CITIZEN®

INSTRUCTION MANUAL

Eco-Drive®

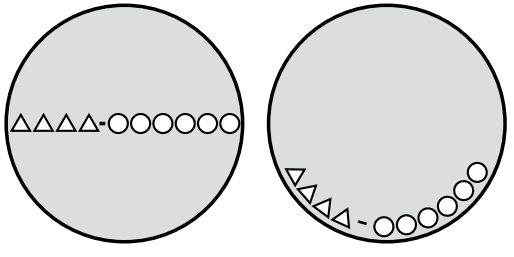
Thank you for your purchase of this Citizen watch.
Before using the watch, read this instruction manual carefully to ensure correct use.
After reading the manual, store it in a safe place for future reference.

Visit the Citizen website (http://www.citizenwatch-global.com/) to view visual guides for operation of your watch. Some models may be equipped with external features (calculation scale, tachymeter, etc.). Visual guides for operation of such external features can also be found on the website.

To check the movement number

A case number—4 alphanumeric characters and 6 or more alphanumeric characters—is engraved on the case back. (Figure on the right)
The first 4 characters of the case number represent the movement number of the watch. In the example on the right, "△△△△" is the movement number.

Engraving position example



The engraving position may differ depending on watch model.

Safety precautions (IMPORTANT)

This manual contains instructions that should be strictly followed at all times not only for optimal use, but to prevent any injuries to yourself, other persons or property.
We encourage you to read the entire booklet (especially, pages 68 to 79) and understand the meaning of the following symbols:

▪ Safety advisories are categorized and depicted in this manual as follows:

⚠ **DANGER**	Highly likely to cause death or serious injury
⚠ **WARNING**	Can cause serious injury or death
⚠ **CAUTION**	Can or will cause minor or moderate injury or damage

▪ Important instructions are categorized and depicted in this manual as follows:

	Warning (caution) symbol followed by instructions that should be followed or precautions that should be observed.
	Warning (caution) symbol followed by prohibited matters.

Before using this watch

After unpacking, the following must be carried out before using the watch:

- **Checking the power reserve** **→Page 17**

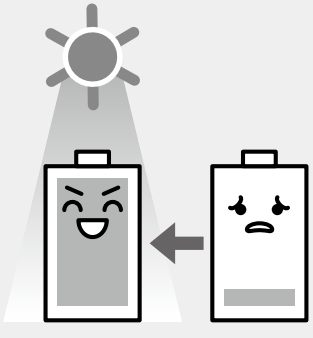
  Check the charge level of the watch.

- **Setting the World Time** **→Page 21**

  Select the city for which you want to indicate the time and date.

- **Receiving the satellite time signal** **→Page 28**

  Correct the time by receiving the satellite time signal.



This watch has a rechargeable cell which is charged by exposing the dial to light.

Expose the dial to light regularly to charge the watch.
For details of charging, see pages 12 to 19.

◆ Protective stickers

Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

◆ Band adjustment

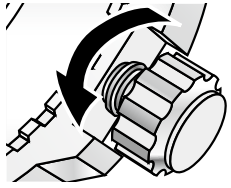
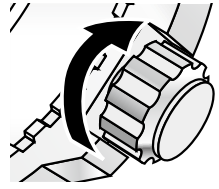
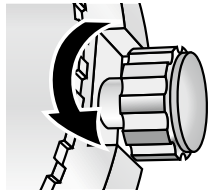
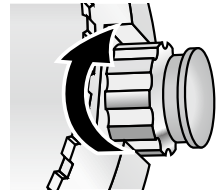
We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury. Consult your nearest authorized Citizen service center.

◆ How to use a specially designed crown/push button

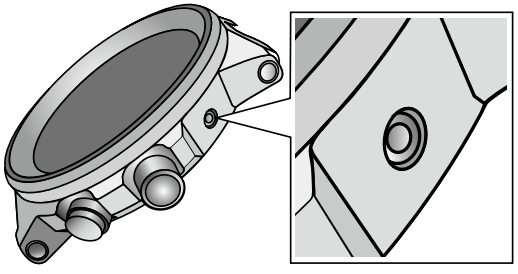
Some models are equipped with a specially designed crown and/or push button to prevent accidental operation.

Screw down crown and screw down push button

Unlock the crown prior to operate your watch.

	Unlock	Lock
Screw down crown	 Rotate the crown counterclockwise until it releases from the case.	 Push the crown in to the case. With gentle pressure towards the case, rotate the crown clockwise to secure it to the case. Be sure to tighten firmly.
Screw down push button	 Rotate the locking screw counterclockwise, and loosen until it stops.	 Rotate the locking screw clockwise, and tighten firmly.

Recessed buttons



Press the button with a narrow-tipped object such as a wooden toothpick.

Table of contents

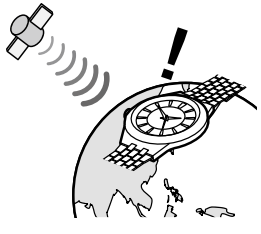
Features 10
Component identification 11
Charging your watch..... 12
Using the world time function 20
Switching summer time and standard time 25
Before receiving the satellite time signal 28
Turning off the signal reception 34
Receiving the satellite time signal 35
Checking and adjusting leap seconds..... 43
Checking and adjusting the rollover number 46
Adjusting the time/calendar manually 50

Checking and correcting the current reference position 56
Troubleshooting 60
Eco-Drive (solar powered) watch handling precautions 68
Water resistance 72
Precautionary items and usage limitations 74
Specifications..... 80

Features

"Satellite controlled watch"

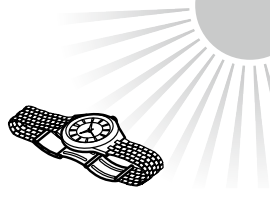
Receives the time information sent from the satellite and adjusts the time and calendar on the watch.
* Location information is not acquired.





"World Time"

Easy to see the time and calendar of cities all over the world.



"Eco-Drive"

No need for periodical changing of rechargeable cells. The watch is charged by light.

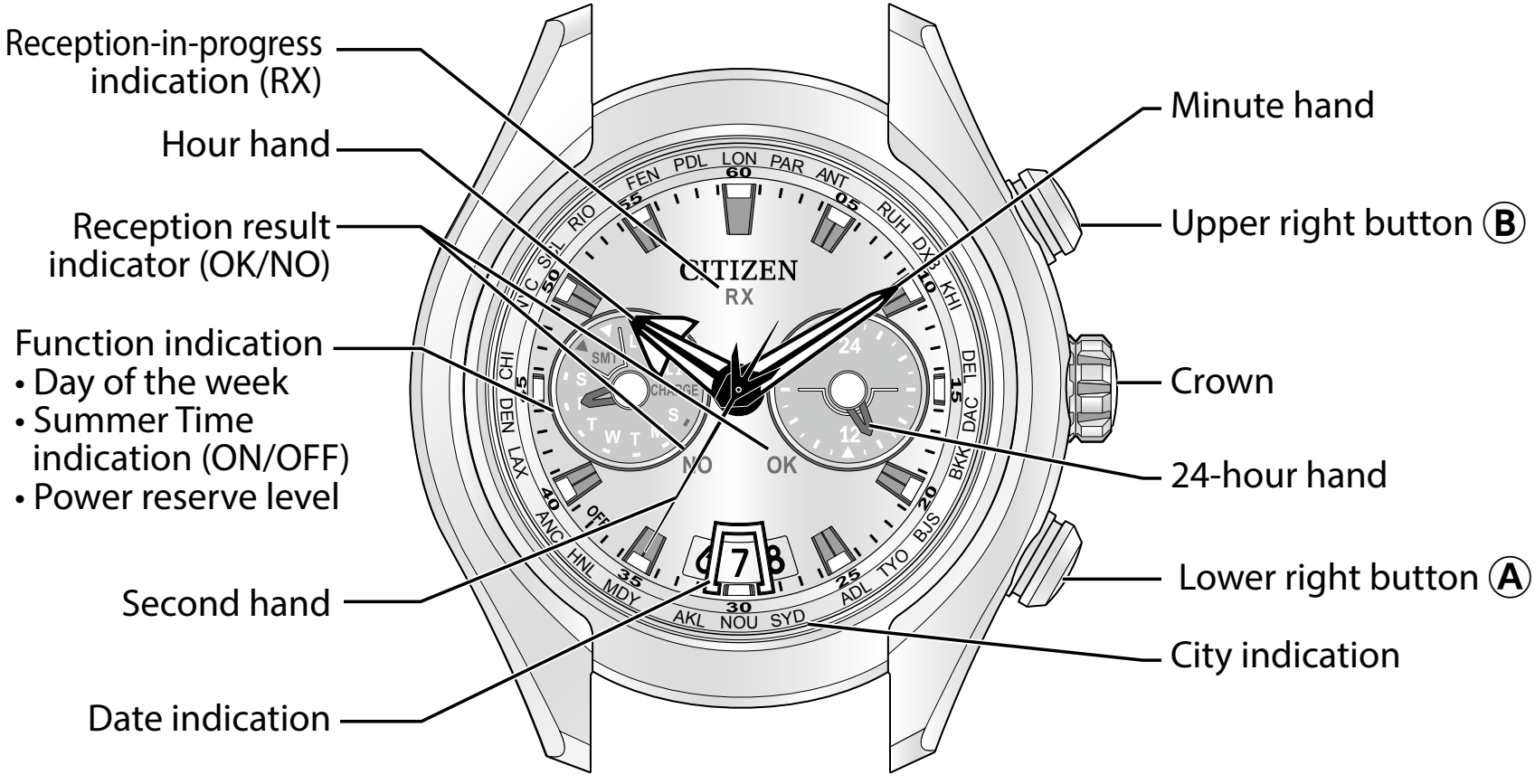


"Perpetual calendar"

No need for date correction at the end of each month.
The leap year is also updated automatically.

* "Eco-Drive" is Citizen original technologies.

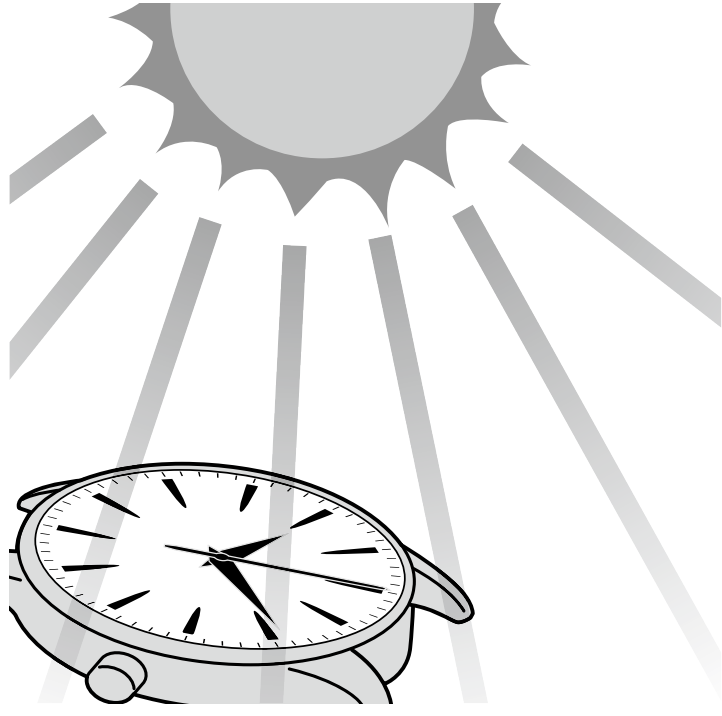
Component identification



- The illustrations in this instruction manual may differ from the actual appearance of your watch.
- A solar cell is located under the dial.

Charging your watch

This watch has a rechargeable cell which is charged by exposing the dial to light, such as direct sunlight or fluorescent lamps.
After taking off the watch, put it in a location where the dial is exposed to bright light, such as by a window.
The watch can be charged effectively when the dial is exposed to sunlight as shown in the figure.



For optimal performance, be sure to:

- This watch contains a large capacity battery for performing power-consuming satellite signal reception. This battery takes some time until it is fully charged.
- Charge the watch by exposing it to direct sunlight for five to six hours at least once every two weeks.
- Avoid leaving the watch in a dark place for long periods of time.

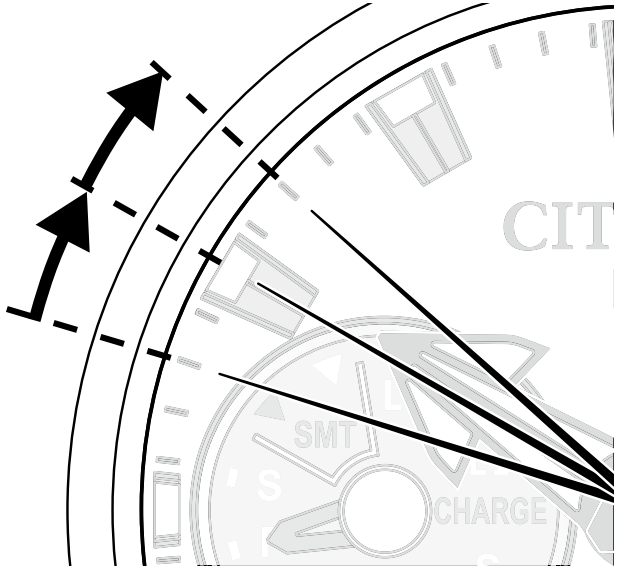
- If the watch is obscured from light by long sleeves frequently, supplemental charging may be needed to ensure continual operation.
- Do not charge the watch at a high temperature (about 60°C (140°F) or higher) as doing so may cause movement malfunction.
- If the surrounding temperature falls below 0°C (32°F) or exceeds 40°C (104°F), the "Charge suspension temperature detection function" will activate and charging will not be possible.

◆ When the watch reaches a low charge state (insufficient charge warning function)

When the power reserve becomes low, the second hand moves once every two seconds. This is the insufficient charge warning function. Be sure to fully charge your watch.

- When the watch is sufficiently charged, the second hand will move normally.
- If you do not charge the watch for 10 days or longer after the insufficient charge warning movement has begun, the watch will be depleted of all power and stop.

Even when the second hand moves once every two seconds, the current time and date are indicated, and you can adjust the time and date. However, satellite time signal reception and other operations are not possible.



◆ Charging time by environment

Below are the approximate times required for charging when exposing the watch dial to light continuously. Please use this table as a reference only.

Environment	Illuminance (lx)	Charging time (approx.)		
		To work for one day	To start working normally when the cell is discharged	To become fully charged when the cell is discharged
Outdoors (sunny)	100,000	9 minutes	15 hours	150 hours
Outdoors (cloudy)	10,000	25 minutes	45 hours	340 hours
20 cm (7-7/8 inches) from a fluorescent lamp (30 W)	3,000	1.5 hours	150 hours	—
Interior lighting	500	8 hours	—	—

- **To charge the rechargeable cell, it is recommended to expose the dial to direct sunlight.** A fluorescent lamp or interior lighting does not have sufficient illumination to charge the rechargeable cell.
- When the battery is fully charged, the overcharge protection function stops the charging so that the watch performance and rechargeable cell are not adversely affected by overcharge.

Charging your watch

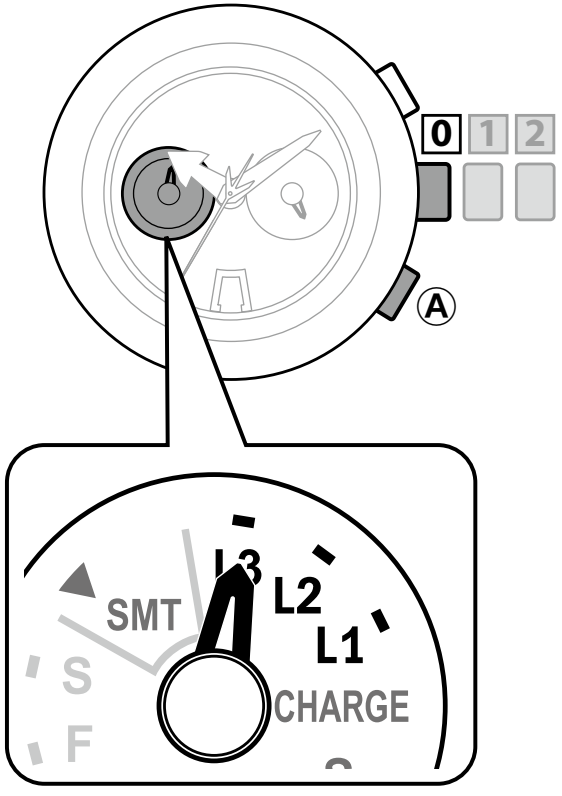
Caution: This watch uses a special rechargeable cell.

- If the surrounding temperature falls below 0°C (32°F) or exceeds 40°C (104°F), the "Charge suspension temperature detection function" will activate and charging will not be possible.
- If you do not charge the watch for 60 days after it has stopped, the "Over discharge detection function" will activate and charging will not be possible.
  If the watch does not work even after charging for more than one day under direct sunlight, request replacement of the rechargeable cell.

Fully charged to fully discharged: Approximately 2 years
(When receiving the satellite time signal once every two days)
Power reserve upon insufficient charge warning function (page 14): 10 days

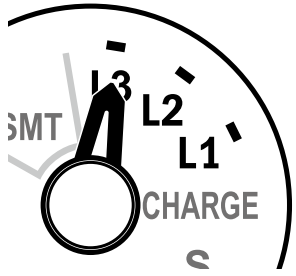
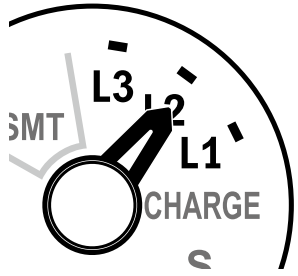
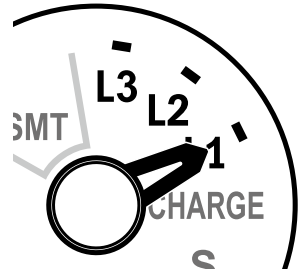
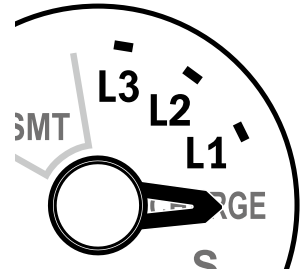
◆ Checking the power reserve

Check the current power reserve.



1. **Ensure that the crown is in position 0 .**
2. **Press the lower right button Ⓐ .**
   The function indication shows the power reserve level.
   - For details on the power reserve level, see the next page.
3. **Press the lower right button Ⓐ to finish the check procedure.**
   - The current time indication will resume automatically when leaving the watch for approx. 10 seconds.

The power reserve level

Level	3	2	1	0
Power reserve level				
Approximate duration of operation at each level	Approx. 730 to 365 days	Approx. 365 to 16 days	Approx. 16 to 10 days	Approx. 10 days
	Power reserve is sufficient for all features and functions. Optimal performance is achieved at this level.	Power reserve is sufficient for all operations at this level.	Power reserve is getting low. The watch should be fully charged to ensure optimal performance.	Power reserve is not sufficient for normal operation. The watch must be fully charged.
			The watch must be charged immediately.	

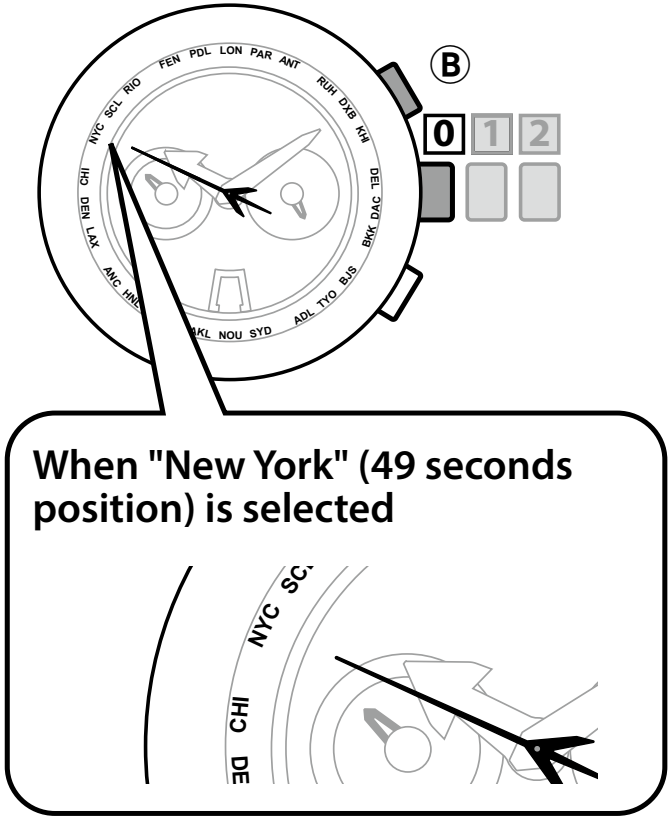
- When the power reserve is at the CHARGE level, the second hand indicates the insufficient charge warning state (by moving once every two seconds). You can manually correct the time and calendar, but you cannot perform the other operations and receive satellite signals.
- When the watch temperature is too high or too low or when the watch is not sufficiently charged due to low illuminance, the function indication makes one clockwise turn to indicate the day of the week. This indication means the uncharged state (that is, the watch is not charged). Place the watch in a bright location at a moderate temperature to charge it.



Using the world time function

◆ Confirming the world time

Check the current world time (city) setting.

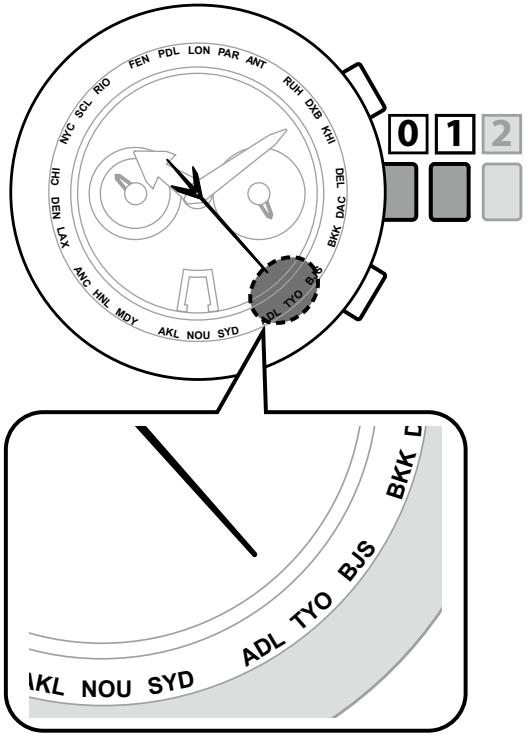


1. **Ensure that the crown is in position 0 .**
2. **Press the upper right button Ⓑ .**
   The second hand indicates the city currently selected.
3. **Press the upper right button Ⓑ to finish the procedure.**
   - The current time indication will resume automatically when leaving the watch for approx. 10 seconds.

◆ Setting the World Time

The watch can indicate the time and date of any of the 26 cities in the world you choose.

- When using the watch in an area not listed in the table below, select and set the city with the same time difference.



1. **Pull the crown out to position 1 .**

   The second hand indicates the current city setting, and the function indication shows the current summer time ON/OFF setting.

   - Setting Summer Time →Page 25

2. **Rotate the crown to select the city for which you want to indicate the time and date.**

   - For details of the selection of cities, see pages 22 to 24.
   - Each time you select a city, the time and date of the city you have selected will be indicated.

3. **Push the crown in to position 0 to finish the setting.**

◆ City indication table

Abbreviation	City indication or second hand position		Time difference
LON	LONDON	0 sec.	0
PAR	PARIS	2 sec.	+1
ATH	ATHENS	4 sec.	+2
RUH	RIYADH	7 sec.	+3
DXB	DUBAI	9 sec.	+4
KHI	KARACHI	11 sec.	+5
DEL	DELHI	14 sec.	+5.5
DAC	DACCA	16 sec.	+6
BKK	BANGKOK	18 sec.	+7
BJS/HKG	BEIJING/HONGKONG	21 sec.	+8
TYO	TOKYO	23 sec.	+9

Abbreviation	City indication or second hand position		Time difference
ADL	ADELAIDE	25 sec.	+9.5
SYD	SYDNEY	28 sec.	+10
NOU	NOUMEA	30 sec.	+11
AKL	AUCKLAND	32 sec.	+12
MDY	MIDWAY ISLANDS	35 sec.	–11
HNL	HONOLULU	37 sec.	–10
ANC	ANCHORAGE	39 sec.	–9
LAX	LOS ANGELES	42 sec.	–8
DEN	DENVER	44 sec.	–7
CHI	CHICAGO	46 sec.	–6
NYC	NEW YORK	49 sec.	–5

Abbreviation	City indication or second hand position		Time difference
SCL	SANTIAGO	51 sec.	–4
RIO	RIO DE JANEIRO	53 sec.	–3
FEN	FERNANDO DE NORONHA	56 sec.	–2
PDL	AZORES	58 sec.	–1

- The city indications displayed on the watch may be different, depending on the model.
- The time difference in the table above is based on UTC.
- The time difference may change depending on the country or area.

Switching summer time and standard time

◆ Summer time

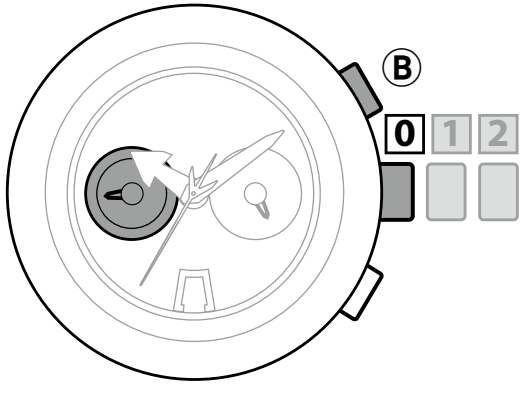
Summer Time is a system adopted in some countries/areas to gain an extra hour of daylight during summer by advancing clocks by one hour.
This watch can display summer time or standard time according to the city selected for world time.

- Summer time information is not contained in the satellite time signal. Adjust the setting manually for the appropriate period.

- The summer time rules may change depending on the country or area.
- The summer time period is different depending on the country or area.

◆ Checking the time currently shown

Check whether the watch shows Summer Time or standard time.

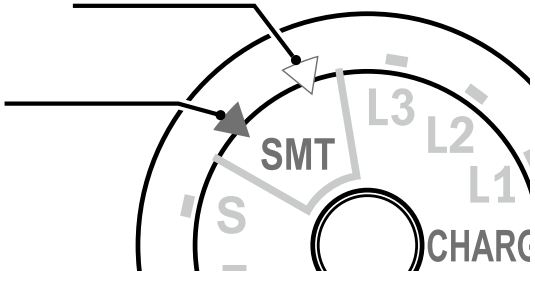


1. **Ensure that the crown is in position 0 .**
2. **Press the upper right button Ⓑ .**

   The function indication shows the summer time ON/OFF setting.

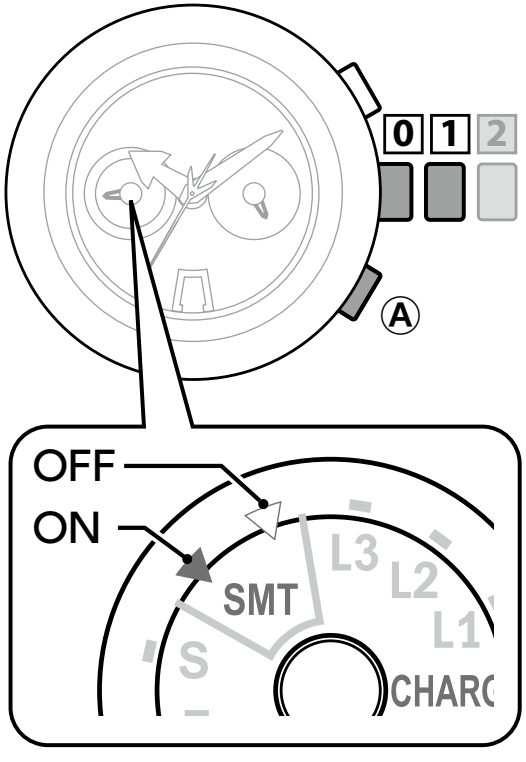
   OFF: Standard time is indicated.

   ON: Summer time is indicated.



3. **Press the upper right button Ⓑ to finish the procedure.**
   - The current time indication will resume automatically when leaving the watch for approx. 10 seconds.

◆ Changing the summer time setting



1. **Pull the crown out to position [1] .**
2. **Press the lower right button Ⓐ to switch the summer time setting to ON or OFF.**

   To show summer time

   Select "ON".
   The hour hand moves forward by 1 hour.

   To show standard time

   Select "OFF".
   The hour hand moves backward by 1 hour.
3. **Push the crown in to position [0] to finish the setting.**

Before receiving the satellite time signal

This watch receives the clock time information sent by satellite.

This watch only receives time information. Location information cannot be acquired.

◆ Receiving the satellite time signal

The satellite time signal can be received using the following three methods. You can also check whether the last attempt to receive the time signal was successful or not. (See page 35.)

Reception type	Method	Time taken
Manual reception 1	Normal reception (See page 35.)	Approx. 4 to 20 seconds*
Manual reception 2	• When the leap second has been updated • When all reset has been performed (See page 38.)	Approx. 21 seconds to 13 minutes
Circumstantial reception	Automatic reception (See page 42.)	

- These reception methods can only be performed when the crown is in position **0** .

* When All Reset has been performed or you have manually adjusted the calendar, reception may take up to 70 seconds.

◆ Cautions regarding receiving the satellite time signal

Do not perform satellite time signal reception while operating a vehicle as doing so is extremely dangerous.

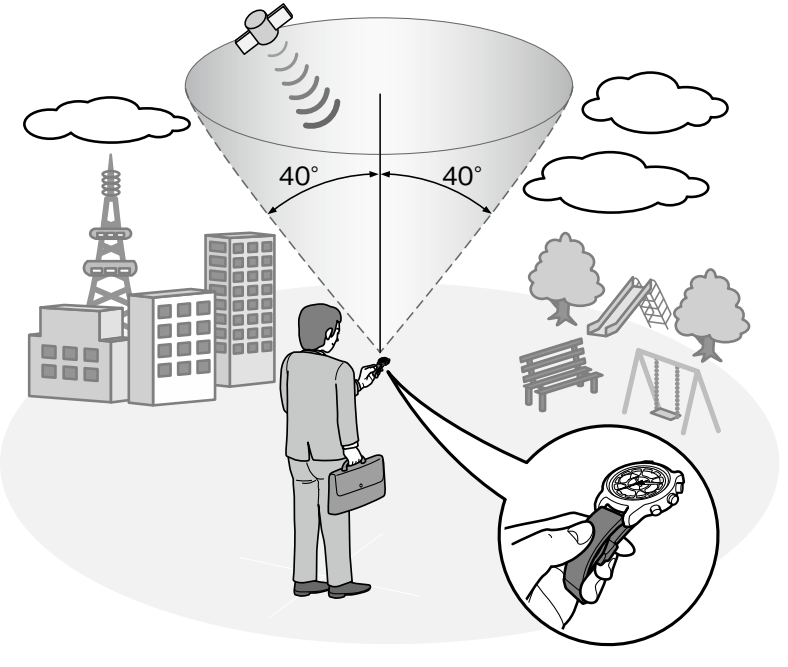
- If the second hand is moving once every two seconds (insufficient charge warning function), you cannot perform satellite time signal reception. Charge the watch sufficiently before attempting time signal reception.
- Even when this watch receives the time signal successfully, the accuracy of the displayed time will be dependent on the reception environment and internal processing.

- Even if the watch is not able to receive the satellite time signal, it will operate normally within an accuracy range of ±15 seconds per month.
- The automatic correction feature of this watch is supported until 28/2/2100.

◆ When receiving the satellite time signal

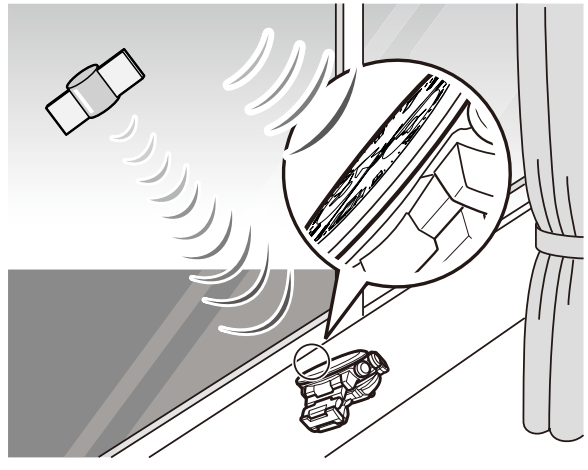
As shown in the picture below, make sure you are in an area with few surrounding trees, buildings, or other objects with may obstruct the satellite time signal. Face the dial towards the sky and perform time signal reception.

- Ideally, the sky directly above you should be clear (approx. 80° as shown on the right) when attempting to receive the satellite time signal.
- If you will perform time signal reception with the watch on your wrist, keep it as far away from your body as possible.



- **If the time signal is difficult to receive…**
  - Remove the watch from your wrist and attempt reception again.

- **Receiving signals indoors near a window**
  - Place the watch near a window with a wide view of the sky and orient the dial in an obliquely upward direction (approximately 45°).
  - If there are buildings, trees, or other obstacles above the window, satellite signals may not be able to be received.
  - The direction of the window that allow signal reception may be limited. Find the direction in which you can securely receive signals.
  - Satellite signals may not be able to be received through wire-reinforced glass or heat reflective glass (or film).
  - If the watch cannot receive satellite signals, we recommend that you take your watch outdoors for successful reception.



Do not perform satellite time signal reception while operating a vehicle as doing so is extremely dangerous.

◆ Poor reception areas

It may be difficult to receive the satellite time signal under certain environmental conditions or in certain areas.

Areas with obstructions above the watch

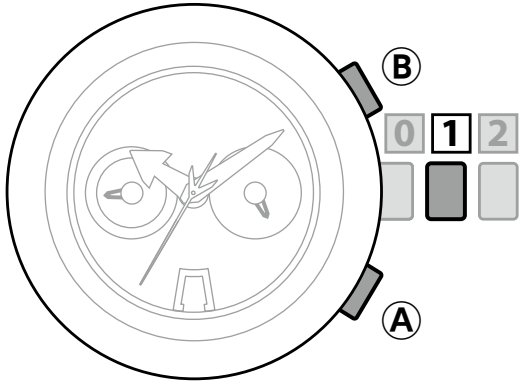
- Indoors or underground
- Areas surrounded by tall buildings or trees
- When the weather is cloudy or rainy, or during a thunderstorm

Nearby objects which emit magnetism or noise

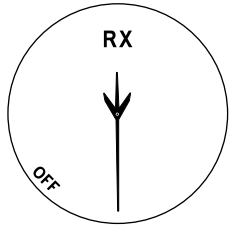
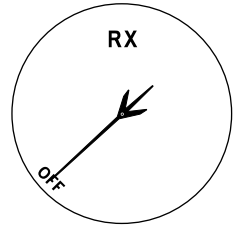
- High-voltage electric cables, railway lines /overhead cables, airports, and transmission facilities.
- Electrical appliances and OA equipment
- Mobile telephones in the process of calling/transmitting
- Mobile telephone base stations

Turning off the signal reception

You can turn off the signal reception on aircrafts or in areas where use of radio waves is prohibited.



1. **Pull the crown out to position 1 .**
2. **Press and hold the upper right button Ⓑ for two or more seconds.**
   The second hand indicates the Signal reception (ON/OFF).
3. **Press the lower right button Ⓐ to switch the signal reception setting to ON or OFF.**

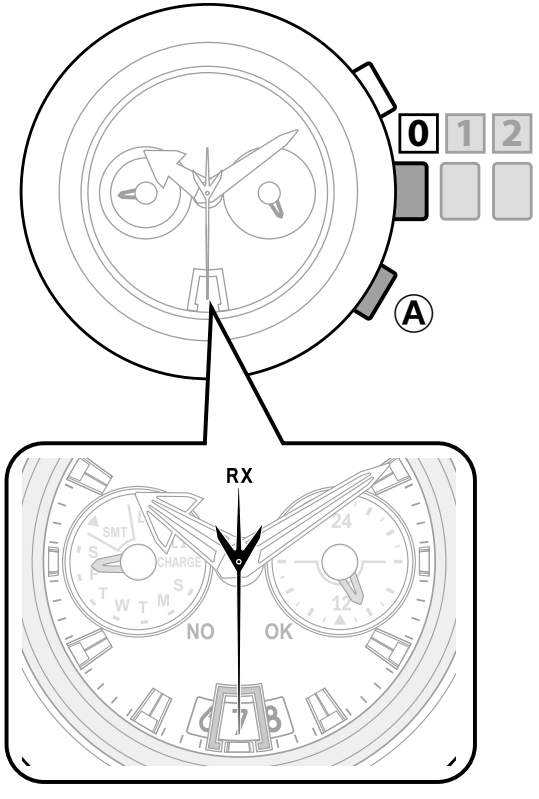
Signal reception is ON	Signal reception is OFF
	

4. **Push the crown in to position 0 to finish the setting.**

Receiving the satellite time signal

◆ Manual reception 1

Use this method for normal reception.



1. **Ensure that the crown is in position 0 .**
2. **Press and hold the lower right button Ⓐ for two or more seconds.**

   After indicating the previous reception result, the tail of the second hand moves to “RX” and the watch starts receiving.

   - It takes from 4 to 20 seconds to finish the satellite time signal reception. (When full reset has been performed or you have manually adjusted the calendar, reception may take up to 70 seconds.)

The second hand will move normally once reception is finished and the reception result has been displayed for 2 seconds.

Successful signal reception	Failed signal reception
Reception result (OK)  The time will be updated and the watch will resume normal operation.	Reception result (NO)  Normal operation resumes with the previously set time.

- The illustrations in this instruction manual may differ from the actual appearance of your watch.
- Depending on the model, the head of the second hand points to the Reception-in-progress indication (RX) and the reception result.

To cancel the reception

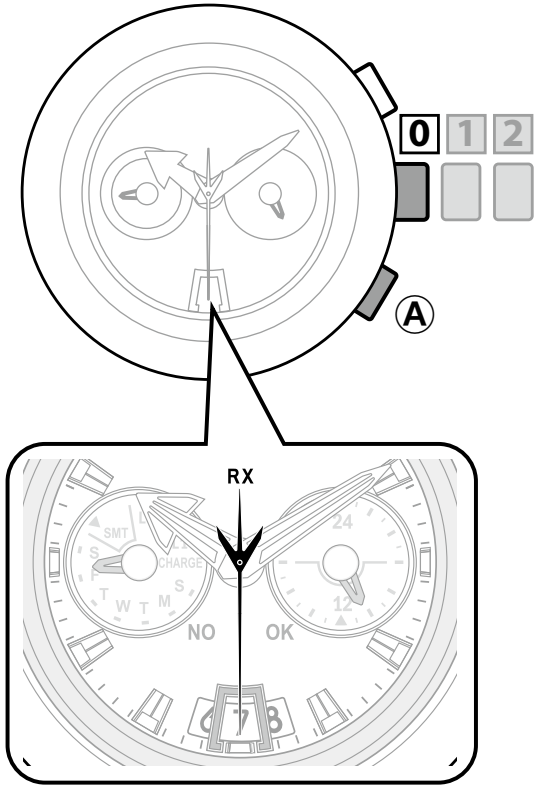
Press and hold the lower right button Ⓐ for two or more seconds.

The reception is canceled and the current time will be indicated.

- If the time is not correct even after performing signal reception, it is possible that the leap second has been updated. Perform manual reception 2. (See page 38.)
- Summer time information is not contained in the satellite time signal. Adjust the setting manually. (See page 27.)

◆ Manual reception 2

Use this method when the leap second has been updated or when all reset has been performed.



1. **Ensure that the crown is in position 0 .**
2. **Press and hold the lower right button Ⓐ for seven or more seconds.**
   - After indicating the previous reception result, the tail of the second hand moves to "RX." Continue holding the button until the second hand rotates around once more and indicates "RX."
   - It takes from 21 seconds to 13 minutes to complete the satellite time signal reception.
   - The illustrations in this instruction manual may differ from the actual appearance of your watch.
   - Depending on the model, the head of the second hand indicates the Reception-in-progress indication (RX) and the reception result.

The second hand will move normally once reception is finish and the reception result has been displayed for 2 seconds.

Successful signal reception	Failed signal reception
Reception result (OK)  The time will be updated and the watch will resume normal operation.	Reception result (NO)  Normal operation resumes with the previously set time.

To cancel the reception

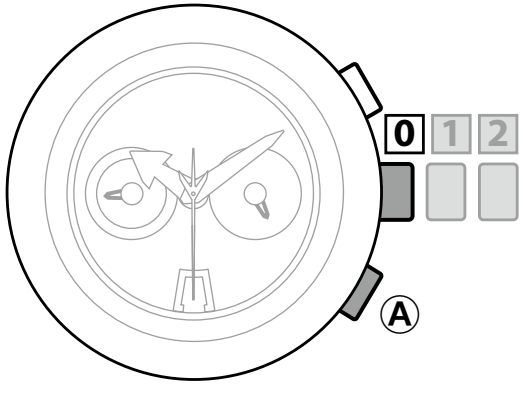
Press and hold the lower right button Ⓐ for two or more seconds.

The reception is canceled and the current time will be indicated.

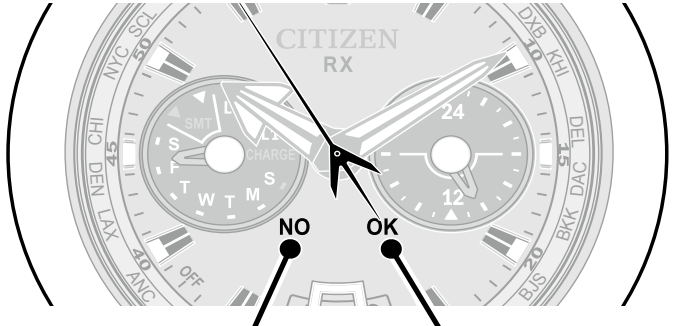
Summer time information is not contained in the satellite time signal. Adjust the setting manually. (See page 27.)

◆ Checking the satellite time signal reception

You can check the previous result of satellite time signal reception (Manual 1/ Manual 2/Circumstantial reception).



1. **Ensure that the crown is in position 0 .**
2. **Press the lower right button Ⓐ .**
   The tail of the second hand indicates the reception result.



NO:
Reception has failed.

OK:
Reception has succeeded.

- Even if reception has succeeded, “NO” will be indicated if more than 48 hours have passed since time signal reception was last performed.
- The second hand also indicates the "OFF" if signal reception is set to OFF. (See page 34.)

3. Press and release the lower right button Ⓐ to finish the procedure.

- The current time indication will resume automatically when leaving the watch for approx. 10 seconds.

About circumstantial reception

If the satellite time signal has not been received for an extended period of time, this watch is equipped with a function which enables it to automatically receive the time signal (circumstantial reception).
When the following five conditions are met, the watch will start automatic reception.

- The watch is sufficiently charged and operating normally.
- Signal reception is set to ON.
- The displayed time is between 6 a.m. and 6 p.m.
- The satellite time signal has not been received for more than 72 hours.
- The watch is outside, or sunlight has been shining on the dial continuously.

When compared to manual reception, circumstantial reception is more greatly affected by positional and environmental conditions. Thus, the reception is far more likely to fail. To adjust the time by receiving the time signal, perform manual reception in an environment such as that described in "When receiving the satellite time signal" on page 31.

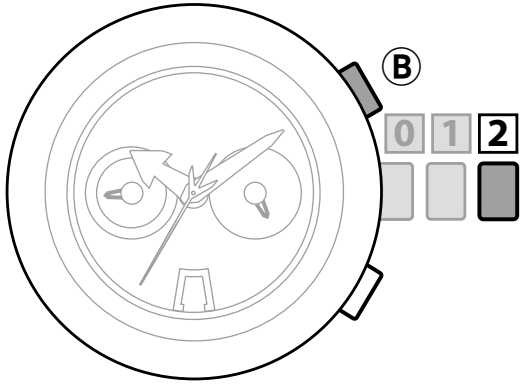
Checking and adjusting leap seconds

This watch displays the time information by setting the leap second and time difference (manual adjustment) to the International Atomic Time information received from the satellite.

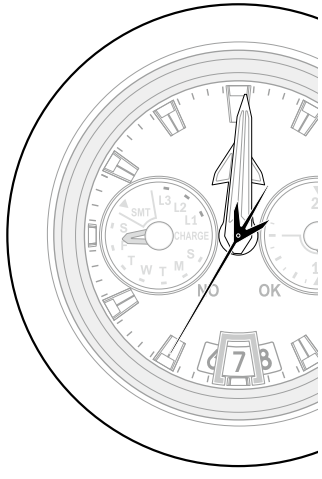
- The leap second setting is specified according to the time of shipment. "-35 seconds" is specified as of January 2013.
- When the leap second information is received through performing manual reception 2 (see page 38), the leap second is automatically adjusted.
- The leap second can also be adjusted manually.

You can find a list of leap seconds at the homepage of IERS (INTERNATIONAL EARTH ROTATION & REFERENCE SYSTEMS SERVICE).
http://hpiers.obspm.fr/eop-pc/earthor/utc/TAI-UTC_tab.html

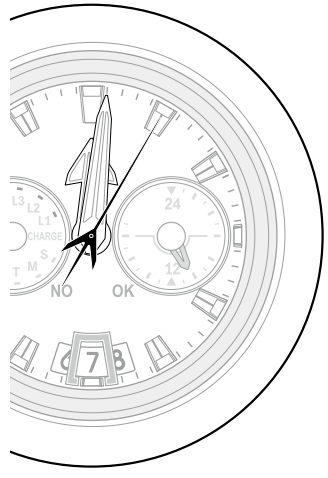
Checking and adjusting leap seconds



1. **Pull the crown out to position 2 .**
2. **Press the upper right button Ⓑ .**
   Using the "0:00:00" position as the starting point, the minute hand and second hand will indicate the leap second setting after a few seconds.



When 0 minutes and 35 seconds is indicated:
The leap second setting is "–35 seconds."



When 1 minute and 5 seconds is indicated:
The leap second setting is "-65 seconds."

3. **Rotate the crown to adjust the leap second.**
   - The leap second can be adjusted in the range of 0 to –90 seconds.
4. **Push the crown in to position 0 to finish the procedure.**

The leap second setting is specified according to the time of shipment. "-35 seconds" is specified as of January 2013.

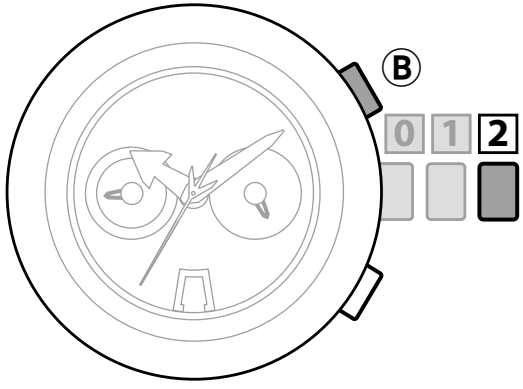
Checking and adjusting the rollover number

In order for this watch to correctly process the week information* received from the satellite, a rollover number for each time period is set. The rollover numbers will be updated automatically.
If the rollover number setting is incorrect, the time and date may not be displayed accurately.
Refer to the table on the right to check the rollover number. Adjust the setting if it is incorrect.

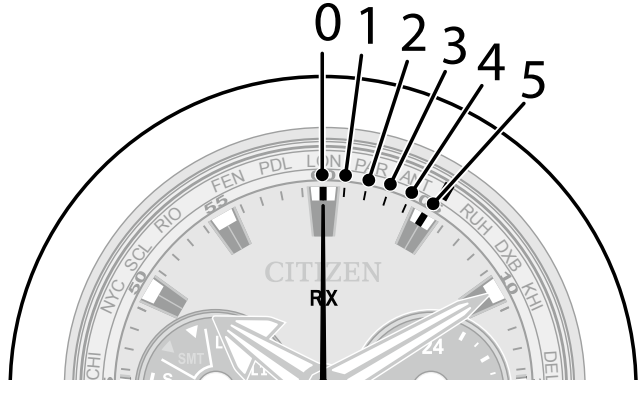
*Called the "Week number." Weeks are represented with a number from 0 to 1023 (approx. 20 years).

Time period (Coordinated Universal Time, GMT)	Rollover number
22/8/1999 (Sun) 00:00 – 6/4/2019 (Sat) 23:59	0
7/4/2019 (Sun) 00:00 – 20/11/2038 (Sat) 23:59	1
21/11/2038 (Sun) 00:00 – 6/7/2058 (Sat) 23:59	2
7/7/2058 (Sun) 00:00 – 19/2/2078 (Sat) 23:59	3
20/2/2078 (Sun) 00:00 – 5/10/2097 (Sat) 23:59	4
6/10/2097 (Sun) 00:00 – 22/5/2117 (Sat) 23:59	5

Checking and adjusting the rollover number



1. **Pull the crown out to position 2 .**
2. **Press the upper right button Ⓑ .**
   The minute hand and second hand will indicate the current leap second setting.
3. **Press and hold the upper right button Ⓑ for five or more seconds.**
   The second hand will indicate the current rollover number setting.



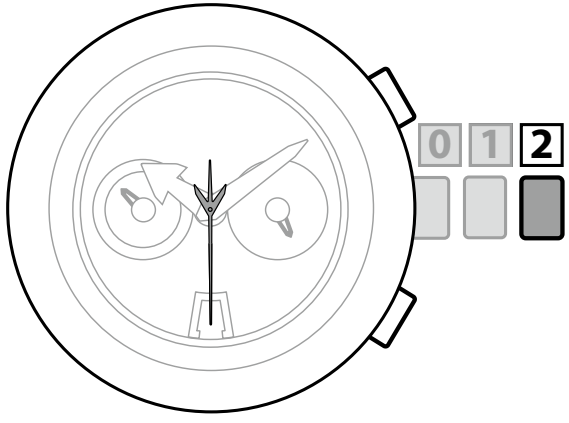
Example: When the rollover number is "0"

- **When the setting is correct:** Proceed to step 5.
- **When the setting is incorrect:** Proceed to step 4.

4. **Rotate the crown to adjust the rollover number.**
   - The rollover number can be adjusted in the range of 0 – 5. See the table on page 47 for appropriate rollover number.
5. **Push the crown in to position 0 to finish the procedure.**

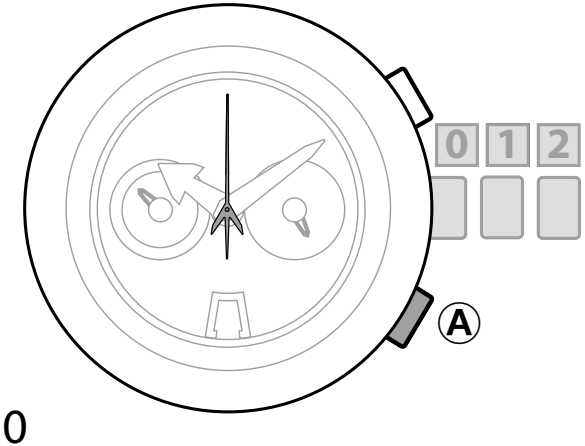
Adjusting the time/calendar manually

Manually adjust the time/calendar when the watch cannot receive the time signal.



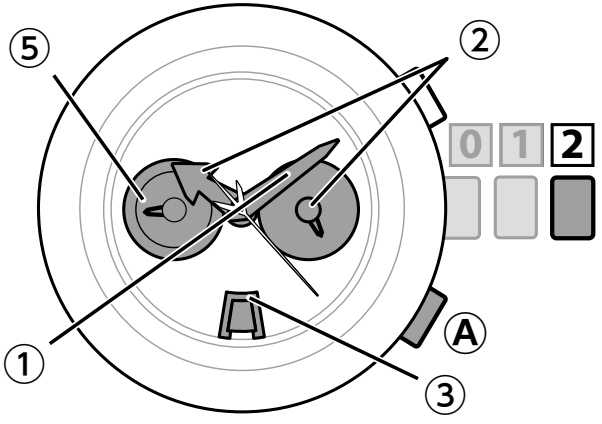
1. Pull the crown out to position 2 .

The second hand moves to the 30-second position.



2. Press the lower right button Ⓐ .

The second hand moves to the 0 second position, and it becomes possible to adjust the time/calendar.



3. Press the lower right button Ⓐ to select the correction target.

Each time you press the lower right button Ⓐ, the correction target changes as follows and the corresponding hand slightly moves.
① Time (minutes) → ② Time (hours/24-hour time) → ③ Date → ④ Year and month → ⑤ Day of the week → (Back to ①)

① Time (minutes)

② Time (hours/24-hour time)



24-hour hand

The hour hand and 24-hour hand move in conjunction with each other.

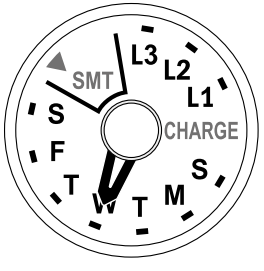
③ Date



The date indication turns and the function indication (day of the week) moves in conjunction.

④ Year and month

⑤ Day of the week

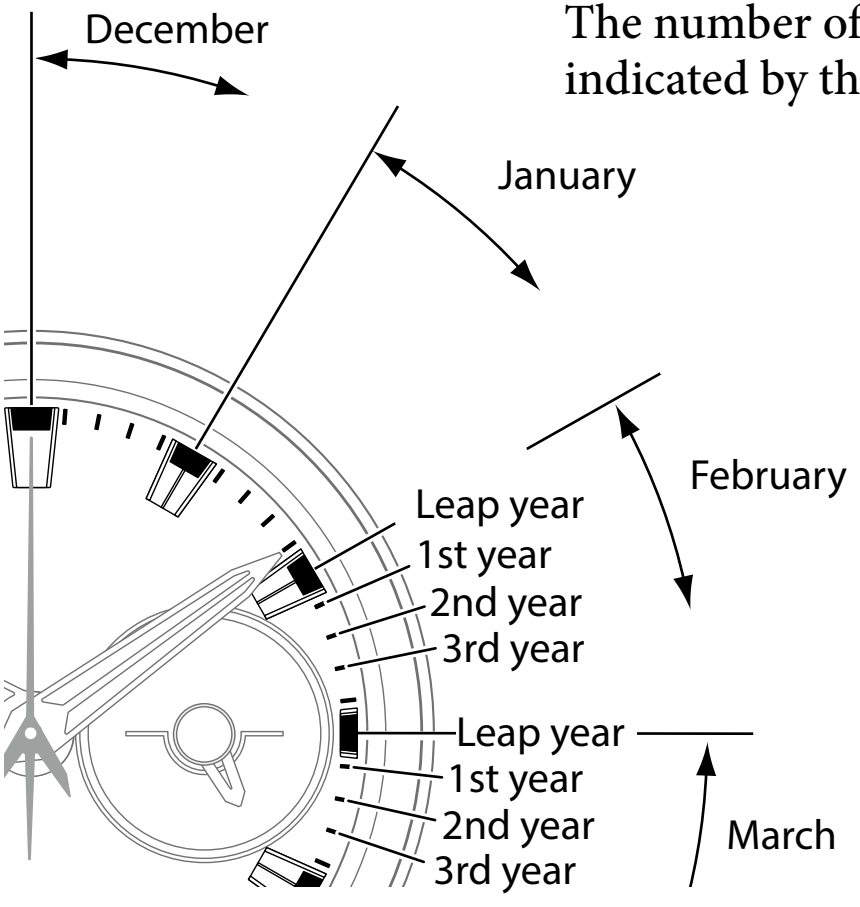


The function indication shows the day of the week.

4. **Rotate the crown to adjust each setting.**
   - If you spin the crown quickly, the hands for the time and day will move continuously. To slow down and stop them, slightly rotate the crown.
   - To move the date forward or backward by one day, slightly rotate the crown.
   - The year and month are indicated by the second hand. Adjust them by referring to the figure in the next page.
5. **Repeat procedures 3 and 4.**
6. **On the stroke of the time signal, push the crown in to position 0 to finish the setting.**

   The second hand starts moving from the 0 second position, and time/calendar indication will resume.

◆ Month and year indications



The number of years and months since the leap year is indicated by the position of the second hand.

[Month]

December : between 12:00 and 01:00
January : between 01:00 and 02:00
February : between 02:00 and 03:00

[Year]

Leap year:
Hour marker in each month

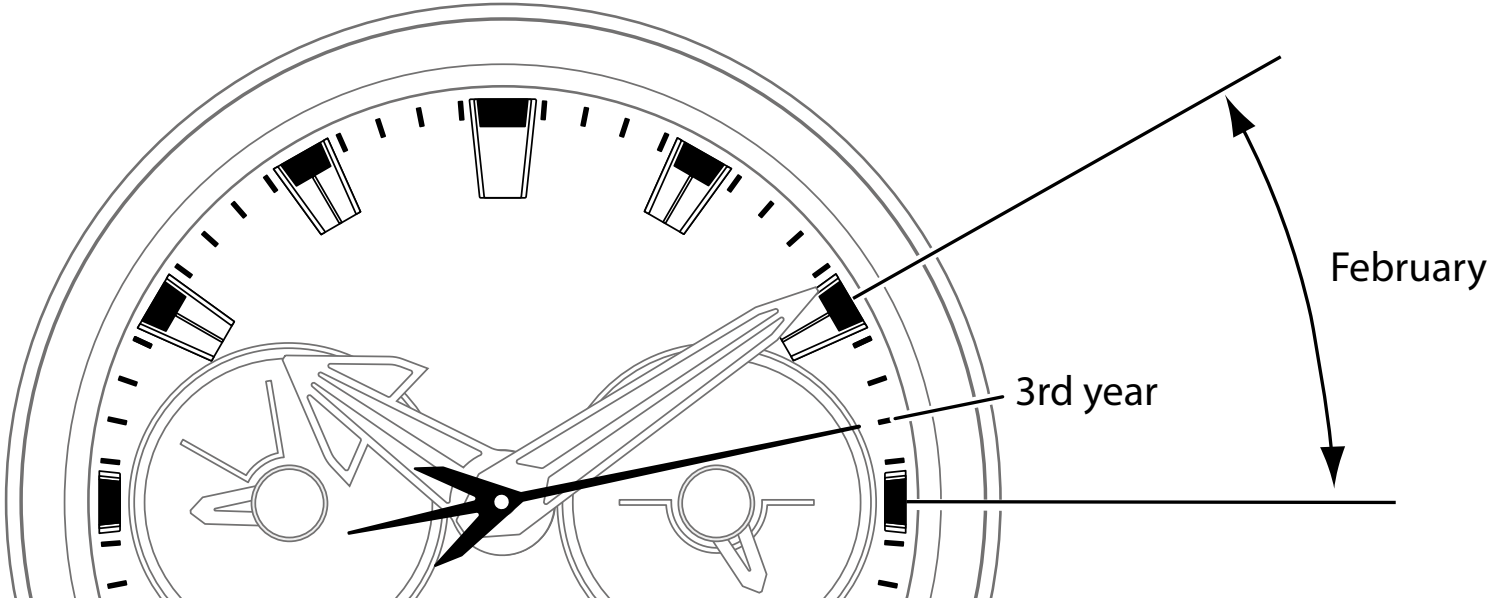
1st year since leap year:
1st min. marker in each month

2nd year since leap year:
2nd min. marker in each month

3rd year since leap year:
3rd min. marker in each month

You can get the actual year from the number of years passed from the leap year by referring to the following table:

Indication of the second hand	Passed year	Year
Hour marker	Leap year	2016, 2020, 2024
1st min. marker	1st year	2013, 2017, 2021
2nd min. marker	2nd year	2014, 2018, 2022
3rd min. marker	3rd year	2015, 2019, 2023



The figure shows February in the 3rd year since the last leap year.

Checking and correcting the current reference position

◆ What is the reference position?

The base position for all the hands to indicate the time and date.
If the reference position is not correct, the time and functions are not indicated correctly.

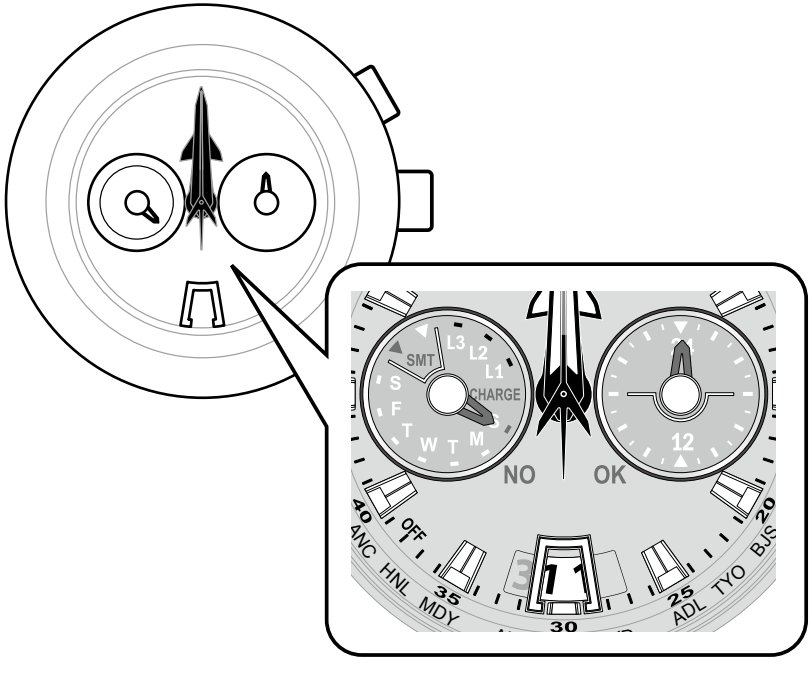
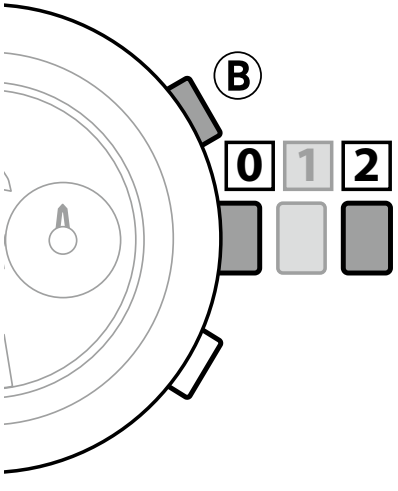


Figure: Correct reference positions

- **Hands:**
  - Hour hand in the 0-hour position
  - Minute hand in the 0-minute position
  - Second hand in the 0-second position
  - 24-hour hand in the 24-hour position
  - Day of the week indication in the Sunday position
- **Date:** Between "31" and "1"

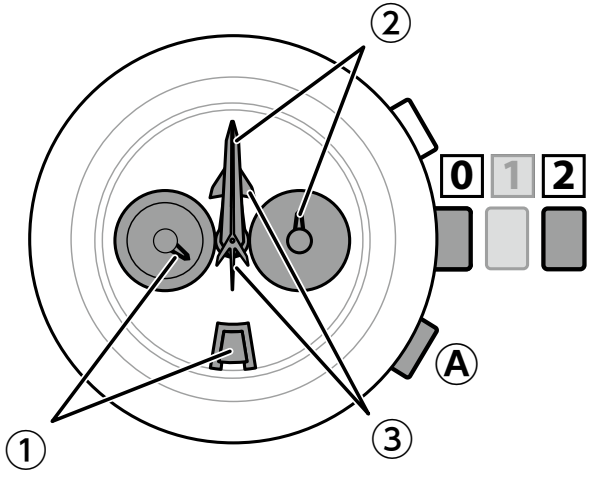
◆ Checking and correcting the current reference position



1. **Ensure that the crown is in position 0 .**
2. **Press and hold the upper right button Ⓑ for seven seconds.**
   All hands and the date indication move to indicate the current reference position.
3. **If the reference position is correct, press the upper right button Ⓑ to return to current time indication.**

   Correct the reference position by taking the following steps if the position is not accurate.
4. **Pull the crown out to position 2 .**
   This will enable you to correct the reference position.

Checking and correcting the current reference position

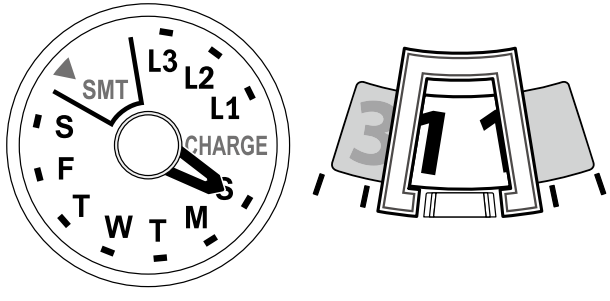


5. Press the lower right button Ⓐ to select the correction target.

Each time you press the lower right button Ⓐ , the correction target changes as follows and the corresponding hand slightly moves.

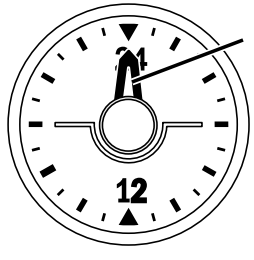
① Day of the week (function indication)/date indication →
② Hour hand/24-hour hand →
③ Second hand/minute hand → back to ①

① Day of the week (function indication)/date indication



The day of the week indication (function indication) and date indication move in conjunction with each other.

② Hour hand/24-hour hand



24-hour hand

The hour hand and 24-hour hand move in conjunction with each other.

③ Second hand/minute hand

6. **Rotate the crown to correct the reference position of the active hand/ indication.**
   - When you rotate the crown quickly, each hand will move continuously. To slow down and stop them, slightly rotate the crown.
7. **Push the crown in to position 0 to finish the correction.**
8. **Press the upper right button Ⓑ to return to current time indication.**

Troubleshooting

If you have a problem with your watch, check the table below.

Problems with time signal reception.

Symptoms	Remedies	Page
Cannot start signal reception or cannot confirm signal reception.	Check to see if the signal reception setting is turned ON.	34
Reception is unsuccessful.	Push the crown in to position 0 .	—
	Avoiding places where the satellite signal may be obstructed and objects which emit noise, face the dial towards the sky and start reception.	31 to 33
	Remove the watch from your wrist and try again.	—
	It may sometimes be difficult to receive the signal due to the influence of mobile telephone base stations or transmission facilities. Move away from any base stations and transmission facilities.	—

Symptoms	Remedies	Page
Reception is unsuccessful. (Continued)	When the second hand moves once every two seconds, the watch cannot receive the time signal. Charge the watch.	12 to 16
	Since it may be difficult to meet all of the reception conditions required for circumstantial reception, perform manual reception.	35 to 37
	If the remedies above do not solve the problems, consult your nearest Authorized Citizen Service Center.	—
The correct time and date are not indicated after successful reception.	Check and correct the World Time setting.	20 to 24
	If the time is not indicated correctly after performing manual reception 1, perform manual reception 2.	38 to 39
	Check and correct the current reference position.	56 to 59
	Check the displayed time—Summer Time or the standard time—and change it if necessary.	25 to 27
	Check and correct the leap seconds and rollover number.	43 to 45, 46 to 49

The hands do not work properly.

Symptoms	Remedies	Page
The second hand moves once every two seconds.	Charge the watch.	12 to 16
All hands stop moving.	Push the crown in to position **0** .	—
	Charge the watch by exposing it to direct sunlight until the second hand starts moving every second.	12 to 16

The time and/or date is incorrect.

Symptoms	Remedies	Page
The time and/or date is incorrect.	Check the World Time setting.	20 to 24
	Change the Summer Time setting.	25 to 27
	Check and correct the current reference position.	56 to 59
	Receive the satellite time signal manually to adjust the time and date.	35 to 37
	Set the time and date manually.	50 to 55
The time is incorrect even though the World Time setting is correct and the satellite signal reception was successful.	Check the displayed time—Summer Time or the standard time—and change it if necessary.	25 to 27
	Check and correct the current reference position.	56 to 59

Others

Symptoms	Remedies	Page
The watch does not work even though it is charged.	If the surrounding temperature falls below 0°C (32°F) or exceeds 40°C (104°F), the "Charge suspension temperature detection function" will activate and charging will not be possible.	—
	If the "Over discharge detection function" is activated, charging is not possible. If the watch does not work after exposing the dial to direct sunlight for more than one day, it is possible that the rechargeable cell has over discharged. Send the watch to your nearest Authorized Citizen Service Center.	16
The watch stops immediately after it is charged.	Charge the watch for 2 to 3 days under direct sunlight. If the second hand starts moving once every two seconds the watch is being charged correctly. Continue charging even when the second hand starts moving normally. If there are no other defects, please contact the shop where you purchased the watch.	12 to 16

◆ All Reset

When the watch does not work properly, you can reset all the settings. If the power reserve is insufficient, charge the watch first.

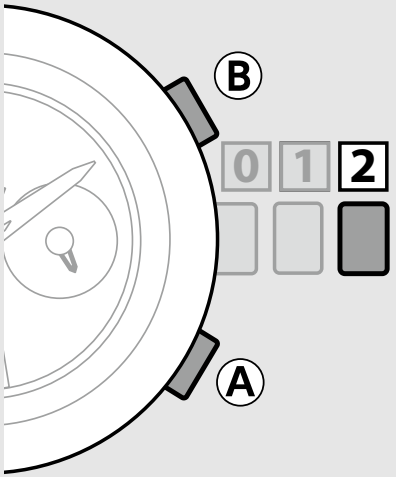
Check before performing All Reset.

After performing All Reset, you need to configure all the settings again.
Set the watch again by following the procedures.

1. **Correct the current reference position.** See page 57.
   After performing All Reset, the watch is in reference position correction mode. See from step 5 on page 58.
2. **Set the World Time.** See page 21.
   - To set Summer Time, see page 27.
3. **Adjust the time/calendar.**
   - For adjustment through receiving the satellite time signal: See pages 35.
   - For manual adjustment: See pages 50.

◆ Performing All Reset

Perform this operation after checking the contents of the previous page.



1. **Pull the crown out to position 2 .**
2. **Press and hold both the lower right button Ⓐ and the upper right button Ⓑ for three or more seconds.**
   The second hand moves to the "0" second position, the hour hand and date indication move slightly, and the watch is reset. The settings will be reset as follows:

The settings after All Reset

- Calendar : Leap year, January
- World Time setting : LON (London)
- Summer Time setting : OFF for all cities

(Performing All Reset does not change the settings for leap seconds and rollover number.)

Eco-Drive (solar powered) watch handling precautions

<Always Make Sure to Recharge Frequently>

- Please note that if you wear long sleeves, the watch may stop as a result of being covered by your sleeve and blocked from the light.
- When you take off the watch, try to place it in as bright a location as possible. This will ensure optimal operation.

⚠ CAUTION Recharging Precautions

- Do not charge the watch at a high temperature (about 60°C (140°F) or higher) as doing so may cause the movement to malfunction.

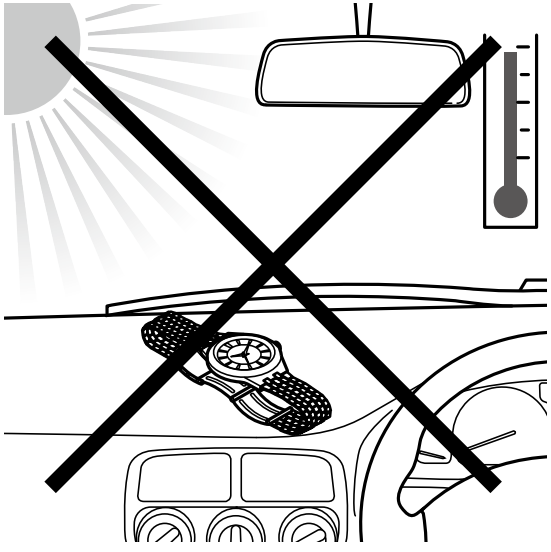
Examples:

- Charging the watch too close to a light source which generates a large amount of heat such as an incandescent lamp or halogen lamp.

* When charging under an incandescent lamp, be sure to leave 50 cm (19-11/16 inch) or more between the lamp and the watch to avoid exposing the watch to excessive heat.

- Charging the watch in a location where the temperature may become extremely high or low such as on the dashboard of a vehicle.

At ambient temperatures of about 0°C (32°F) or lower or 40°C (104°F) or higher, the "charge suspension temperature detection function" activates and the watch cannot be charged.



Eco-Drive (solar powered) watch handling precautions

<Replacement of Rechargeable Cell>

- This watch utilizes a special rechargeable cell that does not require regular replacement.
  However power consumption may increase after using the watch for a number of years due to wear of internal components and deterioration of oils. This may cause stored power to be depleted at a faster rate.
  For optimal performance, we recommend having your watch inspected (chargeable to the owner) by an Authorized Service center to ensure operation is within factory specifications.

⚠ WARNING Handling of Rechargeable Cell

- The rechargeable cell should never be removed from the watch.
  If for any reason it becomes necessary to remove the rechargeable cell from the watch, keep out of the reach of children to prevent accidental swallowing.
  If the rechargeable cell is accidentally swallowed, consult a doctor immediately.
- Do not dispose of the rechargeable cell with ordinary garbage. Please follow the instructions of your municipality regarding collection of batteries to prevent the risk of fire or environmental contamination.

⚠ WARNING Use Only the Specified Battery

- Never use a battery other than the rechargeable cell specified for use in this watch.
  Although the watch structure is designed so that it will not operate when another type of battery is installed, if a silver battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer. When replacing the rechargeable cell, always make sure to use the designated rechargeable cell.

Water resistance

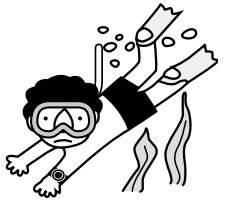
⚠ WARNING Water Resistance

- Refer to the watch dial and the case back for the indication of the water resistance of your watch. The following chart provides examples of use for reference to ensure that your watch is used properly. (The unit "1bar" is roughly equal to 1 atmosphere.)
- WATER RESIST(ANT) ××bar may also be indicated as W.R.××bar.
- Non-water resistant models are not designed to come into contact with any moisture. Take care not to expose a watch with this rating to any type of moisture.
- Water resistance for daily use (to 3 atmospheres) means the watch is water resistant for occasional accidental splashing.

Name	Indication	Specification
	Dial or Case back	
Non-water resistant watch	—	Non-water resistant
Everyday-use water resistant watch	WATER RESIST(ANT)	Water resistant to 3 atmospheres
Upgraded everyday-use water resistant watch	WATER RESIST(ANT) 5 bar	Water resistant to 5 atmospheres
	WATER RESIST(ANT) 10/20 bar	Water resistant to 10 or 20 atmospheres

Water resistance

- Upgraded water resistance for daily use (to 5 atmospheres) means that the watch may be worn while swimming, but is not to worn while skin diving.
- Upgraded water resistance for daily use (to 10/20 atmospheres) means that the watch may be worn while skin diving, but not while scuba or saturated diving using helium gas.

	Water-related use				
	 Minor exposure to water (washing face, rain, etc.)	 Swimming and general washing work	 Skin diving, marine sports	 Scuba diving using an air tank	 Operate the crown or button when the watch is wet
	NO	**NO**	**NO**	**NO**	**NO**
	OK	**NO**	**NO**	**NO**	**NO**
	OK	**OK**	**NO**	**NO**	**NO**
	OK	**OK**	**OK**	**NO**	**NO**

Precautionary items and usage limitations

⚠ CAUTION To Avoid Injury

- Be particularly careful when wearing your watch while holding a small child, to avoid injury.
- Be particularly careful when engaged in strenuous exercise or work, to avoid injury to yourself and others.
- Do NOT wear your watch while in a sauna or other location where your watch may become excessively hot, since there is the risk of burns.
- Be careful when putting on and taking off your watch, since there is a risk of damaging your fingernails, depending on the manner in which the band is fastened.
- Take off your watch before going to bed.

⚠ CAUTION Precautions

- Always use the watch with the crown pushed in (normal position). If the crown is of the screw lock-type, make sure it is securely locked.
- Do NOT operate the crown or any push buttons when the watch is wet. Water may enter the watch causing damage to vital components.
- If water enters the watch or the watch fogs up and does not clear up even after a long time, consult your dealer or Authorized Service Center for inspection and/or repair.

- Even if your watch has a high level of water resistance, please be careful of the following.
  - If your watch is immersed in sea water, rinse thoroughly with fresh water and wipe with a dry cloth.
  - Do not pour water from a tap directly onto your watch.
  - Take off your watch before taking a bath.
- If seawater enters the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, pressure inside the watch will increase, and parts (crystal, crown, push button, etc.) may come off.

⚠ CAUTION When Wearing Your Watch

<Band>

- Leather, genuine skin and rubber (urethane) bands will deteriorate over time due to perspiration, body oils and dirt. Be sure to replace the band periodically.
- The durability of a leather band may be affected when wet (fading, peeling of adhesive), owing to the properties of the material. Moreover, wet leather may cause a rash.
- It is recommended to take off the watch if it gets wet, even if the watch itself is water resistant.
- Do not wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.
- The rubber (urethane) band may be stained by dyes or soil present in or on clothing or other accessories. Since these stains may not be removable, caution is required when wearing your watch with items that tend to easily transfer color (articles of clothing, purses, etc.). In addition, the band may be deteriorated by solvents or moisture in the air. Replace with a new one when it has lost elasticity or become cracked.

Precautionary items and usage limitations

- Please request adjustment or repair of the band in the following cases:
  - You notice an abnormality with the band due to corrosion.
  - The pin of the band is protruding.
- We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury. Consult your nearest authorized Citizen service center.

<Temperature>

- The watch may stop or the function of the watch may be impaired in extremely high or low temperature. Do not use the watch in places where the temperature is outside the operating temperature range as stated in the specifications.

<Magnetism>

- Analog quartz watches are powered by a step motor that uses a magnet. Subjecting the watch to strong magnetism from the outside can cause the motor to operate improperly and prevent the watch from keeping time accurately.
  Do not allow the watch to come into close proximity to magnetic health devices (magnetic necklaces, magnetic elastic bands, etc.) or the magnets used in the latches of refrigerator doors, clasps used in handbags, the speaker of a cell phone, electromagnetic cooking devices and so on.

<Strong Shock>

- Avoid dropping the watch or subjecting it to other strong impact. It may cause malfunctions and/or performance deterioration as well as damage to the case and bracelet.

<Static Electricity>

- The integrated circuits (IC) used in quartz watches are sensitive to static electricity. Please note that the watch may operate erratically or not at all if exposed to intense static electricity.

<Chemicals, Corrosive Gasses and Mercury>

- If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail-polish remover, cresol, bathroom cleaners and adhesives, water repellent, etc.) are allowed to come into contact with the watch, they may discolor, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discoloration of the band and case.

<Protective Stickers>

- Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

⚠ CAUTION Always Keep Your Watch Clean

- Rotate the crown while it is pressed in fully and press the buttons periodically so they do not become stuck due to accumulations of foreign matter.
- The case and band of the watch come into direct contact with the skin in the same manner as undergarments. Corrosion of the metal or unnoticed soiling such as that caused by perspiration and dirt can soil sleeves and other portions of clothing. Keep your watch clean at all times.
- The case and band of the watch come into direct contact with the skin. If you think there is something wrong, discontinue wearing the watch immediately and consult your physician. In the case of accumulation of sweat or dirt on a metal band or case, clean thoroughly using a brush and neutral detergent. In the case of a leather band, wipe clean using a dry cloth.
- Leather bands may become discolored by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.

Caring for Your Watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- For a metallic, plastic or rubber (urethane) watchband, wash any dirt off with water.
  Remove the small amounts of dirt trapped between the crevices of the metallic band with a soft brush.
- For a leather band, wipe off dirt using a dry cloth.
- If you will not be using your watch for an extended period of time, carefully wipe off any perspiration, dirt or moisture and store in a proper location, avoiding locations subject to excessively high or low temperatures and high humidity.

<When Luminous Paint is used for your watch>

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place. It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission gradually becomes weaker as time passes.
- The duration of the light (“glow”) will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.

Specifications

Model	H90*	**Type**	Analog solar-powered watch
Timekeeping accuracy (without reception)	Within ±15 seconds per month when worn at normal operation temperatures (between +5°C and +35°C (between 41°F and 95°F))		
Operating temperature range	-10°C to +60°C (14°F to 140°F)		
Chargeable temperature range	0°C to +40°C (32°F to 104°F)		
Display functions	• Time: Hours, minutes, seconds, 24-hour • Calendar: Date, day of the week • Power reserve: 4 levels		
Maximum run time from full charge	• Fully charged to fully discharged: Approximately 2 years (When receiving the satellite time signal once every two days) • Power reserve upon insufficient charge warning function: 10 days		
Battery	Rechargeable cell (lithium button cell), 1pc.		

Additional functions	• Solar power function • Power reserve indication • Charge suspension temperature detection function • Overcharging prevention function • Over discharge detection function • Insufficient charge warning function (two-second interval movement) • Satellite time signal reception function (manual reception 1/manual reception 2/circumstantial reception) • Confirming reception status (RX) • Indicating the result of the last reception (OK/NO) • Summer Time (ON/OFF) • City setting (26 cities) • Perpetual calendar (until February 28th, 2100) • Antimagnetic performance/Impact detection function/Automatic hand correction function • Uncharged state indication function • Reception OFF function

Specifications are subject to change without prior notice.

CE

This product follows the provisions of R&TTE Directive (1999/5/EC) and RoHS Directive (2011/65/EU). You can find your product's Declaration of Conformity at:
http://www.citizenwatch-global.com/declaration/index.html

RF	ETSI EN300 440-2 V1.4.1
EMC	ETSI EN301 489-3 V1.4.1
LVD	EN60950-1 : 2006 +A12 : 2011

Model No.CC1＊
Cal.H909
CTZ-B8172①