CITIZEN®

Model No. BT0＊＊＊ / Cal. No. E31＊

- INSTRUCTION MANUAL
- MANUEL D'INSTRUCTIONS
- MANUAL DE INSTRUCCIONES

Eco-Drive

CTZ-A8121

Features

Eco-Drive

Solar-powered and no battery replacement (→ page 9)



The date window—large and highly visible



The calendar—no date correction at the end of months (→ page 13)

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- The second hand moves only once every two seconds.
- All hands stop moving.
- The figures are not displayed upright.
- The date is wrong.
- The date changes to the following day at around noon.
- The watch does not work properly.
- The watch does not move even if the battery is fully charged.

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Part names and their main functions



Minute hand

Date

Button Ⓑ:
For setting the calendar-related functions

Hour hand

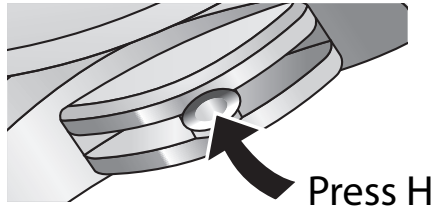
Crown:
For setting the time, checking the date, etc.

24-hour hand:
Goes around once a day

Button Ⓐ:
For setting the date etc.

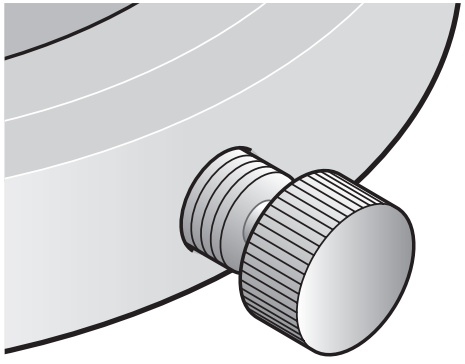
Second hand

Example of a button



The illustrations in this instruction manual may differ from the actual appearance of your watch.

■ How to use the screw down crown



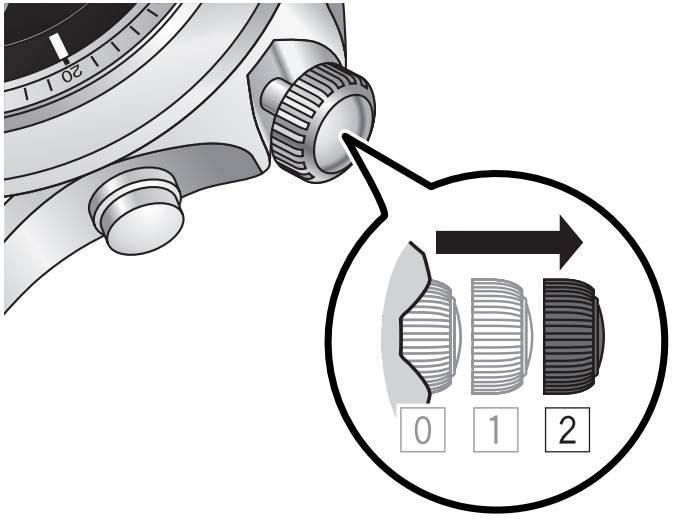
To release the crown

Turn the crown to the left until it pops out slightly.

To lock again

Tighten the crown completely by pressing and turning it to right.

■ When leaving the watch unused for an extended period of time



Pull out the crown to position 2.
All hands stop moving and the battery power is saved.

- The date will change to the following day every 24 hours once you have pulled out the crown to position 2.

Charging the battery

■ Charging the battery

This watch has a battery which is charged by exposing the dial to light such as direct sunlight or fluorescent lamps.

To obtain the best performance:

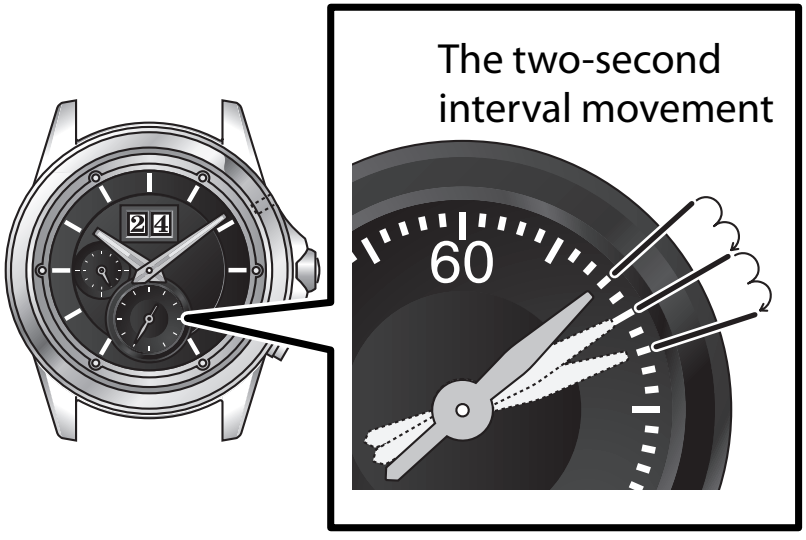
- **Expose the dial to direct sunlight at least once a month.**
- After taking off the watch, put it **where the dial is exposed to bright light,** such as by a window.
- Before storing the watch in a dark place for an extended period of time, fully charge the battery.

When the watch is covered with long sleeves, for example, the battery may not be charged sufficiently. Try to keep the watch exposed to light.

Do not charge the battery at a high temperature (about 60˚C/140˚F or higher).

■ When the battery becomes short of power—Insufficient charge warning function

When the battery becomes short of power, the second hand moves once every two seconds—insufficient charge warning function. Charge the battery by exposing the dial to light.



- After the battery is charged for a while, the second hand will move normally.
- If you have not charged the battery for three days or more since the warning movement began, the battery will run out and the watch will stop.

NOTICE:
You cannot check or adjust the settings while the warning movement continues, though you can see the time.

■ Charging time

Below are the approximate values when exposing to the light continuously.
The charging time differs depending on the color of dial or other conditions.
Use the table below only for your reference.

Illuminance (Lx)	Environment	Charging time to work for one day (approx.)	Charging time to start working normally when the battery is empty (approx.)
500	Interior lighting	4 hours	60 hours
1,000	60-70 cm (24-28 in.) under a fluorescent lamp (30 W)	2 hours	25 hours
3,000	20 cm (8 in.) under a fluorescent lamp (30 W)	40 minutes	7.5 hours
10,000	Under cloudy weather	11 minutes	2.5 hours
100,000	Under direct sunlight in summer	2 minutes	45 minutes

Battery duration after full charging (without further charging)	About 12 months

	Time for charging fully when the battery is empty (approx.)
	—
	—
	—
	70 hours
	35 hours

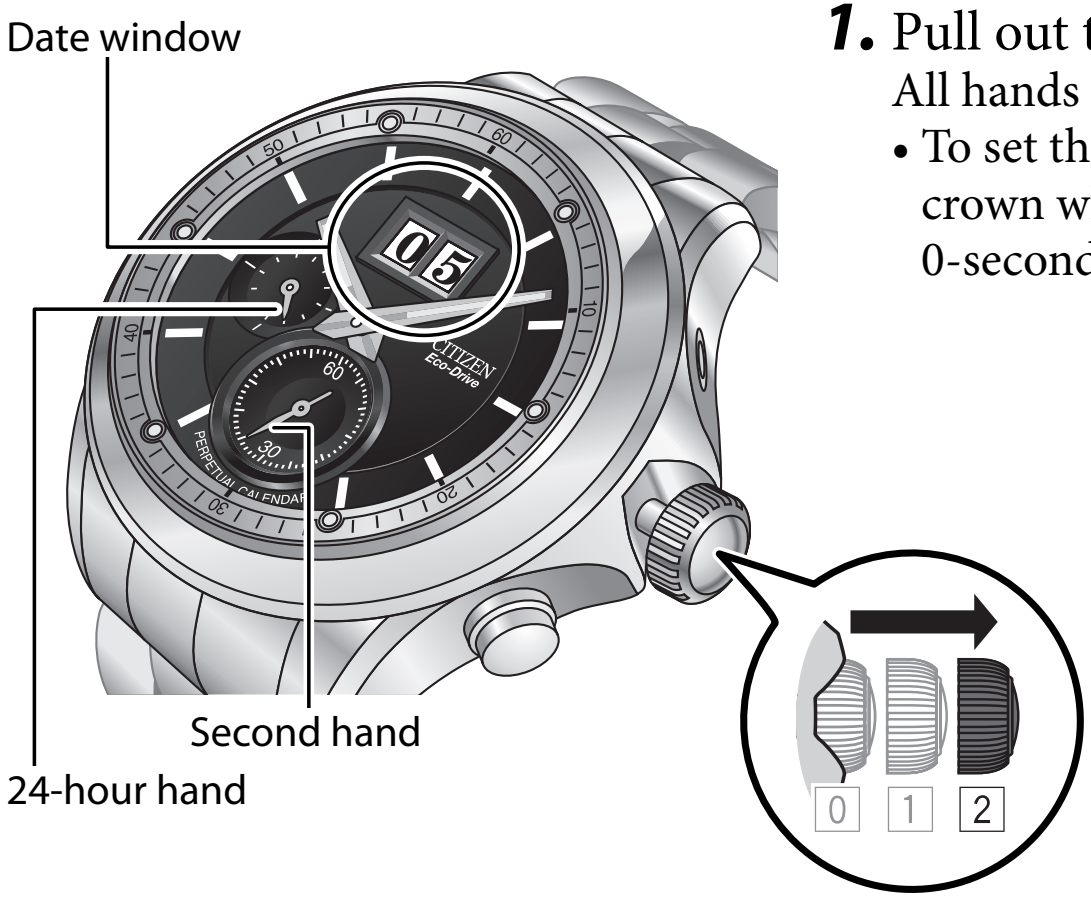
■ After the battery is fully charged— Overcharge prevention function

After the battery is fully charged, charging automatically stops to prevent overcharging, which may damage to the battery, or affect the accuracy, functions, and performance of the watch.

Eco-Drive

This watch has the "Eco-Drive" system, which converts light into electrical energy with the solar cell beneath the dial.
The system makes you free from care of battery replacement and is environment-friendly because of no battery disposal.

Setting the time

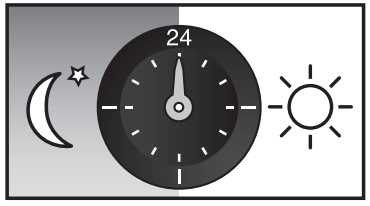


1. Pull out the crown to position 2.
All hands stop moving.

- To set the time accurately, pull out the crown when the second hand is at the 0-second position.

2. Turn the crown to set the time.

All hands other than the second hand will move.



- Take care of the position of the 24-hour hand to set A.M. or P.M. correctly.
- When you set the hands to around midnight, the date will change to the following day. To return to the previous day, set the hands to any position before 23:30.

  Go to step ***3*** after the date has completely stopped.

3. Push in the crown to position [0].

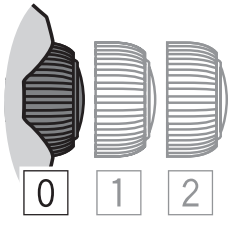
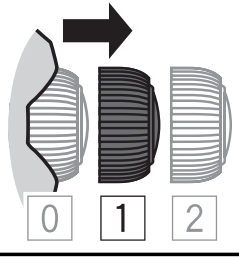
The watch starts moving.

- To set the time accurately, push in the crown by the time signal.

Checking the date, month, and year

You can check the date, month, and year*1.



	The crown position	The button operation
To check a date		—
To check a month		—
To check an year		Pressing **button** Ⓐ*2

*1 **This watch shows the number of years passed since the last leap year.**

*2 Each time you press **button** Ⓐ while the crown is set to position 1, you can display the month and year alternately.

Display examples of the date window

When checking a date	Ex. 5th day 
When checking a month	Ex. February  • "M" stands for Month.
When checking an year	Ex. Next year of a leap year  • "L.Y." stands for Leap Year.

The figures in the date window change slowly.

Perpetual calendar

The date is automatically adjusted until February 28, 2100.
So you do not need to correct it at the end of months.

Setting the year, month, and date

NOTICE:
Do not operate between 23:00 and 0:30; otherwise, the date may not change even if the 24-hour hand moves past midnight.

The calendar setting has the following stages:

Enter the setting mode (→ page 15) ➡ **Set the year (→ page 16)** ➡ **Set the month (→ page 18)** ➡ **Set the date (→ page 20)**

Before setting:
- You cannot go back to the previous setting.
- You cannot go to the next step while the figures in the date window are moving.
- To stop setting, change the position of the crown. In this case, the settings you have made are cleared.

1. Enter the setting mode



The figures in the date window move slightly up and down or right and left, or change to tell you that you can do the next operation.

1-1. Pull out the crown to position [1].
The month appears in the date window.

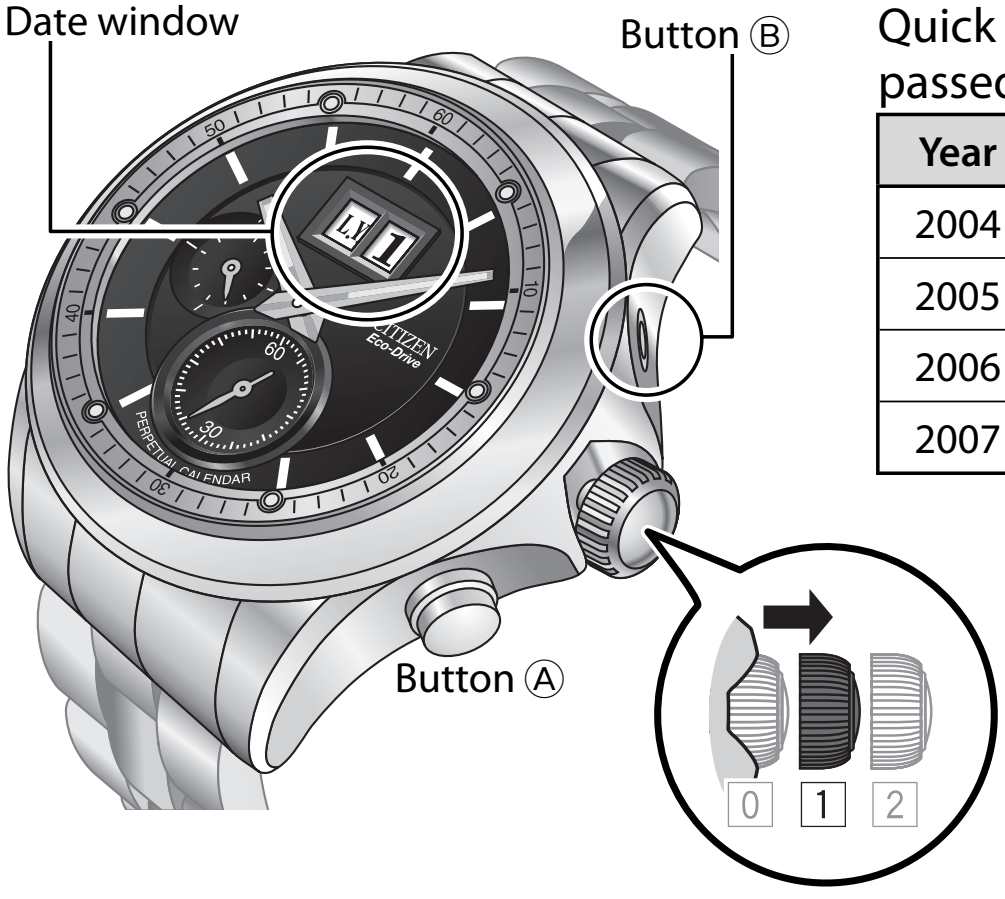
1-2. Press and hold **button** Ⓑ until the figures in the date window start moving.

The figures in the date window change slowly.

Go to the next page

2. Set the year

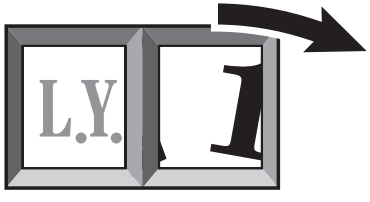
Set the number of years passed since the last leap year.



Quick reference chart for number of years passed since leap year

Year	Passed year	Year	Passed year
2004	Leap year	2008	Leap year
2005	One year	2009	One year
2006	Two years	2010	Two years
2007	Three years	2011	Three years

2-1. Press **button** Ⓐ repeatedly to set the year.



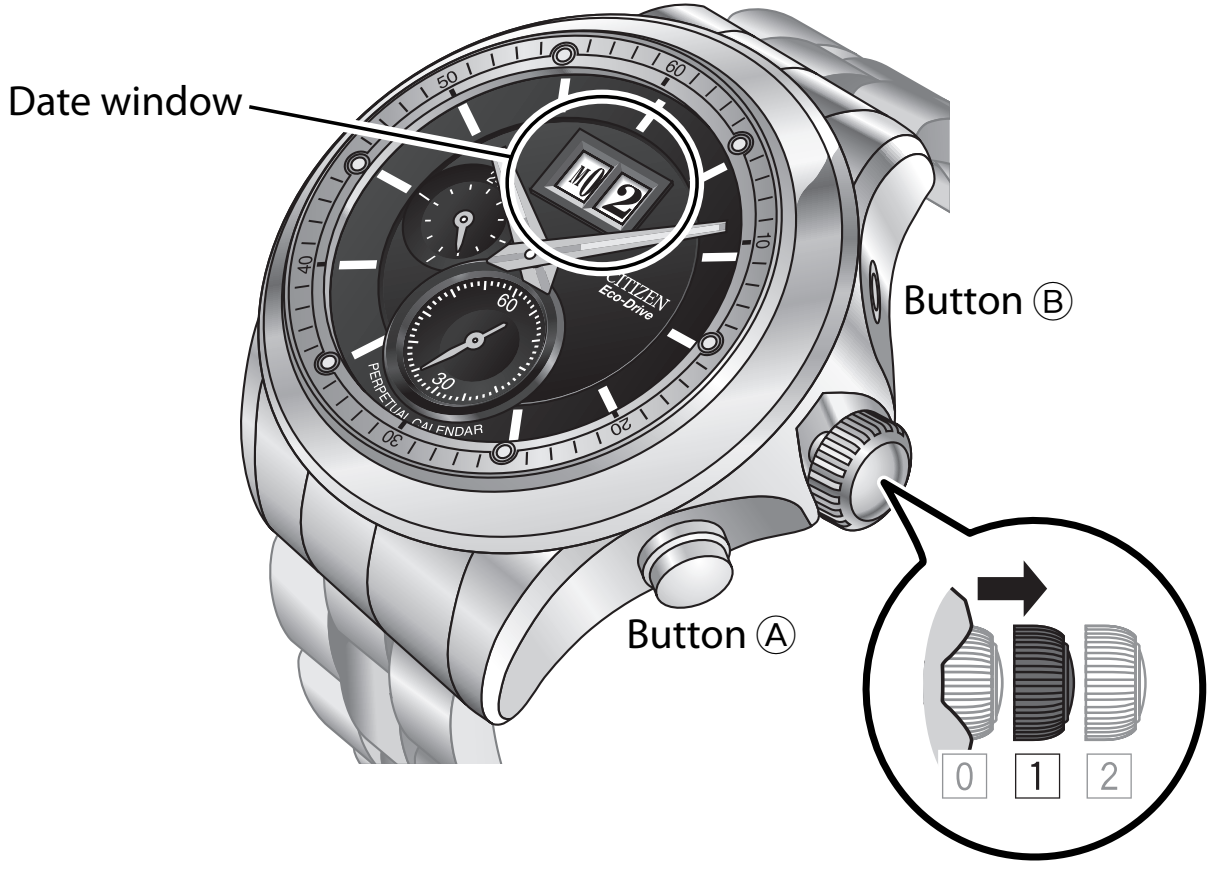
Ex.	Setting value	Window
When the current year is a leap year	0	L.Y. 0
When two years have passed	2	L.Y. 2

2-2. Press **button** Ⓑ.
Now you can set the month.

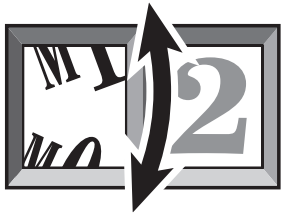
Go to the next page

3. Set the month

Set the month—tens digit, then ones digit.



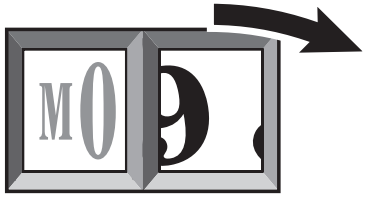
3-1. Press **button** Ⓐ to set the tens digit of the month.



Month	Setting value	Window
From January to September	M0	
From October to December	M1	

3-2. Press **button** Ⓑ.
Now you can set the ones digit.

3-3. Press **button** Ⓐ repeatedly to set the ones digit of the month.



Ex.	Setting value	Window
September	9	
November	1	

3-4. Press **button** Ⓑ.
Now you can set the date.

Go to the next page

4. Set the date

Set the date—tens digit, then ones digit.

> The selectable date differs depending on the year and month you have set.

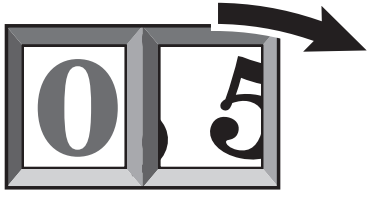


4-1. Press **button** Ⓐ repeatedly to set the tens digit of the date.



4-2. Press **button** Ⓑ.
Now you can set the ones digit.

4-3. Press **button** Ⓐ repeatedly to set the ones digit of the date.



Ex.	Setting value	Window
5th day	0	08
30th day	3	31

Ex.	Setting value	Window
5th day	5	05
30th day	0	30

5. Finish the setting

Push in the crown to position [0].
The settings are stored.

WARNINGS

Handling the secondary battery

- Do not remove the battery. When it is required, keep the battery out of the reach of children to prevent them from swallowing it.
- If the battery is swallowed, consult a doctor and seek medical treatment.

CAUTIONS

Cautions about charging

- Excessively high temperature at charging battery may cause discoloration and deformation of the exterior, and malfunction of the movement.
- Do not charge the battery at a high temperature (about 60˚C/140˚F or higher).
  Examples:
  – charging the battery by light such as an incandescent lamp or halogen lamp
  – charging the battery where the temperature becomes extremely high—such as on the dashboard

To avoid injury

- DO NOT wear the watch where the temperature becomes extremely high—such as in a sauna. Otherwise the watch may become hot and cause skin burn.

To avoid malfunction

- DO NOT use the watch where the temperature is lower or higher than the operation temperature specified in the instruction manual. Doing so may cause the watch to malfunction or stop.
- DO NOT place the watch nearby any materials generating a strong magnetic field such as below:
  – magnetic health equipment such as a magnetic necklace
  – a magnetic latch of a refrigerator door
  – a magnetic clasp on a handbag
  – speakers of a mobile phone
  – electromagnetic cooking devices
  They may interfere with the movement of the stepping motors in the watch and timekeeping becomes inaccurate.

- DO NOT place the watch nearby the household appliances generating static electricity. Timekeeping may become inaccurate if the watch is exposed to such strong static electricity that which is emitted from a TV screen.
- DO NOT apply any strong shock, for example, by dropping it onto a hard floor.
- Avoid using the watch where it may be exposed to chemicals or corrosive gases. If solvents, such as thinner or benzine, or substances containing such solvents come in contact with the watch, discoloration, melting, cracking, etc. may occur. The case, band, or other parts may become discolored if the watch comes in contact with mercury as that used in thermometers.

WARNINGS

Water-resistance performance

Before use, confirm the water-resistance level of your watch indicated on the dial and case.

Indication		Specifications
Dial	Case (case back)	
WATER RESIST(ANT) or no indication	WATER RESIST(ANT)	Water-resistant to 3 atmospheres
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5bar or WATER RESIST(ANT)	Water-resistant to 5 atmospheres
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10bar/20bar or WATER RESIST(ANT)	Water-resistant to 10 or 20 atmospheres

The unit “bar” is roughly equal to 1 atmosphere.
* “WATER RESIST(ANT) xx bar” may also be indicated as “W.R. xx bar.”

	Examples of use				
	 Minor exposure to water (washing face, rain, etc.)	 Moderate exposure to water (washing, kitchen work, swimming, etc.)	 Marine sports (skin diving)	 Scuba diving (with an air tank)	 Operation of the crown when the watch is wet
	OK	**NO**	**NO**	**NO**	**NO**
	OK	**OK**	**NO**	**NO**	**NO**
	OK	**OK**	**OK**	**NO**	**NO**

Go to the next page

Precautions

- Water-resistance for daily use (up to 3 atmospheres):
  This type of watch is resistant to minor exposure to water. For example, you may wear the watch while washing your face; however, it is not designed to be used underwater.
- Upgraded water-resistance for daily use (up to 5 atmospheres):
  This type of watch is resistant to moderate exposure to water. You may wear the watch while swimming; however, it is not designed to be used for skin diving.
- Upgraded water-resistance for daily use (up to 10/20 atmospheres):
  This type of watch may be used for skin diving; however, it is not designed to be used for scuba or saturated diving using helium gas.
- Be sure to use the watch with the crown pressed in fully (normal position). If the crown of your watch is the screw down crown, be sure to tighten it completely.
- DO NOT operate the crown or buttons with wet fingers or when the watch is wet. Water may penetrate the watch and compromise water-resistance.

- If water has penetrated the watch, or if the inside of the glass is fogged up and does not become clear in a day, take the watch to your dealer or Citizen Service Center for repair. Leaving the watch in such a state will rust the internal parts and cause malfunction.
- If seawater penetrates the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, the pressure inside the watch will increase, and parts (glass, crown, buttons, etc.) may come off.
- If the watch is used in seawater, rinse with fresh water afterward and wipe with a dry cloth.

Keep your watch clean

- Keep your watch clean to prevent rust or dirt on the watch. They may stain your clothes.
- Wipe off dirt on the leather band with a soft and dry cloth to prevent it from discoloring.

Troubleshooting

If you have a problem with your watch, check the table below for a possible solution before calling for service.

Symptoms	Remedies	Reference page
The hands do not work properly		
The second hand moves only once every two seconds.	Charge the battery.	7
All hands stop moving.	Push in the crown to position 0.	10
	Charge the battery.	6
The date display is not correct		
The figures are not displayed upright.	Check and correct the reference position.	32
The date is wrong.	Set the year, month, and date correctly.	14
The date changes to the following day at around noon.	Check if the 24-hour hand indicates the correct time.	10

Symptoms	Remedies	Reference page

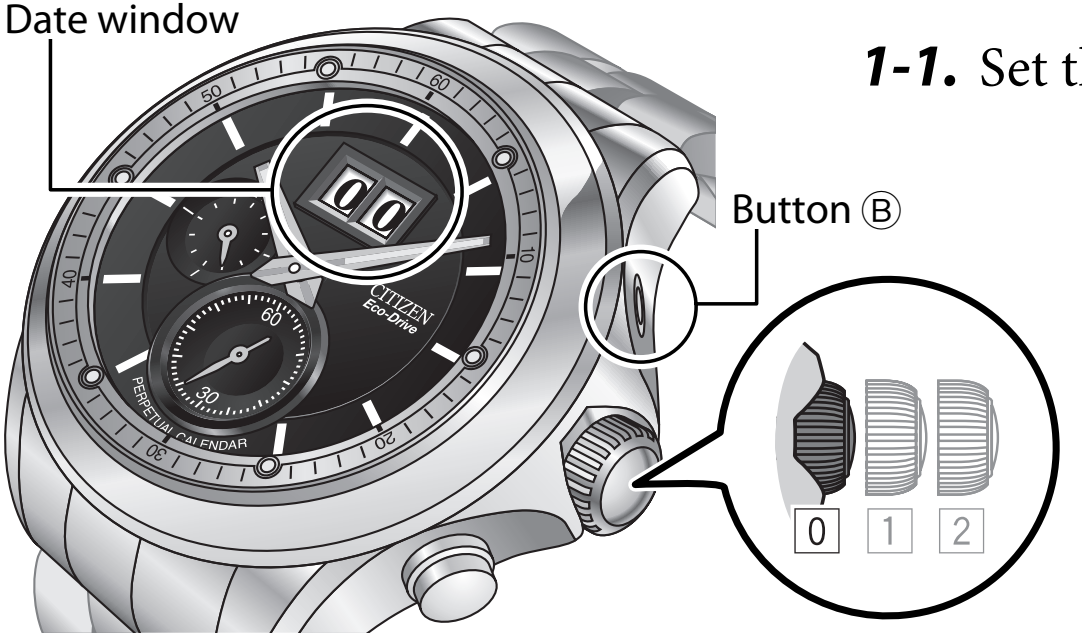
Others

The watch does not work properly even if you have tried the remedies on page 30.	Reset the watch, then adjust the reference position.	36
The watch does not move even if the battery is fully charged.	Contact the Citizen Service Center or the store where you purchased your watch.	–

Checking and correcting the reference position

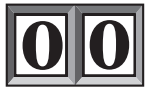
The figures of the date window rotate referring to the “0” position as the initial position. If the “0” position, the reference position, has moved off because of shock or other reasons, the figures are not displayed upright. Correct the reference position following the procedure below when the figures are not displayed upright.

1. Check the current reference position



1-1. Set the crown to position [0].

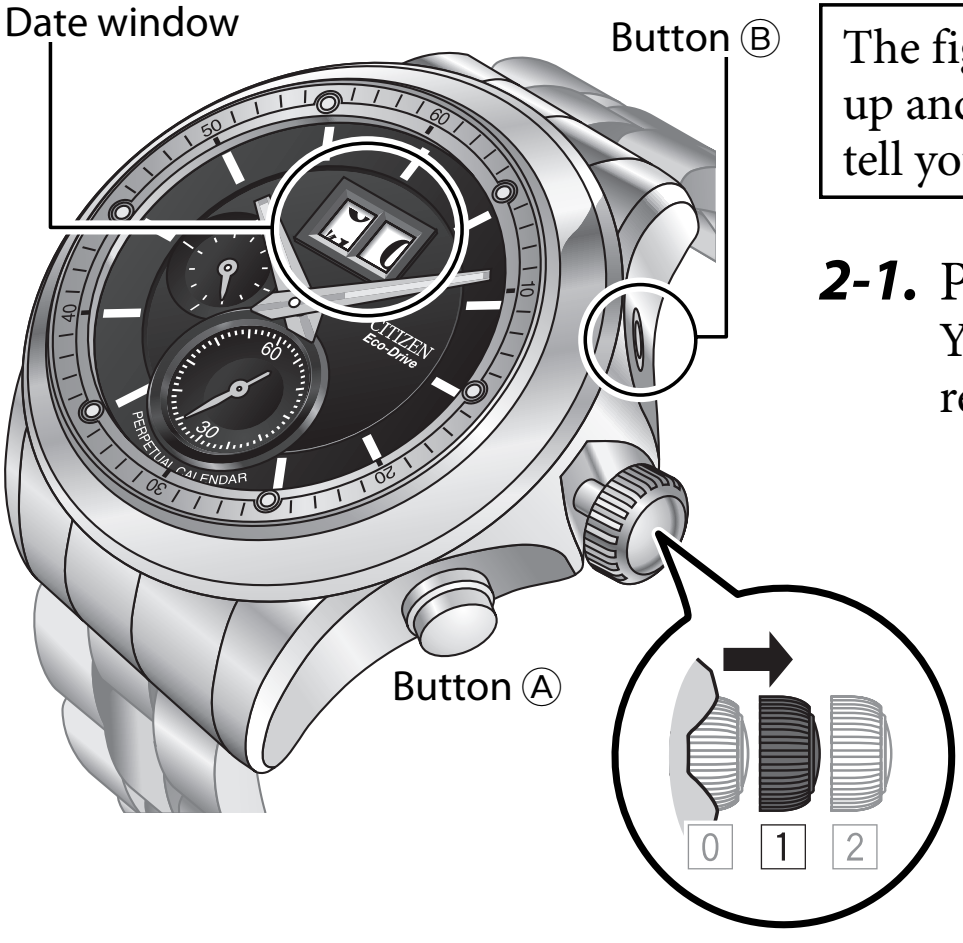
1-2. Press and hold **button** Ⓑ until the figures start moving to show the current reference position.
Check the current reference position after the figures have stopped moving.

Position of figures	The status of the reference position
"0"s of both digits are shown upright. 	The reference position is correct. Go to step ***1-3***.
Other than above Ex. 	The reference position is wrong. Go to step ***2-1*** to correct it (→ page 34). • Follow step ***2-1*** within two minutes.

1-3. Press **button** Ⓑ to finish the procedure.
The current date will appear in the date window.
• The current date will also appear in the date window if no operation is done for about two minutes after step ***1-2***.

Go to the next page

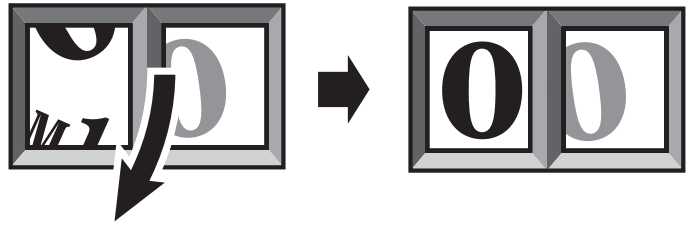
2. Correct the reference position



The figures in the date window move slightly up and down or right and left, or change to tell you that you can do the next operation.

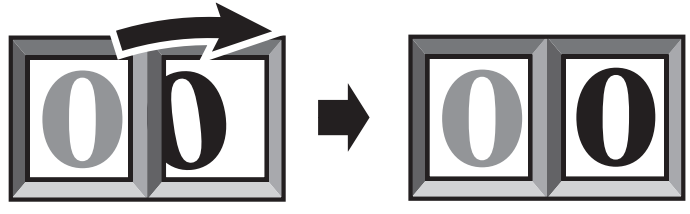
2-1. Pull out the crown to position 1.
You can correct the tens digit of the reference position.

2-2. Press **button** Ⓐ repeatedly to display the "0" upright.
Each time you press the button, the "0" moves step by step.
- When you press and hold **button** Ⓐ, the "0" moves seamlessly.



2-3. Press **button** Ⓑ to advance to the ones digit setting.
Each time you press the button, you can select the tens digit and ones digit alternately.

2-4. Repeat step ***2-2*** to correct the ones digit of the reference position.

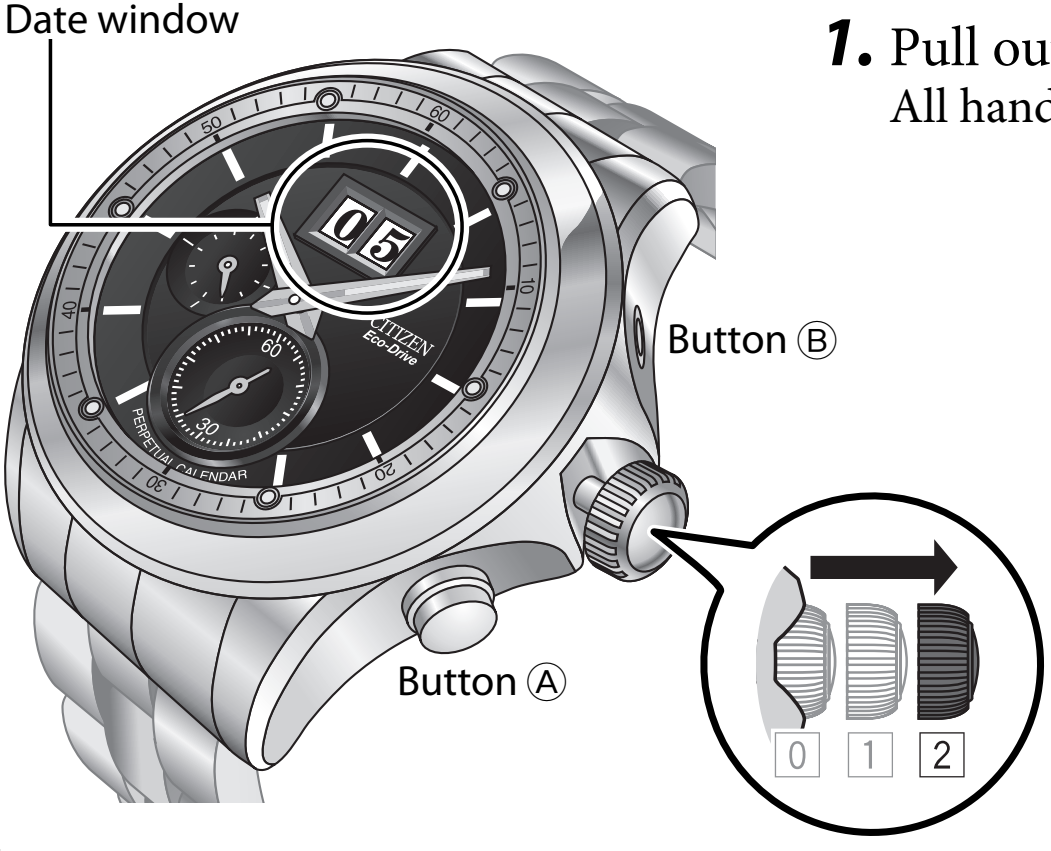


3. Finish the correction

Push in the crown to position [0].
The settings are stored and the current date will appear in the date window.

Resetting the watch

The watch may not work properly if it is affected by static electricity or shock. In this case, reset the watch, then adjust the reference position and set the time, year, month, and date again.



1. Pull out the crown to position 2.
All hands stop moving.

2. Press **buttons** Ⓐ and Ⓑ at the same time.
The reference position and the calendar are reset.
- When the reset is performed, the figures in the date window move slightly up and down or right and left to tell you that the operation has been completed.

3. Set the reference position.
Follow the procedure from step ***2-2*** to ***2-4*** on page 35.

4. Push in the crown to position [0].
The settings are stored and "01" appears in the date window.
The calendar is set to "January 1st of a leap year." **To set the time, year, month, and date again,** refer to "Setting the time" (→ page 10) and "Setting the year, month, and date" (→ page 14).

Maintenance

Daily maintenance

- Rotate the crown while it is pressed in (position 0) and press the buttons periodically so that they will not be rusty.
- Wipe off dirt, perspiration, and water from the case and glass with a soft cloth.
- To clean a metal, plastic, or rubber watchband, wash away dirt with water. Use a soft brush to remove dust and dirt stuck in the gaps in a metal band.
- Do not use solvents (thinner, benzine, etc.), as they may damage the finish.

Periodical inspections

Your watch needs an inspection once every two or three years for safety and longer usage.
To keep your watch water-resistant, the packing needs to be replaced regularly.
Other parts need to be inspected and replaced if necessary.
Ask for genuine Citizen parts upon replacement.

Specifications

Model	E31*
Type	Analog solar-powered watch
Timekeeping accuracy	Within ±15 seconds per month on average (when worn at normal temperatures between 5˚C/41˚F and 35˚C/95˚F)
Operating temperature range	–10˚C/14˚F to +60˚C/140˚F
Display functions	• Time: 24 hours, hours, minutes, seconds • Calendar: Years passed since the last leap year, Month, Date
Additional functions	• Perpetual calendar (until February 28, 2100) • Overcharge prevention function • Insufficient charge warning function
Battery duration without recharging	• Fully charged to empty: Approx. 12 months • Two second interval movement to stop: Approx. 3 days
Battery	Secondary battery, 1pc.

Specifications are subject to change without prior notice.

CITIZEN®

CTZ-A8121