

Operation Guide 5219 (OC)

CASIO®

ENGLISH

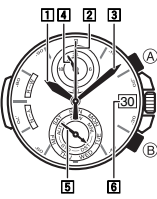
Congratulations upon your selection of this CASIO watch.

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

Note that CASIO COMPUTER CO., LTD. assumes no responsibility for any damage or loss suffered by you or any third party arising through the use of this product or its malfunction.

E-1

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 day of the week.
- 6 Day

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

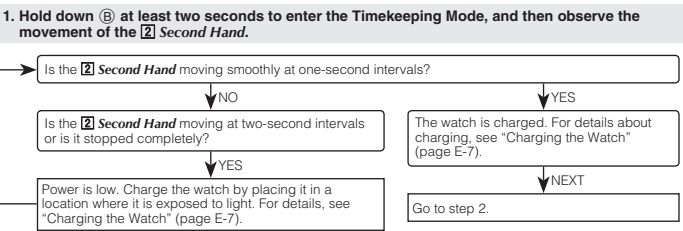
About the crown

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

- Button operations may become disabled after you perform a crown operation. If this happens, rotate the crown slightly. This should restore button operations.

E-2

Things to check before using the watch



2. Check the Home City.

Use the procedure under "To configure Home City settings" (page E-20) 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.

E-3

- 3. Set the current time.**
- **To set the time using a time calibration signal**
See "To get ready for a receive operation" (page E-13).
 - **To set the time manually**
See "Configuring Current Time and Date Settings Manually" (page E-23).
- 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).

E-4

Contents

E-2	About This Manual
E-3	Things to check before using the watch
E-7	Charging the Watch
E-10	To recover from the sleep state
E-11	Radio Controlled Atomic Timekeeping
E-13	To get ready for a receive operation
E-15	To perform manual receive
E-16	To check the result of the latest receive operation
E-16	To turn auto receive on and off
E-18	Mode Reference Guide
E-19	Timekeeping
E-20	Configuring Home City Settings
E-20	To configure Home City settings
E-22	To switch between standard time and summer time manually
E-23	Configuring Current Time and Date Settings Manually
E-23	To change the current time setting manually
E-25	To change the current date setting manually
E-27	Using the Stopwatch
E-27	To perform elapsed time measurement

E-5

E-29	Adjusting Home Positions
E-30	To adjust home positions manually
E-32	Troubleshooting
E-36	Specifications

E-6

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-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.

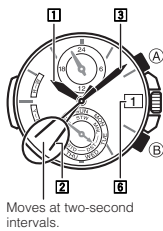
- On the dashboard of a car parked in direct sunlight
- Too close to an incandescent lamp
- Under direct sunlight

E-7

Important!

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

Power Levels



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

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

Level	Hand Movement	Function Status
1	Normal.	All functions enabled.
2	[2] Second Hand moves at two-second intervals. [6] Day changes to 1 (home position).	Time calibration signal reception disabled.
3	[2] Second Hand stopped. [1] Hour Hand and [3] Minute Hand 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.

E-8

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	3 hours		
Window sunlight (10,000 lux)	30 minutes	7 hours		
Window sunlight on cloudy day (5,000 lux)	48 minutes	11 hours		
Indoor fluorescent lighting (500 lux)	8 hours	118 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-36).

E-9

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)	[2] Second Hand only stopped at 12 o'clock, all other functions enabled.
6 or 7 days (function sleep)	• All functions, including timekeeping, disabled. • Internal timekeeping maintained.

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

To recover from the sleep state

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

E-10

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-23) 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)	Antnorn (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)

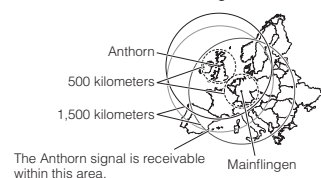
Important!

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

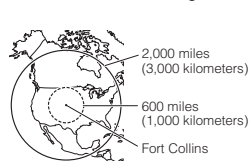
E-11

Approximate Reception Ranges

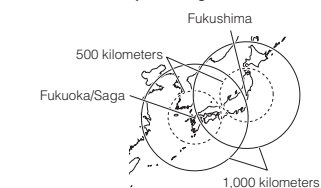
UK and German Signals



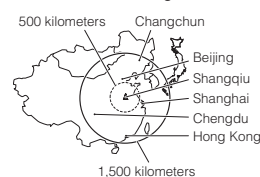
North American Signal



Japanese Signals



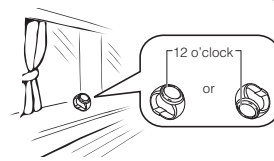
Chinese Signal



- 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 Antnorn (England) transmitters: 500 kilometers (310 miles)
 - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
 - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles)
 - Shangqiu (China) transmitter: 500 kilometers (310 miles)
- As of December 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.

To get ready for a receive operation

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



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

E-13

- 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-14 for details.
- Manual Receive: Perform the operation under "To perform manual receive" on page E-15.

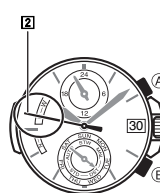
Auto Receive

- 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.

E-14

To perform manual receive

- In the Timekeeping Mode (page E-19), keep **[A]** depressed (for about two seconds) as the **[2] Second Hand** goes through the following sequence.
 - Moves to **YES (Y)** (or **Y** for some models) or **NO (N)** to indicate the last signal reception result, then to **READY (R)**.
- The **[2] Second Hand** indicates the operations the watch is currently performing.



When the [2] Second Hand is pointed here:	It means this:
READY (R)	Watch is setting up for reception.
WORK (W)	Reception is in progress.
YES (Y)	Reception was completed successfully.
NO (N)	Reception failed for some reason.

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

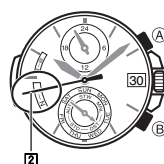
- When the receive operation is successful, the watch adjusts the time setting accordingly, and then resumes regular timekeeping. It does not adjust the setting if the operation failed.

Note

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

E-15

To check the result of the latest receive operation

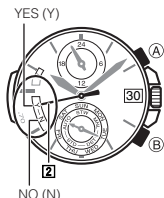


- In the Timekeeping Mode, press (A).
- The [2] **Second Hand** will move to **YES (Y)** if the latest receive operation was successful, or **NO (N)** if it was not. After about ten seconds, regular timekeeping will resume.
 - You can return to the Timekeeping Mode manually by pressing (A) while the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

Note

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

To turn auto receive on and off



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

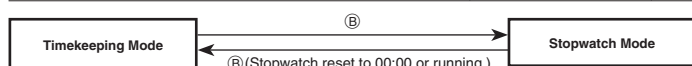
E-16

E-17

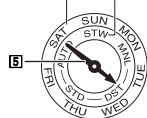
Mode Reference Guide

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

To do this:	Enter this mode:	See:
- View the current time in your Home City and in one of 29 other cities around the globe - View the current date in the Home City - Configure Home City and daylight saving time (DST) settings - Perform a time calibration signal receive operation - Configure time and date settings manually	Timekeeping Mode	E-19
Use the stopwatch to measure elapsed time	Stopwatch Mode	E-27



The hand indicates the day of the week (SUN/MON/TUE/WED/THU/FRI/SAT). Hand points to STW.



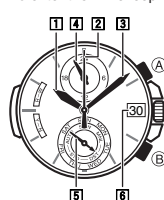
- Hold down (B) at least two seconds to enter the Timekeeping Mode.

E-18

E-19

Timekeeping

To enter the Timekeeping Mode, hold down (B) at least two seconds.

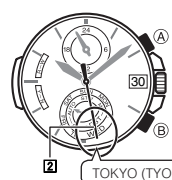


Hand Functions

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

Configuring Home City Settings

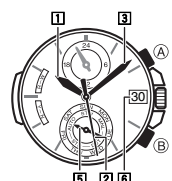
The Home City is location where you will normally use the watch. You can choose from a selection of city codes that represent 29 cities around the globe.



To configure Home City settings

Note

- This watch does not have a city code that corresponds to Newfoundland.
- Pull out the crown.
 - This will cause the [2] **Second Hand** to move to the city code of the currently selected Home City.
 - This indicates the city code setting mode.
 - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
 - For details about city codes, see the "City Code Table" at the back of this manual.

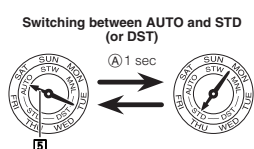


- Rotate the crown to move the [2] **Second Hand** to the city code you want to select as your Home City.
 - Each time you select a city code, the [1] **Hour Hand**, [3] **Minute Hand**, [5] **Lower Dial Hand** and [6] **Day** move to the current time and date for that city code.
- Push the crown back in to return to the Timekeeping Mode.

E-20

E-21

To switch between standard time and summer time manually



- If **STD** is indicated, the watch will always show standard time
- If **DST** is indicated, the watch will always show summer time

- Press (A) to move the short end of the [5] **Lower Dial Hand** between **STD** and **DST**.
 - To switch from **STD** or **DST** to **AUTO**, hold down (A) for about one second.
- After the setting is way you want, push the crown back in.

E-22

STD/DST Switching

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

Normally you should use the **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)

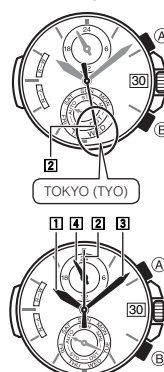
Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

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

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

Configuring Current Time and Date Settings Manually

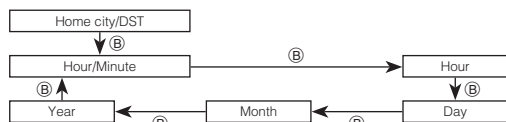
You can configure current time and date settings manually when the watch is unable to receive a time calibration signal.



To change the current time setting manually

- Pull out the crown.
 - This will cause the [2] **Second Hand** to move to the city code of the currently selected Home City.
 - If you do not perform any operation with the crown for about two minutes after pulling it out, crown operations will become disabled and the hand will not move if you rotate the crown. If this happens, push the crown back in and then pull it out again.
- Change the Home City setting, if you want.
 - To change the Home City setting, perform step 2 under "To configure Home City Settings" (page E-20).
- Hold down (B) for about two seconds. This will enter the time setting mode.
 - 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.

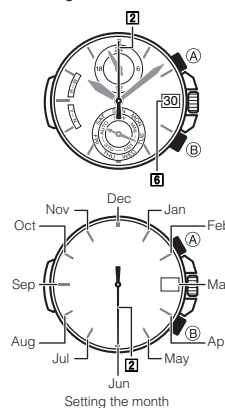
E-23



4. Rotate the crown to adjust the time (hour and minute) setting.
 - Rotating the crown three full consecutive turns clockwise will cause the **[3] Minute Hand** to start moving clockwise. Rotating the crown another three 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-25).
5. After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
 - This causes timekeeping to resume with the **[2] Second Hand** starting from 12 o'clock.

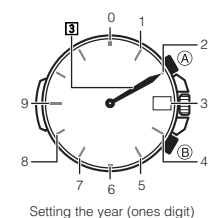
E-24

To change the current date setting manually

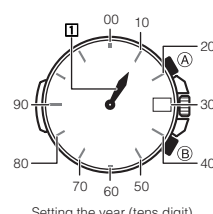


1. Pull out the crown.
 - This will cause the **[2] Second Hand** to move to the city code of the currently selected Home City.
2. Hold down **[B]** for about two seconds.
 - The **[2] Second Hand** will move to 12 o'clock.
3. Press **[B]** twice. This will enter the date setting mode.
 - The **[6] Day** will move slightly left and right to indicate the setting mode.
4. Rotate the crown to adjust the date setting.
5. 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.
6. Rotate the crown to adjust the month setting.

E-25



Setting the year (ones digit)



Setting the year (tens digit)

7. 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 12 o'clock and stop there.
8. Rotate the crown to adjust the year setting.
 - If you want to change the time setting at this time, press **[B]** and then perform the procedure starting from step 4 under "To change the current time setting manually" (page E-23).
9. After the settings are the way you want, push the crown back in to return to the Timekeeping Mode.
 - This causes timekeeping to resume with the **[2] Second Hand** starting from 12 o'clock.
 - The day of the week indicated by the **[5] Lower Dial Hand** changes automatically in accordance with the date (year, month, and day).

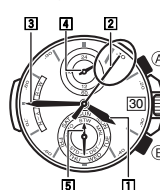
Note

- 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.

E-26

Using the Stopwatch

The stopwatch measures elapsed time and split times.



Hand Functions

- [1] Hour Hand:** Indicates the stopwatch minute count (1 revolution = 60 minutes).
- [2] Second Hand:** Indicates the 0.1-second count during stopwatch operation.
- [3] Minute Hand:** Indicates the stopwatch seconds count.
- [4] Upper Dial Hand:** Indicates the stopwatch minute count (1 revolution = 120 minutes).
- [5] Lower Dial Hand:** Short end points to **STW**.

To perform elapsed time measurement

1. Use the crown to enter the Stopwatch Mode, which causes the **[5] Lower Dial Hand** (short end) to move to **STW**.
2. Now you can perform either of following stopwatch operations.



E-27

Note

- The Stopwatch Mode can indicate elapsed time up to 1 hour, 59 minutes, 59.9 seconds.
- The nearby display illustration shows a stopwatch reading of 20 minutes, 45.10 seconds.
- The watch's face is marked in 0.1-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 0.1-second count for the first 30 seconds of a stopwatch elapsed time operation. After that, the hand stops at 12 o'clock, but 0.1-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-28

Adjusting 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 Home Position Adjustment

- Auto correction of hand home positions corrects the hand position automatically.
- Auto correction is performed in the Timekeeping Mode only.
- Auto correction corrects the positions of all hands. For the **[6] Day**, you must perform the manual adjustment procedure under "To adjust home positions manually" (page E-30).
- If the **[4] Upper Dial Hand** is 12 hours off of the current correct time, correct the setting using the procedure under "To adjust home positions manually" (page E-30).
- 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 (page E-10).

Manual Home Position Adjustment

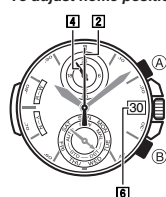
- Perform the procedure in this section if auto home position adjustment is not possible for some reason.
- Hand home position adjustment is not required if the time and day settings are correct.

Note

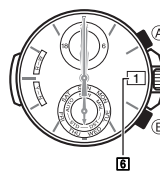
- Any time after you enter the home position adjustment mode in step 2 of the following procedure, you can return to the Timekeeping Mode by pushing the crown back in. In this case, any adjustments you made before the watch returned to the Timekeeping Mode will be applied.
- If you do not perform any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

E-29

To adjust home positions manually



1. Hold down **[B]** at least two seconds to enter the Timekeeping Mode.
2. Pull out the crown.
3. Keep **[B]** depressed for more than seven seconds. This will cause the **[2] Second Hand** to perform one full revolution.
 - After about two seconds, the **[2] Second Hand** will move to 12 o'clock. After about seven seconds, the **[2] Second Hand** will start performing one full revolution. Keep **[B]** depressed until the **[2] Second Hand** completes one full revolution.
 - After the **[2] Second Hand** completes its full revolution, release **[B]**. When you do, home position adjustment of all of the hands (but not the **[6] Day**) will start automatically.
 - Home position adjustment is complete when all hands are at 12 o'clock.
 - 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 **1** is not in the center of the **[6] Day**, rotate the crown to center it.
 - Rotating the crown three full consecutive turns clockwise will cause the **[6] Day** to start changing in a forward direction (increment).
 - 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 regular timekeeping. Wait until everything stops moving before performing any other operation.

E-30

E-31

Troubleshooting

Hand Movement and Position

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

Refer to "Mode Reference Guide" (page E-18). To return directly to the Timekeeping Mode, hold down **Ⓢ** at least two seconds.

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

■ All the watch's hands are stopped at 12 o'clock and none of the buttons work.

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).

■ 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.

E-32

■ 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-20).

■ 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-20).
- The period when summer time is applied in the location where you are using the watch may be different from the period set for your currently selected Home City. Use the procedure under "To switch between standard time and summer time manually" (E-22) to switch from **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-29).

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.

E-33

Time Calibration Signal

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

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

Possible Cause	Remedy	Page
• 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-13
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-14), 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-20).

E-34

■ The current time setting is off by one hour.

Possible Cause	Remedy	Page
The period when summer time is applied in the location where you are using the watch may be different from the period set for your currently selected Home City.	Use the procedure under "To switch between standard time and summer time manually" to switch from AUTO to STD (for standard time) or DST (for summer time).	E-22

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

Possible Cause	Remedy	Page
The watch is in the Stopwatch Mode.	Auto Receive is not performed while the watch is in the Stopwatch Mode. Hold down Ⓢ at least two seconds to enter the Timekeeping Mode.	E-18
Your Home City setting is wrong.	Check your Home City setting and correct it, if necessary.	E-11 E-20
There is not enough power for signal reception.	Expose the watch to light to charge it.	E-7

■ 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-20
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-29

E-35

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

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: 1:59/59.9"

Measuring unit: 0.1 seconds

Measuring mode: Elapsed time

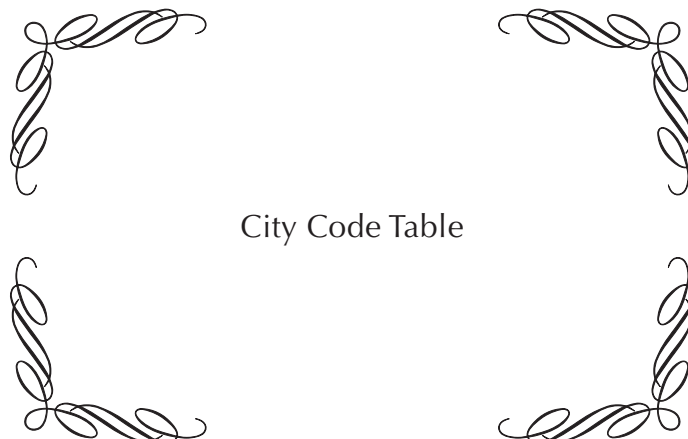
Other: Power Saving; Low battery alert; Auto Correction of Hand Home Positions

Power Supply: Solar panel and one rechargeable battery

Approximate battery operating time: 7 months (from full charge to Level 3) under the following conditions:

- Analog hands operational 18 hours per day, sleep state 6 hours per day
- 4 minutes of signal reception per day

E-36



L-1

City Code Table

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

L-2

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	2:00 a.m., first Sunday in October	3:00 a.m., first Sunday in April
TOKYO (TYO)	Tokyo	+9		
ADELAIDE (ADL)	Adelaide	+9.5		
SYDNEY (SYD)	Sydney	+10	None	None
NOUMEA (NOU)	Noumea	+11	2:00 a.m., last Sunday in September	3:00 a.m., first Sunday in April
WELLINGTON (WLG)	Wellington	+12		

- Based on data as of December 2010.

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

L-3