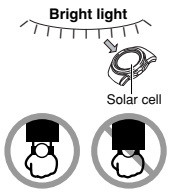
Operation Guide 5046

CASIO

Getting Acquainted

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully.

Keep the watch exposed to bright light

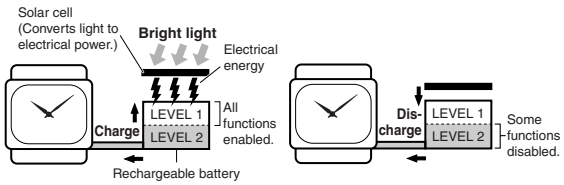


The electricity generated by the solar cell of the watch is stored by a built-in battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

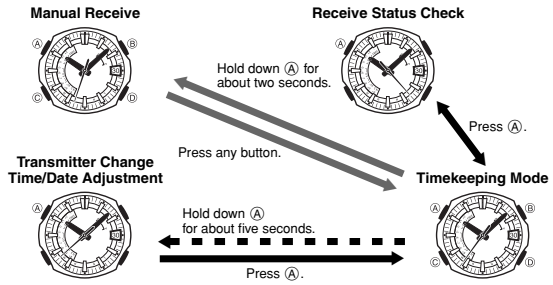
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Even if the face of the watch is blocked only partially from light, charging will be reduced significantly.

- The watch continues to operate, even when it is not exposed to light. Leaving the watch in the dark can cause the battery to run down, which will result in some watch functions to be disabled. If the battery goes dead, you will have to re-configure watch settings after recharging. To ensure normal watch operation, be sure to keep it exposed to light as much as possible.

Battery charges in the light. **Battery discharges in the dark.**



General Guide



- The actual level at which some functions are disabled depends on the watch model.
- **Be sure to read "Power Supply" for important information you need to know when exposing the watch to bright light.**

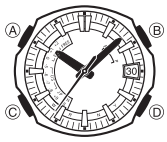
If the analog hands aren't moving...

If the analog hands aren't moving, it means that the power saving mode has stopped them to save battery power.

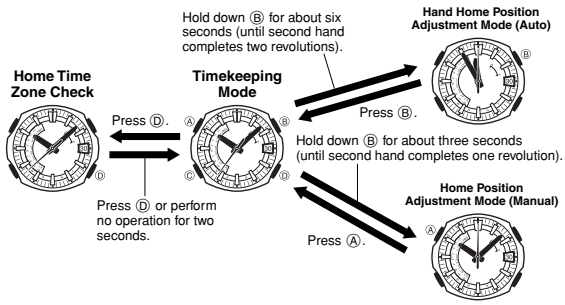
- **See "Power Saving" for more information.**
- The hands also stop when the watch's battery runs down.

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



- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need in order to perform operations in each mode. Further details and technical information can be found in the "Reference" section.



- If you lose your place during the above operation, hold down Ⓒ (at any time except in the Hand Home Position Adjustment Mode (Auto)) to return to the Timekeeping Mode.

Radio-controlled Atomic Timekeeping

This watch adjusts its time setting automatically in accordance with a time calibration signal. You also can perform a manual procedure to set the time and date, when necessary.

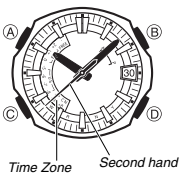
- This watch is designed to pick up the time calibration signals transmitted in Germany (Mainflingen), England (Anthorn), the United States (Fort Collins), China (Shangqiu), and Japan (Fukushima, Fukuoka/Saga).
- The U.S. time calibration signal can be picked up by the watch while in North America. The term "North America" in this manual refers to the area that consists of Canada, the continental United States, and Mexico.
- See the information under "Signal Reception Troubleshooting" if you experience problems with time calibration signal reception.

Current Time Setting

The first thing you should do after purchasing this watch is to specify your Home Time Zone (the time zone where you normally will use the watch). For more information, see "To specify your Home Time Zone" below.

- When using the watch outside the areas covered by the time signal transmitters, you will have to adjust the current time setting manually as required. See "Timekeeping" for more information about manual time settings.
- If you lose your place during the following operation, hold down Ⓒ to return to the Timekeeping Mode.

To specify your Home Time Zone



1. In the Timekeeping Mode, hold down Ⓐ for about five seconds until the second hand moves in sequence to **Y** (**YES**) or **N** (**NO**), **R** (**READY**) or **W** (**WORK**), and then the current Home Time Zone.
   - This indicates the Home Time Zone setting mode.
2. Use Ⓓ (+) to move the second hand until it is pointing at the Home Time Zone you want to select.
   +8 (**CN**) : Hong Kong
   +9 (**JP**) : Tokyo
   –8 (**US**) : Los Angeles
   –7 (**US**) : Denver
   –6 (**US**) : Chicago
   –5 (**US**) : New York
   +0 (**EU**) : London
   +1 (**EU**) :Paris
   +2 (**EU**) :Athens
   FREE : Time calibration signal reception not performed.
3. To exit the setting mode, press Ⓐ.

- Normally, your watch should show the correct time as soon as you specify your Home Time Zone. If it does not, it should adjust automatically after the next auto receive operation (in the middle of the night). You also can perform manual receive or you can set the time manually.
- Time calibration reception is not performed while "**FREE**" is selected for the Home Time Zone, so you will need to set the time manually. If you want signal reception to be performed, select a time zone other than "**FREE**".
- The watch will receive the time calibration signal automatically from the applicable transmitter (in the middle of the night) and update its settings accordingly. For information about the relationship between time zones and transmitters, see "Important!" under "Time Calibration Signal Reception" and "Transmitters".
- See the maps under "Approximate Reception Ranges" for information about the reception ranges of the watch.
- Even if the time calibration signal is received correctly, there may be times when the analog hands may not indicate the correct time. If this happens, use the procedures under "Adjusting the Home Positions" to check the home positions of the hands, and make adjustments as required.

To check current Home Time Zone setting

In the Timekeeping Mode, press Ⓓ.

- This will cause the second hand to move to the currently selected Home Time Zone.
- The second hand will resume normal timekeeping after about two seconds or if you press Ⓓ again.

Daylight Saving Time (DST)

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

The time calibration signals transmitted from Mainflingen (Germany), Anthorn (England), or Fort Collins (the United States) include both standard time and summer time (DST) data. When the watch is able to receive a signal from any one of these transmitters, it will adjust time automatically in accordance with standard time or summer time (DST).

- While "**FREE**" is selected as the Home Time Zone or if you are in an area where signal reception is impossible, you will need to set the time ahead one hour for summer time (DST) and back one hour for standard time as required. See "To set the time and date manually" for more information.

Time Calibration Signal Reception

There are two different methods you can use to receive the time calibration signal: auto receive and manual receive.

- **Auto Receive**

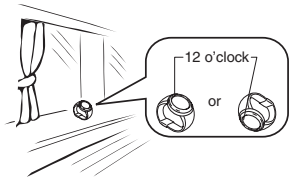
When Auto Receive is enabled, the watch will receive the applicable time calibration signal up to six times a day (five times for the China signal).
When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see “About Auto Receive”.

- **Manual Receive**

Manual receive lets you start a time calibration receive operation with the press of a button. For more information, see “To perform manual receive”.

Important!

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 12 o’clock side facing towards a window. This watch is designed to receive a time calibration signal late at night. Because of this, you should place the watch near a window as shown in the illustration when you take it off at night. Make sure there are no metal objects nearby.



- Make sure the watch is facing the right way.
- Proper signal reception can be difficult or even impossible under the conditions listed 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

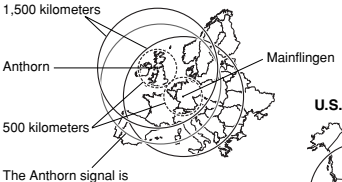
- Signal reception normally is better at night than during the day.
- Time calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 14 minutes. Take care that you do not perform any button operations or move the watch during this time.
- The time calibration signal the watch will attempt to pick up depends on its current Home Time Zone setting as shown below. If you use the watch in Japan or Europe (each of which has two different transmitter locations), it will try to receive the time calibration signal from one of the transmitters in your current location. If it cannot receive the signal, it will then try to receive the time calibration signal from the other transmitter.

Home Time Zones and Transmitters

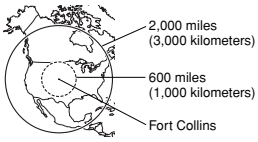
Home Time Zones	Transmitter	Frequency
+0, **+1**, **+2**	Anthorn (England) Mainflingen (Germany)	60.0 kHz 77.5 kHz
+8	Shangqiu City (China)	68.5 kHz
+9	Fukushima (Japan) Fukuoka/Saga (Japan)	40.0 kHz 60.0 kHz
–8, **–7**, **–6**, **–5**	Fort Collins, Colorado (the United States)	60.0 kHz

Approximate Reception Ranges

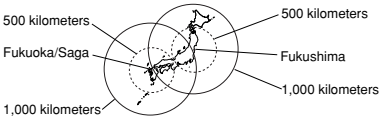
U.K. and German Signals



U.S. Signal

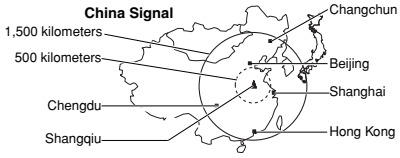


Japan Signals



Signals are receivable in the Taiwan area when reception conditions are good.

China Signal



- Signal reception may not be possible up to 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: 1500 kilometers (910 miles)
- Even when the watch is within the reception range of the transmitter, signal reception will be impossible if the signal is blocked by mountains or other geological formations between the watch and signal source.
- Signal reception is affected by weather, atmospheric conditions, and seasonal changes.
- See the information under “Signal Reception Troubleshooting” if you experience problems with time calibration signal reception.

About Auto Receive

When Auto Receive is enabled, the watch will receive the applicable time calibration signal up to six times a day (five times for the China signal). When any auto receive is successful, the remaining auto receive operations are not performed. The reception schedule (calibration times) depends on your currently selected Home Time Zone.

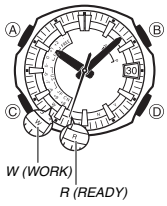
Your Home Time Zone		Auto Receive Start Times					
		1	2	3	4	5	6
+0	**Standard Time**	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am	Midnight*
	Daylight Saving Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight*	1:00 am*
+1	**Standard Time**	2:00 am	3:00 am	4:00 am	5:00 am	Midnight*	1:00 am*
	Daylight Saving Time	3:00 am	4:00 am	5:00 am	Midnight*	1:00 am*	2:00 am*
+2	**Standard Time**	3:00 am	4:00 am	5:00 am	Midnight*	1:00 am*	2:00 am*
	Daylight Saving Time	4:00 am	5:00 am	Midnight*	1:00 am*	2:00 am*	3:00 am*
+8	**Standard Time**	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am	
+9	**Standard Time**	Midnight	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am
–8 **–7** **–6** **–5**	**Standard Time and Daylight Saving Time**	Midnight	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am

*Next day

Note

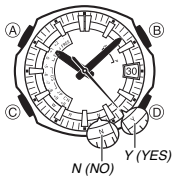
- When a calibration time is reached, the watch will receive the calibration signal only if it is in the Timekeeping Mode. Reception is not performed if a calibration time is reached while you are configuring settings.
- Auto receive of the calibration signal is designed to be performed early in the morning, while you sleep (provided that the Timekeeping Mode time is set correctly). Before going to bed for the night, remove the watch from your wrist, and put it in a location where it can receive the signal easily.
- The watch takes anywhere from two to 14 minutes to perform a time calibration signal receive operation. Do not perform any button operation within 14 minutes before or after the calibration times. Doing so can interfere with correct calibration.
- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode.

To perform manual receive



1. Place the watch on a stable surface so its 12 o’clock side is facing towards a window.
2. In the Timekeeping Mode, hold down Ⓐ for about two seconds.
3. The second hand will move to **R** (**READY**) to indicate that the watch is setting up for time calibration reception.

- The second hand will move to **W** (**WORK**) and stay there while actual reception is in progress.
- If signal reception is unstable during reception, the second hand may move between **W** (**WORK**) and **R** (**READY**).
- The hour and minute hands continue to keep time normally.
- Time calibration signal reception 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 operations or move the watch during this time.
- If reception is successful, the second hand will move to **Y** (**YES**). Five seconds later, the hands will move to the correct time.



Note

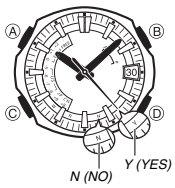
- To interrupt a receive operation and return to the Timekeeping Mode, press any button.
- If reception is not successful, the second hand will move to **N** (**NO**). Five seconds later, the second hand will resume normal operation, without any adjustment of the hand setting.
- If the second hand is pointing to **Y** (**YES**) or **N** (**NO**), you can return to the Timekeeping Mode by pressing Ⓐ.

Viewing the Latest Signal Reception Results

You can use the procedure below to check whether or not the most recent signal receive operation was successful.

To check the latest signal reception results

In the Timekeeping Mode, press Ⓐ.



- If the watch was able to perform a successful signal receive operation since midnight, the second hand will move to **Y** (**YES**). If the watch has been unable to receive any signal successfully, the second hand will move to **N** (**NO**).
- The watch will return to the Timekeeping Mode after five seconds or when you press Ⓐ.
- The most recent signal reception result is cleared when the first auto receive operation is performed on the following day. This means **Y** (**YES**) indicates successful signal reception since the start of the current day.
- If you adjust the time or date setting manually, the second hand will move to **N** (**NO**).

Signal Reception Troubleshooting

Check the following points whenever you experience problems with signal reception.

Problem	Probable Cause	What you should do
The second hand is pointing at **N** (**NO**).	• You changed the time setting manually. • You performed some button operation during the auto receive operation. • The watch is not in the Timekeeping Mode. • Signal reception results are reset at midnight each day. • Radio interference is often present during the day time, which can interfere with calibration signal reception.	• Perform manual signal receive at night or wait until the next auto signal receive operation is performed. • Enter the Timekeeping Mode and try again. • Check to make sure the watch is in a location where it can receive the signal.
The time setting is incorrect following signal reception.	• The Home Time Zone setting is not correct for the area where you are using the watch. • The home position of the hands is off.	• Select the correct Home Time Zone. • Enter the home position adjustment mode and adjust the home position.

• For further information, see “Important!” under “Time Calibration Signal Reception” and “Radio-controlled Atomic Timekeeping Precautions”.

Adjusting the Home Positions

Even if it receives a time calibration signal normally, the watch will not show the correct time if the home positions of the hands and/or date are off. The watch automatically adjustments the hands every hour, so normally home position adjustment should not be required. However, you should perform the applicable adjustment procedure whenever you notice one of the symptoms described below.

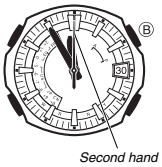
When the hands are off by one hour or more

Perform hand home position adjustment referring to “To perform auto home position adjustment of the hands” or “To perform manual home position adjustment of the hands and date”.

When the day indication is not correct

Perform date home position adjustment referring to “To perform manual home position adjustment of the hands and date”.

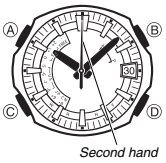
To perform auto home position adjustment of the hands



In the Timekeeping Mode, hold down Ⓑ for about six seconds.

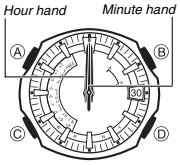
- Note that though the second hand will stop moving momentarily after about three seconds, you should keep Ⓑ depressed. You can release the Ⓑ button when the second hand starts moving again, which indicates that hand home position adjustment is being performed automatically.
- The watch will return to the Timekeeping Mode after auto adjustment is complete.
- To stop auto adjustment part way through and return to the Timekeeping Mode, press Ⓑ again.

To perform manual home position adjustment of the hands and date



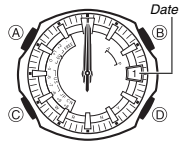
Correct second hand home position

1. In the Timekeeping Mode, hold down Ⓑ for about three seconds.
   - Release the Ⓑ button when the second hand stops.
   - The second hand is at its proper home position if it stops at 12 o’clock. If it doesn’t, use the Ⓓ button to move the second hand to 12 o’clock.



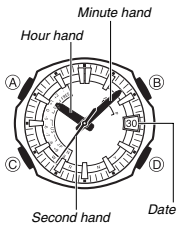
Correct hour and minute hands home positions

2. After confirming that the second hand is in correct home position, press Ⓒ. This will switch to hour hand and minute hand home position adjustment.
   - The hour hand and minute hand are at their proper home positions if they both move to 12 o’clock. If they don’t, use Ⓓ (+) and Ⓑ (–) to move hands to their proper home positions.
3. After confirming that the hour and minute hands are in their correct home positions, press Ⓒ. This will advance to date home position adjustment.
   - The date is in the correct home position if it shows “1”. If it doesn’t, use Ⓓ (+) and Ⓑ (–) to change the date to “1”.
   - Pressing Ⓒ here will return to the second hand position adjustment in step 1 of this procedure.
4. Press Ⓐ to return to the Timekeeping Mode.
   - After you complete the home position adjustment procedure, place the watch in a location that allows good time calibration signal reception, and then perform a manual receive operation. See “To perform manual receive” for more information.



Correct date home position

Timekeeping

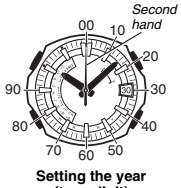


Use the Timekeeping Mode to set and view the current time and date. This section also explains how to set the current date and time manually.

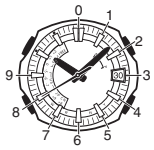
- All of the operations in this section are performed in the Timekeeping Mode.

To set the time and date manually

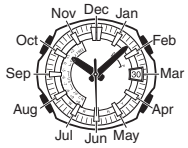
1. In the Timekeeping Mode, hold down Ⓐ for about five seconds until the second hand moves in sequence to **Y** (**YES**) or **N** (**NO**), **R** (**READY**) or **W** (**WORK**), and then the current Home Time Zone.
   - This indicates the watch is in the setting mode.
2. Use Ⓓ (+) to move the second hand until it is pointing at the Home Time Zone you want to select.
   - For details about the Home Time Zone setting, see “To specify you Home Time Zone”.
   - For detailed information about time zones, see the “UTC Offset Table”.
3. When the second hand is indicating the Home Time Zone you want to select, press Ⓒ.
   - This will cause the second hand to move to **A** (**AM**) or **P** (**PM**), which indicates the time setting mode.
4. Use Ⓓ (+) and Ⓑ (–) to change the current time setting value.
5. When the hands are indicating the time you want, press Ⓒ.
   - This will cause the second hand to move to the number that indicates the current tens digit setting for the year.
6. Press Ⓓ to move the second hand and change the tens digit setting.
7. When the second hand is indicating the year tens digit you want, press Ⓒ.
   - This will cause the second hand to move to the number that indicates the current ones digit setting for the year.
8. Press Ⓓ to move the second hand and change the ones digit setting.
9. When the second hand is indicating the year ones digit you want, press Ⓒ.
   - This will cause the second hand to move to the number that indicates the current month setting.



Setting the year (tens digit)



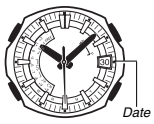
Setting the year (ones digit)



Setting the month

10. Press Ⓓ to move the second hand and change the month setting.
11. When the second hand is indicating the month you want to select, press Ⓒ.
    - This will cause the current date setting to be indicated.
12. Use Ⓓ (+) and Ⓑ (–) to change the current date setting.
    - Pressing Ⓒ at this point will take you back to step 4 of this procedure.
13. After all the settings are the way you want, press Ⓐ to return to the Timekeeping Mode.

- Pressing Ⓐ any time during the above procedure will return to the Timekeeping Mode, where the second hand will resume timekeeping from second 0.



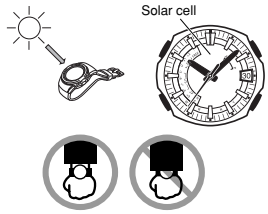
Setting the date

Power Supply

This watch is equipped with a solar cell and a special rechargeable battery (secondary battery) that is charged by the electrical power produced by the solar cell. The illustration shown below shows how you should position the watch for charging.

Example: Orient the watch so its face is pointing at a light source.

- The illustration shows how to position a watch with a resin band.
- Note that charging efficiency drops when any part of the solar cell is blocked by clothing, etc.
- You should try to keep the watch outside of your sleeve as much as possible. Even if the face of the watch is blocked from light only partially, charging will be reduced significantly.

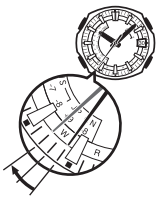


Important!

- 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 rechargeable battery power to run down. Make sure that the watch is exposed to bright light whenever possible.
- This watch uses a special rechargeable battery to store power produced by the solar cell, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the special rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.
- The special rechargeable (secondary) battery used by your watch is not intended to be removed or replaced by you. Use of a rechargeable battery other than the special one specified for this watch can damage the watch.
- The current time and all other settings return to their initial factory defaults whenever battery power drops to Level 3 and when you have the battery replaced.
- Keep the watch in an area normally exposed to bright light when storing it for long periods. This helps to keep the rechargeable battery from going dead.

Battery Power Levels

The movement of the analog hands indicates the current battery power level.



Jumps two seconds

Level	Hand Movement	Function Status
1	Normal.	All functions enabled.
2	• Second hand jumps every 2 seconds. • Date changes to home position.	Time calibration signal reception disabled.
3	• Second hand stopped. • Hour and minute hands stopped at 12 o'clock.	All functions disabled.

- The second hand jumping every two seconds (Level 2) indicates that battery power is quite low. Expose the watch to light as soon as possible to charge the battery.
- When battery power is at Level 2, time calibration signal reception is disabled.
- At Level 3, all functions are disabled and settings return to their initial factory defaults. The watch will continue to keep time internally for about one month after the battery drops to Level 3. If you recharge the battery sufficiently during this period, the analog hands will move automatically to the correct setting and normal timekeeping will resume.
- The watch's Home Time Zone setting will change automatically to **+9** (Tokyo) whenever the battery drops to Level 3. With this Home Time Zone setting, the watch is configured to receive the time calibration signals of Japan. If you are not in Japan, you will need to use the procedure under "To specify your Home Time Zone" to change the Home Time Zone setting to your current location whenever the battery drops to Level 3.

Charging Precautions

Certain charging conditions can cause the watch to become very hot. Avoid leaving the watch in the areas described below whenever charging its rechargeable battery.

Warning!
Leaving the watch in bright light to charge its rechargeable battery 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

Charging Guide

After a full charge, timekeeping remains enabled for up to about five months.

- The following table shows the amount of time the watch needs to be exposed to light each day in order to generate enough power for normal daily operations.

Exposure Level (Brightness)	Approximate Exposure Time
Outdoor sunlight (50,000 lux)	8 minutes
Sunlight through a window (10,000 lux)	30 minutes
Daylight through a window on a cloudy day (5,000 lux)	48 minutes
Indoor fluorescent lighting (500 lux)	8 hours

- For details about the battery operating time and daily operating conditions, see the "Power Supply" section of the Specifications.
- Stable operation is promoted by frequent charging.

Recovery Times

The table below shows the amount exposure that is required to take the battery from one level to the next.

Exposure Level (Brightness)	Approximate Exposure Time		
	Level 3	Level 2	Level 1
Outdoor sunlight (50,000 lux)	2 hours		25 hours
Sunlight through a window (10,000 lux)	6 hours		92 hours
Daylight through a window on a cloudy day (5,000 lux)	9 hours		– – –
Indoor fluorescent lighting (500 lux)	101 hours		– – –

- The above exposure time values are all for reference only. Actual required exposure times depend on lighting conditions.

Reference

This section contains more detailed and technical information about watch operation. It also contains important precautions and notes about the various features and functions of this watch.

Auto Return Features

- If you leave the watch in the home position adjustment mode for two or three minutes without performing any operation, it will return to the Timekeeping Mode automatically.
- If you do not perform any operation for about two or three minutes while a setting mode is selected, the watch will exit the setting mode automatically.

High-Speed Movement

- The Ⓓ and Ⓑ buttons are used to change the hand setting in various setting modes. In most cases, holding down these buttons will start high-speed movement of the applicable hand(s) and day.
- High-speed movement of hands and day will continue until you press any button, or until the moving hand(s) and day finishes one complete cycle.
  - One complete cycle for the hands is one revolution (360 degrees) of the hour hand, or 24 hours.
  - One complete cycle for the day is 31 days.

Radio-controlled Atomic Timekeeping Precautions

- Strong electrostatic charge can result in the wrong time being set.
- The time calibration signal bounces off the ionosphere. Because of this, such factors as changes in the reflectivity of the ionosphere, as well as movement of the ionosphere to higher altitudes due to seasonal atmospheric changes or the time of day may affect the reception range of the signal and make reception temporarily impossible.
- Even if the time calibration signal is received properly, certain conditions can cause the time setting to be off by up to one second.
- The current time setting in accordance with the time calibration signal takes priority over any time settings you make manually.
- The watch is designed to update the date and day of the week automatically for the period January 1, 2000 to December 31, 2099. Setting of the date by the time calibration signal will not be performed starting from January 1, 2100.
- This watch can receive signals that differentiate between leap years and non-leap years.
- Though this watch is designed to receive both time data (hour, minutes, seconds) and date data (year, month, day), certain signal conditions can limit reception to time data only.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps time with the precision noted in "Specifications".

Transmitters

The time calibration signal received by this watch depends on the currently selected Home Time Zone.

- When a U.S. time zone is selected, the watch receives the time calibration signal transmitted from the United States (Fort Collins).
- When a Japanese time zone is selected, the watch receives the time calibration signal transmitted from Japan (Fukushima and Fukuoka/Saga).
- When a European time zone is selected, the watch receives the time calibration signals transmitted from Germany (Mainflingen) and England (Anthorn).
- When a China time zone is selected, the watch receives the time calibration signals transmitted from China (Shangqiu City).
- When your Home Time zone is **+0**, **+1**, **+2** (which can receive both the Anthorn and Mainflingen signals), the watch first tries to pick up the signal it last successfully received. If that fails, it tries the other signal. For the first receive after you select your Home Time zone, the watch tries the nearest signal first (Anthorn for **+0**, Mainflingen for **+1** and **+2**).

Timekeeping

- The year can be set in the range of 2000 to 2099.
- 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 battery replaced or when battery power drops to Level 3.
- The date will change automatically when the current time reaches midnight. The date change at the end of the month may take more time than normal.
- The current time for all time zones in the Timekeeping Mode is calculated in accordance with the UTC offset of each time zone, based on your Home Time Zone setting.
- UTC offset is calculated by this watch based on Coordinated Universal Time (UTC*) data.
  * UTC is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth's rotation. The reference point for UTC is Greenwich, England.

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)	Second hand only is stopped, all other functions are enabled.
6 or 7 days (function sleep)	• All functions, including analog timekeeping, disabled • Internal timekeeping maintained

- Wearing the watch inside the sleeve of clothing can cause it to enter a sleep state.
- 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 that sleep state.

To recover from a sleep state

Perform any one of the following operations.

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

Specifications

Accuracy at normal temperature: ± 15 seconds a month (with no signal calibration)
Timekeeping: Hour, minutes (hand moves every 10 seconds), seconds, day
Calendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099
Other: Home Time Zone (can be assigned one of 9 time zones); FREE (signal receive disabled)
Time Calibration Signal Reception: Auto receive up to six times a day (five times for the China signal) (Remaining auto receives cancelled as soon as one is successful); Manual receive
Receivable Time Calibration Signals:
Mainflingen, Germany (Call Sign: DCF77, Frequency: 77.5 kHz); Anthorn, England (Call Sign: MSF, Frequency: 60.0 kHz); Fort Collins, Colorado, the United States (Call Sign: WWVB, Frequency: 60.0 kHz); Fukushima, Japan (Call Sign: JJY, Frequency: 40.0 kHz); Fukuoka/Saga, Japan (Call Sign: JJY, Frequency: 60.0 kHz); Shangqiu City, Henan Province, China (Call Sign: BPC, Frequency: 68.5 kHz)
Other: Power Saving

Power Supply: Solar cell and one rechargeable battery
Approximate battery operating time: 6 months (from full charge to Level 3) under the following conditions:
- Watch is not exposed to light
- Internal timekeeping
- Analog hands operational 18 hours per day, sleep state 6 hours per day
- 4 minutes of signal reception per day

UTC Offset Table

Main City	UTC Offset
Los Angeles	–8
Denver	–7
Chicago	–6
New York	–5
London	+0
Paris	+1
Athens	+2
Hong Kong	+8
Tokyo	+9

- Based on data as of March 2008.
- The rules governing global times (UTC offset) and summer time are determined by each individual country.