

Congratulations upon your selection of this CASIO watch.

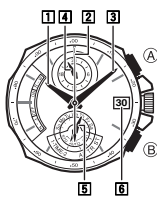
- Note that the product illustrations in this manual are intended for reference only, and so the actual product may appear somewhat different than depicted by an illustration.

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

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

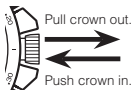


Operations are performed using the watch's crown, and the two buttons indicated by the letters (A) and (B) in this manual.

### Hand Functions

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

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



### About the crown

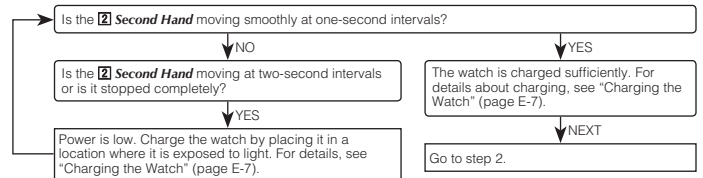
Some of the operations of this watch are performed by pulling out the crown, while other operations are performed by pushing the crown in.

- When pushing the crown in, make sure you push it in as far as it will go. Operations may not be performed correctly if you push the crown in incompletely.
- When pulling out the crown, avoid using undue force, which creates the risk of personal injury to your fingers and fingernails, and of watch malfunction.

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## Things to check before using the watch

- Push in and hold the crown for at least two seconds to enter the Timekeeping Mode, and then observe the movement of the 2 Second Hand.



- Check the Home City and the daylight saving time (DST) settings.

Use the procedure under "To configure Home City settings" (page E-26) to configure your Home City and daylight saving time settings.

### Important!

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

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## 3. Set the current time.

- To set the time using a time calibration signal  
See "To get ready for a receive operation" (page E-14).
- To set the time manually  
See "Configuring Current Time and Date Settings Manually" (page E-31).

### The watch is now ready for use.

- For details about the watch's radio controlled timekeeping feature, see "Radio Controlled Atomic Timekeeping" (page E-11).

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## Charging the Watch

The face of the watch is a solar cell 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-10) if its face is blocked by your sleeve even only partially.

### Warning!

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

- On the dashboard of a car parked in direct sunlight
- Too close to an incandescent lamp
- Under direct sunlight

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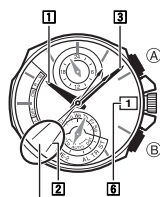
# Operation Guide 5141 (OC)

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## 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



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.

- If the **[2] Second Hand** is moving normally at one-second intervals, power is at Level 1.
- If the **[2] Second Hand** is moving at two-second intervals, power is at Level 2, which is quite low. Expose the watch to light as soon as possible so it can charge.

Level	Hand Movement	Function Status
1	Normal.	All functions enabled
2	<b>[2] Second Hand</b> moves at two-second intervals. <b>[6] Day</b> changes to <b>1</b> (home position).	Beeper, time calibration signal reception, and countdown timer operation disabled
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

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- 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.

## 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.

## 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	21 hours	
Window sunlight (10,000 lux)	30 minutes	5 hours	77 hours	
Window sunlight on cloudy day (5,000 lux)	48 minutes	8 hours	124 hours	
Indoor fluorescent lighting (500 lux)	8 hours	84 hours	---	

- \* 1 Approximate exposure each day to generate power for normal daily operation.
- \* 2 Approximate exposure to take power up one level.

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- The above times are for reference only. Actual times depend on lighting conditions.
- For details about the operating time and daily operating conditions, see the "Power Supply" section of the Specifications (page E-53).

## 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 AM and 9:59 PM. If the watch is already in a sleep state when 6:00 AM 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.

## 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-31) 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)

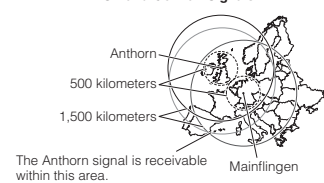
## Important!

- 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-29) for information about how to do this.

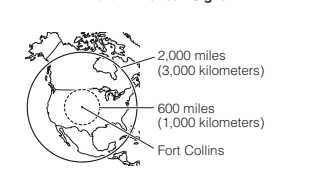
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## Approximate Reception Ranges

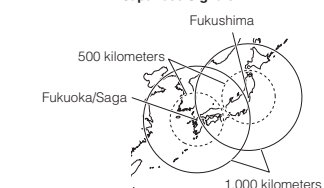
### UK and German Signals



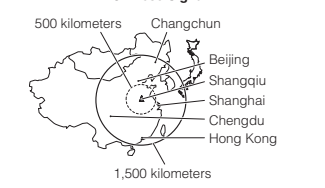
### North American Signal



### Japanese Signals



### Chinese Signal



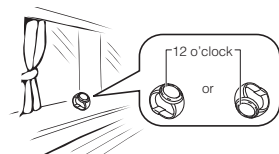
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- Even when the watch is within range of a transmitter, signal reception may be impossible due to the effects of geographic contours, structures, weather, the time of year, the time of day, radio interference, etc. The signal becomes weaker at distances of approximately 500 kilometers, which means that the influence of the conditions listed above becomes even greater.
- Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference may also cause problems with reception.
  - Mainflingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles)
  - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
  - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles)
  - Shangqiu (China) transmitter: 500 kilometers (310 miles)
- As of June 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 signal that is different from the countries it supports may result in incorrect time indication due to local application of summer time, etc.

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## To get ready for a receive operation

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



- Position the watch as shown in the nearby illustration, with 12 o'clock pointed towards a window. Make sure there are no metal objects nearby.
- Signal reception normally is better at night.
- The receive operation takes from two to 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

## 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-15 for details.
- Manual Receive: Perform the operation under "To perform manual receive" on page E-16.

## Auto Receive

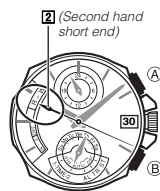
- With Auto Receive, the watch performs the receive operation each day automatically up to six times (up to five times for the Chinese calibration signal) between the hours of midnight and 5 a.m. (according to the Timekeeping Mode time). When any receive operation is successful, none of the other receive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

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## To perform manual receive

- In the Timekeeping Mode (page E-20), keep **(B)** depressed (for about two seconds) as the **[2] Second Hand** (short end) 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** (short end) indicates the operations the watch is currently performing.



When the <b>[2] Second Hand</b> (short end) 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.

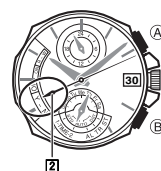
- If signal reception is unstable, the **[2] Second Hand** (short end) may move between **WORK (W)** and **READY (R)**.
- When the receive operation is successful, the watch adjusts the time setting accordingly, and then resumes normal timekeeping. It does not adjust the setting if the operation failed.

### Note

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

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## To check the result of the latest receive operation



In the Timekeeping Mode, press **(B)**.

- The **[2] Second Hand** (short end) will move to **YES (Y)** for about one second 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 **(B)** while the **[2] Second Hand** (short end) is pointing to **YES (Y)** or **NO (N)**.

### Note

- The **[2] Second Hand** (short end) 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-52).
- The receive operation is disabled under any of the following conditions.
  - While power is at Level 2 or lower (page E-8)
  - While the watch is in the power recovery mode (page E-9)
  - While the watch is in the function sleep state (power saving, page E-10)
  - While a countdown time operation is in progress (page E-37)
- A receive operation is cancelled if an alarm sounds while it is being performed.

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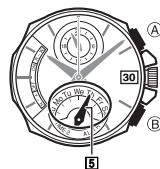
## Mode Reference Guide

Your watch has four "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> <li>Switch between the two Home Cities</li> </ul>	Timekeeping Mode	E-22
Use the stopwatch to measure elapsed time	Stopwatch Mode	E-35
Use the countdown timer	Countdown Timer Mode	E-37
Set an alarm time	Alarm Mode	E-40

## Selecting a Mode

With this watch, everything starts from the Timekeeping Mode.



### To determine the watch's current mode

Check the position of the **[5] Lower Dial Hand** as shown under "To select a mode" (page E-20).

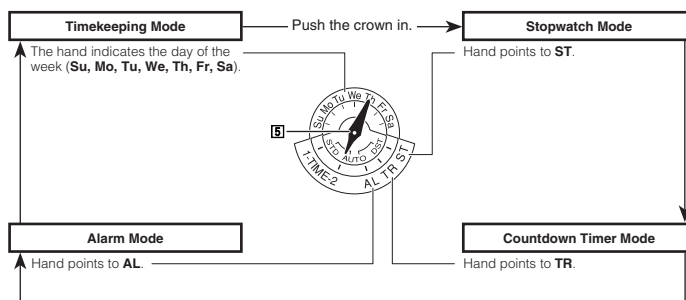
### To return to the Timekeeping Mode from any other mode

Except while the watch is performing auto hand home position correction, push in and hold the crown for at least two seconds.

### To select a mode

Each push of the crown cycles through the modes in the sequence shown below. The **[5] Lower Dial Hand** indicates the currently selected mode.

- When pushing the crown in, make sure you push it in as far as it will go. Operations may not be performed correctly if you push the crown in incompletely.
- When you go from the Alarm Mode to the Timekeeping Mode, the **[5] Lower Dial Hand** first indicates TIME 1 or TIME 2 (page E-22), and then moves to the current day of the week.



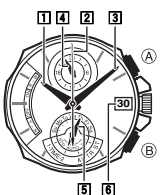
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## Timekeeping

In the Timekeeping Mode, you can configure two different time zones (TIME 1 and TIME 2) as Home Cities, so you can switch between them to view their current dates and times. To enter the Timekeeping Mode from another mode, push in and hold the crown for at least two seconds.

- The watch configuration used in this manual assumes that TIME 1 is configured as your main Home City.
- For details about using TIME 2, see "About TIME 2" (page E-23).



### Hand Functions

- Hour Hand
- Second Hand
- Minute Hand
- Upper Dial Hand: Indicates the current hour in the Home City time in 24-hour format.
- Lower Dial Hand: For about one second after entering the Timekeeping Mode, shows TIME 1 (**1-TIME**) or TIME 2 (**2-TIME**). After that, shows the current day of the week for the selected TIME.
- Day

### To check the city code of the currently selected TIME

- Pressing **(A)** in the Timekeeping Mode will cause the **[2] Second Hand** to move to the city code of the currently selected TIME and stay there for about one second.
- For details about city codes, see the "City Code Table" at the back of this manual.

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## About TIME 2

This watch supports two Home Cities: a main Home City (TIME 1) and a second Home City (TIME 2). TIME 2 also can be configured with one of 29 city codes (time zones) around the world. While TIME 2 is selected in the Timekeeping Mode, the alarm, and time calibration signal auto receive functions operate in accordance with the TIME 2 time.

- If the city code you select for TIME 2 supports time calibration signal reception (page E-11), signal reception will be performed accordingly when TIME 2 is selected.
- When the watch corrects the current time setting in accordance with a time calibration signal, it will correct both the TIME 1 and TIME 2 settings.
- Support for two Home Cities allows you to do the following.

**Example: Taking a trip from Tokyo to New York (a), then from New York to London (b), and then back to Tokyo (c)**

### a) While en route from Tokyo to New York

- Switch the Timekeeping Mode from TIME 1 (Tokyo) to TIME 2. See "To switch from TIME 1 to TIME 2" (page E-25).

### a-2. Select the New York city code for Time 2.

See "To configure Home City settings" (page E-26).

### b) En route from New York to London

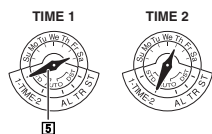
- Change the TIME 2 city code to London. See "To configure Home City settings" (page E-26).

### c) En route back to Tokyo from London

- Switch the Timekeeping Mode from TIME 2 (London) back to TIME 1 (Tokyo). See "To switch from TIME 1 to TIME 2" (page E-25).

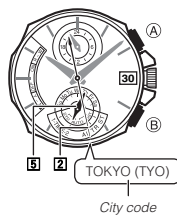
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## To check whether TIME 1 or TIME 2 is currently displayed



- In the Timekeeping Mode, push the crown in four times.
- This will re-enter the Timekeeping Mode (page E-21).
  - The **[5] Lower Dial Hand** will indicate either TIME 1 (1-TIME) or TIME 2 (TIME-2) for about one second. After that, the **[5] Lower Dial Hand** will move to the current day of the week.
  - When you return to the Timekeeping Mode from another mode (by pushing in and holding the crown for about two seconds), the **[5] Lower Dial Hand** will move directly to the day of the week without first indicating TIME 1 or TIME 2.

## To switch from TIME 1 to TIME 2



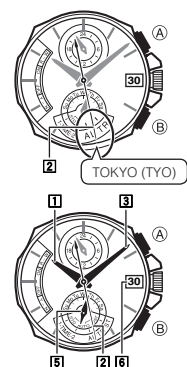
- In the Timekeeping Mode, hold down **(A)** and keep it held down until step 2 of this procedure is complete (about three seconds). During that period, the watch will perform the following operations automatically.
  - The **[2] Second Hand** will move to the city code of the currently selected TIME (TIME 1 or TIME 2).
  - Next, the **[2] Second Hand** will move to the city code of the other TIME.
  - After that, the time and date settings will change to those for the newly selected TIME.
  - Finally, the **[5] Lower Dial Hand** will indicate the new TIME (TIME 1 or TIME 2) selection.
- You can release **(A)** after the TIME is indicated by the **[5] Lower Dial Hand**.
  - After about one second, the **[5] Lower Dial Hand** will indicate the current day of the week for the selected TIME.
  - Pressing **(A)** during the one second after switching will indicate the day of the week immediately.
  - To return to TIME 1 from TIME 2, hold down **(A)** in the Timekeeping Mode again.

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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.
- Push in and hold the crown for at least two seconds.
    - This will enter the Timekeeping Mode (page E-21).

- Pull out the crown.
  - This will cause the **[2] Second Hand** to move to the city code of the currently selected TIME (page E-22).
  - This indicates the city code setting mode.
  - If you do not perform any operation with the crown for about three minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
  - For details about city codes, see the "City Code Table" at the back of this manual.
- Rotate the crown to move the **[2] Second Hand** to the city code you want to assign to the currently selected TIME.
  - Each time you select a city code, the **[1] Hour Hand**, **[3] Minute Hand**, **[5] Lower Dial Hand** and **[6] Day** move to the current time and date for that city code.

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### STD setting by time calibration signal



### DST setting by time calibration signal



- Press **(A)** to toggle the time for the currently selected city code between **STD** (standard time) and **DST** (daylight saving time).
  - In the city code setting mode, the short end of the **[5] Lower Dial Hand** indicates the current daylight saving time setting as **STD** (standard time) or **DST** (daylight saving time).
  - Note that an **AUTO** setting (Auto STD or Auto DST) will be indicated only if the currently selected city code is one that supports calibration time signal reception. While **AUTO** is selected, the watch will switch between STD and DST automatically in accordance with time calibration signal data.
  - While **AUTO** is in use, the short end of the **[5] Lower Dial Hand** will point to the **STD** side or the **DST** side of **AUTO**, depending on the current STD/DST setting.
  - The initial default setting is **AUTO** when any one of the following city codes is selected as the Home City code: LONDON (LON), PARIS (PAR), ATHENS (ATH), NEW YORK (NYC), CHICAGO (CHI), DENVER (DEN), LOS ANGELES (LAX), ANCHORAGE (ANC), or TOKYO (TYO).
  - For details about the Daylight Saving Time setting, see "Daylight Saving Time (DST)" (page E-28).
- After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.

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## Daylight Saving Time (DST)

Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time. The time calibration signals transmitted from Mainflingen (Germany), Anthorn (England), or Fort Collins (the United States) include both Standard Time and DST data.

- Note that an **AUTO** setting (Auto STD or Auto DST) will be indicated only if the currently selected city code is one that supports calibration time signal reception. While **AUTO** is selected, the watch will switch between STD and DST automatically in accordance with time calibration signal data.
- The initial default setting is **AUTO** when any one of the following city codes is selected as the Home City code: LONDON (LON), PARIS (PAR), ATHENS (ATH), NEW YORK (NYC), CHICAGO (CHI), DENVER (DEN), LOS ANGELES (LAX), ANCHORAGE (ANC), or TOKYO (TYO).
- For information about manually overriding the time calibration STD/DST setting, see "To manually override a time calibration standard time/daylight saving time setting" (page E-30).
- Note that you cannot switch between **STD** (standard time) and **DST** (daylight saving time) while **UTC\*** is selected as your Home City.
- \* *Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.*
- If you experience problems receiving the time calibration signal in your area, it probably is best to switch between Standard Time and Daylight Saving Time (summer time) manually (page E-30).

E-28

## STD/DST Switching

STD/DST switching can be performed either automatically or manually, depending on time calibration signal reception conditions in your area, the use of daylight saving time in your area, etc.

- To configure the watch to switch between STD and DST automatically in accordance with a time calibration signal, see "To toggle the Home City time between standard time and daylight saving time" (page E-29).
- To override time calibration data and use a fixed STD/DST setting, see "To manually override a time calibration standard time/daylight saving time setting" (page E-30).

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

#### STD setting by time calibration signal



#### DST setting by time calibration signal



- Perform steps 1 and 2 under "To configure Home City settings" on page E-26.
  - Each time you select a city code, the **[1] Hour Hand**, **[3] Minute Hand**, and **[4] Upper Dial Hand** move to the current time for that city code.
- Press **(A)** to toggle the time for the currently selected city code between **STD** (standard time) and **DST** (daylight saving time).
  - The short end of the **[5] Lower Dial Hand** will indicate the current daylight saving time setting as **STD** (standard time) or **DST** (daylight saving time).
  - When **AUTO** is enabled, the short end of the **[5] Lower Dial Hand** will point to the **STD** side of **AUTO** or the **DST** side (depending on the current STD/DST setting) of **AUTO**.
- After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.

E-29

## Note

- Selecting some city codes makes it possible for the watch to receive the time calibration signal for the corresponding area automatically. See page E-11 for details.

### To manually override a time calibration standard time/daylight saving time setting

#### STD by manual setting



- Perform steps 1 and 2 under "To configure Home City settings" on page E-26.
  - Each time you select a city code, the **[1] Hour Hand**, **[3] Minute Hand**, and **[4] Upper Dial Hand** move to the current time for that city code.
- Hold down **(A)** for about three seconds until the short end of the **[5] Lower Dial Hand** points to **DST**.
  - This is the STD/DST manual/auto switching mode.
  - Performing the above step selects manual DST switching.
  - Note that you cannot switch between manual and auto switching while the currently selected city code of the Home City is one that does not support time calibration signal reception.

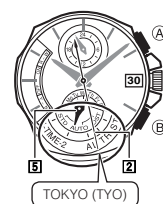
#### DST by manual setting



- Each press of **(A)** toggles between STD and DST as shown in the illustration to the left.
- Push the crown back in to return to the Timekeeping Mode.

## 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.

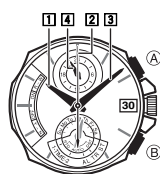


### To change the current time setting manually

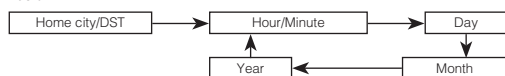
- In the Timekeeping Mode, pull out the crown.
  - This will cause the **[2] Second Hand** to move to the city code of the currently selected TIME (page E-22).
  - At this time, the short end of the **[5] Lower Dial Hand** will indicate the Home City's current daylight saving time setting (**STD** or **DST**).
  - If you do not perform any operation with the crown for about three minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.

E-30

E-31



- 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-26).
- Hold down (B) for about two seconds. This will enter the time setting mode.
  - The watch will beep and the (2) Second Hand will move to the 12 o'clock.
  - In the following steps, each press of (B) cycles between settings as shown below.

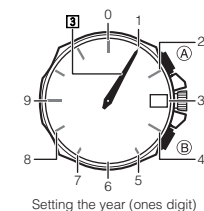
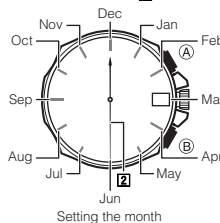
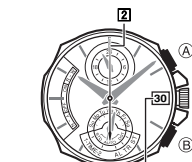


- Rotate the crown to adjust the time (hour and minute) setting.
  - Rotating the crown two full consecutive turns clockwise will cause the (3) Minute Hand to start moving clockwise. Rotating the crown another two full consecutive turns clockwise will cause the (3) Minute Hand to start moving at high speed. To stop hand movement, press any button or rotate the crown one full turn counterclockwise.
  - The (4) Upper Dial Hand is synchronized with the (1) Hour Hand.
  - When adjusting the setting, check to make sure that the (4) Upper Dial Hand correctly indicates an a.m. time or p.m. time.
  - If you want to change the date setting at this time, press (B) and perform the procedure starting from step 3 under "To change the current date setting manually" (page E-33).
- After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
  - This causes timekeeping to resume with the (2) Second Hand starting from the 12 o'clock.

E-32

### To change the current date setting manually

- In the Timekeeping Mode, pull out the crown.
  - This will cause the (2) Second Hand to move to the city code of the currently selected TIME (page E-22).
- Hold down (B) for about two seconds.
  - The watch will beep and the (2) Second Hand will move to the 12 o'clock.
- Press (B). This will enter the date setting mode.
  - The (6) Day will move slightly left and right to indicate the setting mode.
- Rotate the crown to adjust the date setting.
- After the (6) Day stops moving, press (B). This will enter the month setting mode.
  - The (2) Second Hand will move to the currently selected month. This is the month setting mode.
- Rotate the crown to adjust the month setting.

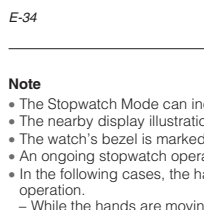


- Press (B). This will enter the year setting mode.
  - The (1) Hour Hand will move to the number that represents the tens digit of the year and the (3) Minute Hand will move to the number that represents the ones digit. The (2) Second Hand will move to the 12 o'clock and stop there.
- Rotate the crown to adjust the year setting.
  - If you want to change the time setting at this time, press (B) and then perform the procedure starting from step 4 under "To change the current time setting manually" (page E-31).
- After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
  - This causes timekeeping to resume with the (2) Second Hand starting from the 12 o'clock.
  - The day of the week indicated by the (5) Lower Dial Hand changes automatically in accordance with the date (year, month, and day).

### 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.

Setting the year (ones digit)

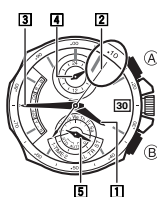


Setting the year (tens digit)

E-34

### Using the Stopwatch

The stopwatch measures elapsed time and split times.



### Hand Functions

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

### To perform elapsed time measurement

- Use the crown to enter the Stopwatch Mode, which causes the (5) Lower Dial Hand to move to ST.
- Now you can perform either of following stopwatch operations.



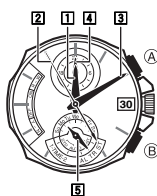
### Note

- The Stopwatch Mode can indicate elapsed time up to 1 hour, 59 minutes, 59.95 seconds.
- The nearby display illustration shows a stopwatch reading of 20 minutes, 45.10 seconds.
- The watch's bezel is marked in 0.05-second units.
- An ongoing stopwatch operation will continue even if you pull out the crown.
- In the following cases, the hands of the watch are moving, so pressing (B) will not perform a reset operation.
  - While the hands are moving to elapsed timekeeping after you enter the Stopwatch Mode
  - While the watch is changing dates at midnight
- Once started, stopwatch timing continues until you press (A) 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 (A) 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 12 o'clock.
- The (2) Second Hand indicates the 0.05-second count for the first 30 seconds of a stopwatch elapsed time operation. After that, the hand stops at 12 o'clock, but 0.05-second timing continues internally after the first 30 seconds. The (2) Second Hand will jump to the current value whenever (A) (Stop) is pressed.

E-36

### Using the Countdown Timer

The countdown timer can be configured within a range of one minute to 60 minutes. An alarm sounds for about 10 seconds when the timer reaches zero, and a count up elapsed time operation starts.



### Hand Functions

- Hour Hand: Indicates the elapsed time hour.
  - Second Hand: Indicates countdown or elapsed seconds.
  - Minute Hand: Indicates countdown or elapsed minutes.
  - Upper Dial Hand: Indicates elapsed time in 24-hour format.
  - Lower Dial Hand: Points to TR.
- All hands move counterclockwise during a countdown. They automatically switch to clockwise movement when elapsed time measurement begins after the countdown is complete. An elapsed time measurement operation will continue until you press (A) to stop it.

### Elapsed Time Measurement Following Countdown

When the countdown reaches zero, the watch starts to count up elapsed time in one-second increments.

When the watch switches to elapsed time measurement, the hands automatically switch to clockwise movement.

- You can pause and restart an elapsed time operation by pressing (A). While an elapsed time operation is paused, pressing (B) resets to the countdown start time.

### 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 (A).

### To specify the countdown start time

- Use the crown to enter the Countdown Timer Mode, which will move the (5) Lower Dial Hand to TR.
- In the Countdown Timer Mode, pull out the crown. This enters the countdown start time setting mode.
  - If you do not perform any operation with the crown for about three minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
- Rotate the crown to set the countdown start time.
  - Rotating the crown two full consecutive turns clockwise will cause the (3) Minute Hand to start moving clockwise. Rotating the crown another two full consecutive turns clockwise will cause the (3) Minute Hand to start moving at high speed. To stop hand movement, press any button or rotate the crown one full turn counterclockwise.
  - The maximum countdown start time setting is 60 minutes. To set a countdown start time of 60 minutes, move the (3) Minute Hand to 12 o'clock.

### To perform a countdown timer operation



- Pressing (B) while the Countdown Timer is stopped resets the displayed time to the start time specified by you.

E-38

E-33

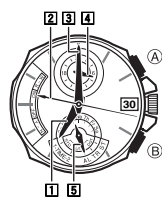
E-35

E-37

E-39

## 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 (TIME 1 or TIME 2) (page E-22) reaches the preset alarm time. This is true even if the watch is not in the Timekeeping Mode.



### Hand Functions

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

### To change the alarm time setting

1. Use the crown to enter the Alarm Mode, which will move the 5 Lower Dial Hand to AL.
2. In the Alarm Mode, pull out the crown to enter the alarm setting mode.
  - If you do not perform any operation with the crown for about three minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.

E-40

3. Rotate the crown to set the alarm time.
  - Rotating the crown two full consecutive turns clockwise will cause the 3 Minute Hand to start moving clockwise. Rotating the crown another two full consecutive turns clockwise will cause the 3 Minute Hand to start moving at high speed. To stop hand movement, press any button or rotate the crown one full turn counterclockwise.

4. Push the crown back in to exit the alarm setting mode.
  - The alarm always works based on the time kept in the Timekeeping Mode.
  - The watch will return to the Timekeeping Mode automatically if you do not perform any operation in the Alarm Mode for about two or three minutes.

### To turn the alarm on or off

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

### To stop the alarm

Press any button.

E-41

## 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 all hands. For the 6 Day, you must perform the manual adjustment procedure under "Adjusting Home Positions Manually" (page E-43).
- If the 4 Upper Dial Hand is 12 hours off of the current correct time, correct the setting using the procedure under "Adjusting Home Positions Manually" (page E-43).
- Auto correction of the 5 Lower Dial Hand is performed once a day in the middle of the night, while the watch is in the sleep state.
- Auto correction of hand home positions can take up to three and a half minutes to complete.

E-42

## Adjusting Home Positions Manually

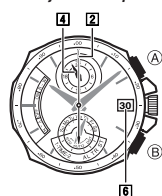
Strong magnetism or impact can cause the hands and/or day of the watch to be off, even if the watch is able to perform the signal receive operation. If this happens, perform the applicable home position adjustment procedures in this section.

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

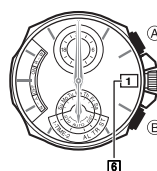
### Note

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

### To adjust home positions manually



1. Push in and hold the crown for at least two seconds to enter the Timekeeping Mode.
2. Pull out the crown.
3. Hold down B for about seven seconds. This will cause the watch to beep twice and then the 2 Second Hand will perform one full revolution.
  - Though the 2 Second Hand will stop momentarily about two seconds after you hold down B, do not release the button yet. Wait until the 2 Second Hand completes a full revolution before you release B.
  - This operation will enter the home position adjustment mode and cause all of the watch's hands (but not the 6 Day) to move automatically to their home positions.
  - Home position adjustment is complete when all hands are at their 12 o'clock positions.
  - If the 4 Upper Dial Hand is not pointing at 24, which is its home position, hold down A for about two seconds to move it there.
  - To exit the home position adjustment operation and return to the Timekeeping Mode, push the crown back in.



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

E-44

E-43

## Troubleshooting

### Hand Movement and Position

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

Refer to "To select a mode" (page E-20). To return directly to the Timekeeping Mode from any other mode, push in and hold the crown for at least two seconds.

#### ■ When pressing in the crown to enter the Stopwatch Mode from the Timekeeping Mode, the crown needs to be held down longer than when switching to another mode.

The watch is designed this way in order to ensure that the Timekeeping Mode is not exited unintentionally due to accidental pressing of the crown. When entering the Stopwatch Mode from the Timekeeping Mode, push in the crown as far as it will go and hold it down until the mode changes.

#### ■ 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-8).

#### ■ 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-10).
- The time setting is being adjusted following a successful auto time calibration signal receive operation (page E-11).
- The watch is returning to the Timekeeping Mode automatically from the Alarm Mode (page E-40).

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

The watch may be in the power recovery mode (page E-9). Do not perform any operation until the hands return to their normal positions (in about 15 minutes). The hands should return to their correct positions when normal operation returns. To help power recover, leave the watch in a location where it is exposed to light.

#### ■ The current time setting is off by hours.

- Your Home City setting may be wrong. Check your Home City setting and correct it, if necessary (page E-26).
- Your watch supports display of the current times in one of two different Home Time zones named TIME 1 and TIME 2. Check to make sure that your watch is displaying the Home Time zone you want (page E-22).

#### ■ 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-26).
- The watch's STD (standard time)/DST (daylight saving time) setting can be configured for auto switching in accordance with a time calibration signal. You also can manually override the STD/DST setting configured by the calibration signal. If you use manual override to select a setting, timekeeping will be off by one hour following an STD/DST switching data in your area, even if the watch is receiving a time calibration signal. Select the correct STD (standard time)/DST (daylight saving time) setting to suit your current location (page E-28).
- If you are using in 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-29) to change the STD/DST setting.

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## ■ 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-42).

## TIME 1 and TIME 2

### ■ The TIME 1 time is correct, but the TIME 2 time is off.

The STD (standard time)/DST (daylight saving time) setting of TIME 2 may be wrong. Select the correct STD (standard time)/DST (daylight saving time) setting (page E-28).

## 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-8). Continue exposing the watch to light until the [2] Second Hand starts moving normally (at one-second intervals).

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

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

## Time Calibration Signal

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

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E-49

## ■ 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) 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-14
	If you are unable to receive the time calibration signal, change the STD (standard time)/DST (daylight saving) setting manually.	E-28

## ■ 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. Push in and hold the crown for at least two seconds to enter the Timekeeping Mode.	E-20
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-11 E-26
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-37
There is not enough power for signal reception.	Expose the watch to light to charge it.	E-7

E-50

E-51

## Specifications

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

**Timekeeping (World time):** 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; Dual Home City times (TIME 1 and TIME 2)

**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

Receiveable 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)

**Stopwatch:** Measuring capacity: 1:59:59.95"

Measuring unit: 0.05 seconds

Measuring mode: Elapsed time

**Countdown Timer:**

Measuring unit: 1 second

Input range: 1 to 60 minutes (1-minute increments)

Other: Elapsed time

**Alarm:** Daily alarm

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E-53

## ■ The [2] Second Hand (short end) indicates NO (N) when I check the result of the latest receive operation.

Possible Cause	Remedy	Page
• You are wearing or moving the watch, or performing a button operation during the signal receive operation. • The watch is in an area with poor reception conditions.	Keep the watch in an area where reception conditions are good while the signal receive operation is being performed.	E-14
You are in an area where signal reception is not possible for some reason.	See "Approximate Reception Ranges".	E-12
The calibration signal is not being transmitted for some reason.	• Check the website of the organization that maintains the time calibration signal in your area for information about its down times. • Try again later.	—

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

You may have the watch configured for Auto Receive of the time calibration signal (page E-15), 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-26).

## ■ 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-11 E-26
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-43

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

**Power Supply:** Solar cell 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

City Code	City	UTC Offset/ GMT Differential	City Code	City	UTC Offset/ GMT Differential
PAGO PAGO (PPG)	Pago Pago	-11	JEDDAH (JED)	Jeddah	+3
HONOLULU (HNL)	Honolulu	-10	TEHRAN (THR)	Tehran	+3.5
ANCHORAGE (ANC)	Anchorage	-9	DUBAI (DXB)	Dubai	+4
LOS ANGELES (LAX)	Los Angeles	-8	KABUL (KBL)	Kabul	+4.5
DENVER (DEN)	Denver	-7	KARACHI (KHI)	Karachi	+5
CHICAGO (CHI)	Chicago	-6	DELHI (DEL)	Delhi	+5.5
NEW YORK (NYC)	New York	-5	DHAKA (DAC)	Dhaka	+6
SANTIAGO (SCL)	Santiago	-4	YANGON (RGN)	Yangon	+6.5
RIO	Rio De Janeiro	-3	BANGKOK (BKK)	Bangkok	+7
F. DE NORONHA (FEN)	Fernando de Noronha	-2	HONG KONG (HKG)	Hong Kong	+8
PRAIA (RAI)	Praia	-1	TOKYO (TYO)	Tokyo	+9
UTC		0	ADELAIDE (ADL)	Adelaide	+9.5
LONDON (LON)	London		SYDNEY (SYD)	Sydney	+10
PARIS (PAR)	Paris	+1	NOUMEA (NOU)	Noumea	+11
ATHENS (ATH)	Athens	+2	WELLINGTON (WLG)	Wellington	+12

• Based on data as of July 2010.

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

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