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## Crown Operation –Models Equipped with a Crown Cover–

### <Opening and Closing the Crown Cover>

Insert your fingernail between the case and crown cover and open the crown cover so that it opens to the outside.

\* Always make sure to close the crown cover after operating the crown.



### <Important Point when Turning the Crown for Setting Time and Date, Correcting Time Difference or Setting Reference Position>

Although the crown can be operated by turning while pinching between your fingers or fingernails (Fig. 1), the crown can be turned more easily by turning while pressing against the crown with the thick portion of your finger (Fig. 2).

\* Please refer to the manual for information on the procedures for setting the time and date, correcting time difference and setting the reference position.

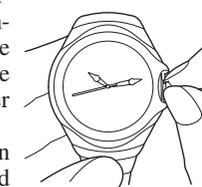


Fig.1

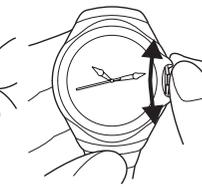


Fig.2

## 1. Features

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This watch is a solar-powered watch that contains a solar cell in its face that drives the watch by converting light energy into electrical energy.

It is equipped with numerous functions including a perpetual calendar that changes the year, month and day automatically through February 28, 2100, including leap years, a time difference correction function that makes it possible to easily change the time difference without stopping the watch, and a power save function that reduces current consumption when the solar cell is not exposed to light.

## 2. Before Using

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This watch is a solar-powered watch. Make sure to charge the watch prior to use by adequately exposing it to light. If the watch should happen to stop as a result of being insufficiently charged, charge by exposing the watch to intense light such as direct sunlight.

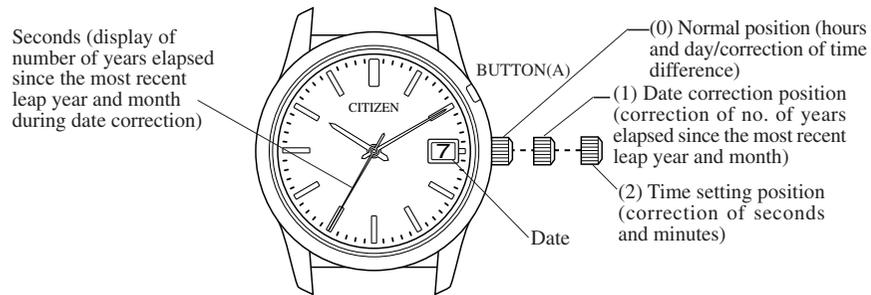
A secondary battery is used in this watch to store electrical energy. This secondary battery is a clean energy battery that does not contain mercury or other toxic substances. Once fully charged, the watch circuit will continue to keep time for about 2 years without additional charging (when the power save function is operating).

### <Proper Use of this Watch>

To use this watch comfortably, make sure to recharge it before it stops running completely. There is no risk of overcharging no matter how much the watch is charged (Overcharging Prevention Function). **It is recommended that the watch be recharged everyday.**

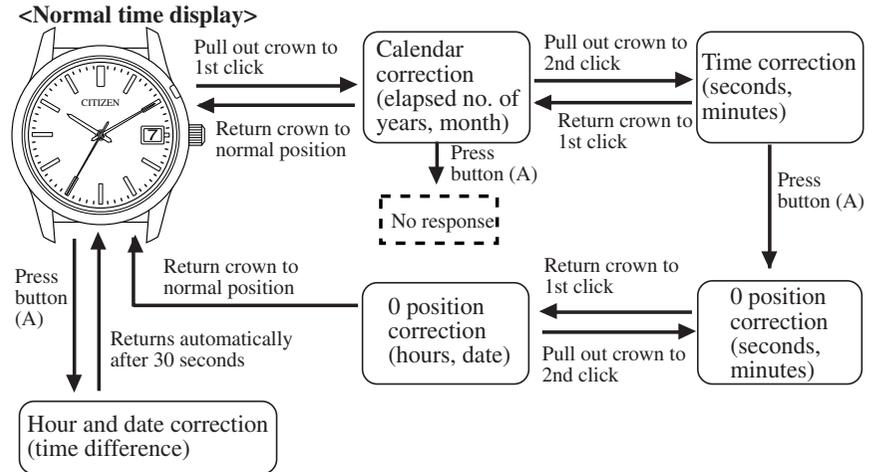
### 3. Setting the Time and Date

In the case the crown is of the screw-lock type, operate the crown after first loosening the screw and then make sure to securely retighten the screw after the crown has been operated.



### [Switching the Mode]

The correction mode is switched by operating the crown and button as indicated below.



## **[Setting the Time and Date]**

### **<Correcting Minutes and Seconds>**

1. When the crown is pulled out to the second click, the second hand rapidly advances to the 0 seconds position and stops.
  - \* Align the hands at the reference position after performing the all-reset procedure when the second hand does not stop at the 0 seconds position.
2. Turn the crown and set the minutes.
  - (1) When the crown is turned to the right, the second hand makes one revolution and the minute hand moves forward by 1 minute (clockwise rotation).
  - (2) When turned to the left, the second hand makes one revolution in the counter-clockwise direction and the minute hand moves backward by one minute (counter-clockwise rotation).
  - \* When the crown is turned continuously, the second and minute hands advance rapidly. Turn the crown to either the left or right to stop the hands from advancing rapidly.
  - \* Since the movement of the hour hand is linked to movement of the minute hand, the watch can also be set by rapidly advancing the minute hand.
  - \* Changing of the date is linked to movement of the hour hand. The date is rapidly advanced automatically when set to a date that does not exist (such as February 30 or April 31). When the date is advancing rapidly, the minute and

second hands are paused at 12:00 AM, and the hour hand moves continuously to rapidly advance past the non-existent date.

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

### **<Correcting Hours and Date>**

When the hours (hour hand) are incorrect, the hour hand can be corrected without stopping the minute and second hands. Since movement of the date is linked to movement of the hour hand, the date cannot be corrected alone. The date is changed by correcting the hour hand. The hour hand and date can be corrected for 30 seconds after pressing button (A) or for 30 seconds after the hands have finished moving.

1. Put the crown in the normal position and press button (A).
  - \* The second hand performs a demonstration movement (forward rotation → backward rotation → forward rotation).
2. Turn the crown to set the hours.
  - (1) When turned to the right, the hour hand moves forward by 1 hour (clockwise rotation).
  - (2) When turned to the left, the hour hand moves backward by 1 hour (counter-clockwise rotation).

- \* When the crown is turned continuously, the hour hand advances rapidly. Turn the crown to either the left or right to stop the hour hand from advancing rapidly.
  - 3. Turn the crown continuously to advance the hour hand rapidly and correct the date.
    - \* The date changes between the hours of about 10:00 PM and 3:00 AM.
    - \* When the month is set to a month with 30 days, even when the date changes from the 30th to the 31st, the non-existent date is corrected to the 1st of the following month by advancing the date rapidly.
- Note:** When correcting the time, pay attention to AM and PM. The time when the date has changed is AM.

#### <Correcting Elapsed No. of Years and Month>

When the crown is pulled out to the 1st click, the second hand switches to display of the number of years that elapsed since the most recent leap year and the month.

1. When the crown is pulled out to the 1st click, the second hand moves to the year and month position stored in memory and stops.
2. Turn the crown and set the year and date.
  - (1) Turn the crown to the right to set the second hand to the position corresponding to the year (number of years elapsed since the most recent leap

- year) and month.
- (2) When the crown is turned to the left, the second hand moves backward.
- \* Turning the crown continuously causes the second hand to advance rapidly. Turn the crown to the right or left to stop the second hand from advancing rapidly.

#### **Examples:**

- \* In the case of December in a leap year: Align the second hand at 0 seconds.
  - \* In the case of April in a year that is three years after the most recent leap year: Align the second hand at 23 seconds (between 4:00 and 5:00).
3. Always make sure to return the crown to the normal position after correcting the years and month. The second hand catches up to the current seconds and the hands begin to move.

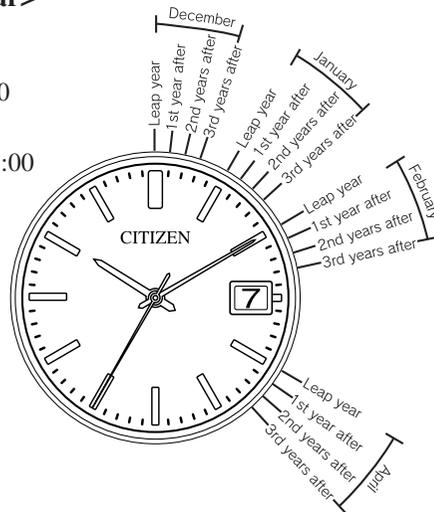
#### **[When the Date has been Set to a Date that does not Exist]**

When the month has been changed and the date has been set to a date that does not exist after setting the date, the date automatically changes to the first day of the following month when the crown is returned to the normal position from the correction state.

**<How to Read Month and Year>**

**☆How to read the month:**

January: Between 1:00 and 2:00  
 February: Between 2:00 and 3:00  
 .....  
 December: Between 12:00 and 1:00



**☆How to read the year:**

Leap year: First mark in each month zone  
 1 year after most recent leap year: Second mark in each month zone  
 2 years after the most recent leap year: Third mark in each month zone  
 3 years after the most recent leap year: Fourth mark in each month zone

**<Quick Reference Table for No. of Years Since Most Recent Leap Year>**

Year	Years elapsed	Year	Years elapsed
2000	Leap year	2004	Leap year
2001	1st year after leap year	2005	1st year after leap year
2002	2nd year after leap year	2006	2nd year after leap year
2003	3rd year after leap year	2007	3rd year after leap year

## 4. Correcting the Time Difference

When button (A) is pressed and the crown is turned, time difference can be corrected in 1 hour units.

The time difference can be corrected for 30 seconds after button (A) has been pressed or for 30 seconds after the hands finish moving.

1. Put the crown in the normal position.
2. When button (A) is pressed, the second hand performs a demonstration movement (forward rotation → backward rotation → forward rotation).
3. Correct the time difference by turning the crown to the right or left.
  - (1) When the crown is turned to the right, the hour hand moves forward by one hour (clockwise rotation).
  - (2) When the crown is turned to the left, the hour hand moves backward (counter-clockwise rotation) by one hour.

\* Turning the crown continuously causes the hour hand to advance rapidly. Turn the crown to the left or right to stop the hour hand from advancing rapidly.

**Note (1):** Pay attention to AM and PM when correcting the time difference.

**(2):** When returning the time difference to its original setting, return the hour hand in the opposite direction in which it was corrected.

**Example:** Setting the time in London (local time) when the time in Tokyo (home time) is 10:00 AM:

The time difference between Tokyo and London is -9 hours. Since it is 1:00 AM in London when it is 10:00 AM in Tokyo, in the case of correcting the time difference at this time:

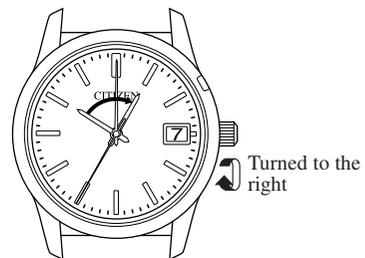
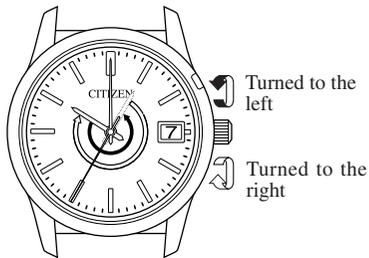
1. Press button (A).
2. Turn the crown to the left to turn the hands backward (counter-clockwise) by 9 hours.

**Note:** If the crown is turned to the right to move the hands clockwise to set the time to 1:00, the time will be 1:00 PM and the calendar function will not operate correctly, preventing the date from changing at the proper time.

—Case of Correcting Time Difference by -9 Hours—

<Proper Correction Procedure>

<Improper Correction Procedure>



→ : Direction of time difference correction  
⇨ : Direction of returning time difference

→ : Direction of improper time difference correction

The time difference cannot be corrected when the second hand is moving at two-second intervals indicating that the watch is insufficiently charged. Correct the time difference after charging the watch by exposing it to light so that the second hand returns to one-second interval movement.

[Reference: Time Differences of Major World Cities Based on UTC]

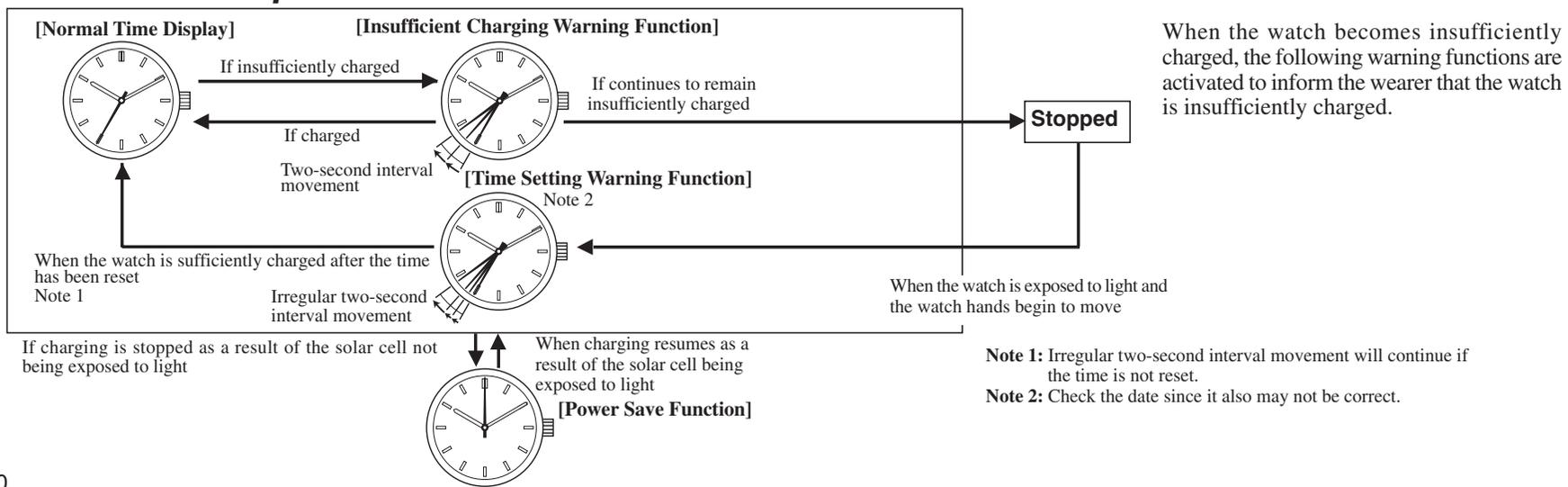
City name	Time difference	Daylight savings time	City name	Time difference	Daylight savings time
London	±0	○	Bangkok	+7	×
Paris	+1	○	Hong Kong	+8	×
Cairo	+2	○	Tokyo	+9	×
Moscow	+3	○	Sydney	+10	○
Dubay	+4	×	Noumea	+11	×
Karachi	+5	×	Auckland	+12	○
Dakar	+6	×	Honolulu	-10	×

\* Cities (regions) in which daylight savings time is used are indicated with a ○, while those in which it is not are indicated with an ×.

City name	Time difference	Daylight savings time
Anchorage	-9	○
Los Angeles	-8	○
Denver	-7	○
Chicago	-6	○
New York	-5	○
Caracas	-4	×
Rio de Janeiro	-3	○

\* Countries or regions may change time zones for various reasons.

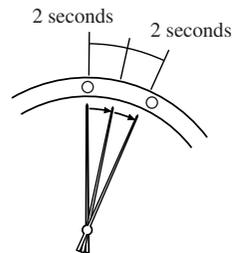
## 5. Functions Unique to Solar-Powered Watches



### <Insufficient Charging Warning Function>

The second hand moves at two-second intervals to indicate that the watch is insufficiently charged. Although the watch will continue to operate normally at this time as well, it will stop after about 2 days have elapsed since the start of two-second interval movement. Expose the watch to light to return the second hand to one-second interval movement. When the second hand is moving at two-second intervals, time, date and time difference cannot be corrected.

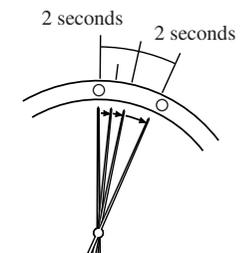
Two-second interval movement



### <Time Setting Warning Function>

When the watch is again exposed to light after stopping, although the second hand begins to move, since the time is incorrect, the second hand moves irregularly at two-second intervals to indicate that the time is incorrect. Reset the time after the watch has been sufficiently charged. The second hand will continue to move irregularly at two-second intervals unless the time is reset.

Irregular two-second interval movement



#### <Overcharging Prevention Function>

The overcharging prevention function is activated when the secondary battery is fully charged so that it is not charged further.

#### <Power Save Function>

When power is no longer generated as a result of light not shining on the solar cell continuously for 2 hours, the second hand stops at the 12:00 position and the watch enters the Power Save state to reduce power consumption of the secondary battery. The minute hand stops simultaneous to stopping of the second hand. The hour hand continues to keep time by moving at one-hour intervals, and the date changes with the movement of the hour hand. The power save function does not operate when the crown is pulled out.

**Note:** The power save function is not activated even when power is not generated as a result of light not shining on the solar cell during the time the secondary battery is fully charged and the overcharging prevention function is activated.

#### <Canceling Power Save>

The power save function is canceled when the solar cell is exposed to light and power generation is resumed. The minute and second hands advance rapidly to the current time and begin moving.

## 6. General Reference for Charging Times

The time required for recharging 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.

\*Recharging time refers to the amount of time the watch is continuously exposed to light.

Illuminance (lux)	Environment	Charging time		
		Charging time for 1 day of operation	Charging time from the stopped state to 1-second interval movement	Charging time from stopped state to fully charged
500	Inside an ordinary office	2.5 hours	53 hours	470 hours
1,000	60-70 cm(24-28in.) under fluorescent light (30 W)	1.5 hours	26 hours	216 hours
3,000	20 cm(8 in.) under fluorescent light (30 W)	26 minutes	9 hours	69 hours
10,000	Outdoors, cloudy weather	9 minutes	3 hours	24 hours
100,000	Outdoors, summer, under direct sunlight	7 minutes	50 minutes	16 hours

**Full recharging time:** Time required for recharging the watch from the stopped state to fully charged.

**Charging time for 1 day of operation:** Time required for recharging the watch to run for 1 day at 1-second interval movement.

## **7. Notes Regarding Handling of this Watch**

**<Try to keep the watch charged at all times.>**

Please note that if you frequently wear long sleeves, the watch can easily become insufficiently charged as a result of it being concealed and unable to be exposed to light.

\* When you take the watch off, try to place it in as bright a location as possible to ensure that it always keeps the correct time.

### **[Charging Precautions]**

\* Avoid recharging at high temperatures (over about 60°C/140°F) since this may result in damage to the watch during recharging.

#### **Examples:**

\* Charging the watch in close proximity to an incandescent lamp, halogen lamp or other light source that can easily reach high temperatures.

\* Charging the watch in a location that reaches high temperatures such as on a car dashboard.

\* When charging the watch with an incandescent lamp, always make sure the watch is at least 50 cm(20 in.) away from the lamp so that it does not reach excessively high temperatures during charging.

## **8. Replacing the Secondary Battery**

The secondary battery used in this watch does not have to be periodically replaced in the manner of ordinary batteries since it is able to be charged and discharged repeatedly.

## **9. All-Reset** ---

The display of this watch may not read correctly as a result of being subjected to the effects of static electricity or strong impact and so forth. When this happens, perform the procedure described in "10. Reference Position Alignment" after performing the all-reset procedure described below.

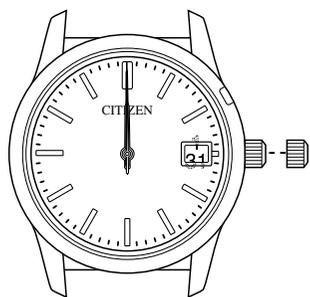
1. Pull out the crown to the second click.
  - \* The second hand moves to the 0-position stored in memory and stops.
2. Continuously press button (A) for at least 1 second.
  - \* The second and hour hands perform a demonstration movement (forward movement → backward movement → forward movement). This completes the all-reset procedure. Always make sure to perform the reference position alignment procedure after performing all-reset.

**Note:** Demonstration movement is not performed when the watch is insufficiently charged. Perform the all-reset procedure only after charging the watch sufficiently.

## **10. Reference Position Alignment** ---

After performing the all-reset procedure, align the second and minute hands at their reference positions by pulling out the crown to the second click, and the hour hand and date to their reference positions by pulling out the crown to the first click.

1. Align the second and minute hands at the 12:00 position with the crown pulled out to the second click.
  - (1) Turning the crown to the right moves the second and minute hands forward.
  - (2) Turning the crown to the left moves the second and minute hands backward.
  - \*Turning the crown continuously causes the hands to advance rapidly. Turn the crown to the left or right to stop the hands from advancing rapidly.



2. Align the date between the 31st and 1st and the hour hand at the 12:00 position with the crown pulled out to the first click.
  - (1) Turning the crown to the right causes the hour hand to move forward.
  - (2) Turning the crown to the left causes the hour hand to move backward.
3. The date moves with the hour hand. Continuously move the hour hand to set the date between the 31st and 1st.
4. Align the hour hand at 12:00.
5. After each hand and the date have been set, return the crown to the normal position.

**Note (1):** It takes about 1 second for the watch to store the reference position in memory. Once the reference position has been stored in memory, the second hand will begin irregular two-second interval movement. The reference position may not be stored in memory if the crown is operated before the start of irregular two-second interval movement after returning the crown to the normal position.

- Note (2):** The second hand will continue to remain stopped even if the crown is returned to the normal position unless the reference position alignment procedure is performed.
6. After performing the reference position alignment procedure, properly reset the time and date.

\*The watch shows 12:00 AM for the time of reference position alignment after the all-reset procedure has been performed. Set the time and date by referring to "3. Setting the Time and Date" while being careful not to incorrectly set AM and PM.

## 11. Precautions

### CAUTION: 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.

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.

Indication		Specifications	Examples of use				
Dial	Case(Case back)						
WATER RESIST or no indication	WATER RESIST(ANT)	Water-resistant to 3 atmospheres	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 buttons with moisture visible
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5 bar or WATER RESIST(ANT)	Water-resistant to 5 atmospheres	<b>OK</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10 bar/20 bar or WATER RESIST(ANT)	Water-resistant to 10/20 atmospheres	<b>OK</b>	<b>OK</b>	<b>OK</b>	<b>NO</b>	<b>NO</b>

- 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, it is not designed for use underwater.
- 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, it is not designed for use while skin 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-type crown, be sure to tighten the crown completely.
- Do NOT operate the crown or buttons with wet fingers or when the watch is wet. Water may enter the watch and compromise water-resistance.
- 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, immediately take the watch to your dealer or 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 water. Use a soft brush to remove dust and dirt jammed in the gaps in the metal band.

**NOTE:** Avoid using solvents (thinner, benzine, etc.), as they may mar 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 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, a magnetic latch of a refrigerator door, 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 requires inspection once 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 are required to be inspected and replaced as necessary.

Ask for Citizen genuine parts during replacement.

## 12. Specifications ---

- \* **Model:** B11\*
- \* **Type:** Analog solar-powered watch
- \* **Accuracy:** 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  $95^{\circ}\text{F}$ )
- \* **Operating temperature range:**  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}/14^{\circ}\text{F}$  to  $140^{\circ}\text{F}$
- \* **Display functions:**
  - Time:** Hours, minutes, seconds (the second and minute hands move every second and the hour hand moves every 3 minutes)
  - Calendar:** Date display  
Month and years elapsed since the most recent leap year are displayed by the second hand (only displayed when correcting the no. of years elapsed since the most recent leap year and month)
- \* **Additional functions:**
  - Power save function
  - Time difference correction function (forward and backward correction in 1 hour units)
  - Insufficient charge warning function
  - Time setting warning function
  - Overcharging prevention function

- \* **Continuous running times:**
  - Fully charged to stopped: Approx. 2 years (when power save function is operating)
  - 2-second interval movement to stopped: Approx. 2 days
- \* **Battery:** Secondary battery
- \* Specifications are subject to change without notice.