

# CITIZEN®

**Model No. AR3\* \* \* / Cal. No. G87 \***

- INSTRUCTION MANUAL
- BETRIEBSANLEITUNG
- MANUEL D'INSTRUCTIONS
- MANUAL DE INSTRUCCIONES
- MANUALE DI FUNZIONAMENTO
- MANUAL DE INSTRUÇÕES
- 説明書
- 说明书



***Eco-Drive***

CTZ-B8113





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# 1. Features

This is an analog solar-powered watch that is equipped with a solar cell incorporated in its face to convert solar energy into electricity.

## 2. Before Using

**Sufficiently Recharge by  
Placing in Light Before Use**

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 7 months without additional charging.

### <How to use this Solar Watch Properly>

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

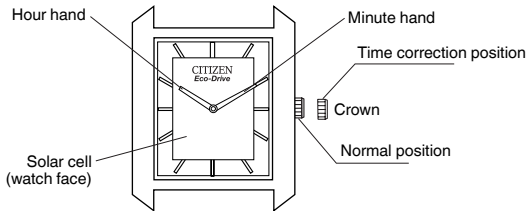
## 3. Overcharging Prevention Feature

When the secondary battery is fully charged, the overcharging prevention feature is activated to prevent further recharging. This enables the wearer to recharge without risk of damage to the watch.

## 4. Setting the Time

\* In the case the crown is of the screw-lock type, loosen the screw by turning the crown to the left before operating the crown, and after having returned the crown to the normal position following operation, turn the crown to the right while pushing it in to securely retighten it.

- (1) Pull the crown out to the time correction position.
- (2) Turn the crown to set the time.
- (3) Return the crown to the normal position to start the watch.



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

## 5. Charging Time

The time required for charging varies according to the model of watch (color of the watch face, etc.). The following table provides a general reference for determining charging times.

Illuminance (lux)	Environment	Charging time (approx.)		
		For restarting after stopping	For one day's use	For full charge
500	Inside an ordinary office	————	4 hours	————
1,000	60-70cm (24-28in.) under a fluorescent light (30W)	60 hours	2 hours	————
3,000	20cm (8in.) under a fluorescent light (30W)	13 hours	40 min	————
10,000	Exterior, cloudy	3.5 hours	12 min	70 hours
100,000	Exterior, summer, sunny	19 min.	2 min	9 hours

Time required for full charge: Time from the state in which the watch has stopped until fully charged.

Time required for one day's use: Time required for the watch to run for one day.

Battery duration from full charge to stop: 7 months

## 6. Notes Regarding Handling of Solar-Powered Watches

### <Always make sure to recharge frequently>

- Please note that if you wear long sleeves, the watch may stop as a result of being covered by your sleeve and blocked from the light.
- When you take off the watch, try to place it in as bright a location as possible. This will ensure that it will continue to run properly.

### **CAUTION: Recharging Precautions**

- The watch will be damaged during recharging if it becomes excessively hot (60°C/140°F and above). Avoid recharging when the watch is hot.  
Examples: Recharging when the watch is in close proximity to an incandescent lamp, halogen lamp or other light source that generates considerable heat, or recharging the watch while placed on the dashboard of an automobile or other locations subject to excessively high temperatures.
- When you charge the watch by an incandescent lamp, take a distance about 50cm (20 in.) from the light source to prevent extremely high temperature.



## <Replacement of Secondary Battery>

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

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

- The secondary battery should never be removed from the watch.
- If for any reason it becomes necessary to remove the secondary battery from the watch, keep it out of the reach of children to prevent accidental swallowing.
- If the secondary battery is accidentally swallowed, consult a doctor immediately.

### **WARNING** Use Only the Specified Battery

Never use a battery other than the secondary battery specified for use in this watch. Although the watch structure is designed so that it will not operate when another type of battery is installed, if a silver battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer.

When replacing the secondary battery, always make sure to use the designated secondary battery.

## 7. Precautions

### WARNING: Water-resistance performance

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



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

Name	Indication	Specification
	Watch dial and Case back	
Everyday-use water-resistant watch	WATER RESIST(ANT)	Water-resistant to 3 atmospheres
Upgraded everyday-use water-resistant watch	WATER RESIST(ANT) 5bar	Water-resistant to 5 atmospheres
Upgraded everyday-use water-resistant watch	WATER RESIST(ANT) 10/20bar	Water-resistant to 10 or 20 atmospheres

**OK**

**OK**

**OK**

### Examples of Use



Moderate exposure to water (washing, kitchen work, swimming, etc.)



Marine sports (skin diving)



Scuba diving (with air tank)



Operation of the crown with moisture visible

**NO**

**NO**

**NO**

**NO**

**OK**

**NO**

**NO**

**NO**

**OK**

**OK**

**NO**

**NO**

\* WATER RESIST (ANT) xx bar may also be indicated as W.R. xx bar. 9

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

## **CAUTION**

- Be sure to use the watch with the crown pressed in (normal position). If your watch has a screw-type crown, be sure to tighten the crown completely.
- Do NOT operate the crown 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, benzene, 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.

## **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.

## 8. Specifications

1. **Model** : G87\*
  2. **Type** : Analog solar-powered watch
  3. **Timekeeping accuracy** : Within  $\pm 15$  seconds per month on average  
(when worn at normal temperatures between 5°C/41°F and 35°C/95°F)
  4. **Operating temperature range** : -10°C/14°F to +60°C/140°F
  5. **Display functions** : hours, minutes
  6. **Additional function** : Overcharging prevention feature
  7. **Continuous operation times** : Fully charged to stopping: Approx. 7 months
  8. **Secondary battery used** : Secondary battery, 1pc.
- 
- In the interest of product improvement, specifications are subject to change without notice.





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