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## 1. Features

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 full-auto calendar that changes the date automatically (day, month and year change automatically through February 28, 2100 including leap years), a daily alarm function that can be set based on a 24 -hour clock, and a chronograph function that allows measurement of time in $1 / 20 \mathrm{sec}-$ ond units up to 59 minutes, 59.95 seconds.

## 2. Before Using

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 will continue to run for about 9 months without additional charging (when the power save feature is operating).

## $\checkmark$ Power Save Feature

When power generation stops as a result of light not shining on the solar cell during the time display or local time display, the second hand stops at the 12:00 position and only the hour and minute hands move to save power. When light once again begins to shine on the solar cell, the second hand advances rapidly to the current seconds and returns to moving at one second intervals.

## <Proper Use of this Watch>

To use this watch comfortably, make sure to recharge it before it stops running completely. Since there is no risk of overcharging (Overcharging Prevention Feature), it is recommended that the watch be recharged everyday.

## 3. Names of Components

| Name/Mode | Time/Calendar | Chronograph |
| :--- | :--- | :--- |
| (1) Mode hand | TME | CHR |
| (2) Function hand | Stops at 0-position | Chronograph minutes, <br> 1/20th seconds |
| (3) Date | Displays date | Date display <br> (TME or L-TM) |
| (4) Hour hand | Displays hours | Displays hours <br> (TME, L-TM or ALM) |
| (5) Minute hand | Displays minutes | Displays minutes <br> (TME, L-TM or ALM) |
| (6) Second hand | Displays seconds | Chronograph seconds |
| (7) 24 hour hand | 24-hour time display in <br> coordination with hour hand | 24-hour time display in <br> coordination with hour hand |


| Local Time | Alarm |
| :--- | :--- |
| L-TM | ALM |
| Stops at 0-position | Stops at 0-position |
| Displays date of local time | Date display <br> (TME or L-TM) |
| Displays hours of local <br> time | Displays alarm hours |
| Displays minutes of local <br> time | Displays alarm minutes |
| Displays seconds | Displays ON/OFF |
| 24-hour local time display in <br> coordination with hour hand | 24-hour alarm time display in <br> coordination with hour hand |


| Name | Crown position | Time/Calendar | Chronograph |
| :---: | :---: | :---: | :---: |
| (8) Crown | Normal position | Mode switching | Mode switching |
|  | Position 1 | Calendar correction | 0-position check/correction (function hand, date wheel) |
|  | Position 2 | Time correction | 0 -position check/correction (second hand, 24 hour hand, hour hand, minute hand) |
| Button (A) | Normal position | Not used | Start/stop, reset (pressing continuously for at least 2 seconds) |
|  | Position 1 | Year correction | Function hand and date wheel 0-position correction |
|  | Position 2 | Not used | Second hand 0-position correction |
| Button (B) | Normal position | Not used | Recalls $1 / 20$ seconds when stopped |
|  | Position 1 | Month correction | Not used |
|  | Position 2 | Not used | Not used |


| Local Time | Alarm |
| :--- | :--- |
| Mode switching | Mode switching |
| Local time display | Alarm ON/OFF setting |
| Local time correction | Alarm time correction (includ- <br> ing ON/OFF switching) |
| Not used | Alarm tone monitor (pressing con- <br> tinuously for at least 2 seconds) |
| Not used | ON/OFF switching |
| Not used | ON/OFF switching |
| Not used | Not used |
| Not used | Not used |
| Not used | Not used |

## 4. Functions Unique to Solar-Powered Watches

When this watch becomes insufficiently charged, the second hand automatically moves to one of the words indicating a warning display to inform the wearer of "insufficient charge warning" or "time setting warning".
Try to keep the watch charged at all times to prevent it from becoming insufficiently charged.
[Normal Time Display]

## [Case of Having Become Insufficiently Charged from the Normal

 Time Display]* In the case the watch has become insufficiently charged, promptly recharge the watch so that it returns to normal hand movement (normal time display).
[Insufficient Charge
Warning Display]
The second hand rapidly moves to "CHARGE" position and stops.
[Stopped]
The second hand rapidly moves to "STOP" position and stops.
[Time Setting Warning Display]
The second hand rapidly moves to the "SET" position and stops.

When the second hand is pointing to the word "SET", it means that the time should be reset. Always make sure to reset the watch to the current time.


When the watch is recharged by exposin to light, the second hand moves from "STOP" position to the "SET" position Note: Recharge the watch by exposing to light for at least 30 minutes. (Expose the watch to light until the second hand moves to the "SET" position.)
[Case of Forgetting to Reset the Time after Charging due to the Watch Being Insufficiently Charged and then Resetting the Time after Recharging]

* If the watch stops as a result of being insufficiently charged, the watch will not return to normal hand movement (normal time display) unless the watch is sufficiently recharged and the time is reset.
[Insufficient Charge
Warning Display]
[Time Setting Warning Display]
[Tall



## <Insufficient Charging Warning Feature>

Regardless of the display of the watch at the time, when the watch becomes insufficiently charged, the watch changes to the time display and the second hand moves to the CHARGE position to inform the wearer that it is insufficiently charged. After the second hand moves to the CHARGE position, the watch changes to the time display in the order of the 24 hour hand, hour hand, minute hand and date wheel (function hand). Although the watch continues to keep time accurately at this time, the watch stops after about 5 days have elapsed (roughly 2 days in the case the hands have been moved to switch the time when the insufficient charging warning feature is activated). When this happens, charge the watch by exposing to light so that it returns to one-second interval movement. However, since the
time is incorrect when the watch is exposed to light and
 changes to the insufficient charging warning display after it has stopped due to insufficient charging, set the time after sufficiently charging the watch.
Notes:

- Chronograph measurement stops and the chronograph is reset even when measurement is in progress.
- The set time (time difference) is retained for the local time.
- The alarm will not sound even if it is set.
- Crown (mode switching) and button operations will not function.


## <Time Setting Warning Feature>

When the watch is recharged by exposing to light after it has stopped, the second hand moves to the SET position to inform the wearer that the time is incorrect. Although the 24 hour hand, hour hand and minute hand will begin to move after the second hand moves to the SET position, since the time is incorrect, reset the time and date after sufficiently charging the watch.
Notes:

- Crown and button operations will not function except for time and calendar setting operations.
- When the crown is pulled out to position 2 (time correction position) in the time or date setting mode, the time setting warning feature is canceled. The second hand will remain stopped at the SET position unless the crown is pulled out to position 2 and the time is set.
- In the case the watch has stopped due to insufficient charging, a minimum of 30 minutes are required until the watch changes to the time setting warning display even if sufficiently exposed to light.


## <Overcharging Prevention Feature>

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

## <Power Save Feature>

When power is no longer generated as a result of light not shining on the solar cell when the watch is in the time/calendar mode or local time mode, the second hand moves to the 0 seconds position and stops to save power by reducing current consumption.
The 24 hour hand, hour hand and minute hand continue to keep the correct time even though the second hand is stopped. Furthermore, the calendar is corrected in coordination with the 24 hour hand, hour hand and minute hand.

- During normal hand movement, when power generation is resumed after the second hand stops at the 0 seconds position, the second hand is rapidly advanced to the current seconds and begins one-second interval movement. However, when the insufficient charging warning feature has been activated, the second hand moves to the CHARGE position and stops, and when the time setting warning feature has been activated, it moves to the SET position and stops. When the watch has stopped, the second hand moves to the STOP position and remains stopped.


## Note:

- During the time the secondary battery is fully charged and the overcharging prevention feature is operating, the power save feature does not operate even when power generation is interrupted as a result of not exposing the solar cell to light. Similarly, the power save feature will also not operate when the secondary battery has temporarily become fully charged as a result of exposure to intense light.


## 5. 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 <br> (lx) | Environment |  | Charging time |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  |  | Charging time <br> for 1 day of <br> operation | Charging time from the <br> stopped state to 1-sec- <br> ond interval movement | Full <br> recharging <br> time |  |
| 500 | Inside an ordinary office | 2.5 hours | 48 hours | 337.5 hours |  |
| 1,000 | $60-70 \mathrm{~cm}(24-28 i n$.$) under fluorescent light$ <br> $(30 \mathrm{~W})$ | 40 minutes | 20 hours | 134.5 hours |  |
| 3,000 | 20 cm (8in.) under fluorescent light (30W) | 10.5 minutes | 7 hours | 42.5 hours |  |
| 10,000 | Outdoors, cloudy weather | 5 minutes | 2.5 hours | 12 hours |  |
| 100,000 | Outdoors, summer, under direct sunlight | 1.5 minutes | 1 hour | 4 hours |  |

[^0]
## 6. Notes Regarding Handling of this Watch

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

Please note that if you 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.


## $\triangle$ CAUTION Charging Precautions

- Avoid recharging at high temperatures (over about $60^{\circ} \mathrm{C} / 140^{\circ} \mathrm{F}$ ) 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.


## 7. Replacing the Secondary Battery

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

## 8. Switching the Mode (Display Function)

This watch is equipped with four modes consisting of time/calendar, chronograph, local time and alarm. Since the mode changes when the crown is turned, the current mode can be confirmed with the mode hand.


## 9. Hand 0-Position Check and Correction

Before using this watch, check that the functions of the watch operate properly by performing the following procedure.

## 0 -Position: This refers to the base position of each hand that enables the

 watch to function properly.
## [0-Position Check]

1. Turn the crown to switch the watch to the chronograph [CHR] mode.
2. Pull the crown out to Position 1 to check the 0 -position (function hand and date wheel correction mode). Confirm that the 24 hour hand, hour hand, minute hand, second hand and function hand rapidly advance to the 0 position, and the date wheel displays " 1 ".

0 Positions of each Hand (Base Positions): 24 hour hand: 24:00
Hour hand, minute hand: 00:00
Second hand: 00 seconds
Function hand: 0 position (12:00 position) Date wheel: 1st
Perform the " 0 -Position Correction" when the hands and date wheel are not at the positions indicated above.


0-Position Correction

## [0-Position Correction]

## 0-Position Correction of Function Hand and Date Wheel:

1. Pull the crown out to Position 1 in the chronograph [CHR] mode to correct the function hand and date wheel
2. Click (turn) the crown to the left to align the date wheel.
(1) Clicking the crown once causes the function hand to make four revolutions and the date to be corrected by one day.
(2) Turning the crown rapidly (clicking continuously two or more times) causes the function hand to advance continuously. When stopping the function hand, click the crown once to the right or left. When the function hand is not stopped manually, it stops automatically after advancing 31 days.
The 12:00 position immediately after the date changes to the " 1 st" is the 0 position of the function hand. After correcting the date wheel to the " 31 st " by turning the crown, press button (A) to finely correct the function hand so that the function hand is aligned at the 0 position after the date wheel changes to the " 1 st ".

0-Position Correction of 24 Hour Hand, Hour Hand, Minute Hand and Sec ond Hand:

1. Pull the crown out to Position 2 in the chronograph [CHR] mode to correct each hand.
2. Pressing button (A) causes the second hand to be corrected by one second at a time each time it is pressed. Continuously pressing button (A) causes the second hand to advanced rapidly.
3. Clicking the crown allows correction of the 24 hour hand, hour hand and minute hand.
(1) Clicking the crown once to the right causes the hour and minute hands to move clockwise.
(2) Clicking the crown once to the left causes the hour and minute hands to move counter-clockwise.

- Turning the crown rapidly (clicking continuously two or more times) causes the hands to advanced rapidly. When stopping the hands, click the crown once to the right or left. When the hands are not stopped manually, they stop automatically after being corrected by 12 hours.


## 10. Setting the Time and Date

## [Setting the Time]

1. Turn the crown and align the mode hand at the time/calendar [TME] mode.

2. When the crown is pulled out to Position 2 (time setting position), the second hand rapidly advances to the 0 seconds position and stops.
Note: When the second hand does not stop at the 0 seconds position, reset the base position in the " 0 -Position Correction Mode".
Note: If the crown is pulled out to Position 2 when the date is changing, the date wheel and function hand stop at that time, and are then advanced by the remaining amount after the second hand is rapidly advanced to the 0 seconds position.
3. Click (turn) the crown to set the time.
(1) Clicking the crown once to the right causes the 24 hour hand, hour hand and minute hand to move in the clockwise direction.
(2) Clicking the crown once to the left causes the 24 hour hand, hour hand and minute hand to move in the counter-clockwise direction.

- Turning the crown rapidly (continuously clicking two or more times) causes the hands to advance rapidly. When stopping the hands, click the crown once to the right or left. When the hands are not stopped manually, they stop automatically after being corrected by 12 hours.

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

## [Setting the Date]

The calendar function of this watch is a full-auto calendar that changes the year, month and date automatically, including leap years.


1. Turn the crown to switch the watch to the time/calendar [TME] mode.
2. When the crown is pulled out to Position 1 (date correction position), the second hand rapidly advances to the month display position stored in memory, while the function hand moves to the year display position (number of years elapsed since the most recent leap year), after which both stop.
Note: If the crown is pulled out to Position 1 when the date is changing, the second hand advances rapidly after the date changes.
3. Click (turn) the crown to the left to set the date.

- Clicking the crown once to the left causes the function hand to make four revolutions and the date to be corrected by one day.
- Turning the crown rapidly (continuously clicking two or more times) causes the hand to advance continuously. When stopping the hand, click the crown once to the right or left. When the hand is not stopped manually, it stops automatically after being advanced 31 days.

4. Pressing button (A) allows correction of the year (number of years elapsed since the most recent leap year)
Press button (A) and align the function hand at the position corresponding to the year (number of years elapsed since the most recent leap year).

* Interpretation of Year/Position of Function Hand *

Leap year : 0 minutes position
1 year after most recent leap year : 6 minutes position
2 years after most recent leap year : 12 minutes position
3 years after most recent leap year : 18 minutes position

Quick Reference Table for No. of Years Since Most Recent Leap Year:

| Year | Years elapsed | Year | Elapsed years |
| :--- | :--- | :--- | :--- |
| 2000 | Leap year | 2004 | Leap yea |
| 2001 | 1st year | 2005 | 1st year |
| 2002 | 2nd year | 2006 | 2nd year |
| 2003 | 3rd year | 2007 | 3rd year |

5. Pressing button (B) allows correction of the month. Press button (B) and align the second hand at the position corresponding to the month

* Interpretation of Month/

Position of Second Hand*
January: 1:00 position
February: 2:00 position
March: 3:00 position
December: 12:00 position
6. Return the crown to the normal position after setting the date. The watch will

resume keeping time once the second hand catches up to the current seconds.

## <When the Calendar has been Set to a Non-existent Date>

When the crown is returned to the normal position from the date correction mode, the watch switches to the 1st day of the following month.
Example: February 29, 30 or 31 in an ordinary year $\rightarrow$ March 1
February 30 or 31 in a leap year $\quad \rightarrow$ March 1

## [When the Date is not in the Center of the Calendar Window]

If the date has shifted from the calendar window as a result of the watch having been subjected to a strong impact and so forth, realign the function hand and date to their proper reference positions in the chronograph mode.

1. Turn the crown to set the watch to the chronograph mode.
2. Pull the crown out to the first click.
3. Pressing button (A) causes the function hand and date to move a little at a time.

* Press button (A) several times until the " 1 " of the date reaches the center of the calendar window.
* After aligning the date to " 1 ", press button (A) several times until the function hand reaches the " 0 " position.

4. Return the crown to the normal position.


## 11. Using the Chronograph

The chronograph is able to measure time up to a maximum of 59 minutes 59.95 seconds in 1/20th second units, after which it resets to 0 seconds.


## [Explanation of Hands During Chronograph Measurement]

When the crown is turned and the mode hand is set to the chronograph [CHR] mode, the second hand and function hand are rapidly advanced to the 0 position and the watch enters the chronograph mode.

- Second hand:

Switches to the chronograph second hand. The second hand advances rapidly and makes one revolution only when starting at 0 seconds, after which it moves in 1 second increments to measure chronograph seconds.

- Function hand:

Switches to either chronograph minutes or chronograph $1 / 20$ th seconds. The function hand moves in one minute increments to measure chronograph minutes. When button $(\mathrm{B})$ is pressed when the chronograph is stopped, the function hand switches to $1 / 20$ th seconds display during time button (B) is pressed.
Note: 24 hour hand, hour hand, minute hand, date wheel:

- Continue to display the current time when the watch has been switched from the time/calendar mode.
- Continues to display local time when the watch has been switched from the local time mode.
- Continues to display the alarm set time when the watch has been switched from the alarm mode.


## [Chronograph Measurement]

1. Turn the crown to set the mode hand to the chronograph [CHR] mode.
2. Press button (A) to start and stop the chronograph. A confirmation tone is heard whenever button $(A)$ is pressed.
3. Continuously pressing button (A) when the chronograph is stopped causes the chronograph second hand and chronograph minute hand to be reset to the 0 position.


## 12. Setting Local Time

The local time function allows the time in a different time zone to be set separately from the current time. Local time is set by performing a time difference correction in 1 hour units based on the current time (time of the time mode/TME). The minute and second hands move in coordination with the current time.

## [Time Difference Correction Procedure]

1. Turn the crown to set the mode hand to the local time [L-TM] mode.
2. Pull out the crown to Position 2 (local time setting position).
3. Click the crown to the right or left to correct the time difference.

- When the crown is clicked to the right, the hour hand moves by 1 hour in the clockwise direction.
- When the crown is clicked to the left, the hour hand moves by 1 hour in the counterclockwise direction.

Note: The hour hand is not advanced rapidly even if the crown is continuously clicked two or more times. Perform correction accurately 1 hour at a time. Furthermore, the range of time difference correction is $\pm 23$ hours based on the current time.
4. Always make sure to return the crown to the normal position after correcting the time difference.
Note: If the hour hand passes 12:00 AM (midnight) during correction, the date is advanced by 1 day following completion of hand movement. If the time difference is corrected in the counter-clockwise direction and the hour hand passes back over 12:00 AM, although the date is corrected following completion of hand movement, since the date is corrected by 30 days in the clockwise direction, it takes about 2-3 minutes for the date to be corrected. Pay attention to AM and PM when correcting time difference.
Note: When returning the time difference to the original setting, return the hour hand in the direction opposite that when the time difference was corrected.

## 13. 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 time at which the alarm sounds applies to the time (TME) mode, and cannot be set based on the local time (L-TM).


## [Setting the Alarm Time]

1. Turn the crown and set the mode hand to the alarm [ALM] mode.

- Second hand: Moves rapidly to the ON or OFF position.
- 24 hour hand, hour hand, minute hand: Move the previously set alarm time.
- Function hand: Stops at the 0 position.

2. Pull out the crown to Position 2 (alarm setting position).

- The alarm setting is turned ON automatically.

3. Click (turn) the crown to set the alarm time.
(1) Clicking once to the right causes the hour and minute hands to move clockwise.
(2) Clicking once to the left causes the hour and minute hands to move counterclockwise

- Turning the crown rapidly (continuously clicking two or more times) causes the hands to advance rapidly. When stopping the hands, click the crown once to the right or left. When the hands are not stopped manually, they stop automatically after being corrected by 12 hours.
- Set the alarm while making sure to not to mistake AM and PM by referring to the 24 hour hand.

4. Return the crown to the normal position after setting the alarm time.

## [Switching Alarm ON and OFF]

The alarm is switched ON and OFF each time button (A) is pressed when the crown is pulled out to Position 1 or Position 2 in the alarm mode.

## [Alarm Tone Monitor]

When button (A) is pressed with the crown in the normal position in the alarm mode, the alarm tone sounds for as long as button (A) is pressed.

## [Stopping the Alarm Tone]

Press either button (A) or (B) to stop the alarm tone while it is sounding.

## 14. All-Reset

This watch may not function properly as a result of being subjected to the effects of static electricity or strong impact and so forth. When this happens, set the hands of the watch to their respective base positions according to the following procedure after performing the all-reset procedure.


When performing the all-reset procedure, first make sure that the watch is fully charged and the second hand is moving in one second increments. If the all-reset procedure is performed when the watch is insufficiently charged, it may not function properly or remain stopped following the all-reset procedure.

1. Turn the crown to set the mode hand to the chronograph [CHR] mode.
2. Pull out the crown to Position 2 ( 0 -position correction mode).

- Each of the hands and date wheel move to their respective 0 positions stored in memory and then stop.

3. Press buttons (A) and (B) simultaneously and then release.

- Following a confirmation tone, each of the hands perform a demonstration movement in the order of the function hand, 24 hour hand, hour hand, minute hand and second hand to indicate that the all-reset procedure is finished.
Note: Following the all-reset procedure, make sure to properly reset each mode after performing 0 -position correction for each hand before using the watch. The watch will remain stopped and not run unless 0-position correction is performed.


## 15. 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.

| Indication |  | Specification | Minor exposure to water (washing face, rain, etc.) |
| :---: | :---: | :---: | :---: |
| Dial | Case (Case back) |  |  |
| WATER RESIST or no indication | WATER RESIST(ANT) | Water-resistant to 3 atmospheres | OK |
| WR 50 or WATER RESIST 50 | WATER <br> RESIST(ANT) 5 bar or WATER RESIST(ANT) | Water-resistant to 5 atmospheres | $0 \mathrm{~K}$ |
| WR 100/200 or WATER RESIST 100/200 | WATER RESIST(ANT) 10bar/20 bar or WATER RESIST(ANT) | Water-resistant to 10 / 20 atmospheres | $0 \mathrm{~K}$ |

For correct use within the design limits of the watch, confirm the level of waterresistance of your watch, as indicated on the dial and case, and consult the table.
Minor exposure to water
(washing face, rain, etc.)

- Water-resistance for daily use (to 3 atmospheres): This type of watch is waterresistant 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

- 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.

- 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 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 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.


## 16. Specifications

- Model: E81*
- Type: Analog solar-powered watch
- Accuracy: Within $\pm 15$ seconds per month (when worn at normal temperatures of $+5^{\circ} \mathrm{C}$ to $+35^{\circ} \mathrm{C} / 41^{\circ} \mathrm{F}$ to $95^{\circ} \mathrm{F}$ )
- Operating temperature range:

Watch operating temperature range: $-10^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C} / 14^{\circ} \mathrm{F}$ to $140^{\circ} \mathrm{F}$
Power save feature operating temperature range: $-10^{\circ} \mathrm{C}$ to $+35^{\circ} \mathrm{C} / 14^{\circ} \mathrm{F}$ to $95^{\circ} \mathrm{F}$
Time correction operating temperature range: $-5^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C} / 23^{\circ} \mathrm{F}$ to $140^{\circ} \mathrm{F}$

- Display functions:

Time: 24 hours, hours, minutes, seconds
Calendar: Date display by a date wheel (with continuous advance function)
Month display by second hand
Year display by function hand (years elapsed from most recent leap year)

- Additional functions:

Power save feature
Time setting warning feature
Insufficient charging warning feature
Overcharging prevention feature
Chronograph ( 60 minute measurement, $1 / 20$ th second units)
Local time (time difference correction: 1 hour units)
Alarm (24 hour clock, alarm monitor, alarm ON/OFF)

- Continuous running times:

Fully charged to stopped: Roughly 9 months (when power save feature is operating)
Activation of insufficient charging warning feature to stopped: Roughly 5 days (roughly 2 days in the case the hands have been moved to switch the time when the insufficient charging warning feature is activated)

- Battery: Secondary battery
*Specifications are subject to change without notice.


[^0]:    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

