

Operation Guide 5347 (OC)

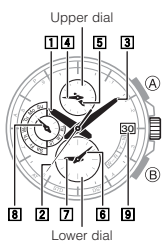
Congratulations upon your selection of this CASIO watch.

* 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.

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 Big Hand
- 5 Upper Dial Small Hand
- 6 Lower Dial Big Hand
- 7 Lower Dial Small Hand
- 8 Mode Hand
- 9 Day Indicator

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

Hand and Date Indicator Movement

- The [9] Day Indicator movement is coordinated with [8] Mode Hand movement. When changing the [9] Day Indicator setting, the [8] Mode Hand will also rotate.
- The [9] Day Indicator changes gradually at midnight. It takes anywhere from about 90 seconds to three minutes for the day to change. The [8] Mode Hand will rotate when the [9] Day Indicator changes.
- The day may not be displayed correctly while the crown is pulled out.
- The Home City date is displayed in the Timekeeping Mode and the Stopwatch Mode. The World Time City date is displayed in the World Time Mode (page E-23).

Crown Operations

The crown can be pulled out to one of two (click) positions. Never apply undue force when pulling out the crown.

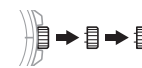
Important!

- In order to ensure full water resistance and to prevent damage due to impact, make sure that the crown is normally pushed in fully when using the watch.
- 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.

First click



Second click



High-speed Movement

When setting a time or when performing home position adjustment (page E-39), you can move the hands either forward or back at high speed. There are two high-speed levels: HS1 and HS2 (faster than HS1).

To start HS1 high-speed movement



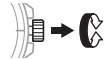
While the crown is pulled out, rotate it rapidly three turns away from you (for forward movement) or towards you (for reverse movement). High-speed movement will continue even if you release the crown.

To start HS2 high-speed movement



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

To stop high-speed movement



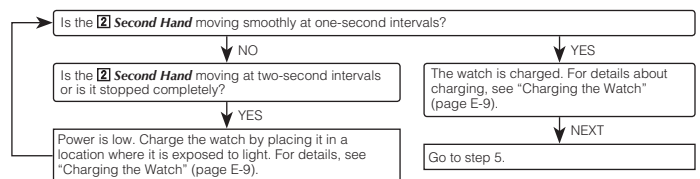
Rotate the crown in the direction that is opposite that of the current high-speed movement or press any button.

Important!

- Leaving the crown pulled out for more than two minutes (approximately 30 minutes in the case of hand and day home position adjustment) without performing any operation will automatically cause crown operations to become disabled. If this happens, press the crown back in, pull it out, and then start the operation over again.

Things to check before using the watch

1. Pull the crown out to the first click.
2. Hold down [A] for at least two seconds to enter the Timekeeping Mode.
3. Push the crown back in.
4. Observe the movement of the [2] Second Hand.



5. Check the Home City.

Use the procedure under "Selecting a City" (page E-28) to configure your Home City.

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.

6. Set the current time.

- **To set the time using a time calibration signal**
See "To get ready for a receive operation" (page E-16).
- **To set the time manually**
See "Configuring Current Time and Date Settings Manually" (page E-32).

The watch is now ready for use.

- For details about the watch's radio controlled timekeeping feature, see "Radio Controlled Atomic Timekeeping" (page E-13).

Contents

| | |
|--|------|
| About This Manual | E-2 |
| Crown Operations | E-3 |
| Things to check before using the watch | E-5 |
| Charging the Watch | E-9 |
| To recover from the sleep state | E-12 |
| Radio Controlled Atomic Timekeeping | E-13 |
| To get ready for a receive operation | E-16 |
| To perform manual receive | E-18 |
| To check the result of the latest receive operation | E-19 |
| To turn auto receive on and off | E-20 |
| Mode Reference Guide | E-22 |
| Selecting a City | E-28 |
| To select a city | E-28 |
| To switch between standard time and summer time manually | E-31 |

| | |
|--|------|
| Configuring Current Time and Date Settings Manually | E-32 |
| To change the current time and date setting manually | E-32 |
| Using the Stopwatch | E-36 |
| To measure elapsed time | E-38 |
| Adjusting the Hand and Day Home Positions | E-39 |
| To adjust the hand and day home positions | E-41 |
| Troubleshooting | E-44 |
| Specifications | E-49 |

Charging the Watch

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

Charging Guide



Whenever you are not wearing the watch, be sure to leave it in a location where it is exposed to light.

- Best charging performance is achieved by exposing the watch to light that is as strong as possible.



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

- The watch may enter a sleep state (page E-12) if its face is blocked by your sleeve even only partially.

Warning!

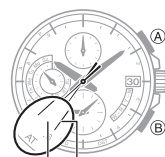
Leaving the watch in bright light for charging can cause it to become quite hot. Take care when handling the watch to avoid burn injury. The watch can become particularly hot when exposed to the following conditions for long periods.

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

Important!

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

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**.

- 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 (**Low battery alert**). Expose the watch to light as soon as possible so it can charge.

| Level | Hand Movement | Function Status |
|-------|---|---|
| 1 | Normal. | All functions enabled |
| 2 | [2] Second Hand moves at two-second intervals. | Time calibration signal reception and home position adjustment disabled |
| 3 | All hands stopped at 12 o'clock. | All functions disabled |

- When power drops to Level 3, all settings (including timekeeping) will be cleared. Recharging the battery will reset all settings to their initial factory defaults, so you will need to configure settings again.

- When the watch is at Level 3, exposing it to light for a while will cause the **[2] Second Hand** to move to the position of second 57. This indicates that charging has started.

Power Recovery Mode

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

Charging Times

| Exposure Level (Brightness) | Daily Operation *1 | Level Change *2 | | |
|---|--------------------|-----------------|---------|-----------|
| | | Level 3 | Level 2 | Level 1 |
| Outdoor sunlight (50,000 lux) | 8 minutes | 2 hours | 6 hours | 18 hours |
| Window sunlight (10,000 lux) | 30 minutes | 6 hours | 8 hours | 66 hours |
| Window sunlight on cloudy day (5,000 lux) | 48 minutes | 8 hours | 8 hours | 107 hours |
| Indoor fluorescent lighting (500 lux) | 8 hours | 94 hours | --- | --- |

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

* 2 Approximate exposure to take power up one level.

- The above times are for reference only. Actual times depend on lighting conditions.
- For details about the operating time and daily operating conditions, see the "Power Supply" section of the Specifications (page E-49).

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) | Only the [2] Second Hand will stop at its current position. |
| 6 or 7 days (function sleep) | <ul style="list-style-type: none"> • All hands stopped at 12 o'clock. • Only day indication operates normally. |

- 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 while an elapsed time operation is in progress in the Timekeeping Mode or the World Time Mode.

To recover from the sleep state

Move the watch to a well-lit area, perform a crown operation, or press any button.

Radio Controlled Atomic Timekeeping

This watch receives a time calibration signal and updates its time setting accordingly. However, when using the watch outside of areas covered by time calibration signals, you will have to adjust the settings manually as required. See "Configuring Current Time and Date Settings Manually" (page E-32) for more information.

- Time calibration signal reception is enabled while the watch is in the Timekeeping Mode or World Time Mode. In this manual, all examples show time calibration signal reception in the Timekeeping Mode. The same procedures apply while the watch is in the World Time Mode.
- Time calibration reception is based on the applicable mode's city setting. In the Timekeeping Mode, the city setting is the Home City. In the World Time Mode, it is the World Time City (page E-28).

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

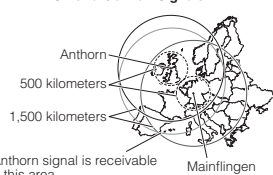
| If the city setting is this: | The watch can receive the signal from the transmitter located here: |
|---|---|
| LONDON (LON), PARIS (PAR), ATHENS (ATH) | Anthorn (England), Mainflingen (Germany) |
| HONG KONG (HKG) | Shangqiu City (China) |
| TOKYO (TYO) | Fukushima (Japan), Fukuoka/Saga (Japan) |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

Important!

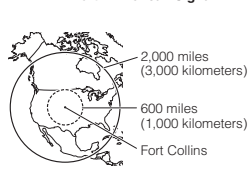
- The areas covered by **HONOLULU (HNL)** and **ANCHORAGE (ANC)** are quite far from the calibration signal transmitters, so certain conditions may cause reception problems.

Approximate Reception Ranges

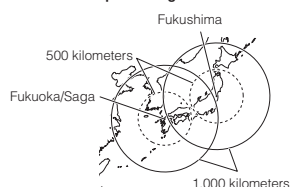
UK and German Signals



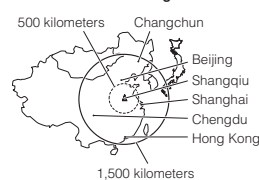
North American Signal



Japanese Signals



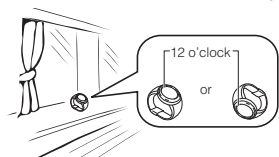
Chinese Signal



- Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference may also cause problems with reception.
 - Mainflingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles)
 - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
 - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles)
 - Shangqiu (China) transmitter: 500 kilometers (310 miles)
- As of June 2013, China does not use Daylight Saving Time (DST). If China does go to the Daylight Saving Time system in the future, some functions of this watch may no longer operate correctly for the China time zones.
- 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.

To get ready for a receive operation

- Enter the Timekeeping Mode (page E-24).
 - You could also enter the World Time Mode to perform this procedure. Time calibration reception is based on the applicable mode's city setting. In the Timekeeping Mode, the city setting is the Home City. In the World Time Mode, it is the World Time City (page E-28).
- Place the watch in a location where signal reception is good.



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

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



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

3. What you should do next depends on whether you are using Auto Receive or Manual Receive.

- Auto Receive: Leave the watch over night in the location you selected in step 2.
- Manual Receive: Perform the operation under "To perform manual receive" on page E-18.

Important!

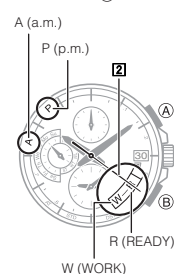
- With Auto Receive, the watch performs the receive operation each day automatically up to six times (up to five times for the Chinese calibration signal) between the hours of midnight and 5 a.m. When any receive operation is successful, none of the other receive operations for that day are performed.
- Calibration signal reception is disabled in the following cases.
 - In the Stopwatch Mode
 - While an elapsed time operation is in progress in the Timekeeping Mode or World Time Mode
 - While Auto Receive is turned off
 - While the crown is pulled out
 - While the battery charge is low
 - While the watch is in function sleep

E-16

E-17

To perform manual receive

- Enter the Timekeeping Mode (page E-24).
 - You could also enter the World Time Mode to perform this procedure. Time calibration reception is based on the applicable mode's city setting (page E-13). In the Timekeeping Mode, the city setting is the Home City. In the World Time Mode, it is the World Time City (page E-28).
- Hold down **(B)** for at least two seconds.



- The **[2] Second Hand** will first indicate **A** (a.m.) or **P** (p.m.), then move to **R** (**READY**) to indicate that signal reception has started.

- The **[2] Second Hand** indicates the operations the watch is currently performing.

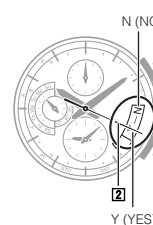
| When the [2] Second Hand is pointed here: | It means this: |
|--|------------------------------------|
| R (READY) | Watch is setting up for reception. |
| W (WORK) | Reception is in progress. |

- If signal reception is unstable, the **[2] Second Hand** may move between **W** (**WORK**) and **R** (**READY**).
- The watch's time setting is adjusted automatically whenever a receive operation is successful.

Note

- Correct indication will resume after the receive operation is complete. If you need to produce a correct time reading immediately, press any button to stop the receive operation.
- If reception fails for some reason, check the surrounding area and eliminate possible causes for failure and then try again. See "To get ready for a receive operation" (page E-16).

To check the result of the latest receive operation



Important!

- Perform the operation below in the same mode (Timekeeping Mode or World Time Mode) where the latest receive operation was performed. Changing to another mode will cause the latest receive information to be cleared.

- Press **(B)**.
 - The **[2] Second Hand** will first indicate **A** (a.m.) or **P** (p.m.), and then move to **Y** (**YES**) if the latest receive operation was successful, or **N** (**NO**) if it was not.
- After about ten seconds, regular timekeeping will resume. Before that, you can press **(B)** to return manually to the mode you started from (Timekeeping or World Time) in step 1.

Note

- The **[2] Second Hand** will indicate **N** (**NO**) if you have exited the mode (Timekeeping Mode or World Time Mode) where the receive operation was performed, or if you have adjusted the time or date setting manually since the latest receive operation.

E-18

E-19

To turn auto receive on and off

- Enter the Timekeeping Mode (page E-24).
 - You could also enter the World Time Mode to perform this procedure. Time calibration reception is based on the applicable mode's city setting (page E-13). In the Timekeeping Mode, the city setting is the Home City. In the World Time Mode, it is the World Time City (page E-28).
- Press **(B)**.
 - The **[2] Second Hand** will first indicate **A** (a.m.) or **P** (p.m.). Then it will indicate the last reception result (**Y** or **N**) for about 10 seconds.
- During the 10 seconds that the **[2] Second Hand** is pointing to the latest receive operation result (see above), pull out the crown to the first click.
 - This will cause the **[2] Second Hand** to point to either **Y** (**YES**) or **N** (**NO**), which indicates the current on/off setting.
 - Leaving the crown pulled out for more than two minutes without performing any operation will automatically cause crown operations to become disabled. If this happens, press the crown back in, pull it out, and then start the operation over again.

- Rotate the crown to move the **[2] Second Hand** to the setting you want.
 - To turn on auto receive, select **Y** (**YES**).
 - To turn off auto receive, select **N** (**NO**).
- Push the crown back in to return to the mode you started from (Timekeeping or World Time) in step 1.

E-20

E-21

Mode Reference Guide

Your watch has three "modes". The mode you should select depends on what you want to do. Pull out the crown to the first click and then rotate it to navigate between modes.

| In this mode: | You can do this: | More info: |
|---------------|--|--------------|
| Timekeeping | <ul style="list-style-type: none"> View the current time in the Home City. Use the upper dial and the [2] Second Hand to measure elapsed time (1/20 (0.05)-second timing for up to 60 minutes (five 12-minute revolutions)). View the current time in the World Time City in the lower dial. Configure Home City and summer time settings. Perform calibration signal Auto Receive and Manual Receive. Enable/disable Auto Receive. Manually configure time and date settings. | E-24 E-37 |
| World Time | <ul style="list-style-type: none"> View the current time in the World Time City. View the current time in the Home City in the upper dial. Use the lower dial and the [2] Second Hand to measure elapsed time (1/20 (0.05)-second timing for up to 60 minutes (five 12-minute revolutions)). Configure World Time City and summer time settings. Perform calibration signal Auto Receive and Manual Receive. Enable/disable Auto Receive. Manually configure time and date settings. | E-25 E-37 |
| Stopwatch | <ul style="list-style-type: none"> Measure elapsed time (1/20 (0.05)-second timing for 60 minutes). View the current time in the World Time City in the upper dial. View the current time in the Home City in the lower dial. | E-36 |

E-22

Relationship between the Timekeeping Mode and World Time Mode

This section explains about the watch's Timekeeping Mode and World Time Mode, and the Home City and World Time City.

| Timekeeping Mode | The Timekeeping Mode is mainly used for viewing the current time in the Home City. |
|------------------|---|
| World Time Mode | The World Time Mode is mainly used for viewing the current time in the World Time City. |
| Home City | Specify the city where you normally will be using your watch. In Japan, the Home City is Tokyo. |
| World Time City | Specify another city anywhere around the globe. |

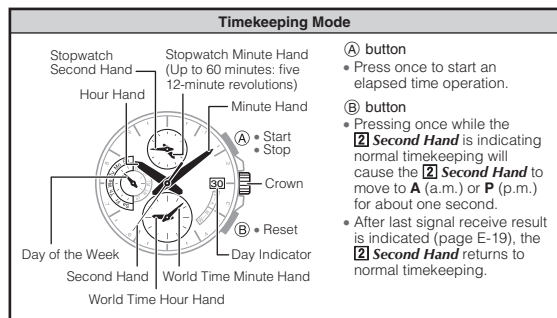
- While the watch is in the Timekeeping Mode, time calibration signal reception is performed in accordance with the Home City setting. When a time calibration signal is received and the time setting is adjusted automatically while the watch is in the Timekeeping Mode, World Time Mode times are also adjusted accordingly.
- When the watch is in the World Time Mode, time calibration signal reception is performed based on the World Time City time. When a time calibration signal is received and the time setting is adjusted automatically while the watch is in the World Time Mode, other World Time Mode times are also adjusted accordingly.
- Adjusting the time setting manually while the watch is in the Timekeeping Mode will cause World Time Mode times to be adjusted accordingly.
- Adjusting the time setting manually while the watch is in the World Time Mode will cause Timekeeping Mode times to be adjusted accordingly.

E-23

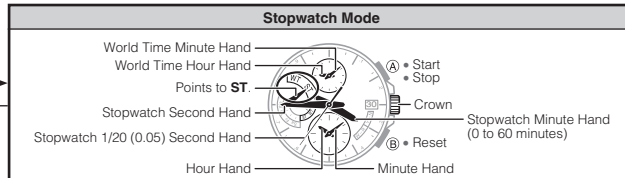
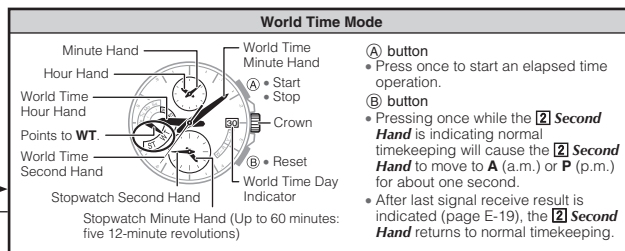
General Guide

Pull out the crown to the first click and then rotate it to navigate between modes. Push the crown back in after entering the mode you want.

- Pulling out the crown to the first click and then holding down **(B)** for at least two seconds will return directly to the Timekeeping Mode.



Pull out the crown to the first click.

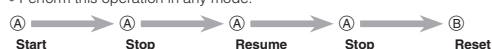


E-24

E-25

Using the Stopwatch

- Perform this operation in any mode.



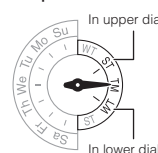
Note

- As the **[9] Day Indicator** changes after you switch between the Timekeeping Mode and World Time Mode, the **[8] Mode Hand** also rotates (page E-2).
- The **[9] Day Indicator** changes gradually at midnight each day. It takes anywhere from about 90 seconds to three minutes for the day to change.

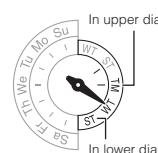
E-26

Watch Modes

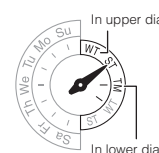
Timekeeping Mode
(Crown pulled out to first click.)



World Time Mode



Stopwatch Mode



- The day of the week is indicated in the Timekeeping Mode. Pulling out the crown to the first click will cause the Mode Hand to move to TM. The mode indicators to the left and right of the Mode Hand indicate the upper and lower dial hand functions: ST (Stopwatch) for the upper dial and WT (World Time) for the lower dial.
- In the World Time Mode, the Mode Hand points to WT. The mode indicators to the left and right indicate the upper and lower dial hand functions: TM (Timekeeping) for the upper dial and ST (Stopwatch) for the lower dial.
- In the Stopwatch Mode, the Mode Hand points to ST. The mode indicators to the left and right indicate the upper and lower dial hand functions: WT (World Time) for the upper dial and TM (Timekeeping) for the lower dial.

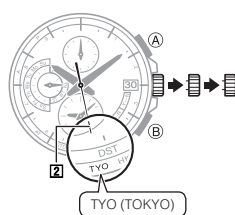
E-27

Selecting a City

Your watch lets you select from among city codes for 29 cities around the globe, plus one code for UTC (Universal Coordinated Time). Selecting a city code causes the watch's time setting to change automatically to indicate the current time in that zone.

Important!

- You can use the same steps to select a city code in the Timekeeping mode and the World Time Mode.
- In the Timekeeping Mode, the city setting is the Home City, and in the World Time Mode, it is the World Time City.



To select a city

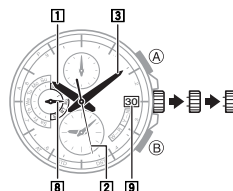
Note

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

1. Pull out the crown to the second click.
 - This will cause the **[2] Second Hand** to move to the city code of the currently selected city.
 - This indicates the city code setting mode.
 - Leaving the crown pulled out for more than two minutes without performing any operation will automatically cause crown operations to become disabled. If this happens, press the crown back in, pull it out, and then start the operation over again.
 - For details about city codes, see the "City Code Table" at the back of this manual.

Illustration shows Timekeeping Mode.

E-28



2. Rotate the crown to move the **[2] Second Hand** to the city code you want to select.
 - Each time you select a city code, the **[1] Hour Hand**, **[3] Minute Hand**, **[8] Mode Hand**, and **[9] Day Indicator** move to the current time for that city code.
3. After the setting is way you want, push the crown back in.
 - The day of the week and day will also be displayed in accordance with the selected city code.

E-29

STD/DST Switching

You can select summer time or standard time independently for each city. The initial default setting for all cities is **AT (AUTO)**.

Normally you should use the **AT (AUTO)** setting because it automatically switches between summer time and standard time. You should change the setting to **STD** (standard time) or **DST** (summer time) in the following cases.

- When using the watch in a city not included in the City Code Table
- When the switching dates in your location are different from those shown in the City Code Table

Daylight Saving Time (DST)

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

- Note that you cannot switch between **STD** (standard time) and **DST** (daylight saving time) while **UTC*** is selected as the city code.

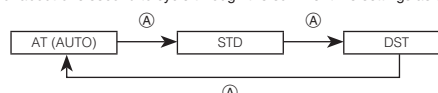
* Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.

To switch between standard time and summer time manually

1. Pull the crown out to the second click.
 - The **[2] Second Hand** will move to the currently selected city code.
 - Leaving the crown pulled out for more than two minutes without performing any operation will automatically cause crown operations to become disabled. If this happens, press the crown back in, pull it out, and then start the operation over again.
2. Press **(A)**.
 - The **[2] Second Hand** will move to the currently selected summer time setting (see table below).
 - After about two seconds, the **[2] Second Hand** will return to the city code setting.
 - Be sure to perform step 3 within two seconds after you press **(A)** (while the **[2] Second Hand** is indicating the summer time setting).

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

3. Hold down **(A)** for about one second to cycle through the summer time settings as shown below.



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

E-30

E-31

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.

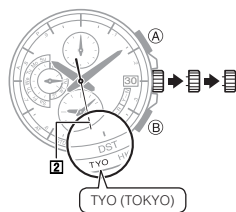
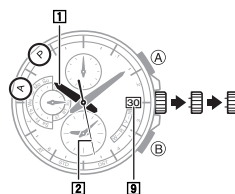


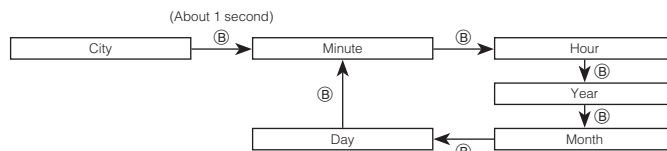
Illustration shows Timekeeping Mode.

To change the current time and date setting manually

- In the mode whose time and date setting you want to change (Timekeeping Mode or World Time Mode), pull out the crown to the second click.
 - This will cause the **[2] Second Hand** to move to the city code of the currently selected city.
 - Leaving the crown pulled out for more than approximately 30 minutes without performing any operation will automatically cause crown operations to become disabled. If this happens, press the crown back in, pull it out, and then start the operation over again.



- Change the city setting and summer time setting, if you want.
 - To change the city setting, perform step 2 under "To select a city" (page E-28).
- Hold down **[B]** for about one second. This will enter the time and date setting mode.
 - The **[2] Second Hand** will move to **A** (a.m.) or **P** (p.m.).
 - In the following steps, each press of **[B]** cycles between settings as shown below.



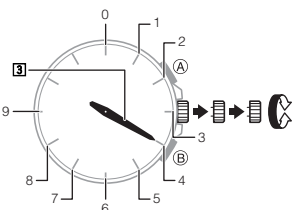
4. Rotate the crown to adjust the minute setting.

- A high-speed movement feature (one full cycle maximum) is available when adjusting the hands. See "Crown Operations" (page E-3).

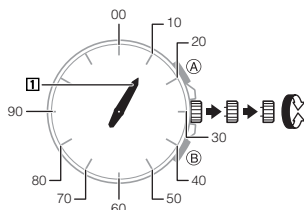
E-32

E-33

- Press **[B]**.
 - The **[1] Hour Hand** will move slightly left and right to indicate the hour and day setting mode.
- Rotate the crown to adjust the hour setting.
 - The **[2] Second Hand** will move to **A** (a.m.) or **P** (p.m.).
 - A high-speed movement feature (one full cycle maximum) is available when adjusting the hands. See "Crown Operations" (page E-3).
- Press **[B]**. This will enter the year setting mode.
 - After the **[2] Second Hand** moves to the month, the **[3] Minute Hand** and **[1] Hour Hand** will move and point to the year.
 - [2] Second Hand**: The month setting is configured in step 10, below.
- Rotate the crown to adjust the year setting.



Setting the year (ones digit)

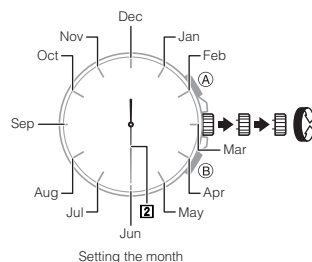


Setting the year (tens digit)

E-34

E-35

- Press **[B]** to enter the month setting mode.
 - The **[2] Second Hand** will perform one rotation and stop at the current month setting.
- Rotate the crown to adjust the month setting.
- Press the **[B]**.
 - The **[8] Mode Hand** will move slightly, indicating the day setting mode.
- Rotate the crown to adjust the day setting.
 - The **[8] Mode Hand** will rotate along with the crown rotation.
- After the settings are the way you want, push the crown back in to return to the mode you started from in step 1.
 - This causes timekeeping to resume with the **[2] Second Hand** starting from 12 o'clock.
 - The day of the week indicated by the **[8] Mode Hand** changes automatically in accordance with the date (year, month, and day).



Setting the month

Note

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

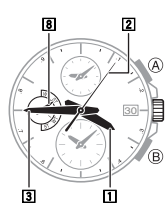
Using the Stopwatch

This watch can be used as a stopwatch.

- Measurement is possible in the Stopwatch Mode, Timekeeping Mode, and World Time Mode.
- Measurement is 1/20 (0.05) second units.
- Measurement can be up to 59 minutes, 59.95 seconds (60 minutes total).
- Elapsed time measurement stops when the maximum limit is reached.
- In the Timekeeping Mode and World Time Mode, measured time display is up to 11 minutes, 59.95 seconds.
- If measured time exceeds 11 minutes 59.95 seconds, switch to the Stopwatch Mode.

Stopwatch Mode

Example: When elapsed time is 20 minutes, 45.10 seconds



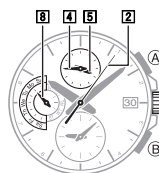
Hand Functions

- [1] Hour Hand**: Indicates the stopwatch minute count (1 revolution = 60 minutes).
 - [2] Second Hand**: Indicates the 1/20 (0.05)-second count during stopwatch operation.
 - [3] Minute Hand**: Indicates the stopwatch seconds count.
 - [8] Mode Hand**: Points to ST.
- The watch face is marked with 0.05-second markers.

E-36

Timekeeping Mode

Example: When elapsed time is 3 minutes, 45.10 seconds

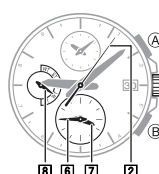


Hand Functions

- [2] Second Hand**: Indicates the 1/20 (0.05)-second count.
- [4] Upper Dial Big Hand**: Indicates the 1-second count.
- [5] Upper Dial Small Hand**: Indicates the 1-minute count (up to 60 minutes: five 12-minute revolutions).
- [8] Mode Hand**: Points to the day of the week while elapsed time is in progress.

World Time Mode

Example: When elapsed time is 3 minutes, 45.10 seconds



Hand Functions

- [2] Second Hand**: Indicates the 1/20 (0.05)-second count.
- [6] Lower Dial Big Hand**: Indicates the 1-second count.
- [7] Lower Dial Small Hand**: Indicates the 1-minute count (up to 60 minutes: five 12-minute revolutions).
- [8] Mode Hand**: Points to WT while elapsed time is in progress.

E-37

To measure elapsed time



- Pressing **[A]** without resetting the stopwatch will resume the elapsed time operation from where it was last stopped.

Note

- The Stopwatch Mode can indicate elapsed time up to 59 minutes, 59.95 seconds. Elapsed time measurement will stop automatically when the maximum time is reached.
- Pressing **[B]** will not perform a reset operation while the hands are moving to elapsed timekeeping.
- In the Stopwatch Mode, the **[2] Second Hand** indicates the 1/20 (0.05)-second count for the first 30 seconds of a stopwatch elapsed time operation. The **[2] Second Hand** will jump to the current value whenever **[A]** (Stop) is pressed.
- In the Timekeeping Mode and World Time Mode, the **[2] Second Hand** (1/20 (0.05) second) hand returns to normal 1-second movement approximately 20 seconds after an elapsed time measurement operation is started.

Adjusting the Hand and Day Home Positions

If the watch is exposed to strong magnetism or impact, it can cause its hands and/or the date to go out of alignment. This can result in incorrect date and/or time indication even though a time calibration signal is being received.

The watch automatically adjusts the **[2] Second Hand**, **[3] Minute Hand**, and **[1] Hour Hand** positions periodically.

If you notice that the **[4] Upper Dial Big Hand**, **[5] Upper Dial Small Hand**, **[6] Lower Dial Big Hand**, **[7] Lower Dial Small Hand**, **[8] Mode Hand**, or **[9] Day Indicator** are not in the correct position, perform manual adjustment.

Important!

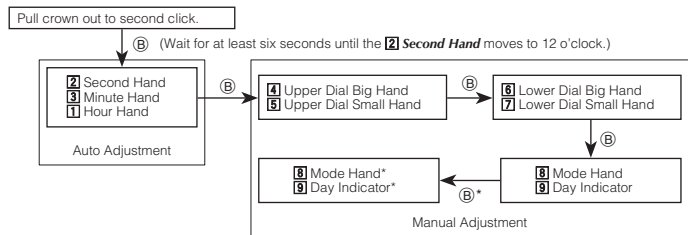
- Performing hand position correction in either the Timekeeping Mode or World Time Mode will correct the hand positions in all modes.
- You cannot correct the hand and day home positions while in the Stopwatch Mode.

E-38

E-39

Hand/Day Adjustment Steps

For full details, see the procedure from page E-41 to E-43.



- * Perform this operation only if you are unable to align the **8 Mode Hand** and **9 Day Indicator** using the operation to the right.
- After completing adjustment, push the crown back in. Pushing the crown back in part way through adjustment will return to the mode you started from, with any adjustments you made in effect.

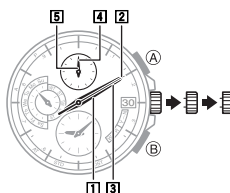
E-40

To adjust the hand and day home positions

Important!

- You do not need to perform the procedure in this section if the watch is indicating the time and/or day correctly.

- Pull the crown out to the second click.
- Keep **B** depressed for more than six seconds. This will cause the **2 Second Hand** moves to 12 o'clock.
 - After about one second, the **2 Second Hand** moves to **A** (a.m.) or **P** (p.m.). After about six seconds, the **2 Second Hand** moves to 12 o'clock.
 - Release **B** after the **2 Second Hand** moves to 12 o'clock. At this time the watch will start automatic adjustment of the **2 Second Hand**, **3 Minute Hand**, and **1 Hour Hand** positions.
 - Adjustment is complete when the **2 Second Hand**, **3 Minute Hand**, and **1 Hour Hand** move to 12 o'clock.



- Press **B**.
 - The **2 Second Hand**, **3 Minute Hand**, and **1 Hour Hand** will move to 2 o'clock.
 - The **4 Upper Dial Big Hand** and **5 Upper Dial Small Hand** will move to 12 o'clock and stop there.
 - If the **4 Upper Dial Big Hand** and **5 Upper Dial Small Hand** do not align with 12 o'clock, rotate the crown to adjust them so they do.
 - You can use high-speed hand movement to perform this step.

- Press **B**.
 - The **6 Lower Dial Big Hand** and **7 Lower Dial Small Hand** will move to 12 o'clock and stop there.
 - If the **6 Lower Dial Big Hand** and **7 Lower Dial Small Hand** do not align with 12 o'clock, rotate the crown to adjust them so they do.
 - You can use high-speed hand movement to perform this step.
- Press **B**.
 - Check if the **8 Mode Hand** is stopped at 12 o'clock and the **9 Day Indicator** indicates the day correctly.
 - If the position of the **8 Mode Hand** and/or **9 Day Indicator** is not correct, rotate the crown to adjust the **8 Mode Hand** to 12 o'clock and the **9 Day Indicator** so the day is in the center of indicator window.
 - You can use high-speed hand movement to perform this step.
 - When you rotate the crown, there is a limit on the movement of the **8 Mode Hand** and **9 Day Indicator**. The maximum range of movement of the **8 Mode Hand** is 180 degrees left and right. The **9 Day Indicator** can move just a little (page E-2).
 - If you successfully align the **8 Mode Hand** and **9 Day Indicator**, advance to step 7. If you are unable to align the **8 Mode Hand** and **9 Day Indicator**, go to step 6.

Day Indicator during home position adjustment

E-42

- Press **B**.
 - Wait until the **8 Mode Hand** stops at 12 o'clock and the **9 Day Indicator** stops at 1.
 - The **8 Mode Hand** may continue to rotate for as long as 30 minutes until the **9 Day Indicator** stops at 1 (page E-2).
 - If the **8 Mode Hand** and/or **9 Day Indicator** is not aligned properly when they stop moving, rotate the crown to adjust them so the **8 Mode Hand** is at 12 o'clock and so 1 is in the center of the **9 Day Indicator** window.
 - You can use high-speed hand and day movement to perform this step.
 - Push the crown back in.
- This exits the adjustment mode and returns to normal timekeeping.

Important!

- Leaving the crown pulled out for more than approximately 30 minutes without performing any operation will automatically cause the adjustment operation to become disabled. If this happens, push the crown back in and then pull it out to restart the above procedure from the beginning. Pushing the crown in will return to the mode you started from in step 1 with the hands and/or day in their newly adjusted positions.

E-41

Troubleshooting

Hand Movement and Position

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

Refer to "Mode Reference Guide" (page E-22). To return directly to the Timekeeping Mode, pull out the crown to the first click hold down **B** for at least two seconds. To return to the Timekeeping Mode, push the crown back in.

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

Power may be low. Expose the watch to light until the **2 Second Hand** starts moving normally, at one-second intervals (page E-10).

■ 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-12).
- The time setting is being adjusted following a successful auto time calibration signal receive operation (page E-13).

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

The watch may be in the power recovery mode (page E-11). 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.

■ All hands are at 12 o'clock and nothing happens when I press any button.

The rechargeable battery is dead. Expose the watch to light to charge the battery and restore normal operation.

E-44

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 city. You need to adjust the current time manually when any other city is selected.

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

| Possible Cause | Remedy | Page |
|---|---|------|
| <ul style="list-style-type: none"> 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-16 |
| You are in an area where signal reception is not possible for some reason. | See "Approximate Reception Ranges". | E-14 |
| The calibration signal is not being transmitted for some reason. | <ul style="list-style-type: none"> 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-17), which will cause the time to be adjusted automatically according to your currently selected city. If this results in the wrong time setting, check your city setting and correct it, if necessary (page E-28).

E-46

■ The current time setting is off by hours.

- Your city setting may be wrong. Check your city setting and correct it, if necessary (page E-28).

■ 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 select a city" (page E-28).
- The period when summer time is applied in the location where you are using the watch may be different from the period set for your currently selected city. Use the procedure under "To switch between standard time and summer time manually" (page E-31) to switch from **AT (AUTO)** to **STD** (for standard time) or **DST** (for summer time).

■ 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-39).

■ Data indication is correct, but it is not in the middle of the day indicator.

The date is in the process of changing. For information about how the date changes, see page E-2.

Charging

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

It can take quite a long time to charge the battery after the power level drops to Level 3 (page E-10). Continue exposing the watch to light until the **2 Second Hand** starts moving normally (at one-second intervals).

E-45

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

| Possible Cause | Remedy | Page |
|--|--|--------------|
| Your city setting is wrong. | Check your city setting and correct it, if necessary. | E-13 E-28 |
| Auto Receive is disabled because there is an ongoing elapsed time operation. | Stop the ongoing stopwatch operation. | E-36 |
| The watch is in the Stopwatch Mode. | Change to the Timekeeping Mode. If you want to perform signal reception in the World Time Mode, enter the World Time Mode. | E-24 |
| The Auto Receive function is turned off. | Turn on Auto Receive. | E-20 |
| The crown is pulled out. | Push the crown back in. | E-3 |
| There is not enough power for signal reception. | Expose the watch to light to charge it. | E-9 |

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

| Possible Cause | Remedy | Page |
|--|---|--------------|
| Your city setting is wrong. | Check your city setting and correct it, if necessary. | E-13 E-28 |
| 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-39 |

E-47

Crown Operation

■ Nothing happens when I rotate the crown.

| Possible Cause | Remedy | Page |
|---|--|------|
| The crown has been left pulled out for more than two minutes (30 minutes in the case of hand home position adjustment) without any operation being performed. | Push the crown back in and then pull it out again to restore normal operation. | E-3 |

Specifications

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

Timekeeping : Hour, minutes, seconds, a.m./p.m. indication, day, day of the week

Calendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099

Other: Home City and World Time City can be assigned one of 29 city codes (29 time zones) and Coordinated Universal Time; Daylight Saving Time (summer time)/Standard Time auto switching

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); Anthon, 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: 59'59.95"

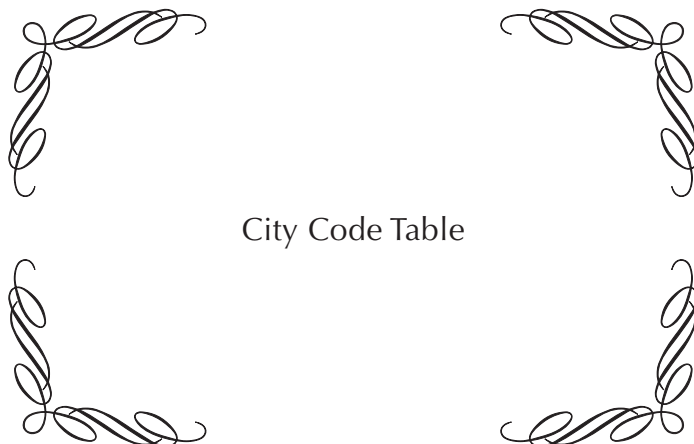
Measuring unit: 1/20 (0.05) seconds

Measuring modes: Elapsed time

Other: Power Saving; Low battery alert; Auto Correction of Hand Home Positions

Power Supply: Solar panel and one rechargeable battery

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



City Code Table

| City Code | City | UTC Offset/ GMT Differential | Summer Time Period | |
|--------------------|---------------------|---------------------------------|----------------------------------|---|
| | | | Summer Time Start | Summer Time End |
| PAGO PAGO (PPG) | Pago Pago | -11 | 02:00, second Sunday in March | 02:00, first Sunday in November |
| HONOLULU (HNL) | Honolulu | -10 | | |
| ANCHORAGE (ANC) | Anchorage | -9 | | |
| LOS ANGELES (LAX) | Los Angeles | -8 | | |
| DENVER (DEN) | Denver | -7 | | |
| CHICAGO (CHI) | Chicago | -6 | | |
| NEW YORK (NYC) | New York | -5 | | |
| SANTIAGO (SCL) | Santiago | -4 | | |
| RIO | Rio De Janeiro | -3 | 0:00, third Sunday in October | 0:00, third Sunday in February or 0:00, fourth Sunday in February |
| F.DE NORONHA (FEN) | Fernando de Noronha | -2 | None | None |
| PRAIA (RAI) | Praia | -1 | | |
| UTC | | | | |
| LONDON (LON) | London | 0 | 01:00, last Sunday in March | 02:00, last Sunday in October |
| PARIS (PAR) | Paris | +1 | 02:00, last Sunday in March | 03:00, last Sunday in October |
| ATHENS (ATH) | Athens | +2 | 03:00, last Sunday in March | 04:00, last Sunday in October |
| JEDDAH (JED) | Jeddah | +3 | None | None |
| TEHRAN (THR) | Tehran | +3.5 | 0:00, March 22 or 0:00, March 21 | 0:00, September 22 or 0:00, September 21 |

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

- Based on data as of June 2013.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.
- The summer time periods in this table are applicable to specific cities. For cities not included in the list, select the list city that is in the same time zone as the desired city and perform STD/DST settings manually.