive operation is disabled under any of the following conditions.
  - While power is at Level 2 or lower (page E-12)
  - While the watch is in the power recovery mode (page E-14)
  - When the watch is in the function sleep state (power saving, page E-16)
  - While a countdown time operation is in progress (page E-47)
- A receive operation is cancelled if an alarm sounds while it is being performed.

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## Mode Reference Guide

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

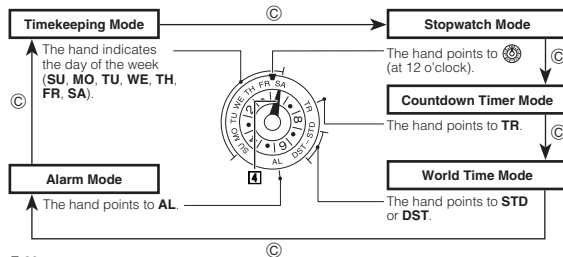
To do this:	Enter this mode:	See:
<ul style="list-style-type: none"> <li>View the current time in your Home City and in one of 29 other cities around the globe</li> <li>View the current date in the Home City</li> <li>Configure Home City and daylight saving time (DST) settings</li> <li>Perform a time calibration receive operation</li> <li>Configure time and date settings manually</li> </ul>	Timekeeping Mode	E-33
Use the stopwatch to measure elapsed time	Stopwatch Mode	E-44
Use the countdown timer	Countdown Timer Mode	E-47
View the current time in one of 29 cities (time zones) around the globe	World Time Mode	E-51
Set an alarm time	Alarm Mode	E-57

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### To select a mode

Press **(C)** to cycle between the modes as shown below. The **(4)** Left Dial Hand indicates the currently selected mode.

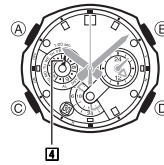


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### Selecting a Mode

With this watch, everything starts from the Timekeeping Mode.



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

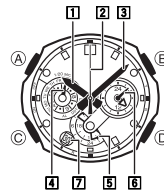
Check the position of the **(4)** Left Dial Hand as shown under "To select a mode" (page E-32).

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

Hold down **(C)** for about two seconds until the watch beeps twice.

## Timekeeping

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

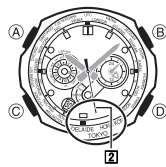


### Hand Functions

- (1)** Hour Hand
- (2)** Second Hand
- (3)** Minute Hand
- (4)** Left Dial Hand: Indicates the day of the week.
- (5)** Lower Dial Hand: Indicates the current hour in the Home City time in 24-hour format.
- (6)** Right Dial Hands: Indicate the current time in the World Time City (page E-51) in 24-hour format.
- (7)** Day Indicator

## 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).



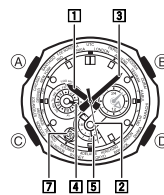
### To configure Home City settings

#### 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 **YES** (or **Y** for some models) or **NO** (**N**) to indicate the last signal reception result, then to **READY** (**R**), and then to the city code of the currently selected Home City.
    - This indicates the city code setting mode.

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- 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, **(5)** Lower Dial 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).

- In the city code setting mode, the **(4)** Left 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-34.
  - Each time you select a city code, the **(1)** Hour Hand, **(3)** Minute Hand, and **(5)** Lower Dial 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 **(4)** Left Dial Hand indicates the current daylight saving time setting as **STD** (standard time) or **DST** (daylight saving time).

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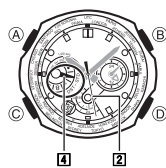
- Note that you cannot switch between **STD** (standard time)/**DST** (daylight saving time) while **UTC** is selected as your Home City.
3. After the setting is the way you want, press **(A)** to return to the Timekeeping Mode.

#### 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-18 for details.
- \* Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.

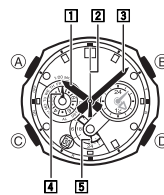
## Configuring Current Time and Date Settings Manually

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

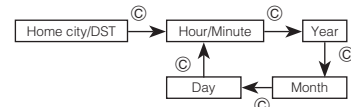


### To change the current time setting manually

1. In the Timekeeping Mode, keep **(A)** depressed (for about five seconds) as the **(2)** Second Hand goes through the following sequence.
  - Moves to **YES** (or **Y** for some models) or **NO** (**N**) to indicate the last signal reception result, then to **READY** (**R**), and then to the city code of the currently selected Home City.
  - At this time, the **(4)** Left 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-34).
  - In the following steps, each press of **(C)** cycles between settings as shown below.



3. Press **(C)**.
  - The watch will beep, and the **(2)** Second Hand and **(4)** Left Dial Hand will move to their 12 o'clock positions. This is the time setting mode.

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**To stop the alarm**  
Press any button.

**Note**

- Pressing any button while the alarm is sounding simply stops the alarm sound. It does not stop the elapsed time operation that started when the end of the countdown was reached. To stop the elapsed time operation, press **(B)**.

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

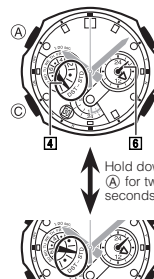
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**To view the time in another time zone**

- Use **(C)** to move the **(4) Left 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 **(6) Right 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-34) to correct the Home City settings.

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**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 **(6) Right 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 watch beeps. This will cause the **(4) Left Dial Hand** to toggle between **DST** (daylight saving time) and **STD** (standard 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.

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

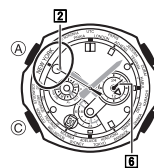
You can use the procedure below to swap your Home City and World Time City. This capability can come in handy when you frequently travel between two locations in different time zones.

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)

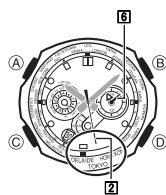
E-54

**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 **(6) Right 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.

E-55



- Hold down **(B)** for about three seconds until the watch beeps.
  - 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).
  - The **(6) Right Dial Hands** will indicate the current time in your new World Time City.

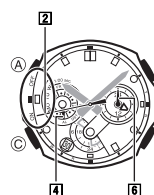
**Note**

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

E-56

**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.



**Hand Functions**

- (2) Second Hand:** Indicates the current alarm ON/OFF setting.
- (4) Left Dial Hand:** Points to **AL**.
- (6) Right Dial Hands:** Indicate the current alarm time setting in 24-hour format.

E-57

**To change the alarm time setting**

- Use **(C)** to move the **(4) Left Dial Hand** to **AL**.
- Use **(D)** (+) and **(B)** (-) to change the alarm time setting.
  - Each press of either button will move the **(6) Right Dial Hands** one minute.
  - Holding down **(D)** or **(B)** will start high-speed hand movement in the applicable direction. To stop high-speed hand movement, press any button.
  - 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 **(A)** to toggle the alarm on and off. The **(2) Second Hand** will indicate the current ON/OFF setting.

**To stop the alarm**

Press any button.

E-58

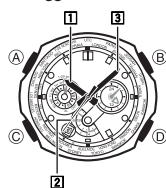
**Auto Correction of Hand Home Positions**

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 correct 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-62).
- 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-60) for more information.
- Auto correction of hand home positions can take up to three and a half minutes to complete.
- 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-60) or "Adjusting Home Positions Manually" (page E-62).

E-59

### 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.
- 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-62). If this happens, press (A) to return to the Timekeeping Mode and then perform the above operation again.

E-60

- Manually triggered auto correction of hand home positions performs the following two steps.

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

E-61

### Adjusting Home Positions Manually

Strong magnetism or impact can cause the hands and/or day 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.

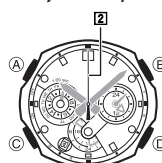
- Hand home position adjustment is not required if the time and day settings are correct.
- You also can use auto correction of the hand home positions (page E-59) to correct the home positions of the (1) **Hour Hand**, (3) **Minute Hand**, and (2) **Second Hand**.

#### 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.

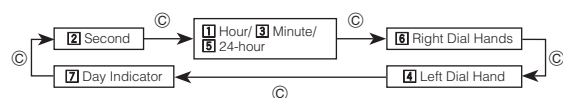
E-62

### To adjust home positions manually

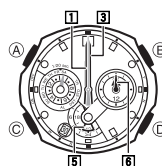


1. Hold down (C) at least two seconds until the watch beeps twice and enters the Timekeeping Mode.
2. Hold down (D) for about three seconds until the watch beeps.
  - The watch is now in the home position adjustment mode.
  - The watch will exit the adjustment mode automatically if you do not perform 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) (+) and (B) (-) to move it to 12 o'clock.
  - Each press of (C) in the home position adjustment mode will cycle through the adjustment settings as shown below.

E-63



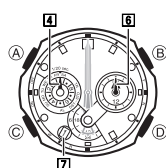
3. After confirming that the (2) **Second Hand** is at the proper home position, press (C). This will switch to (1) **Hour Hand** and (3) **Minute Hand** home position adjustment.
  - The (1) **Hour Hand** and (3) **Minute Hand** are at their proper home positions if they both move to 12 o'clock. The (5) **Lower Dial 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.



4. After confirming that the (1) **Hour Hand** and (3) **Minute Hand** are in their correct home positions, press (C). This will switch to (6) **Right Dial Hand** home position adjustment.
  - The (6) **Right Dial Hands** are at their proper home positions if they both move to 12 o'clock. If the hands are not positioned correctly, use (D) (+) and (B) (-) to move them to 12 o'clock.

E-64

E-65



5. After confirming that the (6) **Right Dial Hands** are in the correct home position, press (C). This will advance to (4) **Left Dial Hand** home position adjustment.
  - The (4) **Left Dial Hand** is in the correct home position if it is pointing at 12 o'clock. If it isn't, use (D) (+) and (B) (-) to move it to 12 o'clock.
6. After confirming that the (4) **Left 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.
7. 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** move to the current time. Wait until everything stops moving.

E-66

### Troubleshooting

#### Hand Movement and Position

- **I lost track of what mode the watch is in.**  
Refer to "To select a mode" (page E-32). To return directly to the Timekeeping Mode from any other mode, hold down (C) 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.**  
Power may be low. Expose the watch to light until the (2) **Second Hand** starts moving normally, at one-second intervals (page E-12).

E-67

- **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-16).
- The time setting is being adjusted following a successful auto time calibration signal receive operation (page E-18).
- The watch is returning to the Timekeeping Mode automatically from the Alarm Mode (page E-58).

- **Hands suddenly stop moving. Button operation also is disabled.**

The watch may be in the power recovery mode (page E-14). 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.

E-68

- **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-34).

- **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-34). 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-36) to change the **STD/DST** setting.

- **The hands and/or day indicator is 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-62).

E-69

## World Time Mode

- The World Time indicated by the [6] Right 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-53).

- The World Time indicated by the [6] Right Dial Hands in the World Time Mode is off.

Your Home City settings may be wrong. Check your Home City settings and correct them, if necessary (page E-34).

## 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-12). Continue exposing the watch to light until the [2] Second Hand starts moving normally (at one-second intervals).

E-70

- 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 NO (N) 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-23
You are in an area where signal reception is not possible for some reason.	See "Approximate Reception Ranges".	E-20
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-72

- 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-25), 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-34).

- The current time setting is off by one hour.

Possible Cause	Remedy	Page
Signal reception on a day for switching between STD (standard time)/DST (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-23
If you are unable to receive the time calibration signal, change the STD (standard time)/DST (daylight saving time) setting manually.		E-36

E-71

- Auto Receive is not performed or I cannot perform Manual Receive.

Possible Cause	Remedy	Page
The watch is in the Stopwatch Mode or Countdown Timer Mode.	Auto Receive is not performed while the watch is in the Stopwatch Mode or Countdown Timer Mode. Hold down [C] at least two seconds to enter the Timekeeping Mode.	E-31
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-34
A countdown timer operation is in progress.	Both Auto Receive and Manual Receive are impossible while a countdown is in progress. In the Countdown Timer Mode, stop the timer operation and then return to the Timekeeping Mode.	E-47
There is not enough power for signal reception.	Expose the watch to light to charge it.	E-10

E-74

- 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-34
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-62

E-73

## 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-76

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

Measuring unit: 1/20 second  
Measuring mode: Elapsed time, split time

**Countdown Timer:**

Measuring unit: 1 second  
Input range: 1 minute to 24 hours (1-minute increments)  
Other: Auto switching to elapsed time measurement (1-second units) when the end of a countdown timer operation is reached

**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

**Alarm:** Daily alarm

**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; Analog hands operational 18 hours per day and one signal reception of approximately 4 minutes per day)

E-77

## City Code Table



## 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	
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 2010.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.

L-4