CITIZEN QUARTZ
Eco-Drive
Model No. BP1XXX
Cal. No. B872

• INSTRUCTION MANUAL

CTZ-B8028

Please make sure to check the following before use.
Please read carefully section G 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.

A. 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 “F. TIME REQUIRED FOR CHARGING” for reference charging times.

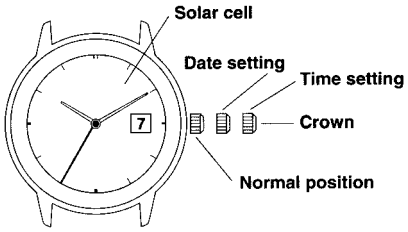
A secondary battery is used in this watch to store electrical energy. **This secondary battery is a clean energy battery which does not use any toxic substances such as mercury. Once fully charged, the watch will continue to run for about 6 months without further charging.**

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

There is no risk of overcharging this watch. (Overcharging Prevention Function is provided.)
We recommend that you recharge the watch every day.

B. 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

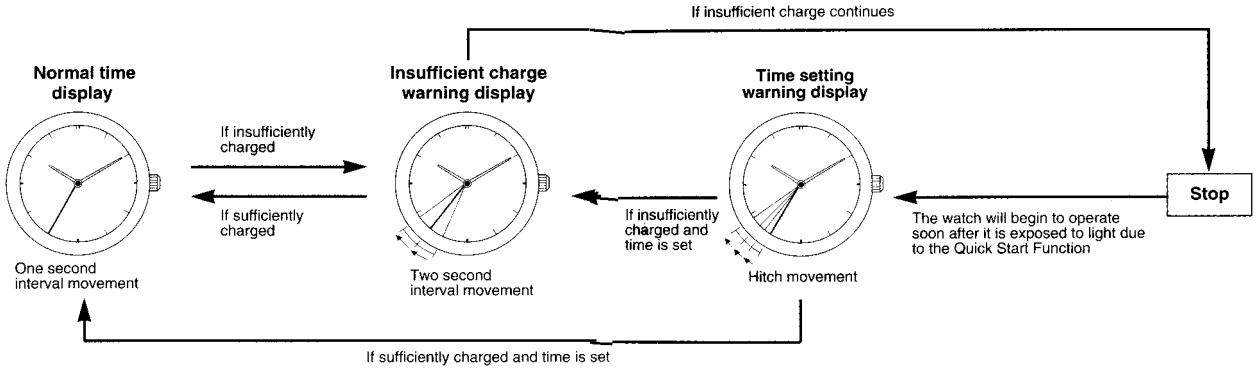
1. Stop the second hand at the 0 second position by pulling the crown out to the 2nd click.
2. Turn the crown to set the time.
3. After setting the time, firmly push the crown back in to its normal position.

■ 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.

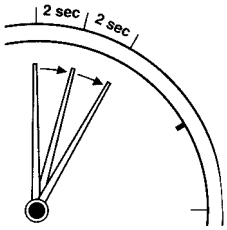
C. FUNCTIONS OF SOLAR POWERED WATCHES

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



■ Insufficient Charge Warning Function

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



Two second interval movement

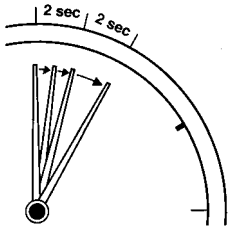
Even in such a case, the watch keeps correct time, but about 3 days after the two second interval movement begins, the watch will stop. After exposing the watch to light recharging takes place and the watch returns to one second interval movement.

■ 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.)

■ 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 correct.**



Hitch movement

In this case, quickly recharge the watch and reset the time. Otherwise, the hitch movement will continue.

■ Overcharge Prevention Function

There is no risk of overcharging.
Once the secondary battery is fully recharged, the overcharging prevention feature comes into operation and prevents overcharging.

D. 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 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.

E. REPLACING THE SECONDARY BATTERY

Unlike ordinary batteries, the secondary battery 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 secondary battery 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.

F. TIME REQUIRED FOR CHARGING

Time required for recharging may vary according to the design (colour of the dial, etc.) and operating environment. The following table will serve as a rough reference.

Illuminance (lux)	Environment	Time required		
		From the stop state to one second movement	One day usage	Full charge time
500	Inside an ordinary office	22 hours	1 hour 30 minutes	320 hours
1000	60-70cm (24-28in.) under a fluorescent light (30W)	11 hours	45 minutes	158 hours
3000	20cm (8in,) under a fluorescent light (30W)	3hours 30 minutes	15 minutes	53 hours
10000	Outdoors, cloudy	1 hour	5 minutes	17 hours
100000	Outdoors, summer, sunny	14 minutes	2 minutes	16 hours

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

Full charge time .....The time to fully recharge after the watch has stopped.
One day usage.....The time required for the watch to run for one day with one second interval movement

G. 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.
* 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.

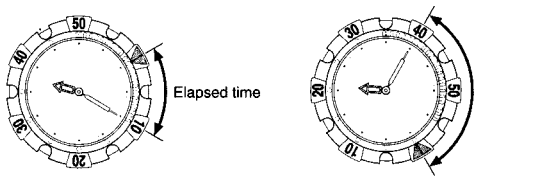
<After Diving>

* 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.

[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 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.



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

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

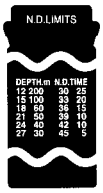
The rotating bezel can be used for various other activities besides diving, for example parking, walking, and keeping track of the remaining time before an important appointment.

[3] No decompression limits

The range within which the diver can rise to the surface without rest for decompression 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 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).

No Decompression limits – How to read no decompression limits



Depth.m (Max. depth in metres)	N.D. Time (No decompression time)
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

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.

[4] Note on the luminous dial

- The luminous paint used for the dial of this watch is mainly made from a luminescent material, which is harmless to the human body and the environment since it contains no toxic substances such as radioactive materials.
  This luminous paint stores light of the sun and indoor lighting and emits light in a dark place. (For example, if the luminous dial is exposed to light of 500 lux or more for 10 minutes or longer, it will emit light for 3 to 5 hours.) However, its luminance gradually fades because it discharges stored light. The duration that the luminous paint emits light differs depending on the illuminance and distance from the light source when it stores light. If the luminous paint stores insufficient light, it will not emit light in a dark place, or even if it emits light, its luminance rapidly fades. Therefore, carefully expose the luminous dial to light so that the luminous paint stores sufficient light especially before diving. It is recommended that you use an underwater flashlight to apply light to the watch during diving.
  Watches that use the luminous paint have “N-JAPAN-N” printed on the dial.

[5] Maintaining Water Resistance

Please have your watch inspected either through your dealer or directly by a Citizen Service Centre every 1 to 2 years to maintain water resistance. Please have the packing, glass, crown, or other components replaced as necessary.

H. 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		Specifications	Examples of use					
Dail	Case (Case back)		 Minor exposure to water (washing face, rain, ect.)	 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 visable
WATER RESIST or no indication	WATER RESIST(ANT)	Water-resistant to 3 atmospheres	OK	NO	NO	NO	NO	NO
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5 bar or WATER RESIST(ANT)	Water-resistant to 5 atmospheres	OK	OK	NO	NO	NO	NO
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10 bar / 20 bar or WATER RESIST(ANT)	Water-resistant to 10/20 atmospheres	OK	OK	OK	NO	NO	NO
DIVER’S 200M or no indication	AIR DIVER’S 200M	Water-resistant to 200m (for diving)	OK	OK	OK	OK	NO	NO

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.

- 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.
* Although diver’s watches for use at depths down to 200 metres can be used for scuba diving, they cannot be used for 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. If used in seawater, rinse with fresh water afterward and wipe with a dry cloth.
- If moisture has enterd 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 Citzen Service Centre 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 a mild soap and water. Use a soft brush to remove dust and dirt jammed in the gaps in metal band. If your watch is not water-resistant, take it to your dealer.

NOTE: Avoid using solvents (thinner, benzine, etc.), as they may mark 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 watch in an environment where it may be exposed to chemicals or corrosive gases.
  If sovents, such as thinner and benzine, or substances containing such solvents come in contact with the watch, dicolouration, 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.

I. SPECIFICATIONS

1. Type	Analog Quartz watch with 3 hands
2. Accuracy	Within ± 15sec/month (within a normal temperature range of 5°C/41°F to35°C/95°F)
3. Quartz oscillator frequency:	32,768Hz
4. IC:	C/MOS-LSI (1. pc.)
5. Operational temperature range:	-10°C/14°F to + 60°C/140F
6. Display features:	Time: hour, minute, second Date: date (models with date display)
7. Additional features:	Insufficient charge warning Quick start Time setting warning Overcharge prevention
8. Continuous operating time:	Appox. 6 months (from full recaharge to stop) Approx. 3 days (from two second interval movement stop)
9. Battery:	Secondary battery

* Specifications are subject to change without prior notice.