

CITIZEN®

INSTRUCTION MANUAL



Eco-Drive®



ENGLISH

FRANÇAIS

ESPAÑOL

DEUTSCH

ITALIANO

PORTUGUÊS

中文(繁体字)

Please make sure to check the following before use.

Please read carefully section entitled "If Your Watch is a Diver's Watch" to ensure proper use of the watch in the case your watch is a diver's watch.

If your watch is a diver's watch, the words "AIR DIVER'S 200M" are indicated on the case back (or dial).

If the words "AIR DIVER'S 200M" are not indicated on the case back (or dial) of your watch, this means that your watch is not a diver's watch and should not be used for scuba diving.

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Before using

This watch is powered not by an ordinary battery, but by converting photo energy to electrical energy.

Before using, expose to light and make sure the watch is sufficiently charged.

See "TIME REQUIRED FOR CHARGING" for reference charging times.

A rechargeable cell is used in this watch to store electrical energy.

This rechargeable cell is a clean energy battery which does not use any toxic substances such as mercury. Once fully charged, the watch will continue to run for about 6 months without further charging.

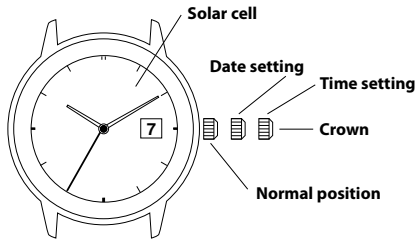
To use this watch comfortably, **make sure that the watch is always recharged before it stops.**

There is no risk of overcharging this watch. (Overcharge Prevention Function is provided)

We recommend that you recharge the watch everyday.

Setting the time and date

*If the crown is of the screw- type, set the time and date after first loosening the screw. Retighten the screw after the time and date have been set.



■ Setting the time

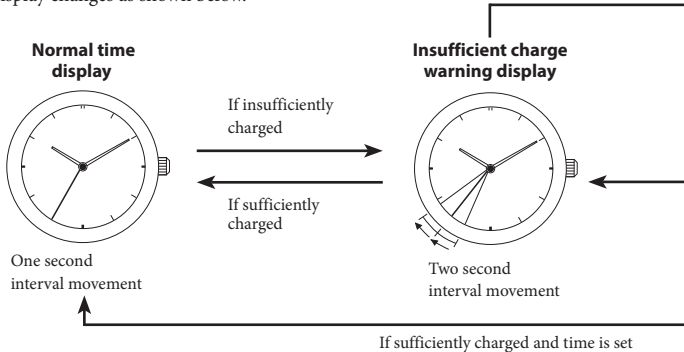
1. Stop the second hand at the 0 second position by pulling the crown out to the 2nd click.
2. Turn the crown to set the time.
3. After setting the time, firmly push the crown back in to its normal position.

■ Setting the date

1. Pull the crown out to the 1st click.
2. Set the desired date by turning the crown.
 - Do not adjust the date when the watch display is reading between 9:00 pm and 1:00 am, otherwise the date might not change on the following day.
3. After you have set the date, be sure to firmly return the crown to its normal position.

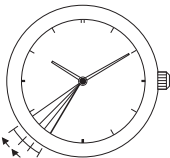
Functions of Eco-Drive watches

If the charge becomes insufficient, a warning function will operate and the display changes as shown below.



If insufficient charge continues

**Time setting
warning display**



If insufficiently
charged and time
is set

Hitch movement

Stop

The watch will begin to operate
soon after it is exposed to light due
to the Quick Start Function

Functions of Eco-Drive watches

■ Insufficient charge warning function

The second hand changes to a two second interval movement to indicate insufficient recharging.

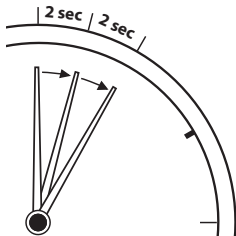
Even in such a case, the watch keeps correct time, but about 3 days after the two second interval movement begins, the watch will stop. After exposing the watch to light, recharging takes place and the watch returns to one second interval movement.

■ Quick start function

The watch will stop if it is completely discharged.

It will begin to operate soon after it is exposed to light.

(However, the time to start may vary according to the brightness of the light.)



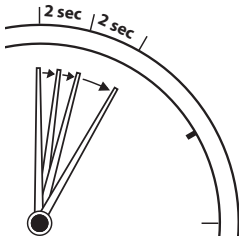
Two second interval movement

■ Time setting warning function

If the watch stops, subsequent exposure to light allows the Quick Start Function to start again, and **the second hand moves with a hitch to indicate that the time is incorrect.**

In this case, quickly recharge the watch and reset the time.

Otherwise, the hitch movement will continue.



Hitch movement

■ Overcharge prevention function

There is no risk of overcharging.

Once the rechargeable cell is fully recharged, the overcharging prevention feature comes into operation and prevents overcharging.

Care and handling during charging

■ Notes on use

Take care to charge your watch during use.

Please note that if you wear long sleeves, the watch can easily become insufficiently charged because it is hidden and not exposed to light.

- When you take the watch off, place it in as bright a place as possible, and it will always continue to run properly.

■ Notes on recharging

- Avoid recharging at high temperatures (over about 60°C/140°F), otherwise the watch will be damaged during recharging.
(eg) Charging the watch near a light source that easily becomes hot, such as an incandescent lamp or a halogen lamp.
Charging in a place that easily becomes hot, such as a dashboard.

When you charge the watch by an incandescent lamp, place the watch about 50cm (20in.) from the light source to prevent the watch from reaching an extremely high temperature.

Replacing the rechargeable cell

Unlike ordinary batteries, the rechargeable cell used in this watch does not have to be periodically replaced due to repeated charging and discharging.

CAUTION

Never use another battery different from the rechargeable cell used in this watch. The watch structure is designed so that a different kind of battery other than that specified cannot be used to operate it. In case a different kind of battery such as a silver battery is used, there is the risk of it becoming overcharged and bursting, causing damage to the watch and even to the wearer.

Charging time by environment

Below are the approximate times required for charging when exposing the watch dial to light continuously. Please use this table as a reference only.

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	14 minutes	6 hours
Outdoors (cloudy)	10,000	5 minutes	1 hour	17 hours
20 cm (7-7/8 inches) from a fluorescent lamp (30W)	3,000	15 minutes	3.5 hours	53 hours
Interior lighting	500	1.5 hours	22 hours	320 hours

- * The recharging time is the time when the watch is continuously exposed to light.

- **To become fully charged when the cell is discharged**
The time to fully recharge after the watch has stopped.
- **To work for one day**
The time required for the watch to run for one day with one second interval movement

If your watch is a diver's watch

[1] Precautions when Using during Diving:

- * When using a diver's watch, please make sure that you have received the proper education and training for various types of diving, and observe all rules.
- * Please make sure to use the watch properly based on a thorough understanding of watch handling and precautions. Please note that failure to operate the watch in a manner not described in the user's manual may prevent the watch from functioning properly.

<Before Diving>

- * Please make sure that the crown is pushed in firmly and the screw is securely tightened.
- * Please check that the band is securely attached to the watch.
- * Please confirm that there are no cracks, scratches, chips or other abnormalities in the band and glass.
- * Please check that the rotating bezel rotates properly.

If your watch is a diver's watch

- * Please check that the time and date are set correctly.
- * Please check that the second hand is moving properly.

If the second hand is moving at two-second intervals, this means that the watch is not sufficiently charged. Sufficiently charge the watch when this occurs.

<During Diving>

- * Never attempt to turn or pull out the crown underwater. This can cause defective water resistance or other malfunction.
- * Be careful to avoid bumping your watch on hard objects such as diving equipment or rocks.

<After Diving>

- * Completely wash off any sea water, mud or sand adhered to the watch with pure water after checking that the crown and screw are tightened. Wipe off any excess moisture with a dry cloth.

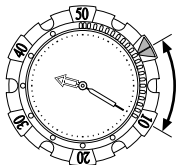
If your watch is a diver's watch

[2] How to use Rotating bezel

The rotating bezel is a convenient way to keep track of diving time, permitting the indication of the elapsed and remaining times.

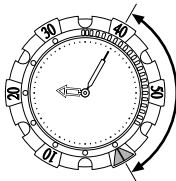
- * Turn the rotating bezel counterclockwise, while pushing it. It is locked under normal conditions to prevent free rotation, and cannot be turned in the reverse direction for safety reasons.
- * Determination of elapsed time: Align the ▼ mark on the rotating bezel with the minute hand. The elapsed time is shown by the rotating bezel scale.
- * Determination of remaining time: Align the ▼ mark on the rotating bezel to a certain required time. The remaining time is read with the ring scale.

If your watch is a diver's watch



Elapsed time

Elapsed time: shows that 10 minutes have passed since 9:10.



Remaining time

Remaining time: shows that 20 minutes remain until 9:25.

The rotating bezel can be used for various other activities besides diving, for example parking, walking, and keeping track of the remaining time before an important appointment.

If your watch is a diver's watch

[3] No decompression limits

The range within which the diver can rise to the surface without rest for decompression is determined by the depth and elapsed time of the dive. The ranges are called "No Decompression Limits".

A table of "No Decompression Limits" compiled according to the U.S. Navy

No Decompression Limits

-How to read no decompression limits-

DEPTH.m
(Max.depth in meter) **N.D.TIME**
(No decompression time)



N.D.LIMITS	
DEPTH.m	N.D.TIME
12	200
15	100
18	60
21	50
24	40
27	30

12m(40ft)	.....	200Min
15m(50ft)	.....	100Min
18m(60ft)	.....	60Min
21m(70ft)	.....	50Min
24m(80ft)	.....	40Min
27m(90ft)	.....	30Min
30m(100ft)	.....	25Min
33m(110ft)	.....	20Min
36m(120ft)	.....	15Min
39m(130ft)	.....	10Min
42m(140ft)	.....	10Min
45m(150ft)	.....	5Min

Diving Manual (1993 edition) is printed on the watchband of this watch (there are some models that do not have this table on the watchband).

Example: Read the table as follows.

In case the maximum diving depth is 21m(70ft) and the elapsed time is 50 minutes or shorter, the diver is not required to take a rest for decompression while rising to the surface.

CAUTION

- The table of no decompression limits is provided for one-time diving.
- Since the no decompression limits differ depending on the diver's physical condition and varies among individuals, use this table as a guideline only.
- In case of diving that requires the diver to take a rest for decompression before rising to the surface, perform diving following a manual exclusively compiled for diving.

If your watch is a diver's watch

[4] When Luminous Paint is used for your watch

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place. It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission gradually becomes weaker as time passes.
- The duration of the light (“glow”) will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.

[5] Maintaining Water Resistance

Please have your watch inspected either through your dealer or directly by a Citizen Service Center every 2 to 3 years to maintain water resistance. Please have the packing, glass, crown or other components replaced as necessary.

Water resistance

WARNING Water Resistance






- Refer to the watch dial and the case back for the indication of the water resistance of your watch. The following chart provides examples of use for reference to ensure that your watch is used properly. (The unit “1bar” is roughly equal to 1 atmosphere.)
- WATER RESIST(ANT) $\times\times$ bar may also be indicated as W.R. $\times\times$ bar.
- Water resistance for daily use (to 3 atmospheres) means the watch is water resistant for occasional accidental splashing.



Indication		Specifications	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 RESIST(ANT) 5 bar or WATER RESIST(ANT)	Water-resistant to 5 atmospheres	OK	
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10bar/20 bar or WATER RESIST(ANT)	Water-resistant to 10/20 atmospheres	OK	
DIVER'S 200M or no indication	AIR DIVER'S 200M	Water-resistant to 200M (for diving)	OK	

Water resistance

- Upgraded water resistance for daily use (to 5 atmospheres) means that the watch may be worn while swimming, but is not to worn while skin diving.
- Upgraded water resistance for daily use (to 10/20 atmospheres) means that the watch may be worn while skin diving, but not while scuba or saturated diving using helium gas.

Examples of use					
					
Moderate exposure to water (washing, kitchen work, swimming, etc.)	Marine sports (skin diving)	Scuba diving (with air tank)	Saturation diving (helium enriched environment)	Operation of the crown with moisture visible	
NO	NO	NO	NO	NO	
OK	NO	NO	NO	NO	
OK	OK	NO	NO	NO	
OK	OK	OK	NO	NO	

Precautionary items and usage limitations

CAUTION To Avoid Injury

- Be particularly careful when wearing your watch while holding a small child, to avoid injury.
- Be particularly careful when engaged in strenuous exercise or work, to avoid injury to yourself and others.
- Do NOT wear your watch while in a sauna or other location where your watch may become excessively hot, since there is the risk of burns.
- Be careful when putting on and taking off your watch, since there is a risk of damaging your fingernails, depending on the manner in which the band is fastened.
- Take off your watch before going to bed.

CAUTION Precautions

- Always use the watch with the crown pushed in (normal position). If the crown is of the screw lock-type, make sure it is securely locked.
- Do NOT operate the crown or any push buttons when the watch is wet. Water may enter the watch causing damage to vital components.
- If water enters the watch or the watch fogs up and does not clear up even after a long time, consult your dealer or Authorized Service Center for inspection and/or repair.

Precautionary items and usage limitations

- Even if your watch has a high level of water resistance, please be careful of the following.
 - If your watch is immersed in sea water, rinse thoroughly with fresh water and wipe with a dry cloth.
 - Do not pour water from a tap directly onto your watch.
 - Take off your watch before taking a bath.
- 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, push button, etc.) may come off.



CAUTION When Wearing Your Watch

<Band>

- Leather, genuine skin and rubber (urethane) bands will deteriorate over time due to perspiration, body oils and dirt. Be sure to replace the band periodically.
- The durability of a leather band may be affected when wet (fading, peeling of adhesive), owing to the properties of the material. Moreover, wet leather may cause a rash.
- It is recommended to take off the watch if it gets wet, even if the watch itself is water resistant.

Precautionary items and usage limitations

- Do not wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.
- The rubber (urethane) band may be stained by dyes or soil present in or on clothing or other accessories. Since these stains may not be removable, caution is required when wearing your watch with items that tend to easily transfer color (articles of clothing, purses, etc.). In addition, the band may be deteriorated by solvents or moisture in the air. Replace with a new one when it has lost elasticity or become cracked.
- Please request adjustment or repair of the band in the following cases:
 - You notice an abnormality with the band due to corrosion.
 - The pin of the band is protruding.
- We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury.
Consult your nearest authorized Citizen service center.

<Temperature>

- The watch may stop or the function of the watch may be impaired in extremely high or low temperature. Do not use the watch in places where the temperature is outside the operating temperature range as stated in the specifications.

Precautionary items and usage limitations

<Magnetism>

- Analog quartz watches are powered by a step motor that uses a magnet. Subjecting the watch to strong magnetism from the outside can cause the motor to operate improperly and prevent the watch from keeping time accurately. Do not allow the watch to come into close proximity to magnetic health devices (magnetic necklaces, magnetic elastic bands, etc.) or the magnets used in the latches of refrigerator doors, clasps used in handbags, the speaker of a cell phone, electromagnetic cooking devices and so on.

<Strong Shock>

- Avoid dropping the watch or subjecting it to other strong impact. It may cause malfunctions and/or performance deterioration as well as damage to the case and bracelet.

<Static Electricity>

- The integrated circuits (IC) used in quartz watches are sensitive to static electricity. Please note the watch may operate erratically or not at all if exposed to intense static electricity.

<Chemicals, Corrosive Gasses and Mercury>

- If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail-polish remover, cresol, bathroom cleaners and adhesives, water repellent, etc.) are allowed to come into contact with the watch, they may discolor, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discoloration of the band and case.

Precautionary items and usage limitations

<Protective Stickers>

- Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.



CAUTION Always Keep Your Watch Clean

- Rotate the crown while it is pressed in fully and press the buttons periodically so they do not become stuck due to accumulations of foreign matter.
- The case and band of the watch come into direct contact with the skin in the same manner as undergarments. Corrosion of the metal or unnoticed soiling such as that caused by perspiration and dirt can soil sleeves and other portions of clothing. Keep your watch clean at all times.
- The case and band of the watch come into direct contact with the skin. If you think there is something wrong, discontinue wearing the watch immediately and consult your physician.
In the case of accumulation of sweat or dirt on a metal band or case, clean thoroughly using a brush and neutral detergent. In the case of a leather band, wipe clean using a dry cloth.
- Leather bands may become discolored by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.

Caring for Your Watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- For a metallic, plastic or rubber (urethane) watchband, wash any dirt off with water. Remove the small amounts of dirt trapped between the crevices of the metallic band with a soft brush.
- For a leather band, wipe off dirt using a dry cloth.
- If you will not be using your watch for an extended period of time, carefully wipe off any perspiration, dirt or moisture and store in a proper location, avoiding locations subject to excessively high or low temperatures and high humidity.

<When Luminous Paint is used for your watch>

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place.

It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission gradually becomes weaker as time passes.
- The duration of the light (“glow”) will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.

Specifications

Model	B870 • B872
Type	Analog Quartz Watch with 3 Hands
Accuracy	Within ± 15 sec/month (within a normal temperature range of 5°C/41°F to 35°C/95°F)
Quartz oscillator frequency:	32,768Hz
IC	C/MOS-LSI (1 pc.)
Operational temperature range	-10°C/14°F to +60°C/140°F
Display features	Time: hour, minute, second Date: date (models with date display)

Additional features	Insufficient charge warning Quick start Time setting warning Overcharge prevention
Continuous operating time	Approx. 6 months (from full recharge to stop) Approx. 3 days (from two second interval movement to stop)
Battery	Rechargeable cell (lithium button cell), 1pc.

* Specifications are subject to change without prior notice.

Model No.BJ5*・BJ8*

Cal.B870・B872

CTZ-B8028③