

# CITIZEN®

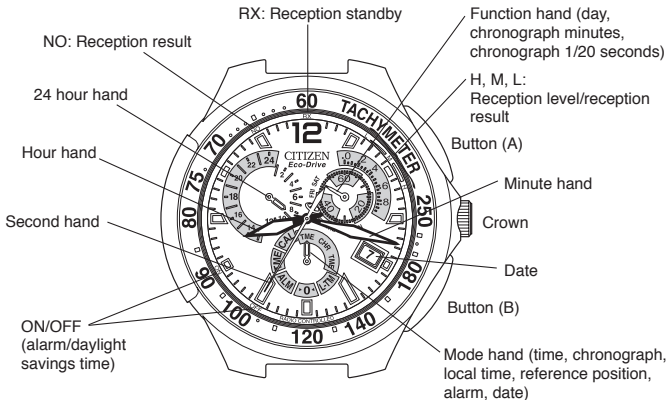
## INSTRUCTION MANUAL



***Eco-Drive***®

### **Request to Customers**

All repairs performed on this watch, excluding repairs involving the band, are to be performed at the CITIZEN. When desiring to have your watch repaired or inspected, please contact the Citizen Service Center either directly or through the store where you purchased your watch.



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

## ■ **This watch is a radio wave watch that receives the standard time radio wave transmitted in Germany** ■

This radio wave watch is equipped with a regular automatic reception function that sets the time and date by automatically receiving radio waves at 3:00 AM or 4:00 AM, and a free reception function that allows the time to be set arbitrarily at any time by receiving radio waves.

- This watch is unable to receive radio waves of countries other than Germany.

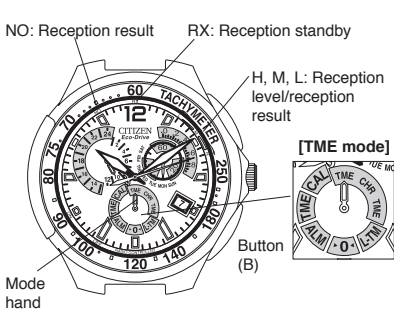
## ■ **Please use this watch after charging sufficiently by placing in light** ■

If the second hand of the watch is moving at two-second intervals while the watch is in use, this indicates that the watch is insufficiently charged. Use the watch after first recharging by referring to the section entitled, "15. General Reference for Charging Times of Solar-Powered Watches".

Since it may be difficult for light to shine on the watch as a result of being covered by clothing during the winter months in particular, it is recommended to charge the watch by exposing to direct sunlight once a month. To ensure that your watch is used comfortably, it is recommended to try to keep the watch fully charged at all times.

# ■ Please confirm the following before using the watch ■

\* Set the mode hand to the TME mode.



Check the movement of the second hand.

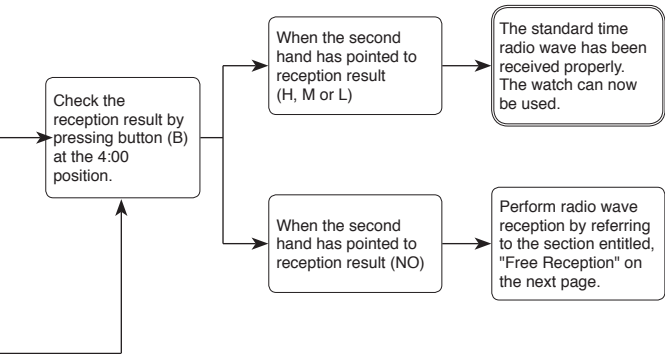
Second hand moving at one-second intervals

Second hand moving at two-second intervals

Recharge the watch by placing under direct sunlight

Second hand moving at one-second intervals

(The mode can be switched by pulling the crown out to Position 1. Set the mode hand to one of the three locations of the TME mode. Return the crown to its original position after switching the mode.)



# ■ Important Points Regarding Radio Wave Reception ■

- Radio waves are received in the Time Mode (TME/3 locations) or Local Time Mode (L-TM). Radio waves cannot be received in other modes.

## **[Regular Automatic Reception]**

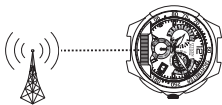
The watch sets the time (including daylight savings time) and date by automatically receiving radio waves at 3:00 AM or 4:00 AM each day. (Radio waves are not received at 4:00 AM if they have been successfully received at 3:00 AM.)

## **[Free Reception]**

The free reception function lets you receive radio waves at any time. Use this function when the reception environment has changed or in other cases when radio waves are unable to be received by Regular Automatic Reception. Do not move the watch during free reception to ensure that radio waves are reliably received. (It may take up to about 15 minutes to receive radio waves.)

## <Reception Procedure>

Remove the watch from your wrist and place it in a stable location where radio waves are able to be received easily such as near a window with the 6:00 position of the watch facing a radio wave transmitter station.



- In the case of free reception, press button (B) at the 4:00 position for about 2 seconds or more and after hearing a confirmatory tone, release your finger when the second hand begins to move to the RX: Reception Standby position (12:00).
- It is not necessary to press button (B) in the case of regular automatic reception.
- It may be difficult to receive radio waves around the times of dawn and dusk. It is recommended to receive radio waves while avoiding these times. Refer to the section entitled, "4. Receiving Radio Waves" for further information on the procedure for receiving radio waves.

## <Confirmation of Reception Result>

Check the reception result to determine whether or not radio waves have been received properly by pressing button (B) located at the 4:00 position following reception. If the second hand points to H, M or L, this indicates that radio waves have been received properly. The watch can now be used.

If the second hand points to NO, this means that radio waves were unable to be received. If this happens, try receiving radio waves again at a different location.

## ■ Power Save Function ■

- This power save function deactivates some features of the watch when it is stored in a dark place for 30 minutes or more.
  - The watch will continue to be accurate to within the time accuracy range when the power save function has been activated.
  - When the watch is exposed to light, the power save function is canceled and the second hand begins to move normally again.
- \* Refer to the section entitled, "14. A. Power Save Function" for further information on the power save function.

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# 1. Features

This watch is a radio wave watch that automatically corrects the time (including daylight savings time) and date by receiving standard time radio waves (time data) transmitted in Germany. In addition, 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 the features listed below.

## (1) Chronograph Function

- This function is able to measure time up to 59 minutes 59.95 seconds in 1/20 second units.

## (2) Local Time Function

- This function allows the watch to be set to the time in another country or city.
- Local time can be corrected in one hour units.
- Daylight savings time can be switched on and off.

## (3) Alarm Function

- The alarm time can be set based on a 24-hour clock.
- The alarm sounds for 15 seconds when the watch reaches the set time.

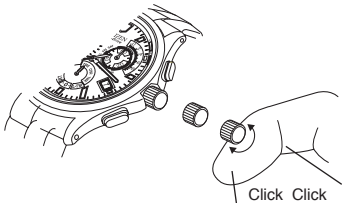
## (4) Perpetual Calendar Function

- The date (elapsed years, month, date and day) does not have to be corrected through February 28, 2100 even if radio waves are not received.

## 2. Operating the Crown

### (Continuously Moving the Hands)

Rapidly turning the crown continuously to the left or right (by two clicks) causes the hands (hour hand, minute hand or second hand) to move continuously. Click the crown once to the right or left to interrupt hand movement.



Rapidly turn the crown continuously (by two clicks) with the side of your Finger.

## 3. Before Using

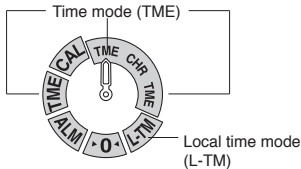
### A. Radio Wave Receiving Function

#### <For Good Reception>

This watch incorporates an antenna for receiving radio waves inside the watch case (at the 6:00 position). For good reception, it is recommended to have the 6:00 position of the watch facing in the direction of the radio wave transmitter station when 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 while referring to the reception level of H, M or L. Find the location and direction where radio waves are received easily as indicated by H or M for the reception level.

#### [Note]

Radio waves can be received in the time (TME) mode found at three locations on the watch or the local time (L-TM) mode. Radio waves cannot be received in other modes.



- In order to receive radio waves properly, remove the watch from your wrist and place it in a stable location that facilitates reception of radio waves such as in front of a window. Do not move the watch during reception.
- Radio waves may be hard to receive due to blockage by metallic objects or the environment. When inside a building and so on, reception should be performed as close to a window as possible.

### **<Time Required for Receiving Radio Waves>**

It takes from about 2 to 15 minutes to receive radio waves. If reception has failed due to a poor reception environment and so forth, it may take about 60 seconds for the watch to return to the normal display.

## **<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.

- ◆ Locations subject to extremely high or low temperatures
- ◆ Inside a reinforced concrete building, between tall buildings or in valleys between mountains or underground
- ◆ In a car, train or airplane
- ◆ Near a cellular telephone in use
- ◆ Near high-tension wires (power lines), railroad overhead wires or airports (communication facilities)
- ◆ Near household electric appliances or OA equipment such as TV sets, refrigerators, personal computers, fax machines, etc.

## 4. Receiving Radio Waves

- There are three ways to receive radio waves consisting of regular automatic reception, free reception and recovery automatic reception. The time (including daylight savings time) and date are corrected automatically when radio waves have been properly received.

[Note] Do not move the watch until reception is completed.

### 1. Regular Automatic Reception

- The watch automatically begins to receive radio waves at 3:00 AM or 4:00 AM each day. (Radio waves are not received at 4:00 AM if they have been successfully received at 3:00 AM.)
- (1) When receiving radio waves, remove the watch from your wrist and place it in a stable location where radio waves can be received easily such as by a window with the 6:00 position of the watch facing in the direction of the radio wave transmitter station.
  - (2) After the second hand has moved to the reception standby (RX) position, it moves to H, M or L to indicate that reception of radio waves is in progress after which the watch begins to receive radio waves.
  - (3) reception is completed, the second hand automatically moves from H, M or L to the correct time.

## **2. Free Reception**

- Free reception can be used to receive radio waves at any time.
- (1) When receiving radio waves, remove the watch from your wrist and place it in a stable location where radio waves can be received easily such as by a window with the 6:00 position of the watch facing in the direction of the radio wave transmitter station.
  - (2) Press button (B) at the 4:00 position for about 2 seconds or more. After the hearing the confirmatory tone, release your finger after checking that the second hand has moved to the standby position (RX) (12:00). The remainder of the procedure is the same as steps (2) and (3) of the procedure for regular automatic reception (on the previous page).

### **<Tone Indicating Completion of Free Reception>**

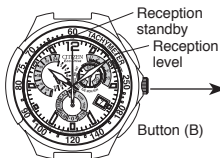
- If reception is successful, a beeping tone sounds twice and the watch is corrected to the correct time.
- If reception has failed, a beeping tone sounds once and the watch returns to the time display prior to radio wave reception.

## **3. Recovery Automatic Reception**

- When the watch has stopped as a result of being insufficiently charged, radio waves are then received once automatically. However, charge the watch for about 30 minutes under direct sunlight to initiate recovery automatic reception. Try to keep the watch charged at all times so that it does not become insufficiently charged.

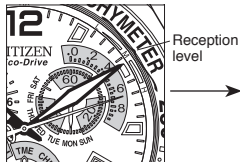
## A. Position of the Second Hand During Reception (movement of second hand from start of reception to completion)

### [Reception Standby]



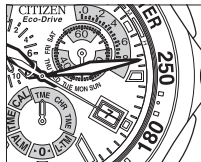
The second hand moves to the RX position and stops.

### [Reception in Progress]



The second hand moves to either the H, M or L reception level. Although the second hand may turn to correct the time during reception, this does not mean that reception is completed.

### [Completion of Reception]



When radio waves have been received properly, the second hand returns to one-second interval movement and each hand is automatically corrected to the correct time. If radio waves were unable to be received, the watch returns to the time prior to radio wave reception. Never move the watch until the second hand returns to one-second interval movement.

## B. Confirmation of Reception Result

- When button (B) is pressed once, the second hand moves to H, M, L or NO to enable confirmation of the reception result.

**[Note]** Since the second hand moves to the 12:00 (RX) position and free reception begins if button (B) is depressed continuously for 2 seconds or more, do not press button (B) for 2 seconds or more. In the case of having mistakenly begun free reception, press button (B) for 2 seconds and to cancel radio wave reception.

- The reception is indicated for 10 seconds after which the watch automatically returns to the current time. In addition, the watch can also be returned to the current time by pressing button (B) while the reception result is indicated.
- The time display may shift slightly depending on the reception environment and internal watch processing even if radio waves are properly received.

## C. Reception Level and Reception Result

- During the time radio waves are being received, the second hand waits at the reception position corresponding to the reception state to indicate the reception level. Following reception, the reception result can be confirmed by pressing button (B).

Reception level	Position of second hand	Reception level during reception	Reception result after reception
H	12 seconds position	· When the radio wave reception environment is extremely good	· When radio waves were received in an extremely good reception environment
M	9 seconds position	· When the radio wave reception environment is good	· When radio waves were received in a good reception environment
L	6 seconds position	· When the radio wave reception environment is somewhat good	· When radio waves were received in a somewhat good reception environment
NO	55 seconds position	-----	When reception has failed

## D. General Reference for Receiving Areas

The following provides a general reference for those areas where the watch is able to receive standard time radio waves. These areas may vary as a result of changes in radio wave reception conditions depending on the time period, seasonal variations and weather. Since this map only provides a general reference of the areas where radio waves can be received, there may be locations where radio waves cannot be received even if they are within the range shown on the map.

Standard time radio wave transmitter station	Location of transmitter station	General reference for areas where radio waves can be received
DCF77	Mainflingen, Germany (25 km southeast of Frankfurt)	Radius of about 900 km from radio wave transmitter station (radio waves may not be able to be received in the vicinity of Lake Lemman, Switzerland)

Although the standard time radio waves used by radio wave watches are transmitted nearly continuously 24 hours a day, transmission may be interrupted for reasons such as maintenance and inspections. This watch will continue to keep the correct time at an accuracy of within  $\pm 15$  seconds per month even if it is unable to receive standard time radio waves.



## 5. List of Functions Assigned to Mode Hand

Name	Crown position	TME (*1)	CHR
Function hand	Normal position	Displays day	Stops at chronograph 0 minutes position
	Position 1		
	Position 2		
Date	Normal position	Displays date	Displays date
	Position 1		
	Position 2		
Hour hand/ minute hand	Normal position	Displays hours/minutes	Displays hours/minutes
	Position 1		
	Position 2		
Second hand	Normal position	Displays seconds	Stops at 0 position
	Position 1	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)
	Position 2	Displays daylight savings time ON or OFF	Stops at 0 position
24 hour hand	Normal position	Displays time (24 hour clock)	Displays time (24 hour clock)
	Position 1		
	Position 2		

Please read this section while referring to the watch illustration found at the beginning of this manual. \*1: The same time is displayed at three locations of the TME mode.

<b>L-TM</b>	<b>▶ 0 ◀</b>	<b>ALM</b>	<b>CAL</b>
Displays day of local time	Stops at chronograph 30 minutes position	Stops at chronograph 0 minutes position	Displays day
Displays date of local time	Displays 31/1	Displays date	Displays date
Displays hours/minutes of local time	Stops at 12:00 position	Displays alarm hours/minutes	Displays hours/minutes
Displays seconds	Stops at 12:00 position	Displays alarm ON or OFF	Displays elapsed years/month
Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)
Displays daylight savings time ON or OFF	Stops at 12:00 position	Displays alarm ON or OFF	Displays elapsed years/month
Displays local time (24 hour clock)	Stops at 24:00 position	Displays alarm time (24 hour clock)	Displays time (24 hour clock)

\*1: The same time is displayed at three locations of the TME mode.

<b>Name</b>	<b>Crown position</b>	<b>TME (*1)</b>	<b>CHR</b>
Button (A)	Normal position	Confirms whether daylight savings time ON or OFF	Start/stop/reset
	Position 1		
	Position 2	Switches daylight savings time ON and OFF	No change
Button (B)	Normal position	Reception result/Reception standby	Displays 1/20 seconds when chronograph stopped
	Position 1	No change	No change
	Position 2	Zeroes second hand to 12:00 position (by pressing for 2 seconds)	
Crown	Normal position	No change	No change
	Position 1	Mode switching	Mode switching
	Position 2	Time correction (after pressing button (B) for 2 seconds)	No change

L-TM	▶ 0 ◀	ALM	CAL
Confirms whether daylight savings time ON or OFF	No change	Switches alarm ON and OFF	No change
Switches daylight savings time ON and OFF	Selects location for reference position correction		Selects location for date correction
Reception result/ Reception standby	No change	Alarm tone monitor	No change
No change		No change	
No change	No change	No change	No change
Mode switching	Mode switching	Mode switching	Mode switching
Local time correction	Reference position correction	Alarm time correction	Date correction

## 6. Switching the Mode

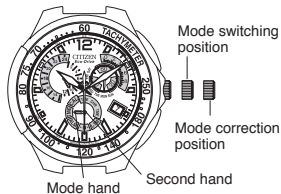
- This watch is equipped with six modes consisting of a time (displayed at three locations), chronograph, local time, reference position, alarm and calendar mode.
- The same time is displayed at all three locations in the time (TME) mode.

### <Procedure for Switching the Mode>

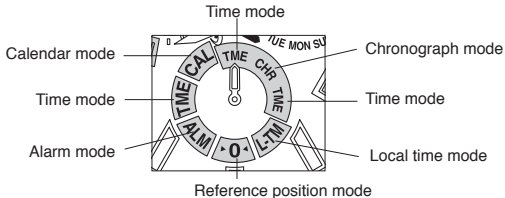
When the crown is pulled out to Position 1 (mode switching position), the second hand advances (clockwise rotation) and stops at the 30 second position.

If the second hand does not stop at the 30 seconds position, refer to the section entitled, "Checking and Correcting the Reference Position" and correct the reference position.

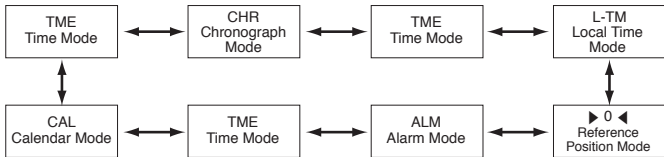
- (1) Turn the crown and align the mode hand at each mode.
  - The mode hand can be aligned by turning the crown to the right or left. Each mode can be selected by moving the mode hand.
- (2) Pull the crown out further to Position 2 (mode correction position) to enter the correction state of each mode.
  - Read the correction procedures for each mode for details on correcting each mode.



### [Mode Names]



### [Switching the Mode]



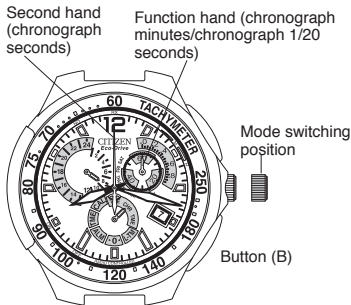
## 7. Using the Chronograph

- The chronograph is able to measure time up to 59 minutes 59.95 seconds in 1/20 second units. It is reset to 0 after timing.

### <Meanings of Hands When Timing with the Chronograph>

Pull the crown out to Position 1 and then turn the crown to align the mode hand at [CHR] (chronograph). Then return the crown to the normal position.

- The second hand and function hand are rapidly advanced to the 0 position and the watch enters the chronograph mode.

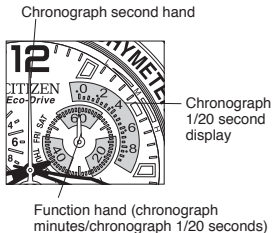


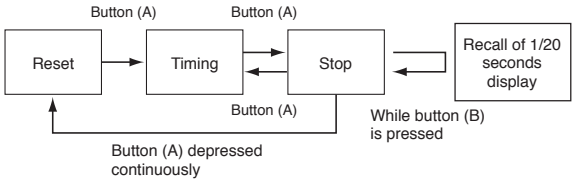
- The second hand changes to the chronograph second hand and is rapidly advanced by one revolution only when starting timing at 0 seconds. It then moves at one-second intervals to measure chronograph seconds.
- The function hand changes to chronograph minutes and advances at one minute intervals or it changes to chronograph 1/20 seconds.
- When button (B) is pressed to stop the chronograph, the function hand displays time in chronograph 1/20 seconds for as long as it is pressed.
- The hour and minute hands may display the mode prior to switching the mode when the watch has been switched from another mode to the chronograph mode.

## <Chronograph Timing>

Pull the crown out to Position 1 and turn to align the mode hand at [CHR] (chronograph), and then push it in to the normal position.

- (1) The chronograph is repeatedly started and stopped and a confirmatory tone sounds each time button (A) is pressed.
- (2) If button (B) is pressed while the chronograph is stopped, the function hand displays the time in chronograph 1/20 seconds for as long as it is pressed. Releasing button (B) returns the function hand to displaying chronograph minutes.
- (3) If button (A) is depressed continuously while the chronograph is stopped, the chronograph second hand and chronograph minute hand are reset to the 0 position.





## 8. Setting Local Time and Daylight Savings Time

- The local time function lets you set the watch to a time in a different area from the time set in the time mode [TME].
- The time difference can be made in 1 hour units.
- The local time can be set over a range of  $\pm 26$  hours based on the time mode [TME].
- Daylight savings time can also be set. The time in this case can be set over a range of -25 to +27 hours.

**[Note]** The times cannot be set beyond the above ranges. In addition, daylight savings time must be switched on and off manually. It cannot be switched automatically by receiving radio waves.

## <Procedure for Setting Local Time>

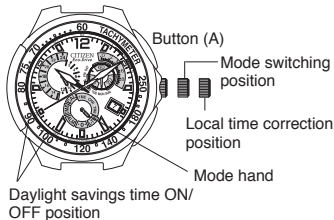
Pull the crown out to Position 1 and turn to align the mode hand to [L-TM] (local time).

(1) Pull the crown out to Position 2 (local time correction position).

- The second hand turns continuously and stops at the daylight savings time ON or OFF position.

(2) Turn the crown to set the hour and minute hands to the local time.

- ① Turning the crown to the right (by 1 click) causes the hour and minute hands and the 24 hour hand to advance by 1 hour.
  - ② Turning the crown to the left (by 1 click) causes the hour and minute hands and 24 hour hand to go back by 1 hour.
- Turning the crown continuously (rapidly by 2 clicks or more) causes the hour and minute hands and the 24 hour hand to move continuously.
  - Turn the crown to the left or right to interrupt continuous movement of the hands.
  - The date and day also change corresponding to the calendar and local time.



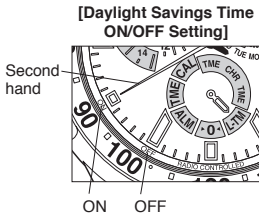
[Note] Set the local time correctly by checking AM and PM with the 24 hour hand.

- (3) Return the crown to the normal position. This completes the procedure for correcting the local time.

### <Procedure for Setting Daylight Savings Time>

Perform the following steps while the local time is already displayed.

- (1) Pull the crown out to Position 2 (local time correction position).
  - The second turns continuously, and then stops at the daylight savings time ON or OFF position.
- (2) Press button (A) to change the daylight savings time setting.
  - Each time button (A) is pressed, a confirmatory tone sounds and ON or OFF can be selected for daylight savings time. The time advances by 1 hour if daylight savings time has been set to ON.
- (3) Return the crown to the normal position. This completes the procedure for setting daylight savings time.



### **<Checking Daylight Savings Time ON/OFF Setting>**

The daylight savings time setting is displayed for about 10 seconds as either ON or OFF when the crown is returned to the normal position or when button (A) is pressed while the crown is at Position 1 in the local time mode (L-TM).

- The second hand indicates ON when daylight savings time has been set.
- The second hand indicates OFF when daylight savings time has not been set.

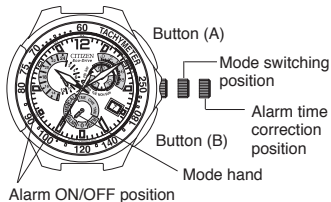
## 9. Using the Alarm

- The alarm function uses a 24 hour clock. Once the alarm has been set, the alarm sounds for 15 seconds when the set time is reached once a day.
  - The alarm can be used in the time mode as well as the local time and calendar modes. The alarm does not sound when the watch is in another mode.
- Furthermore, press button (A) or (B) to stop the alarm tone from sounding before 15 seconds have elapsed.

### <Setting the Alarm Time>

Pull the crown out to Position 1 and turn to align the mode hand at [ALM] (alarm).

- The hour hand and minute hand display the previously set alarm time.



- (1) When the crown is pulled out to Position 2 (alarm time correction position), the second hand stops at the ON or OFF position.
  - Press button (A) to move the second hand to the alarm ON position.
  - Each time button (A) is pressed, a confirmatory tone sounds and the alarm setting switches between ON and OFF.

The setting can be changed while the crown is in the normal position or when pulled out to Position 1.
- (2) Turn the crown to set the correct alarm time while checking AM and PM with the 24 hour hand.
  - ① Turning the crown to the right (by 1 click) causes the minute hand and hour hand to advance by 1 minute.
  - ② Turning the crown to the left (by 1 click) causes the minute hand and hour hand to go back by 1 minute.
    - Turning the crown continuously (rapidly by 2 clicks or more) causes the hour and minute hands to move continuously.
    - Turn the crown to the left or right to interrupt continuous movement of the hands.
- (3) Push in the crown to Position 1 to return the watch to previously used mode.
- (4) Return the crown to the normal position. This completes the procedure for setting the alarm time.

# 10. Manually Setting the Time and Daylight Savings Time

- The time can be set manually when radio waves are unable to be received.
- Daylight savings time is switched on or off automatically when radio waves have been received. Furthermore, remove the watch from your wrist before receiving radio waves to ensure that the time is set correctly.

## A. Setting the Time

(The same time is displayed at the three locations of the TME mode. It is only necessary to set the time at one of these locations.)

**[Normal Hand Movement]**

Crown at normal position



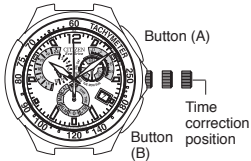
**[Mode Correction]**

Crown at Position 1



**[Time Correction]**

Crown at Position 2



## <Time Correction Procedure>

Pull the crown out to Position 1 and turn to align the mode hand to [TME] (time).

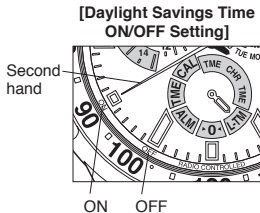
- (1) Pull the crown out to Position 2 (time correction position).
  - The second hand turns continuously and stops at the daylight savings time ON or OFF position.
- (2) Press button (B) for about 2 seconds.
  - When button (B) has been pressed for 2 seconds or more, the second hand advances (clockwise direction) to the 0 seconds position. Release your finger from button (B) once the second hand has stopped at the 0 seconds position.
- (3) Turn the crown to align the minute hand, hour hand and 24 hour hand at the current time.
  - ① Turning the crown to the right (by one click) causes the minute hand, hour hand and 24 hour hand to advance by one minute.
  - ② Turning the crown to the left (by one click) causes the minute hand, hour hand and 24 hour hand to go back by one minute.
    - Turning the crown continuously (rapidly by two clicks or more) causes the minute hand, hour hand and 24 hour hand to move continuously.
    - Turn the crown to the left or right to interrupt continuous movement of the hands.
    - Check AM and PM with the 24 hour hand to set the time correctly.
- (4) Return the crown to the normal position in synchronization with a telephone time signal or other time service. This completes the time correction procedure.

## B. Setting Daylight Savings Time

### <Procedure for Setting Daylight Savings Time>

Perform the following steps while the time mode is already displayed.

- (1) Pull the crown out to Position 2 (time correction position).
  - The second turns continuously, and then stops at the daylight savings time ON or OFF position.
- (2) Press button (A) to change the daylight savings time setting.
  - Each time button (A) is pressed, a confirmatory tone sounds and ON or OFF can be selected for daylight savings time. The time advances by 1 hour if daylight savings time has been set to ON.
- (3) Return the crown to the normal position.  
This completes the procedure for setting daylight savings time.



### **<Checking Daylight Savings Time ON/OFF Setting>**

The daylight savings time setting is displayed for about 10 seconds as either ON or OFF when the crown is returned to the normal position or when button (A) is pressed while the crown is at Position 1 in the time mode (TME).

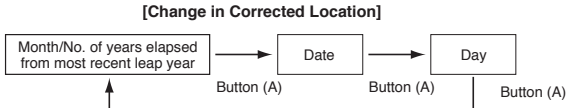
- The second hand indicates ON when daylight savings time has been set.
- The second hand indicates OFF when daylight savings time has not been set.

# 11. Manually Setting the Date

- This watch is equipped with a perpetual calendar that changes the year (number of elapsed years from the most recent leap year), month, date and day automatically through February 28, 2100 once the date has been set.

## <Changing the Corrected Location>

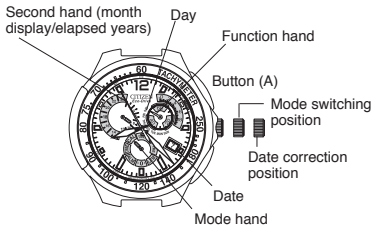
Each time button (A) is pressed, the corrected location changes repeatedly in the order of Month/No. of years elapsed from most recent leap year → Date → Day.



### <Date Correction Procedure>

Pull the crown out to Position 1 and turn the crown to align the mode hand at CAL (calendar).

- (1) Pull the crown out to Position 2 (date correction position).
  - After the second hand turns continuously, it moves from the month display/leap year from the elapsed years position, indicating that the watch is in the month/elapsed years correction mode.
- (2) Turn the crown to the right to align the second hand at the month and number of years elapsed from the most recent leap year. The second hand cannot be aligned by turning the crown to the left.
  - ① Turn the crown to the right (by one click) to align the second hand at the position corresponding to the month and number of years elapsed from the most recent leap year.



## <Reading the Month and No. of Elapsed Years>

### [Reading the Month]

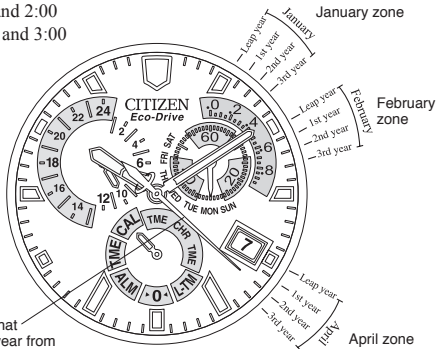
January zone : Between 1:00 and 2:00

February zone : Between 2:00 and 3:00

⋮

December zone :

Between 12:00 and 1:00



Position of the second hand that indicates April in the second year from the most recent leap year

## [Reading the Number of Elapsed Years]

Leap year: Starting point of each month zone

1st year after most recent leap year : 1st graduation of each month zone

2nd year after most recent leap year :2nd graduation of each month zone

3rd year after most recent leap year :3rd graduation of each month zone

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

Year	Elapsed year	Year	Elapsed year
2015	3rd year	2019	3rd year
2016	Leap year	2020	Leap year
2017	1st year	2021	1st year
2018	2nd year	2022	2nd year

### Examples:

- January of current leap year : Align the second hand to the 5 seconds position.
- April of 3rd year from most recent leap year : Align the second hand to the 23 seconds position.

(3) Press button (A).

- The function hand moves back and forth for one revolution after which the watch enters the date correction mode.

(4) Turn the crown to set the date.

- ① When the crown is turned to the right (by one click), the function hand makes five revolutions in the clockwise direction and the date advances by one day.
  - ② When the crown is turned to the left (by one click), the function hand makes five revolutions in the counter-clockwise direction and the date goes back by one day.
- Turning the crown continuously (rapidly by two clicks or more) causes the date to be corrected continuously.
  - Turn the crown to the left or right to interrupt continuous correction of the date.

(5) Press button (A).

- The function hand moves back and forth for half a revolution and stops at the day position indicating that the watch is in the day correction mode.

(6) Turn the crown to set the day.

- ① Turning the crown to the right (by one click) causes the day to change in the order of SUN → MON → · · · FRI → SAT and then back to SUN.
- ② Turning the crown to the left changes the day in the reverse order of SUN → SAT → · · · TUE → MON and then back to SUN.

(7) Return the crown to the normal position. This completes the correction procedure.

### **<Setting to a Non-Existent Date>**

The date is automatically changed to the first day of the following month when the crown is returned to the normal position from the date correction mode. The date is displayed as shown below if the date should happen to be mistakenly set to a non-existent date.

#### **Examples:**

Regular year : February 29, 30 or 31 → March 1

Regular year : April 31 → May 1

Leap year : February 30 or 31 → March 1

Furthermore, since the set day will be displayed for the day, correct the day as necessary.

## 12. Checking and Correcting the Reference Position

The reference position may shift if the watch is placed in environment in which it is subject to strong impacts or magnetism from the outside. If the watch is used while shifted from the reference position, the time, calendar, alarm and other modes will not function properly. If this happens, check the reference position and correct as necessary.

### A. Checking the Reference Position

- (1) Pull the crown out to Position 1 and turn the crown to align the mode hand at ► 0 ◀ (reference position).
  - The second hand advances (clockwise direction) to the 30 seconds position.
  - The 24 hour hand, hour hand and minute hand move forward (clockwise) or backward (counter-clockwise) to the reference position (0 hours 0 minutes 0 seconds) and stop.
  - The date displays an intermediate location between the 31st and 1st, and the function hand moves to MON and stops.

(2) Return the crown to the normal position.

- The second hand moves to the reference position (0:00) and stops.

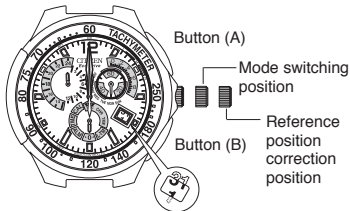
If the reference positions of each hand are properly displayed as described above, pull the crown out to Position 1 and return the watch to the mode in which it was previously being used.

### <Reference Position of Each Hand>

- 24 hour hand: 24 hours 0 minutes
- Hour hand, minute hand: 0 hours 0 minutes
- Second hand: 0 seconds
- Function hand: MON
- Date: Between 31st and 1st

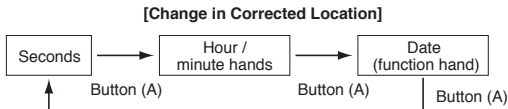
\* If the display of the watch is not as shown above, perform Reference Position Correction described in the following section.

### [Correct Reference Position of Each Hand]



## B. Correcting the Reference Position

- The reference position is corrected by repeatedly changing the corrected location in the order of seconds → hour/minute hands → date (function hand turns) each time button (A) is pressed.

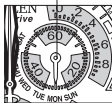


Pull the crown out to Position 1 and turn to align the mode hand at ►0◀ (reference position). When the crown is then pulled out to Position 2, the second hand advances continuously and then stops to indicate that the watch has entered the reference position correction mode.

- (1) Turn the crown to align the second hand at the reference position (0:00).
  - ① Turning the crown to the right (by one click) causes the second hand to advance by one second.
    - Turning the crown continuously (rapidly by two clicks or more) causes the second hand to move continuously.

- Turn the crown to the left or right to interrupt continuous movement of the second hand.
  - The second hand cannot be aligned at the reference position by turning the crown to the left.
- (2) Press button (A).
- After the hour and minute hands move back and forth, the hour hand and minute hand enter the correction mode.
- (3) Turn the crown to align the hour hand and minute hand at "0 hours 0 minutes". Since the 24 hour hand moves in coordination with the hour hand, align the 24 hour hand at 24 hours (12:00 AM).
- ① Turning the crown to the right (by one click) causes the hour hand and minute hand to advance by 1/4 minute (turning by four clicks causes it to advance by one minute).
  - ② Turn the crown to the left (by one click) to turn back the hour hand and minute hand by 1/4 minute (turning by four clicks causes it to go back by one minute).
    - Turning the crown continuously (rapidly by two clicks or more) causes the hour hand and minute hand to move continuously.
    - Turn the crown to the left or right to interrupt continuous movement of the hands.

Date changes to the 1st after the function hand makes five revolutions



(4) Press button (A).

- The function hand moves back and forth and then enters the date correction mode.

(5) Turn the crown to rotate the function hand and align the date between the 31st and 1st, and then turn the crown to align the function hand at MON.

① Turn the crown continuously to the right (rapidly by two clicks or more).

- The function hand makes five revolutions in the clockwise direction and the date changes to the 1st.

② Continue to rotate the function hand until the date reaches the 31st.

③ Turn the crown to the left or right by one click to interrupt movement of the function hand when the date has changed to the 31st.

④ Rotate the function hand while turning the crown to the right one click at a time, and after confirming that the date has reached an intermediate location between the 1st and 31st, always make sure to then align the function hand at the MON position.

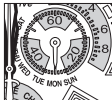
(6) Return the crown to the normal position. This completes the reference position correction procedure.

- After correcting the reference position, always make sure to set the mode to the TME (time) mode and reset the watch to the correct time by Free Reception.

**[Position of Date Display]**



**[Position of Function Hand]**



## 13. Photoelectric Power Generation Function

This watch uses a rechargeable cell to store electrical energy. Once fully charged, it will continue to keep the correct time for about 6 months during normal use (when the Power Save function is not activated). Furthermore, the watch will keep the correct time for about 1 year when the Power Save function is activated.

### <For Optimum Use of this Watch>

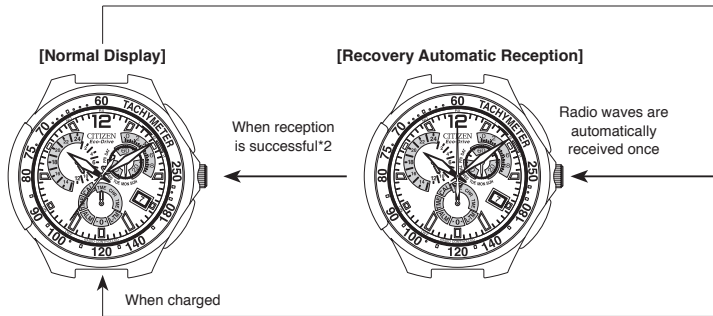
In order to use this watch comfortably, try to keep the watch charged at all times. Charge the watch by exposing the watch dial (containing the solar cell) to direct sunlight or light from a fluorescent lamp.

### <Try to Keep the Watch Charged at all Times>

- If you usually wear long sleeves, the fabric may cover the watch and prevent it from being exposed to light resulting in the watch becoming insufficiently charged. Try to keep the watch charged especially during winter months.
- When the watch is removed, try to place it next to a window or other location that allows the dial to be exposed to sunlight. This will enable charging to continue and allow the watch to continue to run properly at all times.

# 14. Unique Functions of Eco-Drive 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.
- \*2: If recovery automatic reception has failed, the watch begins to run after returning to the time when the watch stopped as a result of being insufficiently charged. In this case, although the second hand moves at one second intervals, since the time is incorrect, first set the time manually or by free reception before using the watch.

When the watch becomes insufficiently charged due to not exposing the dial (solar cell) to light

**[Insufficient Charge Warning Display]**

When sufficiently charged by exposing the dial (solar cell) to light\*1

**Watch stops due to being insufficiently charged**

If insufficient charge warning (second hand two-second interval movement) continues for 4 days or more

Second hand begins two-second interval movement

Two-second interval movement



## **A. Power Save Function**

### **<Power Save>**

When the watch is stored in the place where its solar cell is continuously not exposed to light for 30 minutes or more, the watch enters the power save mode and some features of the watch will be deactivated.

\* The watch will continue to be accurate to within the time accuracy range when the power save function has been activated.

### **<Canceling Power Save>**

The power save function cannot be canceled with crown or button operation.

It is canceled automatically when the solar cell is exposed to light.

When the power save function is canceled, the watch will return to the current time.

Two-second interval movement begins if the watch is insufficiently charged.

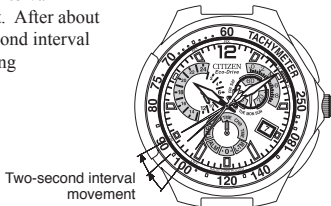
When this happens, sufficiently charge the watch so that it returns to one-second interval movement.

## [Note]

Although the watch will continue to be accurate to within the time accuracy range in the power save mode, when the power save function is canceled, be sure to perform free reception before using.

## B. Insufficient Charge Warning Function

The second hand changes from one-second interval movement to two-second interval movement. After about 4 days have passed since the start of two-second interval movement, the watch stops as a result of being insufficiently charged.



**[Note]** During two-second interval movement:

- (1) The time cannot be corrected by regular automatic or free reception, and the time cannot be corrected manually.
- (2) Only the time mode is displayed, and other modes cannot be used.

## **C. Overcharging Prevention Function**

When the rechargeable cell 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. There is no effect on the rechargeable cell, timekeeping accuracy, watch functions or performance no matter how much the watch is charged.

# 15. General Reference for Charging Times of Eco-Drive Watches

Below are the approximate times required for charging when exposing the watch dial to light continuously. This table is for general reference only and does not represent exact charging times.

Environment	Illuminance (lx)	Charging time (approx.)		
		To work for one day	To start working normally when the cell is discharged	To become fully charged when the cell is discharged
Outdoors (sunny)	100,000	2 minutes	45 minutes	9 hours
Outdoors (cloudy)	10,000	12 minutes	2.5 hours	45 hours
20 cm (7-7/8 inches) from a fluorescent lamp (30W)	3,000	40 minutes	6.5 hours	150 hours
Interior lighting	500	4 hours	45 hours	---

To work for one day:

Time required for charging the watch to run for 1 day with normal hand movement.

To become fully charged when the cell is discharged:

Time required for charging the watch from the stopped state when insufficiently charged to fully charged.

**[Note]**

Once fully charged, the watch has a continuous operating time of about six months without further charging. When the Power Save function has been activated, the watch will continue to keep time for about one year. However, if the watch stops running as a result of being insufficiently charged, since a considerable amount of time is required to charge so that it starts running again as is indicated in the table, try to charge the watch everyday. It is recommended to charge the watch at least once a month by exposing to direct sunlight.

# 16. Eco-Drive Watch Handling Precautions

## **CAUTION** Charging Precautions

- Charging the watch at high temperatures can cause deformation or discoloration of external components as well as a malfunction of the components of the movement.
- Avoid charging the watch at high temperatures (about 60°C / 140°F or higher).

### **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 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 (20 in.) away from the light source to prevent the watch from reaching a high temperature.

## **WARNING Handling the Rechargeable Cell**

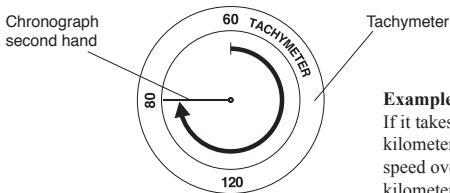
- Never attempt to remove the energy storage cell from the watch. If the energy storage cell must unavoidably be removed, store it out of the reach of small children to prevent accidental swallowing.
- If the energy storage cell should happen to be swallowed, consult a physician immediately and seek medical attention.

## **WARNING Replacing the Energy Storage Cell**

- Although it is not usually necessary to replace the rechargeable cell, there may be rare cases in which it becomes necessary due to a problem with the rechargeable cell. If it becomes necessary to replace the rechargeable cell, please have it replaced promptly.

## 17. Using the Tachymeter (When Provided)

The tachymeter feature is used to measure traveling speed such as that of an automobile. In the case of this watch, the average speed can be approximately determined for a certain distance by measuring how many seconds it takes to travel 1 kilometer (measuring range: maximum 60 seconds). To determine average speed, start the chronograph simultaneous to the start of measurement. Stop the chronograph when the vehicle has traveled 1 kilometer. An approximation of the average speed over that distance can be determined by the position of the chronograph second hand at that time.



### **Example:**

If it takes 45 seconds to travel 1 kilometer, then the average speed over that distance is 80 kilometers/hour.

# 18. 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>· Is the watch in the time mode (TME) or local time mode (L-TM)?</li><li>· Does the second hand move to "RX: Reception standby"?</li></ul>	<ul style="list-style-type: none"><li>· Pull the crown out to Position 1 and turn to set the mode to the time mode or local time mode.</li><li>· Continuously depress button (B) and release when the second hand points to the RX position.</li></ul>
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 6:00 position of the watch towards a window while avoiding objects that block radio waves or generate noise. Try changing the direction, location and angle of the watch several times so that the second hand points to a reception level to find the location at which radio waves are received easily. (Refer to the sections entitled, "For Good Reception" and "Locations where Reception may be Difficult" of this manual.</li></ul>

<p>Unable to receive radio waves even though second hand points to RX</p>	<ul style="list-style-type: none"> <li>· Is the second hand indicating a reception level of H, M or L even during reception?</li> </ul>	<ul style="list-style-type: none"> <li>· Wait until reception is completed (until the second returns to one-second interval movement)</li> </ul>
<p>Time does not match telephone time service even though radio waves can be received</p>	<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 the section entitled, "Correcting the Reference Position" of this manual and reset the reference position.</li> </ul>

# 19. 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) 10bar/20 bar or WATER RESIST(ANT)	Water-resistant to 10/20 atmospheres







Minor exposure to water  
(washing face, rain, etc.)

**OK**

**OK**

**OK**

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			
 <p>Moderate exposure to water (washing, kitchen work, swimming, etc.)</p>	 <p>Marine sports (skin diving)</p>	 <p>Scuba diving (with air tank)</p>	 <p>Operation of the crown or button with moisture visible</p>
<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<b>OK</b>	<b>NO</b>	<b>NO</b>	<b>NO</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, 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-lock type crown, be sure to tighten the crown completely.
- Do NOT operate the crown or button 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 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, benzine, 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.

## 20. Specifications

**1. Model:** E67\*

**2. Type:** Analog solar-powered watch

**3. Timekeeping 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  $95^{\circ}\text{F}$  and when not receiving radio waves)

**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, daylight savings time
- Calendar: Years elapsed from most recent leap year, month, date, day

**6. Additional functions:**

- Solar power function
- Radio wave receiving function (regular automatic reception, free reception, recovery automatic reception)
- Reception status display function (RX)
- Reception level display function (H, M, L)
- Reception result confirmation function (H, M, L, NO)
- Chronograph function (60 minute timing, 1/20 second units)

- Local time function (time difference correction: 1 hour units, daylight savings time ON/OFF function)
- Reference position confirmation function
- Alarm function (24 hour clock alarm)
- Photoelectric power generation function
- Power save function
- Insufficient charge warning function
- Overcharging prevention function

#### **7. Continuous operation times:**

- Time until watch stops without charging after being fully charged
  - : Approx. 1 year (when power save function is operating)
  - : Approx. 6 months (when power save function is not operating)
- Insufficient charge warning display to stopped: Approx. 4 days  
(Continuous operation times may vary depending on the conditions of use.)

#### **8. Battery:** Rechargeable cell, 1 pc.

\* Specifications are subject to change without notice.

European Union directives conformance statement



Hereby, CITIZEN WATCH CO.,LTD. declares that this product is in compliance with the essential requirements and other relevant provisions of directive 2014/53/EU and all other relevant EU directives.

You can find your product's Declaration of Conformity at "<http://www.citizenwatch-global.com/>".

Model No.AS4 \*

Cal.E67

CTZ-B8107⑪