

## **Repairs**

All repairs on this watch, excluding the band, are to be performed by CITIZEN to maintain the quality of the watch. This is because repairs, inspections and adjustments performed on this watch require special techniques and equipment. Please contact the Citizen Service Center when requesting repairs or other servicing of your watch.

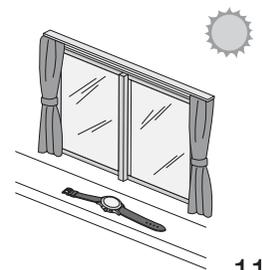
**This radio controlled watch receives standard radio waves broadcast from the People's Republic of China**

- Only standard time radio waves (BPC) broadcast from the People's Republic of China are received.
- The radio controlled watch has no effect on the human body or medical equipment.

**Fully charge your watch before use by exposing it to sufficient light**

The second hand will move at 2-second intervals when the watch is insufficiently charged. Charge your watch as indicated in "General Reference for Charging Times" (p.156).

- **Charge the watch in direct sunlight for a long time once a month.**



## Features

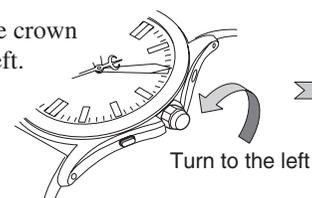
This watch cannot be used without concern over having effects on the body or medical devices (radio waves are not emitted from the watch).

- ◎ This watch is also an Eco-Drive radio wave watch provided with a photoelectric power generation function that converts light energy into electrical energy to drive the watch. It is also equipped with a power save function that reduces the power consumption of the watch when light does not shine onto the watch dial.
- ◎ This watch is equipped with a "Hand Correction Function" that automatically corrects the time if it has become incorrect due to external factors such as strong impacts or magnetism.
- ◎ This watch is equipped with a time difference correction function that is convenient when using the watch overseas. This function lets you easily set the watch to the local time when traveling to a region or country in a different time zone.

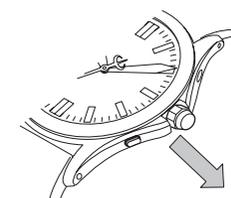
## Operating the Crown

### <Operating Procedure in the case of a Screw-Lock Crown>

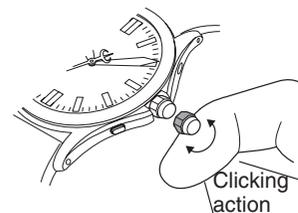
- Turn the crown to the left.



- When the screw locking mechanism is released, the crown pops out a little to the normal position.



### <Continuously Moving the Hands>



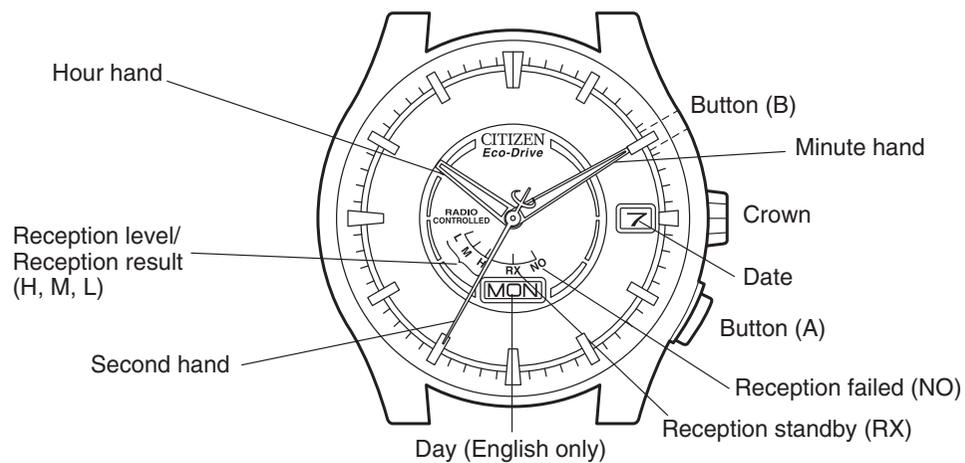
Rapidly turn the crown continuously (by 2 clicks or more)

Rapidly turn the crown continuously to the right or left (by two clicks or more) while at Position 1 or Position 2 to continuously move the hands (hour hand, minute hand or second hand) and the calendar (day, date). Click the crown once (by one click) to the right or left to stop the hands from moving.

**\* A gentle clicking action can be felt on your fingertip when turning the crown.**

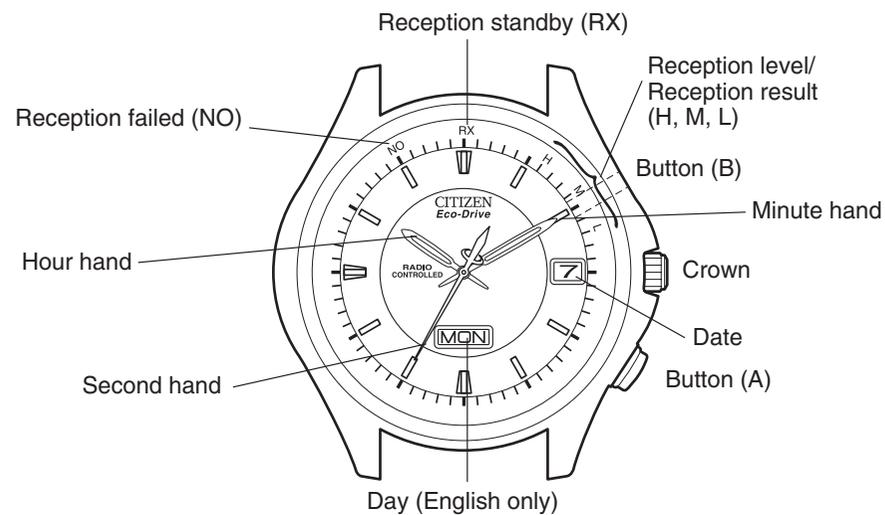
## Names of Components

[Illustration 1: Models having a short second hand that indicates the reception result and so on.]



\* This manual provides an explanation of the operation based on models having a short second hand. Refer to Illustration 2 when using this manual if your watch has a long second hand.

[Illustration 2: Models having a long second hand that indicates the reception result and so on.]

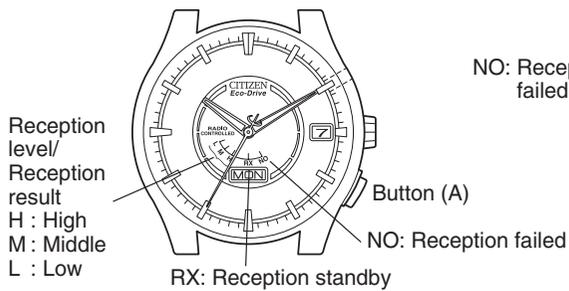


\* The illustrations shown in this manual may differ from the actual watch you have purchased.

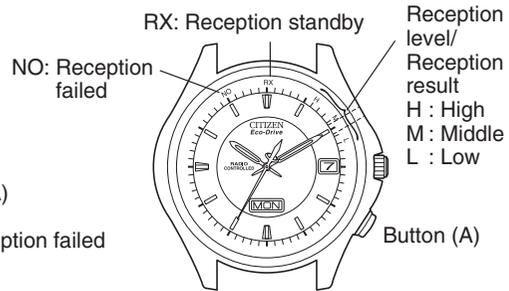
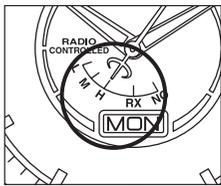
## ■ Please check the following before using your watch ■

[Models having a short second hand that indicates the reception result and so on.]

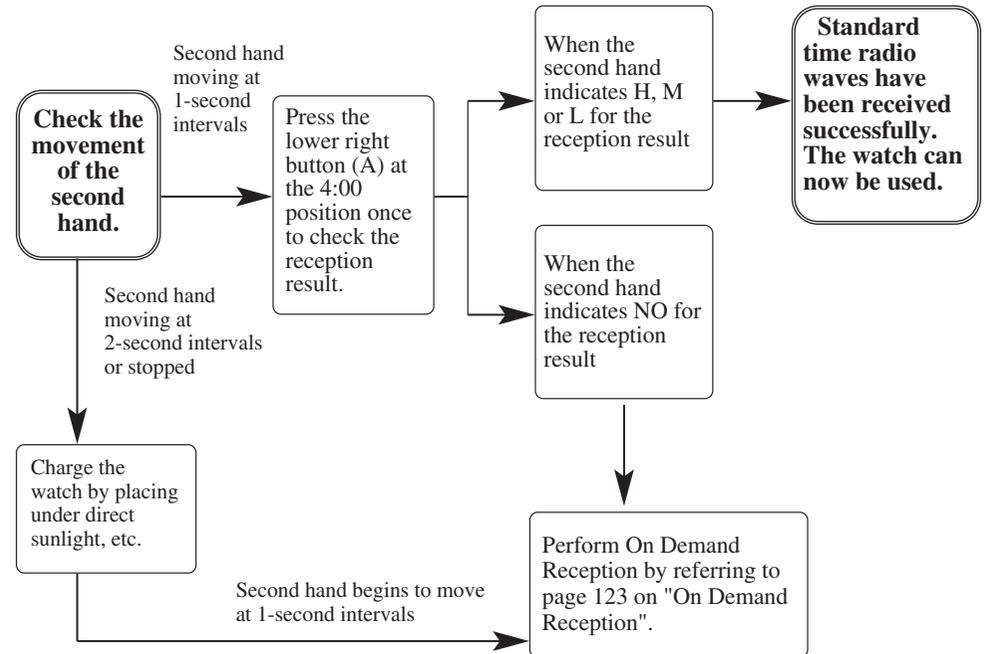
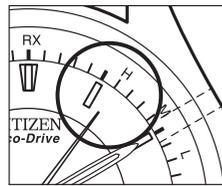
[Models having a long second hand that indicates the reception result and so on.]



[Reception in Progress]



[Reception in Progress]



## ■ Please remember the following about receiving radio waves ■

### Automatic Reception

#### (Automatic reception of radio waves)

- Automatic Reception does not require any buttons to be pressed.

Radio waves are received at 2:00 AM each day, or radio waves are automatically attempted to be received again at 4:00 AM when they are unable to be received at 2:00 AM, to set the time and date.

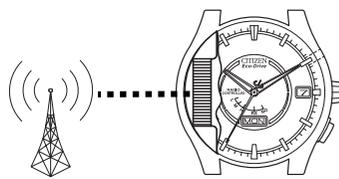
#### <Reception Procedure>

- Take the watch off of your wrist, face the 9:00 position (location of the reception antenna) towards the radio wave transmitter station and place the watch in a stable location that allows radio waves to be received easily such as near a window.

#### <Confirmation of Reception>

You can check the reception result anytime after the automatic reception time.

- Press the lower right button (A) once.
  - If the second hand points to "H, M or L", this indicates that radio waves have been received.
  - If the second hand points to "NO", this indicates that radio waves were unable to be received. If the reception result is "NO", refer to the next page for the procedure for performing on demand reception.



Refer to the section entitled "Reception Area Guidelines" on p.124 for information the direction of the transmitter station.

### On Demand Reception (Manual reception of radio waves)

- This function allows radio waves to be received at any time.

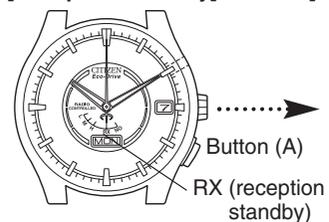
Perform on demand reception when the reception environment has changed and radio waves are unable to be received by Automatic Reception.

#### <Reception Procedure>

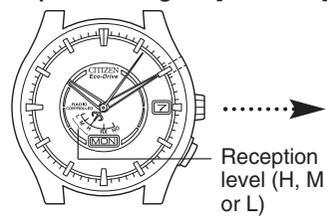
- Take the watch off of your wrist, face the 9:00 position towards the radio wave transmitter station and place the watch in a stable location that allows radio waves to be received easily such as near a window. Do not move the watch during radio wave reception.

1. Press the lower right button (A) for at least 2 seconds, and release your finger after the second hand has stopped at the RX position.
2. The second hand then moves from RX to H, M or L to indicate that reception is in progress.
3. When reception is completed, the second hand returns from H, M or L and resumes 1-second interval movement (within a maximum of 15 minutes).

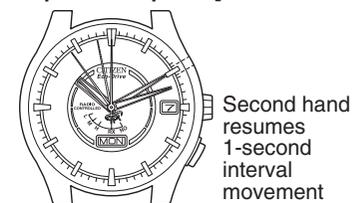
[Reception Standby]



[Reception in Progress]



[Reception Completed]



\* Refer to page 134 on "Reception of Radio Waves" for further details on the reception procedure. 123

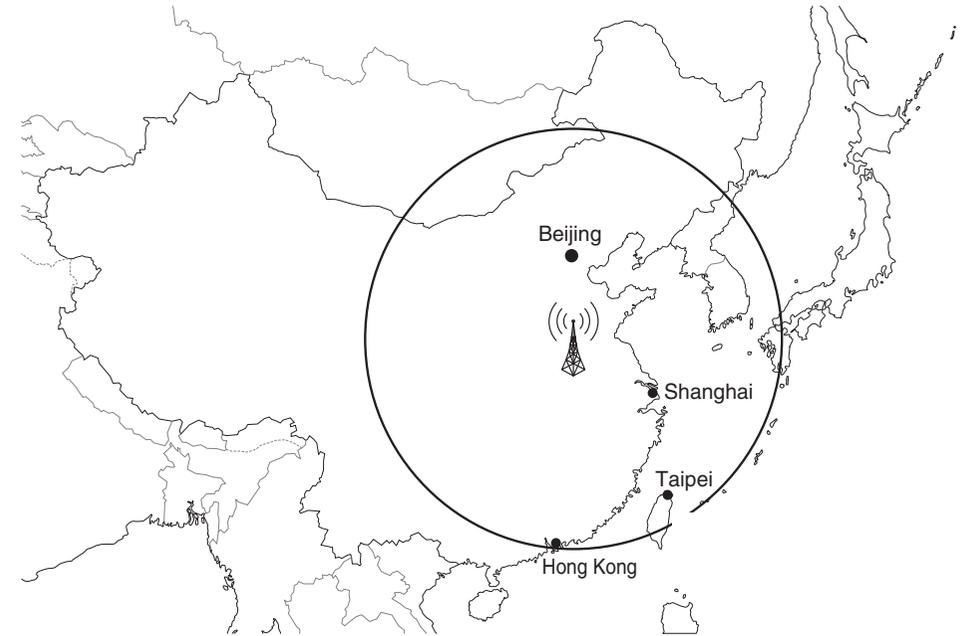
## Reception Area Guidelines

The map shows the approximate reception area. Suitable reception areas may vary according to changes in conditions for the radio wave due to factors including time, season and weather.

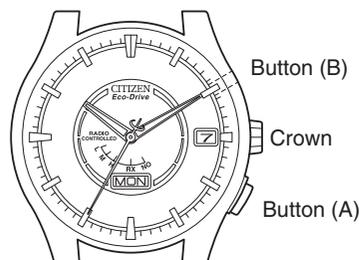
The reception area on the map is only guideline, and it may be difficult to receive the radio wave even within the areas indicated on the map.

Standard time radio wave	Radio wave transmitter
BPC	Shangqiu, Henan

The standard time radio wave used by this radio controlled watch is broadcast almost continuously, but may be interrupted occasionally due to special circumstances at the radio wave transmitter. Radio waves cannot be received during this period.



## [List of Functions of Each Component]



Function	Button or Crown Operation
<b>On Demand Reception</b> (see p.134)	Press the lower right button (A) for 2 seconds or more and then release when the second hand has stopped at RX.
<b>Confirmation of reception result</b> (see p.137)	Press the lower right button (A) once.
<b>Time difference correction</b> (see p.143)	Press the upper right button (B) once and turn the crown. After setting, press the upper right button (B) once again.
<b>Setting the time</b> (see p.138)	Pull the crown out to Position 2.
<b>Setting the date</b> (see p.140) <b>(No. of years elapsed from most recent leap year)</b>	Pull the crown out to Position 1. * The corrected parameter changes in the order of the day, number of years elapsed from most recent leap year and date each time the lower right button (A) is pressed once.

Hand Movement
The second hand stops at RX and then moves to the H, M or L to indicate the reception level. When the reception level is not indicated, this means that radio waves were unable to be received, and the second hand resumes normal hand movement.
The second hand indicates H, M, L or NO and stops.
The second hand stops at the 12:00 position. (It stops at the position corresponding to the time difference if a time difference has been set.) The second hand 12:00 position indicates a time difference of $\pm 0$ hours. One step of the second hand indicates a time difference of one hour.
Turning the crown to the right causes the second hand to make one revolution in the clockwise direction and the minute hand to advance by one minute. Turning the crown to the left causes the second hand to make one revolution in the counter-clockwise direction and the minute hand to go back by one minute. Continuously turn the crown quickly to advance the hands rapidly. * The date changes at 12:00 AM.
The second hand moves to the no. of elapsed years from the most recent leap year stored in the memory of the watch and stops. Date: Turning the crown to the right causes the date to advance by one day, while turning the crown to the left causes it to move back by one day. Day: The day changes when the lower right button (A) is pressed once and the crown is turned to the right, and changes back when the crown is turned to the left. Leap year: The second hand advances by one step when the lower right button (A) is pressed once and the crown is turned to the right, and goes back when the crown is turned to the left.

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# 1. Specifications

1. Model: H176
2. Type: Analog solar-powered watch
3. Timekeeping accuracy: Not during reception (when not receiving radio waves)  
Within  $\pm 15$  seconds per month on average (when worn at normal temperatures of  $+5^{\circ}\text{C}$  to  $+35^{\circ}\text{C}/41^{\circ}\text{F}$  to  $95^{\circ}\text{F}$ )
4. Operating temperature range:  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}/14^{\circ}\text{F}$  to  $140^{\circ}\text{F}$
5. Display functions:
  - Time: Hours, minutes, seconds
  - Calendar (day, date)
6. Additional functions:
  - Radio wave receiving function (automatic reception, on demand reception, recovery automatic reception)
  - Reception status display function (RX)
  - Reception level display function (H, M, L)

- Reception result confirmation function (H, M, L or NO)
  - Time difference correction function
  - Hand correction function
  - Shock detection function
  - Reference position confirmation/correction function
  - Photoelectric power generation function
  - Power save function (reduces power consumption)
  - Insufficient charge warning function (2-second interval movement)
  - Overcharging prevention function
7. Continuous operation times:
    - Time until watch stops without charging after being fully charged:
      - : Approx. 2 years (when power save function is operating)
      - : Approx. 6 months (when power save function is not operating)Furthermore, continuous operating times vary depending on the number of times radio waves have been received and so forth.
    - Insufficient charge warning display to stopped: Approx. 2 days
  8. Battery: Secondary battery, 1 pc.

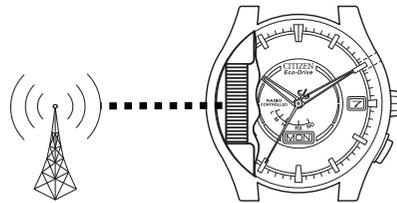
\* Specifications are subject to change without notice.

## Radio Wave Reception

### 2. For Good Reception

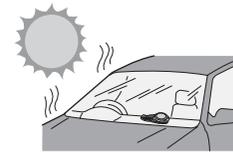
This watch incorporates an antenna for receiving radio waves inside the watch case (at the 9:00 position). For good reception, remove the watch from your wrist and place the watch in a stable location that facilitates reception of radio waves such as near a window with the 9:00 position of the watch facing in the direction of the radio wave transmitter station. Do not move the watch while receiving radio waves.

The reception level varies depending on the environment in which the watch is used. Try receiving radio waves while changing the orientation or location of the watch several times while referring to H, M or L that indicates the reception level of the watch. Find the location and direction where radio waves are received easily as indicated by H or M for the reception level.

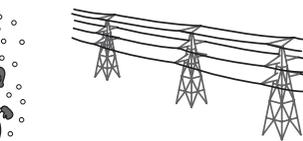


### 3. Locations Where Reception May Be Difficult

It may not be possible to properly receive radio waves at locations susceptible to generation of radio wave noise or under environmental conditions that cause difficulty in receiving radio waves.



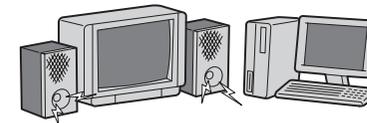
◆ Extremely hot or cold locations



◆ Near high-tension electrical lines, railway overhead wires or communication facilities



◆ Inside vehicles, including cars, trains and aero planes



◆ Near TVs, refrigerators, computers, fax machines and other electrical equipment or office appliances



◆ Near cellular phones that are in use



◆ Inside reinforced concrete buildings  
Between tall buildings or mountains, or underground

## 4. Reception of Radio Waves

There are three ways to receive radio waves consisting of **Automatic Reception**, **On Demand Reception** and **Recovery Automatic Reception**. Always make sure to remove the watch from your wrist to receive radio waves. When reception is completed, each hand automatically moves forward or backward to the received time.

### Automatic Reception (Automatic reception of radio waves)

- ⊙ Place the watch in a stable location where radio waves can be received easily such as by a window with the 9:00 position of the watch facing in the direction of the radio wave transmitter station. Radio waves are automatically received at 2:00 AM every day, or if they are unable to be received at that time, are automatically received at 4:00 every day.

### On Demand Reception (Manual reception of radio waves)

- ⊙ This function allows you receive radio waves at any time.

**Step 1):** Continuously depress the lower right button (A) for about 2 seconds, and release when the second hand has rapidly advanced to "RX" and stopped.

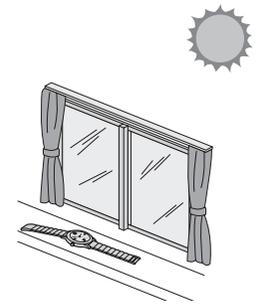
**Step 2):** Place the watch in a stable location where radio waves can be received easily such as by a window with the 9:00 position of the watch facing in the direction of the radio wave transmitter station.

- The second hand then moves from RX to H, M or L indicating that radio waves are being received.
- When reception is completed, the second hand moves from H, M or L and returns to 1-second interval movement.

The reception result can be confirmed by referring to "4. B. Confirmation of Reception Result".

### Recovery Automatic Reception

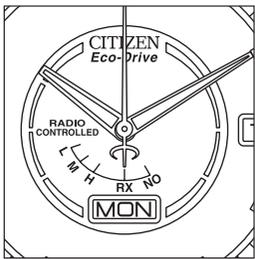
- ⊙ After the watch has stopped as a result of being insufficiently charged, radio waves are received once automatically when the watch is sufficiently recharged by exposing to light. Try to keep the watch charged at all times so that it does not become insufficiently charged.



- \* When the watch is receiving the radio wave signal, all of the hands will stop. To check the time, hold the lower right button (A) for 2 seconds to cancel radio wave reception. The hands will then return to the current time.

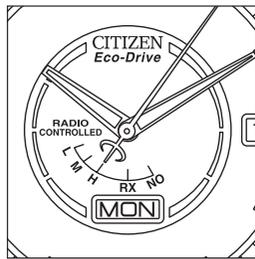
## A. Position of the Second Hand During Reception

[Reception Standby]



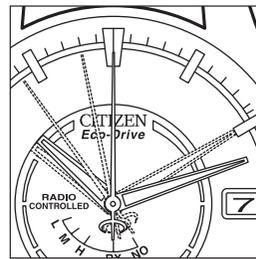
- ◆ Second hand moves to RX and stops

[Reception in Progress]



- ◆ Second hand moves from RX to reception level H, M or L and reception of radio waves begins.

[Completion of Reception]



- ◆ If radio waves have been received properly, the second hand returns to 1-second interval movement, and each hand is automatically corrected to the correct time.

### <Time Required for Reception>

It may take from about 2 minutes to up to 13 minutes to receive radio waves depending on weather conditions on that day and surrounding noise. In addition, the watch may return to the normal display after about 60 seconds if the second hand continues to point to the reception standby (RX) position without moving to H, M or L.

**[NOTE] : The second hand may make one revolution and indicate the reception level again if the transmitter station has changed while reception is in progress or radio wave reception has been interrupted by changes in the reception environment and so forth. Do not move the watch until the second hand returns to 1-second interval movement.**

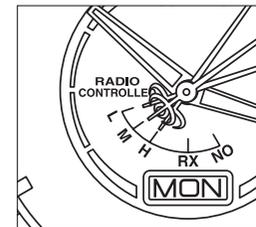
## B. Confirmation of Reception Result

☉ This function allows you to check whether radio wave reception has been successful or failed.

**Step 1): Press the lower right button (A) once. The second hand rapidly moves to H, M, L or NO to indicate the reception result.**

**Step 2): The second hand automatically returns to normal hand movement after the reception result has been displayed for 10 seconds. The second hand can also be returned to 1-second interval movement by pressing the lower right button (A) while the reception result is displayed.**

- If the second hand indicates NO for the reception result, try receiving radio waves by on demand reception after finding a location and direction where radio waves are received easily.



H, M and L indicate the reception level, and have no effect on performance.

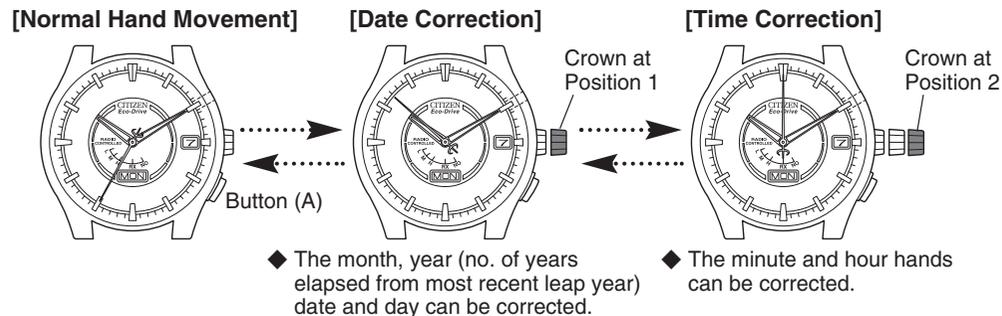
Reception Level	Reception Result After Receiving Radio Waves
H	When radio waves have been received at a high level
M	When radio waves have been received at a medium level
L	When radio waves have been received at a low level
NO	When radio wave reception has failed

<The time display may shift slightly depending on the reception environment and internal watch processing even if radio waves are properly received.>

## Manually Setting the Time and Date

### 5. Setting the Time

The time and date are corrected automatically when this watch receives radio waves. The time and date can also be set manually when using the watch overseas or other locations where radio waves do not reach. Automatic reception or on demand reception can then be performed after returning to a location where radio waves can be received.



◎ Select the calendar mode (month, year, date and day) to be corrected by pressing the lower right button (A) once, and then by turning the crown.

### <Time Correction Procedure>

**Step 1): Pull the crown out to Position 2.**

- The second hand rapidly moves to the 12:00 position and stops.

**Step 2): Turn the crown to set the minute hand and hour hand.**

- ① Turning the crown to the right (by 1 click) causes the second hand to make one revolution in the clockwise direction and the minute hand to advance by 1 minute.
  - ② Turning the crown to the left (by 1 click) causes the second hand to make one revolution in the counter-clockwise direction and the minute hand to go back by 1 minute.
- Continuously turning the crown (by 2 clicks or more) causes the second, minute and hour hands to advance continuously by 12 hours.
  - Turn the crown to the left or right to interrupt continuous movement of the hands.

[NOTE] The date changes at 12:00 AM. Please pay attention to AM and PM.

**Step 3): Return the crown to the normal position in synchronization with a telephone time signal or other time service.**

## 6. Setting the Date

### <Date Correction Procedure>

#### Step 1): Pull the crown out to Position 1.

- The watch enters the date correction mode, and the second hand moves to the position of the month and no. of elapsed years stored in the memory the watch and stops.

#### Step 2): Turn the crown to set the date.

- ① Turning the crown to the right (by 1 click) advances the date by 1 day.
- ② Turning the crown to the left (by 1 click) moves the date back by 1 day.

#### Step 3): Press the lower right button (A) once and turn the crown to set the day.

- ① Turning the crown to the right (by 1 click) advances the day.
- ② Turning the crown to the left (by 1 click) moves the day back.

#### Step 4): Press the lower right button (A) once, turn the crown and read the number of elapsed years from the Quick Reference Chart for Number of Years Since Leap Year to set the month and number of elapsed years from the most recent leap year.

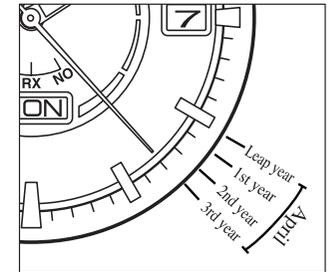
### <Reading the Month and Year (No. of Elapsed Years from Most Recent Leap Year) with the Second Hand>

#### ☆ Reading the Month Indicated by the Second Hand

Second hand between 1:00 and 2:00: January  
 Second hand between 2:00 and 3:00: February  
 ⋮  
 Second hand between 12:00 and 1:00: December

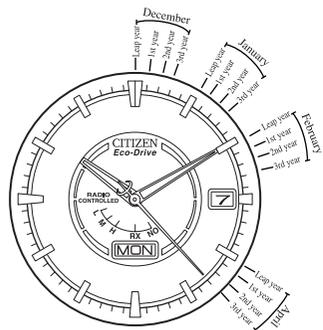
#### Example: April in 3rd year after most recent leap year

Read the number of elapsed years from the most recent leap year from the Quick Reference Chart for Number of Years Since Leap Year.  
 \* Align the second hand at the 23 seconds position (4:00 to 5:00 zone).



### <Quick Reference Chart for Number of Years Since Leap Year>

Year	Elapsed year	Year	Elapsed year	Year	Elapsed year
2004	Leap year	2008	Leap year	2012	Leap year
2005	1st year	2009	1st year	2013	1st year
2006	2nd year	2010	2nd year	2014	2nd year
2007	3rd year	2011	3rd year	2015	3rd year



### ☆ Reading the "No. of Elapsed Years" indicated by the Second Hand

Leap year:

Starting point of each month zone indicated by the Second Hand

1st year after most recent leap year:

1st graduation of each month zone indicated by the Second Hand

2nd year after most recent leap year:

2nd graduation of each month zone indicated by the Second Hand

3rd year after most recent leap year:

3rd graduation of each month zone indicated by the Second Hand

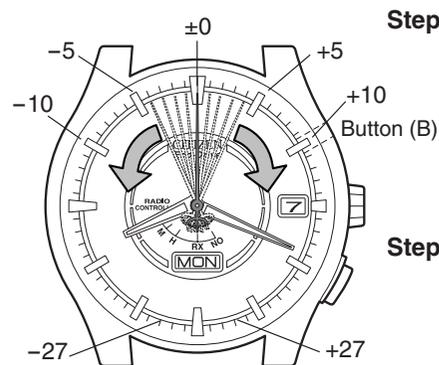
**Step 5):** Check what year the current year is after the most recent leap year and turn the crown to the right to align the second hand at the position corresponding to the month and no. of elapsed years. Turning the crown to the left (by 1 click) causes the second hand to move in reverse.

**Step 6):** Return the crown to the normal position.

- Each time the crown is pulled out to Position 1 and the lower right button (A) is pressed once, the second hand moves to the date and day to be corrected to indicate that the watch has entered the correction mode.

## 7. Time Difference Correction Procedure

- This function lets you set a time difference in 1 hour units for the local time when traveling to a region or country in a different time zone by operating the second hand.



**Step 1):** When the upper right button (B) is pressed once, the second hand stops at the 12:00 position, and the second hand 12:00 position indicates a time difference of  $\pm 0$  hours.

\* The second hand stops at the position corresponding to the time difference when a time difference has been set.

**Step 2):** The time difference can be advanced by 1 hour with one step of the second hand by turning the crown to the right without pulling it out. The time difference can be turned back by 1 hour with one step of the second hand by turning the crown to the left.

**Step 3):** After setting the time difference, the second hand returns to 1-second interval movement after indicating rapidly the time difference set time when the upper right button (B) is pressed once or when none of the buttons have been pressed for 60 seconds.

### Example:

When going to an area with a time difference of +1 hour relative to China, align the second hand with the 1 second position.

## Checking and Correcting the Reference Position

### 8. Hand Correction Function

(Hand Reference Position Automatic Correction Function)

#### What is the Hand Correction Function ? (Hand Reference Position Automatic Correction Function)

This function checks the hand positions at predetermined intervals to determine if the hand reference positions are correct, and if they are detected to have shifted out of position, rapidly corrects the second, minute and hour hands to automatically keep the correct time.

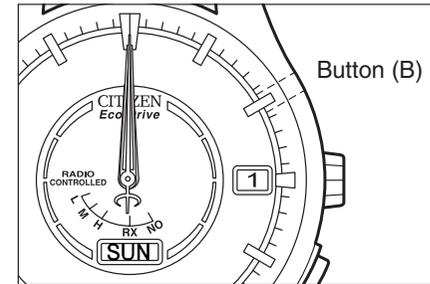
#### Shock Detection Function

This function prevents the second, minute and hour hands from shifting when the watch is subjected to shocks.

- If the watch should happen to be subjected to a strong impact or placed in an environment subjected to magnetism or static electricity, the correct time may not be displayed even if radio waves are received. If this happens, check the reference position. Refer to "9. Checking the Reference Position" on the following page.

### 9. Checking the Reference Position

Radio wave watches display the standard time and date received on the basis of a hand reference position of "12:00:00", a date of the "1st", and "SUN" for the day.



#### Indication of correct reference position:

Time: 12:00:00  
Date: 1st  
Day: SUN

- ◎ Check that the reference position is displayed correctly.

**Step 1): Continuously depress the upper right button (B) for about 5 seconds or more with the crown at the normal position, and release once the second hand has begun to move either forward or backward. All of the hands and calendar move rapidly and stop at the reference position stored in the memory of the watch.**

- This may take up to about 7 minutes.

If the display appears different from the correct reference position display, refer to section 10 entitled "Manually Correcting the Reference Position".

## 10. Manually Correcting the Reference Position

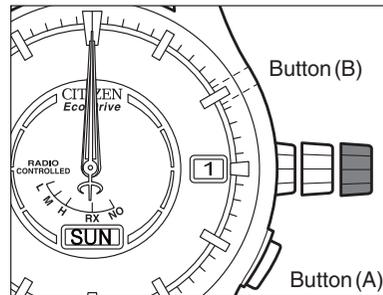
Correct the reference position if the watch does not indicate 12:00:00 for the time, the 1st for the date and SUN for the day.

### <Correcting the Reference Positions of the Hour Hand, Minute Hand, Second Hand, Date and Day>

**Step 1): Press the upper right button (B) for about 5 seconds or more, release it once the second hand has started to move rapidly, and then wait after pulling the crown out to Position 2 while the hand is moving.**

**Step 2): Turn the crown to align the date at "1".**

- ① Continuously turning the crown (by 2 clicks or more) to the right causes the date to change continuously, while continuously turning to the left causes it to return.
- Turn the crown to the left or right to stop the date from changing.



- ② When a "1" appears in the center of the date window on the watch dial, turn the crown to the left or right to stop the date from changing.
- Each time the lower right button (A) is pressed once, the date, day or second hand to be corrected moves indicating that the watch is in the correction mode.

**Step 3): Press the lower right button (A) once and turn the crown to set the day to "SUN".**

- ① Turning the crown continuously to the right (by 2 clicks or more) causes the day to change, while turning continuously to the left causes it to return.

**Step 4): Press the lower right button (A) once and turn the crown to set the hands to "00:00:00".**

- ① Turning the crown to the right (by 1 click) causes the second hand to advance rapidly by 1 minute, while turning it to the left causes the second hand to move back by 1 minute.
- ② Continuously turning the crown (by 2 clicks or more) causes the second hand to rotate rapidly, and the minute hand and hour hand moves continuously in coordination with the second hand.

**Step 5): After setting the reference position, return the crown to the normal position and press the upper right button (B) once to rapidly return each hand, date and day to the current time and date.**

- Although this completes the procedure for setting the reference position, perform on demand reception before using to set the watch to the correct time.

## Solar Power

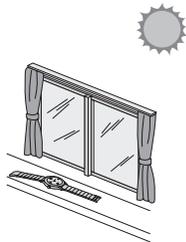
### 11. Solar Power Function

This watch uses a secondary battery to store electrical energy. Once fully charged, this watch will continue to keep the correct time for about 6 months during normal use.

#### <For Optimum Use of this Watch>

**In order to use this watch comfortably, try to store the watch in a bright location at all times.**

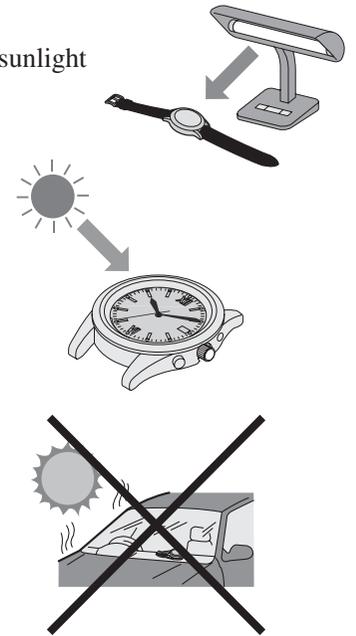
- ◆ When not wearing your watch, try to place it next to a window or other bright location that allows the dial to be exposed to sunlight. This will keep the watch charged and enable it to continue to run properly at all times.



- ◆ Charge the watch by exposing the watch dial to direct sunlight or light from a fluorescent lamp.

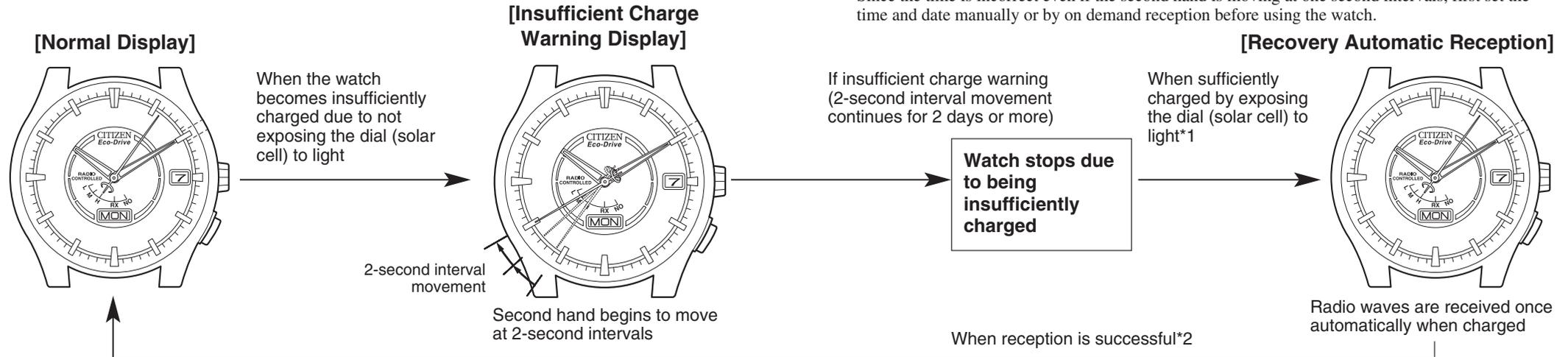
- ◆ If you usually wear long sleeves, the watch may be covered thereby preventing it from being exposed to light resulting in the watch becoming insufficiently charged. It is recommended to charge the watch once a month by exposing to direct sunlight.

**[NOTE] Avoid charging the watch at a location such as an automobile dashboard or other location that reaches a high temperature.**



## 12. Unique Functions of Solar-Powered Watches

◎ When the watch becomes insufficiently charged, the display changes as shown below.



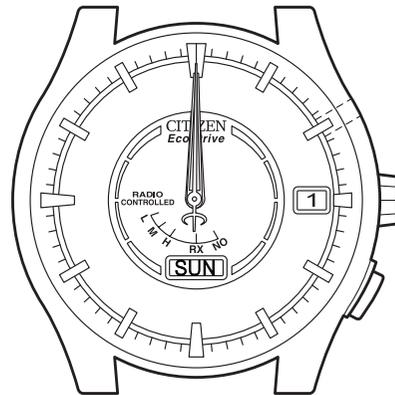
- \*1 If the watch has stopped as a result of being insufficiently charged:**
  - A minimum of about 30 minutes are required until recovery automatic reception even if the watch is exposed to light.
  - Sufficiently charge the watch by referring to “General Reference for Charging Times”.
- \*2: If recovery automatic reception has failed:**
  - Since the time is incorrect even if the second hand is moving at one second intervals, first set the time and date manually or by on demand reception before using the watch.

## A. Power Save Function

When the watch dial is continuously not exposed to light for 7 days or more, each hand stops at the 12:00 position and the watch enters the Power Save mode (to reduce power consumption).

### [The following functions continue to operate in the power save mode.]

- Time is continuously kept internally by the watch.
- The calendar (date, day) is changed automatically.



Stopped at 12:00 position

### <Canceling Power Save>

The power save function is canceled automatically when the watch dial is exposed to light.

- When the power save function is canceled, each hand rapidly returns to the current time and the second hand begins one-second interval movement.
- Two-second interval movement begins if the watch is insufficiently charged. When this happens, sufficiently charge the watch so that it returns to one-second interval movement.

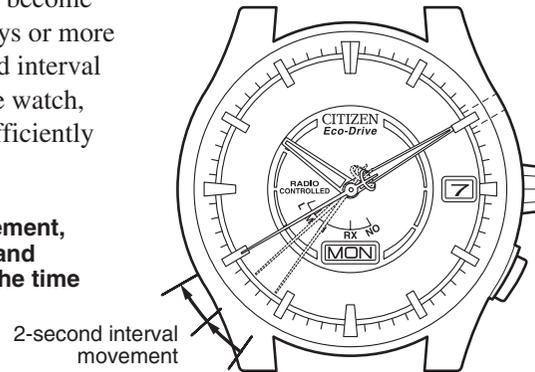
### [Note]

- Check the reception result by pressing the lower right button (A) after the Power Save function has been canceled. If the reception result is "NO", perform on demand reception before using.
- Power save cannot be canceled by operating the crown or buttons. It can only be canceled by exposing the watch to light.

## B. Insufficient Charge Warning Function

The second hand changes from 1-second interval movement to 2-second interval movement to indicate that the watch has become insufficiently charged. After about 2 days or more have passed since the start of two-second interval movement without light shining onto the watch, the watch stops as a result of being insufficiently charged.

**[Note] During two-second interval movement, automatic reception and on demand reception are not available, and the time cannot be corrected manually.**



- ◆ If the watch becomes insufficiently charged while radio wave reception, confirmation of reception result, time difference correction or checking or setting the reference position is in progress, the operation is interrupted and the watch returns to the time prior to the operation being performed. The watch begins 2-second interval movement at this time. Try to keep the watch charged at all times to prevent it from becoming insufficiently charged.

## C. Overcharging Prevention Function

**This function eliminates any worry regarding effects on the secondary battery, timekeeping accuracy, performance or functions of the watch no matter how much the watch is charged.**

When the secondary battery becomes fully charged by exposing the solar cell to light, the overcharging prevention function is activated automatically to prevent the battery from being charged further.

## D. General Reference for Charging Times

The time required for charging varies according to the model of the watch (color of the dial, etc.). The following times are shown below to serve only as a reference.

\* Charging time refers to the time during which the watch is continuously exposed to light.

Illuminance (lx)	Environment	Charging time (Approx.)		
		Charging time for 1 day of operation	Charging time from the stopped state until 1-second interval movement	Charging time until fully charged
500	Inside an ordinary office	4 hours	14 hours	-----
1,000	60-70 cm (24-28in) under a fluorescent lamp (30 W)	2 hours	6.5 hours	-----
3,000	20 cm (8in) under a fluorescent lamp (30 W)	40 minutes	2.5 hours	150 hours
10,000	Outdoors, cloudy weather	11 minutes	1 hour	40 hours
100,000	Outdoors, summer, under direct sunlight	4 minutes	40 minutes	30 hours

Charging time for 1 day of operation: Time required for charging the watch to run for 1 day at normal hand movement.

Full charging time: Time required for maximally charging the watch when it is stopped due to being insufficiently charged.

**[NOTE]** The watch will continue to run for about 6 months without additional charging once it has been fully charged. The watch will continue to keep time for about 2 years when the power save function is operating. However, once the watch has stopped as a result of being insufficiently charged, a considerable amount of time is required until it starts to run again as indicated in the table above. It is therefore recommended to charge your watch everyday. Furthermore, it is recommended to charge your watch by exposing to direct sunlight once a month.

## E. Handling Precautions

### **WARNING Handling of Secondary Battery**

- ◆ Never attempt to remove the secondary battery from the watch. If the secondary battery must unavoidably be removed, store it out of the reach of small children to prevent accidental swallowing. If the secondary battery should happen to be swallowed, consult a physician immediately and seek medical attention.
- ◆ Do not dispose of the secondary battery with ordinary garbage. Please follow the instructions of your municipality regarding collection of batteries to prevent the risk of fire or environmental contamination.

### **WARNING Only use the specified secondary battery**

- ◆ The watch will not operate if another type of battery is attempted to be installed in the watch. If an ordinary silver battery is forcibly installed in the watch and the watch is charged, overcharging may occur that will eventually cause the battery to rupture. This can result in the risk of the watch being damaged or injury to the wearer. Never attempt to install a battery in the watch other than the specified secondary battery.

### **CAUTION Charging Precautions**

- ◆ Avoid charging the watch at high temperatures (about 60°C /140°F or higher). Allowing the watch to reach high temperatures during charging can cause discoloration or deformation of external components or a malfunction of the components of the movement.  
Examples:
  - Charging by placing the watch too close to a light source that may become hot such as an incandescent lamp or halogen lamp.
  - Charging by placing the watch on an automobile dashboard or other location that can easily reach a high temperature.
- ◆ When charging the watch with an incandescent lamp, halogen lamp or other light source that may reach a high temperature, always make sure to place the watch at least 50 cm (20in) away from the light source to prevent the watch from reaching a high temperature.

## Troubleshooting

### <Radio Wave Reception Function>

Try checking the following when you think a problem has occurred.

Problem	Check Items	Corrective Actions
Watch does not begin reception	<ul style="list-style-type: none"> <li>● Does the second hand move to "RX: Reception standby"?</li> </ul>	<ul style="list-style-type: none"> <li>● Continuously depress the lower right button (A) and release when the second hand points to the RX position.</li> </ul>
Time does not match telephone time service even though radio waves can be received	<ul style="list-style-type: none"> <li>● Has the reference position been set correctly?</li> </ul>	<ul style="list-style-type: none"> <li>● Check the reference position. If the reference position is not correct, refer to "10. Manually Correcting the Reference Position" and reset the reference position.</li> </ul>

Problem	Check Items	Corrective Actions
Unable to receive radio waves (even within a receivable area)	<ul style="list-style-type: none"> <li>● Are there objects that block radio waves or generate noise nearby?</li> <li>● Are radio waves attempted to be received away from a window?</li> </ul>	<ul style="list-style-type: none"> <li>● Try receiving radio waves while facing the 9:00 position of the watch towards a transmitter station while avoiding objects that block radio waves or generate noise. Try changing the direction, location and angle of the watch several times to find the location near a window at which radio waves are received easily. Refer to "3. Locations where Reception may be Difficult" in the section on Radio Wave Reception.</li> </ul>
	<ul style="list-style-type: none"> <li>● Has the watch been moved while the second hand is indicating RX or a reception level of H, M or L during reception?</li> </ul>	<ul style="list-style-type: none"> <li>● Wait until reception is completed (until it returns to normal hand movement) before moving the watch.</li> </ul>

## Precautions

### WARNING: Water-resistance performance

There are several types of water-resistant watches, as shown in the following table.

The unit "bar" is roughly equal to 1 atmosphere.

\* WATER RESIST(ANT) xx bar may also be indicated as W.R. xx bar.

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

For correct use within the design limits of the watch, confirm the level of water-resistance of your watch, as indicated on the dial and case, and consult the table.

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 air tank)	Operation of the crown or button with moisture visible
<b>OK</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>OK</b>	<b>OK</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>OK</b>	<b>OK</b>	<b>OK</b>	<b>NO</b>	<b>NO</b>

### **WARNING: Water-resistance performance**

- Water-resistance for daily use (to 3 atmospheres): This type of watch is water-resistant to minor exposure to water. For example, you may wear the watch while washing your face; however, do not use while swimming.
- Upgraded water-resistance for daily use (to 5 atmospheres): This type of watch is water-resistant to moderate exposure to water. You may wear the watch while swimming; however, do not use while skin diving or scuba diving.
- Upgraded water-resistance for daily use (to 10/20 atmospheres): This type of watch may be used for skin diving; however, it is not designed for scuba or saturated diving using helium gas.

### **CAUTION**

- Be sure to use the watch with the crown pressed in (normal position). If your watch has a screw-lock type crown, be sure that the crown is locked securely.
- Do NOT operate the crown or button when the watch is wet. Water may enter the watch and compromise water-resistance.
- The durability of a leather band may be affected when wet, owing to the properties of the material. In the case of a watch of upgraded water resistance for daily use that is frequently used in water, fading, peeling of adhesive or other problems may occur. It is therefore recommended to use another type of band (metal or rubber watchband).
- If the watch is used in seawater, rinse with fresh water afterward and wipe with a dry cloth.

- If moisture has entered the watch, or if the inside of the crystal is fogged up and does not become clear within a day, take the watch to your nearest Citizen Service Center for repair. Leaving the watch in such a state will allow corrosion to form inside.
- 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, buttons, etc.) may come off.

### **CAUTION: Keep your watch clean.**

- Leaving dust and dirt deposited between the case and crown may result in difficulty in pulling the crown out. Rotate the crown while in its normal position, from time to time, to loosen dust and dirt and then brush it off.
- Dust and dirt tend to be deposited in gaps in the back of the case or band. Deposited dust and dirt may cause corrosion and soil your clothing. Clean the watch occasionally.

### **Cleaning the Watch**

- Use a soft cloth to wipe off dirt, perspiration and water from the case and crystal .
- Use a soft, dry cloth to wipe off perspiration and dirt from the leather band.
- To clean a metal, plastic, or rubber watchband, wash away dirt with mild soap and water. Use a soft brush to remove dust and dirt jammed in the gaps in the metal band. If your watch is not water-resistant, take it to your dealer.

**NOTE:** Avoid using solvents (thinner, benzene, etc.), as they may damage the finish.

**CAUTION: Operating environment**

- Use the watch within the operating-temperature range specified in the instruction manual.  
Using the watch where temperatures are outside the specified range, may result in deterioration of functions or even stoppage of the watch.
- Do NOT use the watch in places where it is exposed to high temperature, such as in a sauna.  
Doing so may result in a skin burn.
- Do NOT leave the watch in a place where it is exposed to high temperature, such as the glove compartment or dash-board of a car.  
Doing so may result in deterioration of the watch, such as deformation of plastic parts.
- Do NOT place the watch close to a magnet.  
Timekeeping will become inaccurate if you place the watch close to magnetic health equipment such as a magnetic necklace or a magnetic latch of a refrigerator door or handbag clasp or the earphone of a mobile phone. If this has occurred, move the watch away from the magnet and reset the time.
- Do NOT place the watch close to household appliances that generate static electricity.  
Timekeeping may become inaccurate if the watch is exposed to strong static electricity, such as is emitted from a TV screen.
- Do NOT subject the watch to a strong shock such as dropping it onto a hard floor.
- Avoid using the watch in an environment where it may be exposed to chemicals or corrosive gases.

If solvents, such as thinner and benzine, or substances containing such solvents come in contact with the watch, discoloration, melting, cracking, etc. may result. If the watch comes in contact with mercury used in thermometers, the case, band or other parts may become discolored.

**Periodical inspections**

Your watch needs inspection once in every two or three years for safety and long use. 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 Citizen genuine parts upon replacement.