

CITIZEN QUARTZ

Eco-Drive AQUALAND

Model No. BJ2XXX

Cal. No. B74✱

This watch is an analog solar powered diver's watch into which an electronic depth meter function and chronograph function are built. The solar power generation function transforms solar energy to electrical energy to run the watch.

- Since solar energy is used as the power source of this watch, it has no need of regular replacement of the battery unlike the general diver's watches using the mercury cell, etc. (Solar power function)
- The built-in depth meter function automatically measures the depth in diving with the watch worn on the wrist. (Depth meter function)
- The maximum depth in diving is automatically memorised. (Maximum depth memorising function)
- The chronograph function measures the time in units of one second for 50 minutes at maximum.

Any repair of this product should be conducted at a Citizen Service Centre. For repair and inspection please contact the place of purchase or contact a Citizen Service Centre directly.

- Before using this watch, carefully read this instruction manual for safe and correct use.
- After reading this manual, keep it at hand for future reference.

Safety precautions
(Instructions to be followed at all times)

In order to prevent injury to yourself or other persons or damage to property, this manual gives instructions which you should strictly follow as described below

- Injury and/or damage which might be caused by using the watch improperly or neglecting any of the instructions or precautions in this manual are classified using the following symbols.

Can cause serious injury or death.

Can or will cause minor or moderate injury or damage.

- The instructions for safe operation are classified using the following symbols.
(The following are just examples of symbols.)

Warning or caution symbol followed by instructions for safe operation and/or precautions that you should take.

Prohibition symbol followed by instructions on what you should not do

WARNING

- Diving is one of the sports involving many risks. When using this watch for diving, carefully read this manual and follow the instructions with good understanding of the proper way to use it.

Since the depth meter function of this watch is not approved as an official depth gauge, be sure to use this function as an auxiliary means to know the approximate depth.

- Diving with this watch must be limited to recreational diving (diving without decompression). Don't use this watch for decompression diving, saturated diving or diving in a high altitude. The depth meter function of this watch works normally in seawater with temperatures of +10°C to +40°C (50°F to 104°F), however, depth indication is incorrect in water other than seawater (specific gravity: 1.025).
- Rapid and sharp change of the atmosphere and/or seawater temperature occasionally affects the indication and performance of the watch. Therefore, it is recommended that this watch be used together with another depth gauge. Read the indication of this watch as a rough guideline.
- Even recreational diving involves many risks. Before using this watch as an auxiliary instrument for diving, be sure you receive right training in scuba diving by a qualified instructor in order to acquire experience and technique necessary for safe diving as well as to master the proper way to handle and operate this watch.

1. BEFORE USING

“Battery” means a secondary battery (rechargeable battery) in this manual. Before using, make sure the watch is sufficiently charged by exposing it to the light.

A secondary battery is used in this watch to store electrical energy. If the battery is fully charged once, the watch will continue running for about two months. When the watch is used for diving (about two hours a week), it will run for about one month (until NG is indicated).

<How to use this watch properly>

It is recommended that you recharge the battery every day. To ensure that this watch demonstrates its depth meter function and chronograph function besides the timekeeping function, always keep it sufficiently charged.

If the battery is not sufficiently charged or the battery power is very low, the depth meter function and the chronograph function cannot be activated. The battery of this watch is protected from overcharge.

* For recharging the battery, expose the solar cell (the face of the watch) to light.

2. BEFORE USING FOR DIVING

CAUTION Before using this watch for diving

- For using this watch as an auxiliary depth gauge, the user must not only receive general training and instructions in diving but also follow various rules.
- The user should not use this watch without a good knowledge and understanding of the proper way to handle and operate it and the precautions on it. If this watch is improperly used, it may result in malfunction or breakdown of the watch.

WARNING Regarding the depth meter function

- Since the depth meter function of this watch is not approved as an official depth gauge, use this function as an auxiliary means to measure a depth.
- Read the depth meter indication of this watch as a rough guideline.

CAUTION For safe diving

- When diving, obey the rules of the buddy system every time.
- For safety, it is advised that you enjoy sports diving in the depths around 20m (60 ft).
- Before diving with this watch, fully charge the battery without fail. When the battery is not sufficiently charged (the function hand points at “NG”), the depth meter function cannot be used. If battery power declines considerably during diving, the depth meter function to measure depth is discontinued.
- After diving, take a good rest following safety rules. If you take a plane or move to a high place without sufficient rest after diving, you may suffer from decompression sickness (caisson disease).

*1: Buddy system means that two divers pair with each other for safe diving.

PROHIBITION Circumstances that prohibit use of this watch in diving

Don't use this for diving under the following circumstances.

- When the function hand indicates “NG” on the charging level index.
- When the function hand indicates “NG” on the charging level, the watch will not measure the depth. If the function hand points at “NG” on the charging level during diving, immediately stop using the depth meter function of the watch since the watch discontinues depth measurement in this condition.
- When the watch stops running or malfunctions. (Be careful not to knock the watch against hard things such as diving apparatus, rocks, etc.)
- When the water temperature is out of the guaranteed range for measuring depth. The accuracy of the depth meter function is guaranteed under the condition that water temperature is between +10°C and +40°C (50°F and 104°F).
- For the purpose of knowing a risk of a behaviour or situation. This watch is not designed to serve as a drowning prevention instrument or an emergency instrument.
- In the environment filled with helium gas (saturated diving, etc.). Use of the watch in such conditions may cause failure or breakdown of the watch.

CAUTION

Matters that require attention to the watch before/during/after diving

<Before diving>

- Check to see if the watch is set to the time mode. (When the watch is set to the chronograph mode, it will not shift to the diving mode.)
- Check the indication of the function hand (on the charging level index). When the function hand points to “NG”, the watch will not shift to diving mode because of insufficient battery power. If the function hand points to “NG”, charge the battery sufficiently so that the hand indicates “LV.2” or “LV.1”.
- Check to see if the function hand (serving as the depth indicator) points to “0 m (0 ft)” position when the water sensor is activated and the watch enters the diving mode.
- Check to see if the crown is completely pressed in and screwed down tightly.
- Check to see if the watchband and the watch are tightly fastened to each other.
- Check to see that there are no cracked, damaged or broken parts on the watchband and glass.
- Check to see if the rotating bezel rotates normally.
- Check to see if the time and date are set correctly.

<During diving>

- Avoid quick ascending, otherwise you may suffer from submarine sickness or a functional disorder in some way. Whenever you ascend in water, carefully keep a safe speed.
- Don't disturb any push buttons or the crown except button \bar{B} (for knowing the memorised maximum depth) throughout the dive, otherwise the watch may fail in water-resistance.

<After diving>

- After confirming that the crown is screwed down tightly, wash out seawater, mud, sand, etc. sticking to the watch, with fresh water. Then, wipe off water and moisture with a dry soft cloth.
- Neither remove the sensor cover nor pick at it with a sharp-point in order to remove particles of dust, etc., collected in the sensor. If the sensor part is packed with dust, etc., wash it out with fresh water. In case it is difficult to wash out dust, consult the nearest Citizen Service Centre about the trouble.

CAUTION Regarding diving at high altitudes or in fresh water

- If you intend to use this watch for diving in a high place or in fresh water, be sure to have a special education in safe diving beforehand.
- Don't use the depth meter function of this watch in a high place 4,000 m (13,120 ft) or more above sea level, because the watch gives incorrect measurement of depth in such a place.
- This watch indicates a depth based on the specific gravity (1.025) of seawater. Therefore, if the watch is used in fresh water, the real depth is 2.5% less than the indication on the watch.
Example: 20 m (65 ft) (indicated depth) x 1.025 = 20.5 m (67 ft) (real depth)

When the watch is shifted to the diving mode, the pressure sensor regards the ambient pressure as that on the sea level (0 m/0 ft in depth or altitude). If the watch is shifted to the diving mode in a high place, it regards the pressure on the surface of the water as that on the sea level (namely 0 m/0 ft in depth altitude). In short, the watch always regards the surface of the water as the sea level (0 m/0 ft) except in a place 4,000 m (13,120 ft) or more above sea level. Therefore, you are advised not to use the depth meter function of this watch in a high place 4,000 m (13,120ft) or more above sea level for the reason that the watch gives incorrect measurement of depth in such a place as mentioned previously.

3. NAMES OF PARTS

Collate the following table with the watch diagram on the first page.

Name	Time mode	Diving mode	Chronograph mode
Ⓐ : Button Ⓐ	To be pressed for selecting a mode		
Ⓑ : Button Ⓑ	To be pressed for showing maximum depth left in the memory or for actuating the chronograph.		
1: Function hand	Indicates charging level	Indicates depth	Indicates second(s)
2: Mode hand	Stops at DV position	Stops at DV position	Indicates minute(s)
3: Hour hand	Always indicates the time (hour)		
4: Minute hand	Always indicates the time (minute)		
5: Second hand	Always indicates the time (second)		
6: 24 hour hand	Always indicates the time in the 24 hour system synchronised with the hour hand.		
7: Calendar	Always indicates the date.		
8: Crown	To be used for adjusting the date and time.		

- a: Charge levels Charge level of the battery (battery power) is indicated as follows (LV.1, LV.2, NG) by the function hand. These guidelines indicate whether the depth meter function is usable or not.
- b: Overzone mark When the diving depth exceeds 50 m (125 ft) or there is something abnormal in the depth meter function, the function hand points to the overzone mark.
- c: Depth meter scale The diving depth is indicated by the function hand on this depth meter scale.
- d: Pressure sensor Measures the depth by sensing the water pressure.
- e: Water sensor When the water sensor gets wet, the watch is automatically shifted to the diving mode.
- f: Rotating bezel The diver can know the elapsed time of diving by using this rotating bezel.
- g: Solar cell Electric energy necessary for running the watch is generated by this solar cell when it is exposed to enough light for charging the battery.

4. WARNING FUNCTIONS OF THIS SOLAR POWERED WATCH

With decline of the battery power of this watch, its warning function is activated to change the indication.

Charge level indication

The function hand indicates the charge level as follows (LV.1, LV.2, and NG) to let the user know whether the watch can be used for diving or not. In the diving mode, consumption of battery power is considerably increased because the pressure sensor and water sensor are actuated. Before using this watch for diving, charge the battery sufficiently and confirm the charging level which is indicated by the function hand.

<When the function hand points at LV.1 (at 56-seconds)>

The watch is securing battery power enough for sports diving at the depth of 20 m (66 ft) or so for about an hour.

* However, when the function hand points at LV.1 as a result of charging the battery after it was once depleted (after the status that the function hand indicated NG), be sure to charge the battery with a lighting of 3000 lux (20 cm under a fluorescent lamp) for at least 10 minutes before diving.

* If diving continues for more than one hour, pay careful attention to the indication of the function hand, because the indication may change to NG from LV.1 during the diving and the watch may discontinue measuring the depth.

<When the function hand points at "LV.2" (54-seconds)>

The battery is almost fully charged. Accordingly, the watch can be used reliably for diving.

<When the function hand points at "NG" (58-seconds)>

The watch will not switch to the diving mode because of insufficient charging. When the watch is in this status, it cannot be used for diving because its depth meter function cannot be activated.

If the function hand points to "NG" during a dive, immediately stop using relying on the watch for depth measurement.

CAUTION

- Use the indication of the charge level as a reference only.
- If the watch is exposed to strong light for charging the battery, the function hand may temporarily indicate "LV.1" or "LV.2" despite insufficient charging. If the function hand goes to "LV.1" or "LV.2" from "NG" position in a short time, you need to pay careful attention to charging conditions. It is recommended that you keep the battery sufficiently charged all the time but especially before using the watch for diving. Always check the indication of charge level carefully just before diving. (For details of charging time, refer to "5. TIME REQUIRED FOR CHARGING".)

Insufficient charge warning function

Insufficient charge warning indication

– Mode hand: DV position,

Function hand: NG position.

Whenever the battery power becomes insufficient for operation, the watch is automatically shifted to Time mode regardless of the currently set mode and the second hand goes for 2 second interval movement.

(Insufficient charge warning indication)

If the watch is left in this condition without recharging for another two days, the watch will stop.

- * If the watch falls into such condition, the time measurement will be discontinued in chronograph mode.
- * While the watch is falling into insufficient charge warning indication, all button operations are ineffective except the max. depth operation.

Since the watch continues accurate indication of the date and time even in the insufficient charge warning indication, the watch will recover normal operation if it is exposed to light for sufficiently charging the battery. or using the watch for diving, sufficiently charge the battery until the function hand indicates "LV.1" or "LV.2" on the charge level.

Stop warning function

Stop warning indication

- Mode hand: “0” position,
Function hand: “0” position

If the watch is left in the insufficient charge warning indication for two days, both the mode hand and function hand will move to “0” position respectively. If the watch falls into this condition, it indicates that the watch has stopped operation completely. (Stop warning indication)

* All functions of the watch are inactivated in this indication.

When the battery is charged in this condition, the watch restarts operation as it is switched to the time reset warning indication.

Time reset warning function

Time reset warning indication

- Mode hand: DV position,
Function hand: NG position

With progress in charging the battery as the watch is exposed to light, the watch starts running but shows incorrect time. In this condition the second hand moves irregularly every two seconds to show that the time is incorrect. (Time reset warning indication)

To change the watch to the time mode, reset the watch correctly after sufficiently charging the battery.

* In the case the battery is sufficiently charged but the watch has not been reset to the correct time, the second hand continues to go irregularly every two seconds.

Overcharge prevention function

This watch has an overcharge prevention function. When the secondary battery is fully charged, this function is activated to protect the battery from overcharge by cutting of power supply. This function relieves you from worry about overcharge.

5. TIME REQUIRED FOR CHARGING

Since time required for recharging the battery varies according to a model (depending on the dial colour, etc.), refer to the following table as a rough guideline for charging the battery.

Illuminance (LUX)	Environment	Time required for charging		
		Charging time for one-day operation	Charging time required to make the second hand move normally from the watch stop status.	Charging time required for fully charging
500	Under indoor lighting	2 hrs	16 hrs	134 hrs
1,000	60-70 cm (24-28 in.) under a fluorescent lamp (30 W)	50 mins	6 hrs 30 mins	57 hrs
3,000	20 cm (8 in.) under a fluorescent lamp (30 W)	16 mins	2 hrs 30 mins	18 hrs
10,000	Cloudy outdoor	4 mins	1 hr	5 hrs
100,000	Under bright sunlight in summer	2 mins	45 mins	2 hrs 30 mins

* Each time required for charging means a duration in which the watch is continuously exposed to the light indicated.

Charge time required for fully charging:

Time required for fully charging the battery, starting from the state that the watch has stopped operation (in the stop warning indication).

Charging time for one-day operation:

Time required for charging the battery enough for running the watch for one day, starting from the state that the second hand normally goes every second. (Note) For using the watch for diving (one hour diving a day), time required for charging must be extended 1.5 times as long as the time appearing in the table.

6. SPECIAL CARE FOR THIS SOLAR POWERED WATCH

<Always take care to charge the battery of the watch>

- Mind that the battery power is apt to decline if you wear a jacket or a long sleeved shirt, because the watch is usually shaded by such clothes and the battery is insufficiently charged as a result.
- Try to put the watch in a well lit place, as far as circumstances permit, when you take it off. If you do, the watch will continue normal running.

CAUTION – Notes on charging

- Avoid charging in a hot place where the ambient temperature is +60°C/140°F or more, because an extreme rise in temperature may cause a breakdown of the watch.
Examples: Charging near a hot light source such as an incandescent lamp, halogen lamp, etc.
Charging in a place that can easily become hot such as on a car dashboard, etc.
- When the watch is exposed to an incandescent lamp for charging, carefully keep the watch 50 cm (20 in.) or more apart from it so as not to get the watch hot.

WARNING – Note on handling the secondary battery

- The user should not remove the secondary battery from the watch. If you remove the battery from the watch for unavoidable reasons, be sure to keep it outside the reach of a child to prevent him/her from swallowing it.
- If a child swallows the secondary battery by mistake, immediately consult a doctor for treatment.

WARNING – Use the specified secondary battery only

- Never use any battery other than the specified secondary battery. This watch is so designed that it does not run with any battery other than the specified secondary battery. However, if another battery such as a mercury battery for example, is forcibly set in the watch and it is charged, the battery will not only be overcharged and burst, but if worst comes to worst, it will result in damage to the watch and injure the user and other people. To repeat the warning, use the specified secondary battery only without fail whenever the secondary battery needs replacement.

7. SWITCHING BETWEEN MODES

- Each time button \bar{A} is pressed for two seconds, the mode is switched from the time mode to the chronograph mode and vice versa.
- If the water sensor gets wet while the watch is in time mode, the mode is switched over to the diving mode. However, this mode shift is not performed when the function hand indicates “NG” on the charge level index.

When the water sensor gets wet:

When Button \bar{A} is pressed for 2 seconds as function hand indicates “0 m” (0 ft) in depth, or function hand continuously points at “0 m” (0 ft) in depth for 10 seconds after depth measurement is complete.

8. ADJUSTING TIME AND DATE (Time Mode)

The watch shows time and date in the Time mode. Besides time and date, the function hand indicates the battery power at three different levels. Time (shown by hour, minute, second and 24 hour hands) and date can be checked any time regardless of the mode.

How to adjust date

- (1) After turning the crown counterclockwise to unscrew it, pull the crown out to the date adjustment position (the first click stop position).
- (2) Set the watch for the correct date by turning the crown.
- (3) Press the crown in to the normal position.
- (4) Turn the crown clockwise to screw it tightly against the case.

Note: If date is adjusted when the watch shows a time between 9:00 pm and 1:00 am, the watch may not advance the date indication the next morning.

<Note on operation of the crown>

The crown of this watch is designed to be screwed down to secure the water-resistance of the watch.

- For pulling out the crown for adjustment, unscrew it to get it loose first.
- After adjustment with the crown, press it in to the normal position and then screw it down without fail.
- Do not operate any button while the crown is being pulled out.
If a button is operated in such the status, it may cause some change in the indication or disorder of some hand(s).
- Do not pull out or turn the crown when the watch gets wet or is in the water. Otherwise, the watch may lose water-resistance and the inside of the watch gets wet.

Manner to adjust time

Time can be adjusted in the Time mode.

- (1) After turning the crown counterclockwise to unscrew it, pull the crown out to the time adjustment position (the second click stop position), the second hand will stop running.
- (2) Set the watch for the correct time by turning the crown.
- (3) Press the crown in to the normal position and the watch (second hand) starts running.
- (4) Turn the crown clockwise to screw it tightly against the case.

* When the crown is pulled to the time adjustment position, the function hand points at the “0” second position.

If the function hand does not point at the “0” second position, correct the hand position referring to “12. SETTING FUNCTION HAND AT “0” POSITION”.

9. DIVING MODE

When the watch is immersed in the water, while it is set in the Time mode and the battery is charged enough for diving, the water sensor senses the water and switches the watch to Diving mode to measure the depth. In the Diving mode, the watch automatically memorises the maximum depth of the last dive and the user can recall it after the dive.

<Diving mode (Standby status)>

* If the function hand and mode hand don't point to their respectively specified positions (mode hand: "DV" positions, function hand: "0" position) when the watch

enters the Diving mode (standby status), adjust the hand positions referring to "11. MEASURES AGAINST POSSIBLE PROBLEMS".

<Depth indication>

Indication range: 0 to 50 m (0 to 125 ft) deep (measured every second)

Indication unit: 1 m/5 ft (Decimals of five and above in the first decimal place are rounded up and anything under five in the first decimal place is rounded down. Depth less than 1 m/5 ft is indicated as 0 m/0 ft.)

<Manner to read depth indication>

When the watch reaches the depth of 1 m/5 ft or more in diving, it starts measuring the depth. In diving, the indication by the function hand represents the depth.

- When the depth is less than 1 m/5 ft, the function hand indicates 0 m/0 ft.
- When the depth exceeds 50 m (125 ft), the function and stops at the overzone mark (52-seconds position) to show that the depth is out of the indication range. As the diver ascends in the water and the depth is less than 50 m (125 ft), the watch again indicates the depth.

<How to cancel the diving mode>

- (1) Press button **A** for 2 seconds after diving or in the water where it is less than 1 m (5 ft) deep (depth indication: 0 m/0 ft). The diving mode is cancelled and the watch returns to the Time mode.
- (2) When the watch is left for 10 minutes after diving or in the water where it is less than 1 m (5 ft) deep (depth indication: 0 m/0 ft), the watch automatically returns to the time mode with cancellation of diving mode. If the watch is again immersed in water 1 m (5 ft) or more deep within 10 minutes after the last dive, the new dive is regarded as a continuation of the last dive and the watch continues to measure the depth.

* Wet detection error indication

If the diving standby mode (water sensor in action) continues for 1 hour or more, the function hand points at the overzone mark.

If the watch remains in this status for a long time, refer to "11. MEASURES AGAINST POSSIBLE PROBLEMS."

>How to recall the memorised maximum depth<

- (1) Press button **B** in the Time mode or Diving mode (when depth indication is 0 m/0 ft). The function hand indicates the memorised maximum depth.
- (2) To cancel the maximum depth indication, press button **B** again.

* Indication of the memorised maximum depth continues for 30 seconds and is automatically cancelled after that.

* The memory of the maximum depth of the last dive is held until the watch is used in the next dive is held until the watch is used in the next dive.

* If the maximum depth in diving is less than 1 m (5 ft), it is not memorised. On the other hand, if the maximum depth exceeds 50 m (125 ft), it is memorised as an overzone depth.

* When the watch is used in diving for the first time, it occasionally shows data stored during inspection prior to shipment.

10. CHRONOGRAPH MODE

The chronograph function enables this watch to measure time in units of 1 second for a maximum of 49 minutes 59 seconds. When it has reached 50 minutes, since a time measurement was started, the chronograph stops measuring time and the hands move to the reset position.

<Chronograph indication - Reset position ->

* If the watch is left in reset status in the chronograph mode for 3 minutes, it automatically switches to the Time mode.

<How to measure time>

- (1) In the Time mode, press and hold button **A** for 2 seconds or more to switch the watch to Chronograph mode. As a result, both the function hand and mode hand quickly go to their respective "0" positions and then stop.
- (2) Each time button **B** is pressed, both the hands start and stop alternately.
- (3) If button **A** is pressed while both the hands are stopped, the chronograph is switched to the reset status.

12. SETTING FUNCTION HAND AT "0" POSITION

- (1) Set the watch to the Time mode or Chronograph mode.
- (2) Press button **A** or **B** to set the function hand to the "0" position.
- (3) Press the crown into the normal position and turn it until it is tightly screwed against the case.

* The aforementioned procedure is effectual only when the hand is located within □15 graduations before/after the "0" point. When the hand is located outside the adjustable range, correct the "0" position of the hand referring to "13. ALL RESET/ ADJUSTING HAND POSITION".

* If the watch has been left without any operation for 3 minutes or longer as the crown is pulled to the second click stop position, the function hand does not move regardless of button operation. If the watch falls into such condition, press the crown into the normal position and make a fresh start to adjust the hand position.

* Before unscrewing and pulling out the crown, make sure that the crown is not wet.

Automatic time correction function

If it takes 4 minutes or less to adjust the position of the function hand in the Chronograph mode, the watch automatically sets the hour, minute and second hands for the correct time immediately after the adjustment by the automatic time correction function. Therefore, if adjustment is finished within 4 minutes, the watch has no need of manual time correction. However, if the crown is turned during adjustment, the watch will not indicate a correct time. adjustment is not complete within 4 minutes, you will need to not only adjust the "0" position of the second indicator (function hand) in the Chronograph mode but also to set the correct time.

13. ALL RESET/ADJUSTING HAND POSITION

- (1) Unscrew the crown and pull it out to the second click stop position.
- (2) Press button **A** or **B** simultaneously. If the function hand moves slightly, the watch is reset in whole.
- (3) Press button **A** or **B** to set the function hand and mode hand to their respective "0" positions.

Button **A** : For adjustment counter clockwise

Button **B** : For adjustment clockwise.

* The function hand and the mode hand move interlocking with each other.

- (4) Correct the time indication by turning the crown. (Refer to "8. ADJUSTING TIME AND DATE (Time mode)".)

- (5) Press the crown into the normal position and screw it down tightly against the case. As the crown is pressed into the normal position, the watch returns to the Time mode and starts running.

* After the watch is reset, the function hand points at "NG" position regardless of remaining battery power. Approximately 1 hour after resetting, the function hand will indicate the charge level. (While the function hand is indicating "NG", the watch cannot be switched to the Diving mode).

* If the ALL RESET/ADJUSTING HAND POSITION fails in clearing away the trouble, consult with the store where you purchased the watch or the nearest Citizen Service Centre about the trouble.

Note that the maximum depth memorised during the last dive is cleared simultaneously during ALL RESET.

14. NOTE ON SECONDARY BATTERY

The secondary battery used in this watch is a clean energy battery that incorporates no toxic substances such as mercury inside. The secondary battery has no need of periodical replacement because it is capable of repeated charging and discharging.

15. OTHER FUNCTIONS

[Rotating bezel]

The rotating bezel means the rotating ring set on the rim of the watch case. An elapsed time can be checked by this rotating bezel.

[How to use the rotating bezel]

On starting a dive, turn the rotating bezel counterclockwise to set the triangle mark (Δ) to the position where the minute hand is located. After that, the minute hand serves to indicate the elapsed time on the rotating bezel.

(Example) In the figure on the right, the minute hand indicates that 10 minutes has passed since the dive was started (since the Δ mark was set at the starting point).

CAUTION

- The rotating bezel can be turned counterclockwise only, to avoid malfunction. Be careful not to turn the rotating bezel clockwise by force, otherwise the rotating bezel may be damaged.
- When using the rotating bezel, you are advised to read its indication just as a guideline.

[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 Diving Manual (1993 edition) is printed on the watchband of this watch (there are some models that have no print of the table on the watchband).

Example: Read the table as follows.

In case the maximum diving depth is 21 m (70 ft) and the elapsed time is 50 minutes or shorter, the diver is not required to take a rest for decompression when 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 divers physical condition and difference 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.

16. PROPER CARE FOR LONG TERM USE

WARNING - About water resistance -

- This watch is water-resistant against water pressure at the depth of 200 m. Although the watch can be used for scuba diving with an air tank, it cannot be used for saturation diving using helium gas.

For maintaining the water resistance

For maintaining the water-resistance, ask the nearest Citizen Service Centre directly or through the store where you purchased the watch to inspect the watch and to replace the packing, glass, crown, etc. if needed once a year or every two years.

Example of use in wet

Indication		Specifications	Water splashes on the watch (when washing face, in rain)	Swimming, washing, kitchen work	Skin diving, marine sports	Scuba diving with air tank	Saturation diving using helium gas	Operating the crown or button when the watch is wet
Dial	Case (Case back)							
DIVER'S 200m	WATER RESIST (ANT)	200m deep-water - resistant	OK	OK	OK	OK	OK	OK

CAUTION

- Do not use this watch unless the crown is screwed down into the normal position. Make sure that the crown is tightly screwed down against the case.
- When either the watch or your hand is wet, don't operate any button or the crown, except button **B**, to prevent the watch from getting wet inside and deteriorated in water-resistance.
- If the inside of the watch gets wet or the inside of the glass gets fogged and the watch does not recover from such a condition, immediately ask the nearest Citizen Service Centre to overhaul it. If the watch is left in such a condition, the inside will get rusty.
- If seawater gets into the watch, put the watch in a case or vinyl bag and immediately ask the nearest Citizen Service Centre to overhaul it. If the watch is left with seawater inside, there is danger that the internal pressure of the watch will increase and watch parts (glass, crown, buttons, etc.) will be blown away by the pressure.

CAUTION – For repairing the watch

- This watch must be repaired by an authorised Citizen Service Centre only.

CAUTION – Note on the luminous dial

- The luminous paint used for the dial of this watch is mainly made from light accumulating materials, which are harmless to the human body and the environment since it contains no toxic substances such as radioactive material.

This luminous paint accumulates 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 accumulated light. The duration that the luminous paint emits light differs depending on the illuminance and distance from the light source when it accumulates light. If the luminous paint accumulates insufficient light, it will not emit light in a dark place, or even if it does emit light, its luminance rapidly fades. Therefore, carefully expose the the luminous dial to light so that the luminous paint accumulates sufficient light especially before diving. It is recommended that you use an underwater flashlight to apply light to the watch during diving.

CAUTION – Always keep the watch clean

- The case and the space between the skin and watchband tend to get dirty and may get rusty. This may cause corrosion of the metal, clothes may be soiled by such dirt. To prevent this, try to keep the watch clean at all times.

<How to clean the watch>

- Wipe the case and glass with a soft dry cloth to remove sweat and moisture from them.
- Wash the metal watchband, plastic watchband or rubber watchband in water and remove dust and soil accumulated in openings in the metal watchband with a soft brush, etc.
- Don't use thinner, benzine or other solvents for cleaning since they may damage the watch.

CAUTION – Operating environment

- Be sure to use the watch under specified temperatures described in this owners manual. If not, it may stop or malfunction.
- Do not wear the watch in a hot place such as a sauna, because the watch is easily heated in such a place and you may burn your wrist and other parts of your body.
- Do not leave the watch in extremely hot locations such as the dashboard of a car. It may damage the plastic parts and cause malfunction.
- Do not bring the watch close to a magnet or magnetic material. If the watch is brought close to a magnetic health appliance (magnetic necklace, magnetic bellyband, etc.), the magnetic door of a refrigerator, the magnetic latch of a bag, the earphone of a cellular phone and so on, the watch may fail in keeping good time. If the watch is out of order for the said reason, keep the watch away from such things and reset the watch to the correct time.

- The IC used in this quartz watch has a characteristic that it can't stand much static electricity. If the watch is affected by static electricity radiated from a TV set, etc., it may gain or lose time.
- Be careful not to drop the watch on the floor, etc.
- Don't use the watch in an environment where the watch is exposed to chemicals or gases. If the watch is cleaned using thinner, benzine or other solvents (gasoline, nail-polish, creosol, bathroom cleanser, adhesive, etc.), it may cause discolouration, corrosion, dissolution or other damage to the watch. If the watchband or case is stained with mercury used in a clinical thermometer, etc., the stained part may be discoloured. Pay careful attention to chemicals when you are wearing the watch near them.

17. SPECIFICATIONS

1. Type

Solar powered analog watch with depth meter function

2. Model

B740/B745: Depth indication in meters

B741/B746: Depth indication in feet

3. Watch accuracy

±15 seconds per month (Average)

[at normal temperatures (+5°C to +35°C/+41°F to +95°F)]

4. Depth gauge accuracy

At depth of 1 to 10 m (5.0 to 25 ft): within ±1 m (±5.0 ft)

At depth of 1 to 50 m (27.5 to 125 ft): within ±2 m (±7.5 ft)

(On the condition that the water temperature is constant and error in reading is included.)

* Temperature range for guaranteed accuracy:

+10°C to +40°C (+50°F to +104°F)

Depth gauge accuracy is influenced by changes in surrounding temperature.

5. Range or watch operating temperature

-10°C to +60°C (+14°F to +140°F)

6. Indications

- Time: Hour, minute, second, 24-hour, Charge level
- Date
- Chronograph: Minute, second (50-minute chronograph, reading in units of 1 second)
- Depth gauge: 1 m to 50 m (5 ft to 125 ft)
Reading in units of 1 m (2.5 ft)
Depth less than 1 m (5 ft) is indicated as 0 m (0 ft)
Depth more than 50 m (125 ft) is indicated as overzone.
- Maximum depth to be memorised: 1 m to 50 m (5 ft to 125 ft)