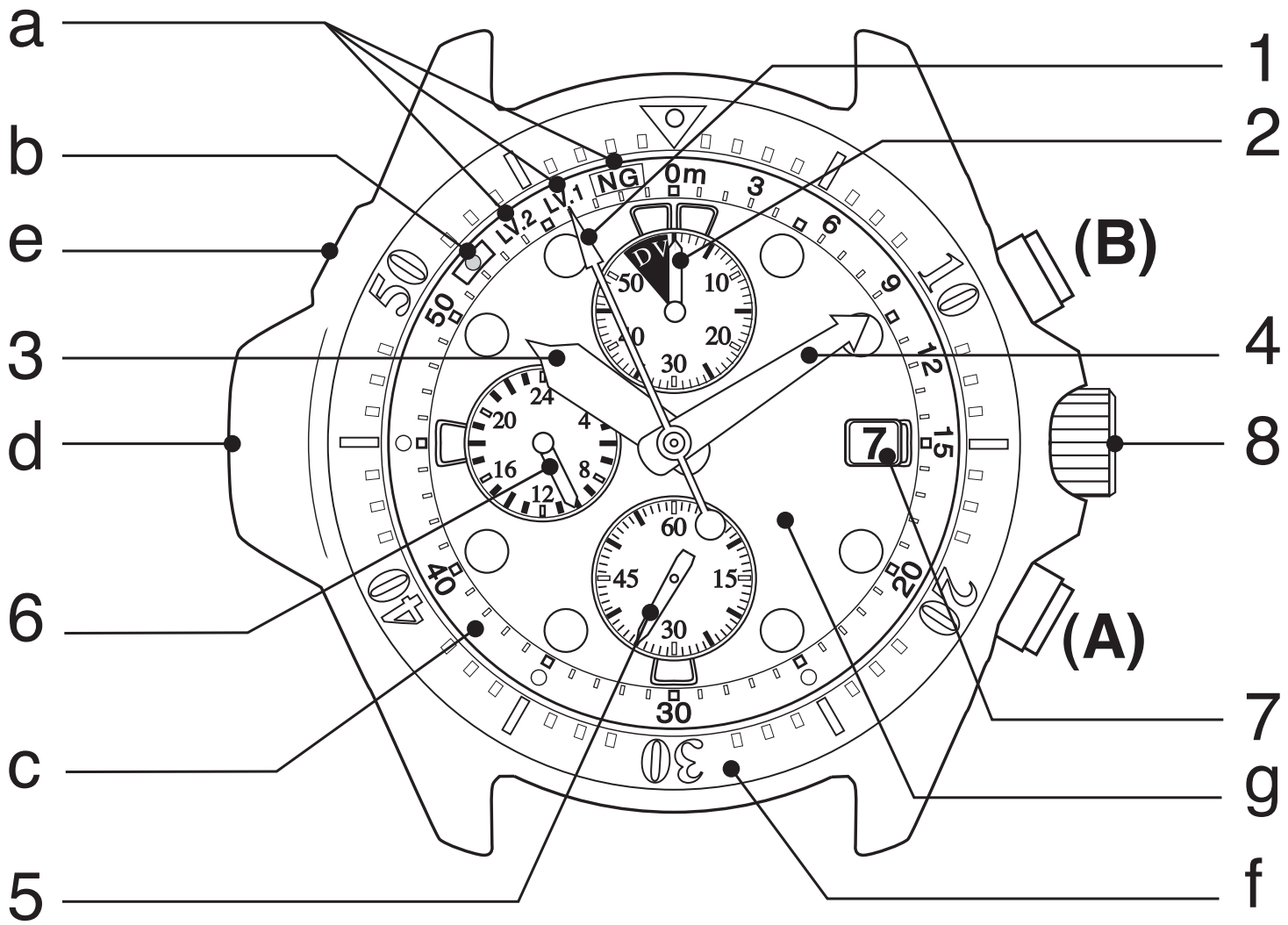
CITIZEN®

INSTRUCTION MANUAL

Eco-Drive®


a
b
e
3
d
6
c
5
1
2
4
8
7
g
f
(B)
(A)
NG
LV.1
LV.2
0m
DIVE
7

Thank you for purchasing a CITIZEN watch. To ensure correct use, please read these instructions carefully. Please confirm that the CITIZEN International Guarantee Card is included for your possible claim.

Nous vous remercions d'avoir porté votre choix sur une montre CITIZEN. Pour assurer une utilisation correcte, veuillez lire ces instructions attentivement. Veuillez vous assurer que la carte de garantie internationale CITIZEN est fournie pour toute réclamation éventuelle.

Muchas gracias por la compra de este reloj CITIZEN. Para asegurar un uso correcto, lea detenidamente estas instrucciones. Verifique de que la tarjeta de Garantía Internacional de CITIZEN le sea suministrada con el reloj en el momento de la compra, de esta manera, podrá reclamar servicios de acuerdo con los términos de la garantía.

When reading this instruction manual, please keep the watch diagram at left folded out and in view. Symbols ((A), (B), etc.) used in the sections on operating instructions refer to the symbols indicated in this diagram.
The design may differ slightly depending on the model.

Pendant la lecture de ce mode d'emploi, dépliez la couverture interne gauche pour voir le diagramme de la montre. Les lettres ((A), (B), etc.) utilisées dans les sections de ce mode d'emploi se rapportent à celles qui figurent sur cette illustration. L'apparence change selon les modéles.

Cuando lea este manual de instrucciones mantenga el diagrama del reloj en la izquierda desplegado y a la vista. Los símbolos ((A),(B),etc.) que se usan en las secciones de las instrucciones del manual, se refieren a los símbolos indicados en este diagrama. El diseño puede diferir ligeramente dependiendo del modelo.

IMPORTANT

Before using

When the watch does not operate according to the instruction manual, it is insufficiently charged.
Charge the watch for more than 4 hours, approximately 20 cm (8 in.) away from the fluorescent or incandescent lamp (30 W) as light sources.
When charging the watch, do not put it too close to the light source.
* When charging the watch under direct rays of the sun, charge for more than an hour.

This watch is an analog diver's watch into which an electronic depth meter function and chronograph function are built.

- When the water sensor gets wet, the watch is automatically shifted to the dive mode. (Depth meter function)
- The maximum depth in diving is automatically memorized. (Maximum depth memorizing function)
- The chronograph function measures the time in units of one second for 50 minutes at maximum. (Chronograph function)
- This watch is a solar-powered watch provided with a solar power generation (Eco-Drive) function.

Safety Precautions (Instructions to be followed at all times)

This manual contains the following instructions that should be strictly followed at all times to prevent injury to yourself and other persons as well as damage to property.

■ **Injuries and damage that might be caused by using the watch improperly or neglecting any of the instructions or precautions contained in this manual are classified with the following symbols.**

⚠ **DANGER**	This symbol indicates matters for which there is a high risk of death or serious injury.
⚠ **WARNING**	This symbol indicates matters for which there is the risk of death or serious injury.
⚠ **CAUTION**	This symbol indicates matters for which there is the risk of minor injury or property damage.

■ **Important instructions that should be followed are classified with the following symbols.**

⚠	Warning (caution) symbol followed by instructions that should be followed or precautions that should be observed
⃠	Warning (caution) symbol followed by prohibited matters.

⚠ DANGER

Please read this manual carefully to make sure you have a thorough understanding of the handling and operating procedures, displays and limitations of this watch and ensure its proper use. Improper use of this watch or failure to observe displayed warnings, cautions and instructions can result in the risk of a fatal or serious accident.

⚠ CAUTION

Diving is a sport that involves risk. When using this watch for diving, make sure you have a proper understanding of the procedures for handling the watch as described in this manual and observe proper procedures. Handling of this watch in a manner contrary to that described in this manual may prevent the watch from functioning properly.

Request to Customers

All repairs performed on this watch, excluding repairs involving the band, are to be performed at the CITIZEN. When desiring to have your watch repaired or inspected, please contact the Citizen Service Center.

⚠ WARNING – Before using this watch for diving –

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 is a sport that involves risk. Before using this watch while diving, be sure to receive diving instruction and training from a qualified instructor to acquire the experience and skills that are required for safe diving. Always observe the applicable rules.

- Diving with this watch must be limited to recreational diving (diving without decompression). Do not 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.

⚠ WARNING

Each diver should take responsibility for planning and executing his or her own diving plan to ensure safe diving.
This watch is not equipped with a function that prevents decompression sickness. In addition, this watch is also unable to check differences in physiological functions of individual divers or differences in physical condition on that day.
Since the occurrence of decompression sickness is greatly affected by physical condition, the degree of the risk of decompression sickness varies depending on your physical condition on that day. It is recommended to avoid diving whenever you are in poor physical condition such as when you are ill, fatigued, have not had enough sleep or have a hangover.

⚠ CAUTION – Before using this watch for diving –

When using this watch, the user must receive general training and instructions, and 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.

⚠ CAUTION – For safe diving –

- When diving, obey the rules of the buddy system every time. (Buddy system means that two divers pair with each other for safe diving.)
- For safety, it is advised that you enjoy sports diving in the depths around 20 m (60 ft).
- Before diving with this watch, fully charge the watch without fail. When the watch is not sufficiently charged (the function hand points at “NG”), the depth meter function cannot be used.
  If charge of the watch becomes low 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 a sufficient rest after diving, you may suffer from decompression sickness (caisson disease).

⃠ PROHIBITION – Circumstances that prohibit use of this watch in diving –

Do not use this watch 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.

Precautions in diving

⚠ WARNING – 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 dive 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 the dive mode because of insufficient charge. If the function hand points to “NG”, charge the watch sufficiently so that the hand indicates “LV.2 (level 2)” or “LV.1 (level 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 dive 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.

⚠ WARNING – 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.
- Do not disturb any push buttons or the crown except button (B) (for displaying the memorized maximum depth) throughout the dive, otherwise the watch may fail in water-resistance.
- If the watch does not operate correctly in the water, start ascending to the surface immediately. Start your ascent immediately, but be sure to stay below an ascent rate of 9 m (30 ft)/min.

⚠ WARNING – 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.
- Remove any debris or dirt that has become trapped in the sensor. If the sensor part is packed with dust, etc., wash it out with fresh water. 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. In addition, do not blow highly compressed air onto the pressure sensor with an air gun. In case it is difficult to wash out dust, consult the Citizen Service Center.

⚠ 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.
- Do not 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% deeper than the indication of 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 dive 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 dive 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 (13,120 ft) or more above sea level for the reason that the watch gives incorrect measurement of depth in such a place as mentioned previously.

BEFORE USING

Before using, make sure the watch is sufficiently charged by exposing it to the light.

A rechargeable cell is used in this watch to store electrical energy. If the watch is fully charged once, it 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 charge the watch everyday.
To insure that this watch demonstrates its depth meter function and chronograph function besides the timekeeping function, always keep it sufficiently charged.
If the watch is not sufficiently charged or the power is very low, the depth meter function and chronograph function cannot be activated.
The watch is protected from overcharge.
For charging the watch, expose the solar cell (the face of the watch) to light.

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1. NAMES OF PARTS

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

Name	Time mode	Dive mode	Chronograph mode
(A): Button (A)	To be pressed for selecting a mode		
(B): Button (B)	To be pressed for showing the 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 synchronized with the hour hand.		
7: Calendar	Always indicates the date.		
8: Crown	To be used for adjusting the time or date.		

a: Charge levels (LV1, LV2,NG) ..... Charge level of the watch 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 meters (125 feet) 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 dive 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.

2. WARNING FUNCTIONS OF THIS ECO-DRIVE WATCH

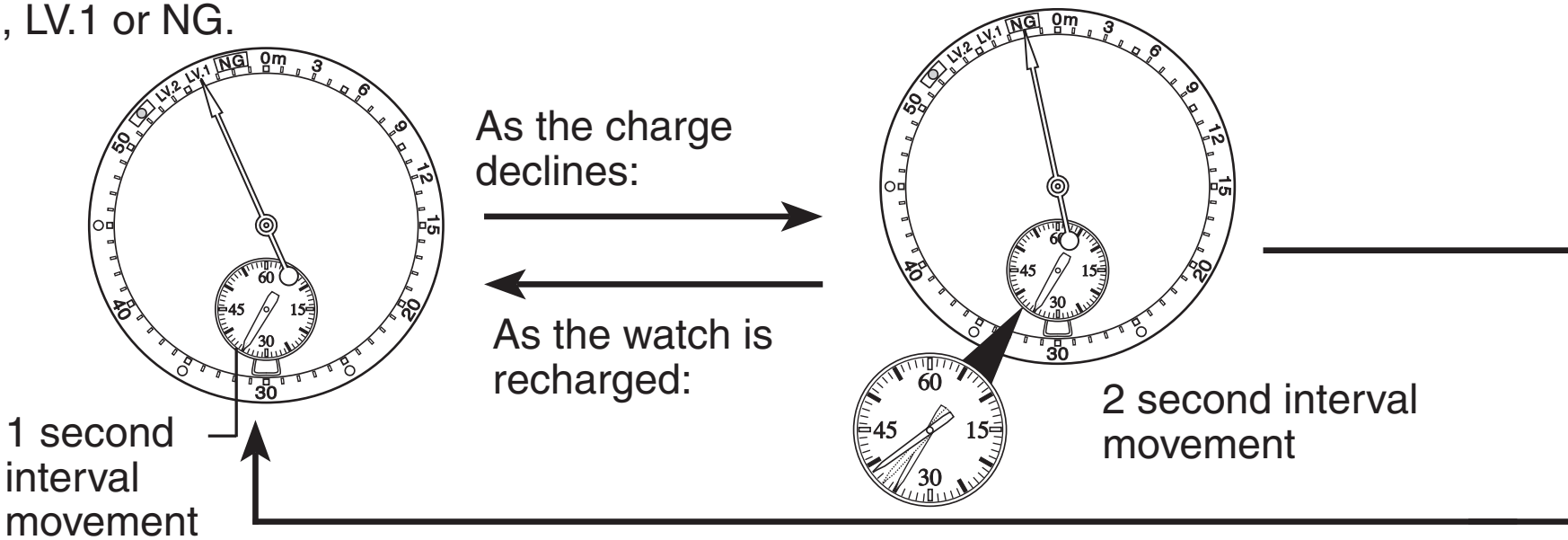
With decline of the charge of the watch, its warning function is activated to change the indication.

[Normal indication (Time mode)]

Function hand: Points at LV.2, LV.1 or NG.

[Insufficient charge warning indication]

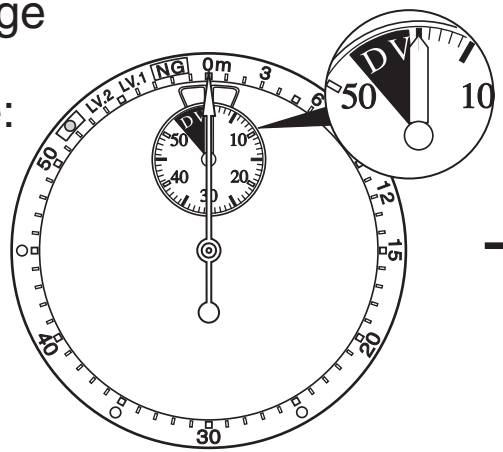
Function hand: Points at NG.



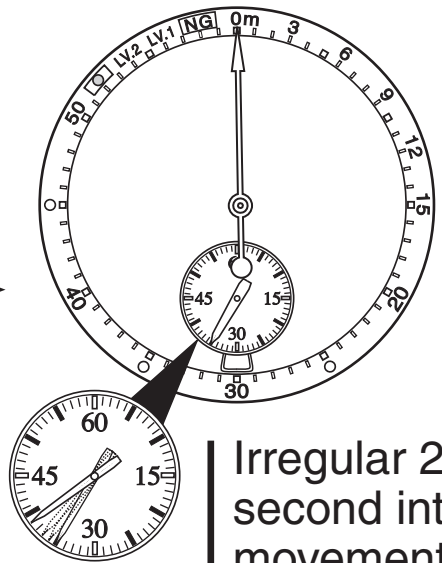
[Stop warning indication]
Function hand: Points at “0”.
Mode hand: Points at “0”.

[Time reset warning indication]
Function hand: Points at “0”.

As the charge declines furthermore:



As the watch is recharged:



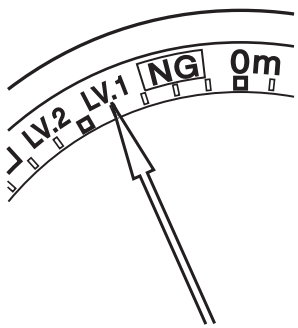
Irregular 2 second interval movement

When the watch is sufficiently charged and the time is correctly set:

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 dive mode, power consumption is increased as the pressure and water sensors are activated. If the watch is not fully charged before diving or exposure to moisture, it may not fully record your dive and/or may not enter the dive mode. Be sure your watch is fully charged by referring to the charge level indicated by the function hand.

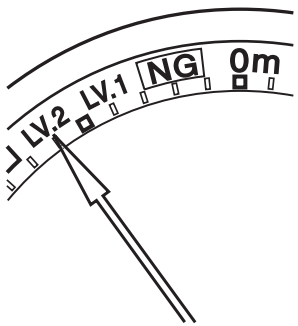
<When the function hand points at LV.1 (at 56-seconds position)>



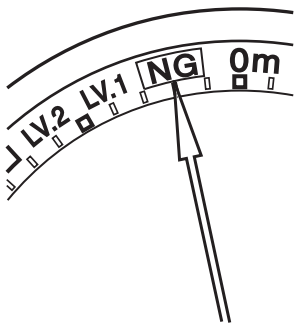
The watch is securing battery power enough for sports diving at the depth of 20 m (66 ft) or so for about an hour.
Note: If moisture adheres to the watch, the watch may enter the dive mode.

* 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 watch 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 shift to the dive mode because of insufficient charging. When the watch is in this status, it cannot be used for diving because its depth meter function won't be activated.
If the function hand points to “NG” during a dive, immediately stop using relying on the watch for depth measurement.



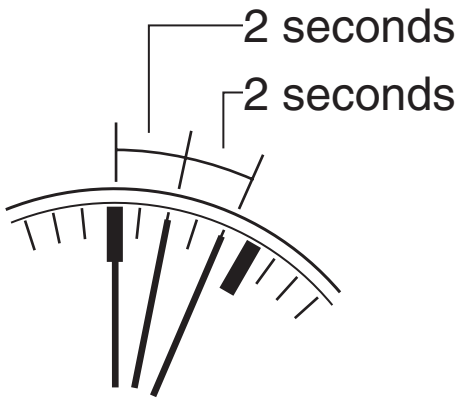
⚠ CAUTION

- Use the indication of the charge level as a reference only.
- If the watch is exposed to strong light for charging, the 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 watch 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 “3. TIME REQUIRED FOR CHARGING” .)

Insufficient charge warning function

(Mode hand: DV position, Function hand: NG position)

Whenever the power of the watch becomes insufficient for operation, the watch is automatically shifted to the 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 the chronograph mode.
* While the watch is falling into the 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 watch. For using the watch for diving, sufficiently charge the watch until the function hand indicates “LV.1” or “LV.2” on the charge level.

Stop warning function

(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)

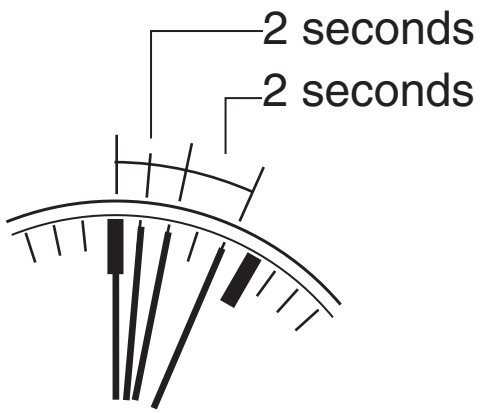
* All functions of the watch are inactivated in this indication.

When charged in this condition, the watch restarts operation in the time reset warning status.

Time reset warning function

(Mode hand: “0” position, Function hand: “0” position)

With progress in charging as the watch is exposed to light, it 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)



Charge the watch sufficiently and reset the time to return to the normal indication.

* In the case the watch 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 rechargeable cell is fully charged, this function is activated to protect the watch from overcharge by cutting of power supply. This function relieves you from worry about overcharge.

3. TIME REQUIRED FOR CHARGING

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 min	45 min	2 hrs 30 min
Outdoors (cloudy)	10,000	4 min	1 hr	5 hrs
20 cm (7-7/8 inches) from a fluorescent lamp (30 W)	3,000	16 min	2 hrs 30 min	18 hrs
Interior lighting	500	2 hrs	16 hrs	—

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

To become fully charged when the cell is discharged:

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

To work for one day:

Time required for charging the watch enough to run for one day, starting from the state that the second hand normally goes every second.

* 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.

4. PRECAUTION FOR THIS ECO-DRIVE WATCH

<Always take care to charge the watch.>

- Mind that the charge of the watch becomes low if you wear a jacket or a long-sleeved shirt, because the watch is usually shaded by such clothes and insufficiently charged as a result.
- Try to put the watch in a well-lighted 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 easily becomes 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 rechargeable cell —

- Do not remove the rechargeable cell from the watch yourself, unless unavoidable.
  If you must remove the rechargeable cell, store it out of reach of children to avoid accidental ingestion. If the rechargeable cell is ingested, consult a doctor immediately.

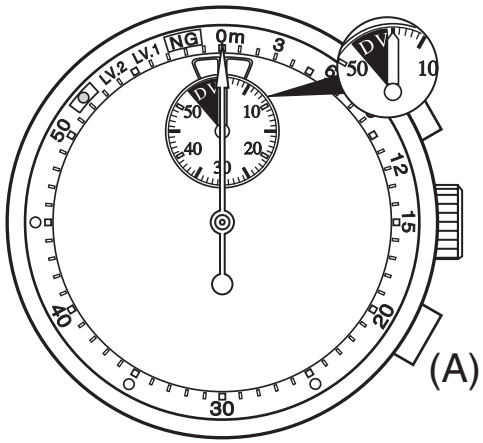
⚠ WARNING – Do not use anything other than the specified rechargeable cell –

- The watch will not operate if incorrect battery types are inserted. Never use a regular silver battery. The battery could overcharge during the charging process and burst, causing damage to the watch or injuries to the wearer.

5. SWITCHING BETWEEN MODES

- Each time button (A) is pressed for 2 seconds or more, the mode is switched from the time mode to the chronograph mode and vice versa.
- If the water sensor gets wet as the watch is in time mode, the mode is switched over to the dive mode. However, this mode shift is not performed when the function hand indicates “NG” on the charge level index.

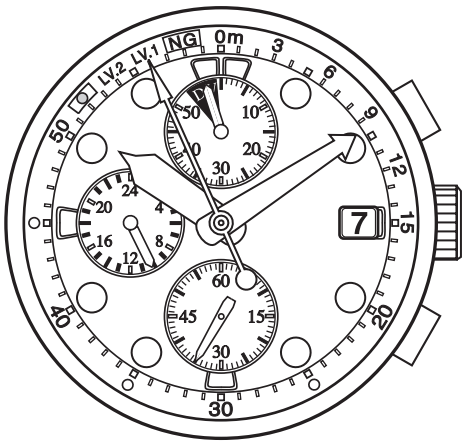
<Chronograph mode>



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

Press button (A) continuously for 2 seconds or more.

<Time mode>



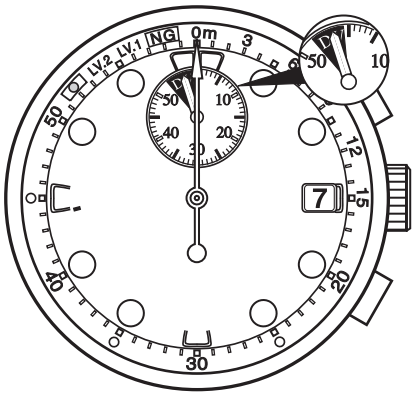
Function hand: “Charge level index” position
Mode hand: “DV” position

When the water sensor gets wet:

When button (A) is pressed for 2 seconds or more as function hand indicates “0 m” (0 ft) in depth, or function hand continuously points at “0 m” (0 ft) in depth for 10 minutes after depth measurement is complete:

<Dive mode>

(Indication in standby status)

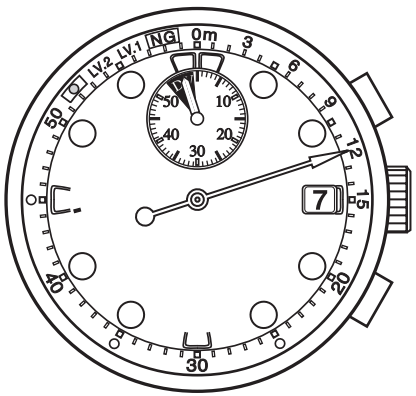


Function hand: “0” position
Mode hand: “DV” position

When watch is at a depth of 1 m (5 ft) or more:

When watch is at a depth of less than 1 m (5 ft):

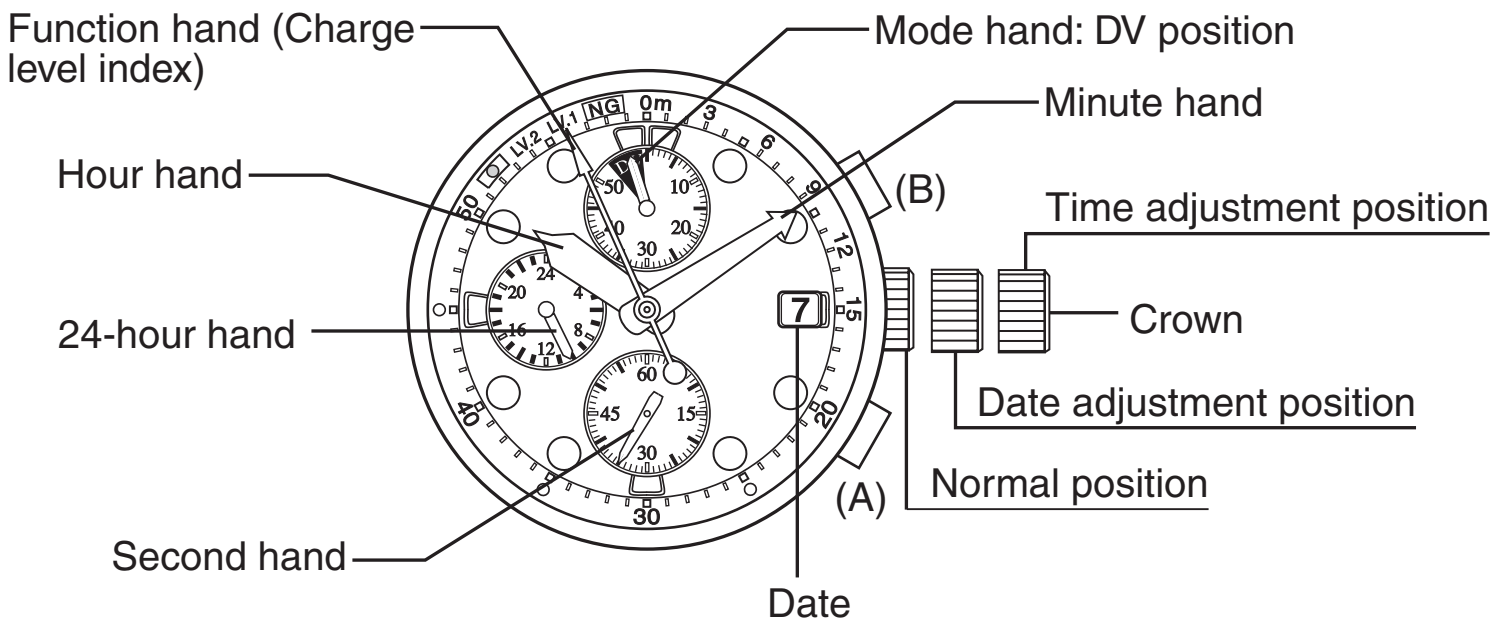
(Depth indication)



Function hand: Depth indication
Mode hand: “DV” position

6. 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 power of the watch at three 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 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 “10. SETTING FUNCTION HAND AT “0” POSITION”.

How to adjust date

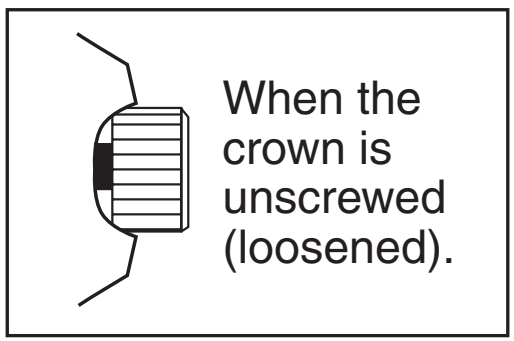
(1) After turning the crown counterclockwise to unscrew it, pull the crown out to the date adjustment position (the first click stop position).
(2) Set the watch for the correct date by turning the crown.
(3) Press the crown in to the normal position.
(4) Turn the crown clockwise to screw it tightly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

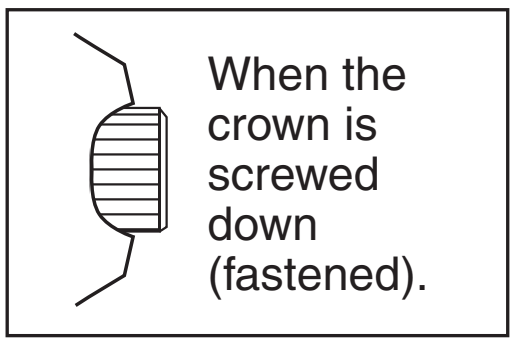
Note: If date is adjusted when the watch shows a time between 9:00 pm and 1:00 am, the watch may not advance the date indication the next morning.

<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 loses water-resistance and the inside of the watch gets wet.

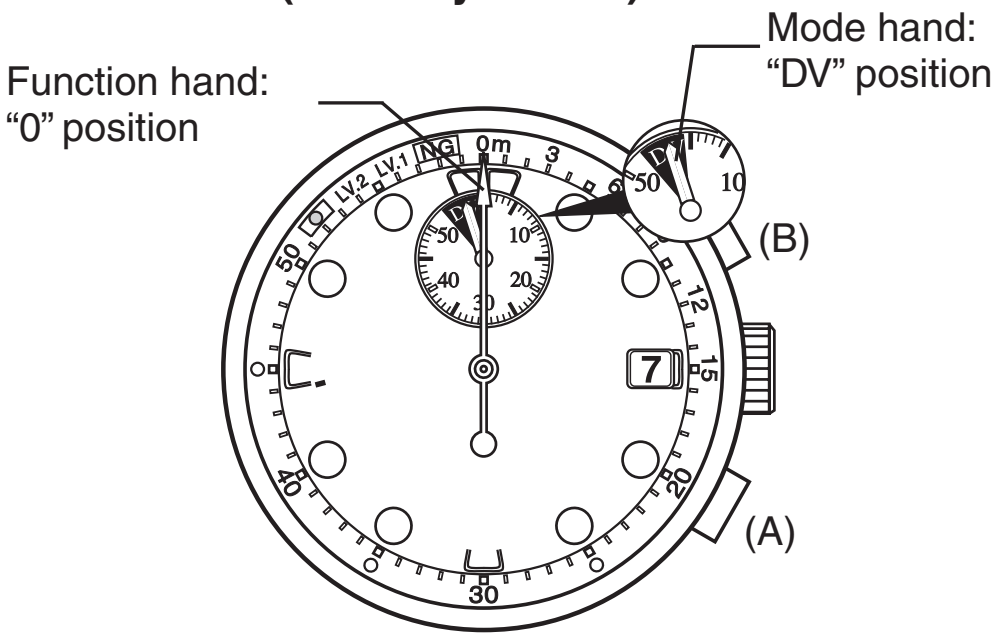




7. DIVE MODE

When the watch is immersed in the water, while it is set in the time mode and charged enough for diving, the water sensor senses the water and automatically switches the watch to dive mode to measure the depth. In the dive mode, the watch automatically memorizes the maximum depth of the last dive (1 data) and the user can recall it after the dive.

<Dive mode (Standby status)>



* If the function hand and mode hand don’t point to their respectively specified positions (mode hand: “DV” position, function hand: “0” position) when the watch enters the dive mode (standby status), adjust the hand positions referring to “9. TROUBLESHOOTING”.

<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.)

<How 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 hand 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 dive mode>

(1) Press button (A) for 2 seconds or more after diving or in the water where it is less than 1 m (5 ft) deep (depth indication: 0 m/0 ft). The dive mode is canceled 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 the dive mode. If the watch is again immersed in the 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 depth.

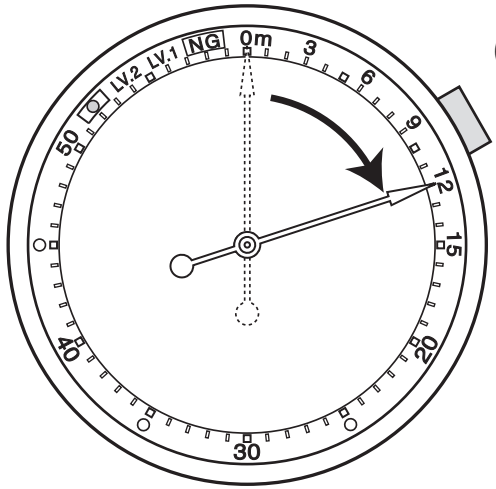
*** Wet detection error indication**

If the diving standby mode (water sensor is 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
“9. TROUBLESHOOTING.”

<How to recall the memorized maximum depth>

(1) Press button (B) in the time mode or dive mode (when depth indication is 0 m/0 ft). The function hand indicates the memorized maximum depth.

(2) To cancel the maximum depth indication, press button (B) again.

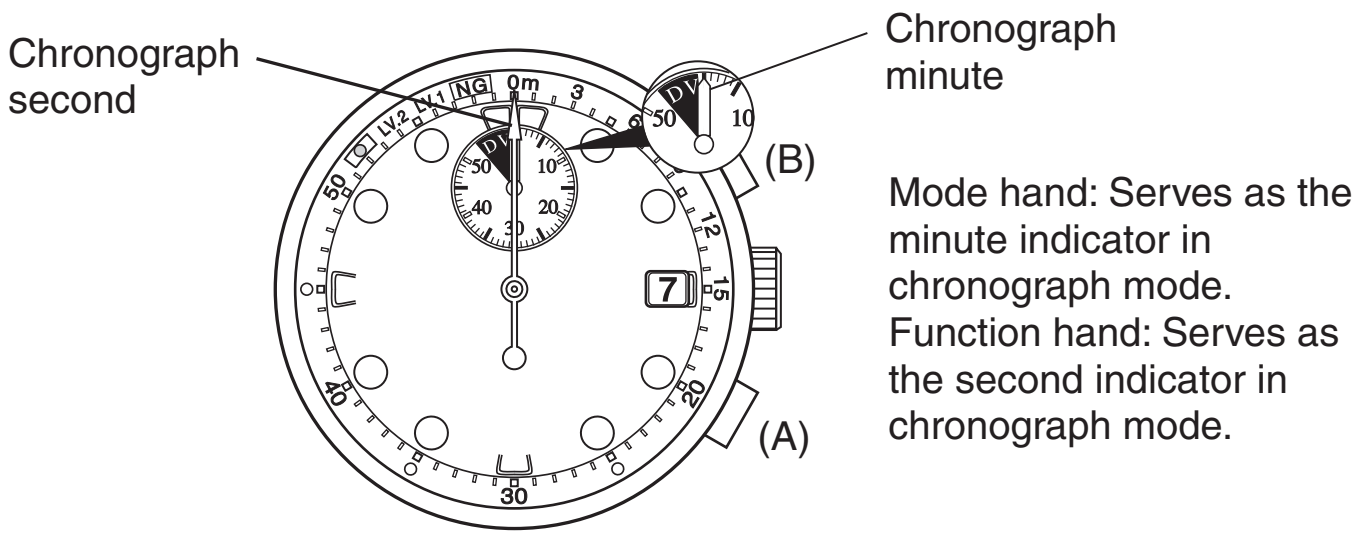


* Indication of the memorized maximum depth continues for 30 seconds and is automatically canceled after that.
* The memory of the maximum depth of the last dive is held until the watch is used in the next dive.
* If the maximum depth in diving is less than 1 m (5 ft), it is not memorized. On the other hand, if the maximum depth exceeds 50 m (125 ft), it is memorized 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.

8. 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.

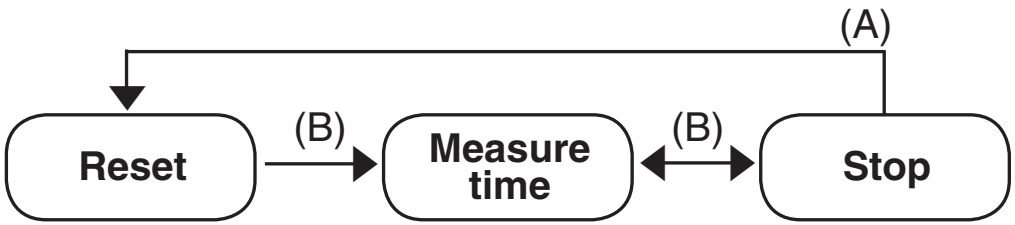
<Chronograph indication — Reset position —>



* 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 the 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 switches to the reset status.



(A) : Press button (A).
(B) : Press button (B).

* The watch cannot be switched to the chronograph mode from the dive mode.
* If the function hand or/and mode hand do not reset to their respective “0” positions when the watch enters the chronograph mode or the chronograph is reset, adjust the hand(s) to the “0” position referring to “9. TROUBLESHOOTING”.
* The mode cannot be changed while the time is being measured in the chronograph mode. If the mode is changed while in the stop state of the chronograph mode, then indication is cleared.

9. TROUBLESHOOTING

If the solar powered watch is insufficiently charged or power of the watch is considerably consumed, the watch functions are limited to a certain range and the watch warns the user of its status by various means such as abnormal indications. To avoid such a power failure, always try to charge the watch sufficiently.

● Some hand is out of the correct position.

If a strong shock or static electricity is given to the watch by careless handling, the hands may show an incorrect indication.

- Adjust the function hand (chronograph second indicator) when it is out of the “0” position (the mode hand functions normally) in the following conditions referring to “10. SETTING FUNCTION HAND AT “0” POSITION”.
  1) When the watch is set to the time adjustment mode (the crown is pulled to the second click stop position)
  2) When the watch is in the dive mode (standby status).
  3) When the watch is in the reset status of the chronograph mode
- In the case the function hand and/or the mode hand are out of their respective “0” positions in other modes, adjust the hand(s) referring to “11. ALL RESET/ ADJUSTING HAND POSITION”.

● **The second hand jumps 2 seconds every 2 seconds.**
This is the insufficient charge warning status that warns of a low charge of the watch. If it occurs, immediately charge the watch sufficiently.
* For details, refer to “2. WARNING FUNCTIONS OF THIS SOLAR POWERED WATCH”.

● **The second hand moves irregularly every 2 seconds.**
This is the time setting warning that warns of incorrect time indication caused by a temporary stoppage of the watch. In such a case, sufficiently charge the watch, then set the correct time.
* For details, refer to “2. WARNING FUNCTIONS OF THIS SOLAR POWERED WATCH”.

● **The modes cannot be switched.**

If the power of the watch drops, the modes cannot be switched under the following conditions.

- When the function hand points to “NG”, the watch cannot be switched over to the dive mode even if the water sensor gets wet.
- When the watch is in the insufficient charge warning status, the mode cannot be switched over to the chronograph mode.
  In such a case, sufficiently charge the watch.

* For details, refer to “2. WARNING FUNCTIONS OF THIS SOLAR POWERED WATCH”.

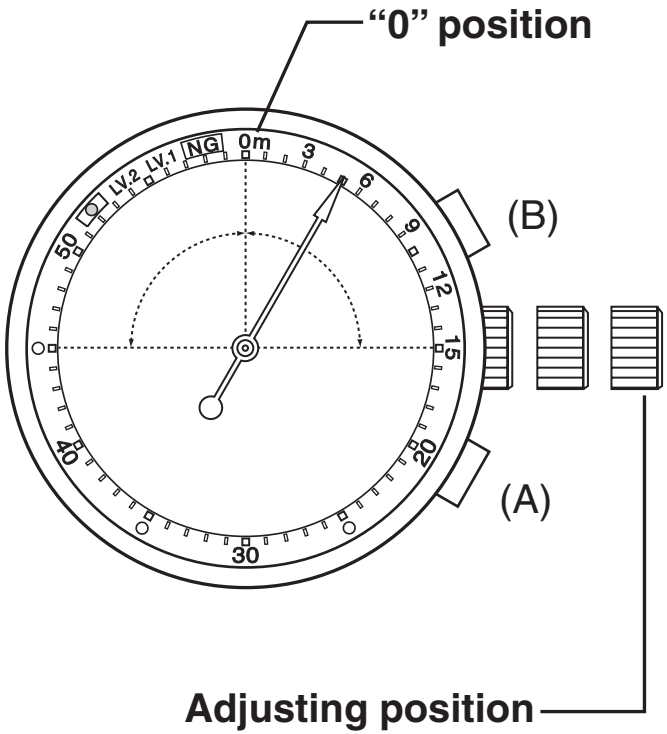
● **The watch does not switch to the time mode from the depth indication.**
When the user climbs to a high place or is on a flight, the watch may unexpectedly be shifted to the dive mode because of a sharp change in the atmospheric pressure (pressure change equivalent to the depth of 1 m/5 ft). (The watch may enter the dive mode when the water sensor is activated by sweat or other moisture.) If it occurs, the watch may fail to switch from the dive mode after the user goes back to the ground level, because the depth meter function didn't reset the depth indication to “0 m (0 ft)”.
If the depth indication is less than 4 m (15 ft), press button (A) for 2 seconds or more to switch to the time mode. If the depth indication is more than 4 m (15 ft), adjust the watch according to “11. ALL RESET/ADJUSTING HAND POSITION”.

● **The function hand continues to indicate the overzone mark.**
If the water sensor gets dirty or wet, it is activated even when the watch is not wet and the wet detection error indication (the function hand points to the overzone mark) appears.
In case the watch falls into this status, carefully clean the water sensor part and wipe out moisture completely.
After the water sensor is cancelled, the normal display will be resumed.
* If careful cleaning results in failure in recovering the watch from the above-mentioned status, it is possible that the pressure sensor is faulty. In that case, immediately stop using the watch and consult with the store where you purchased the watch or the nearest Citizen Service Center.

● **The watch malfunctions otherwise or shows abnormal reading.**
If a strong shock or static electricity is given to the watch, the watch may come into abnormal running that is out of explanation of this instruction manual.
If the watch falls into such a status, adjust it following the instructions of “11. ALL RESET/ADJUSTING HAND POSITION”.

10. SETTING FUNCTION HAND AT “0” POSITION

Within ±15 graduations before/after the “0” point.



(1) Set the watch to the time mode or chronograph mode.
Turn the crown to loosen it and pull it out to the second click stop position.

(2) Press button (A) or (B) to set the function hand to the “0” position.
When the function hand is at the right side of the “0” position, press button (A).
When the function hand is at the left side of the “0” position, press button (B).

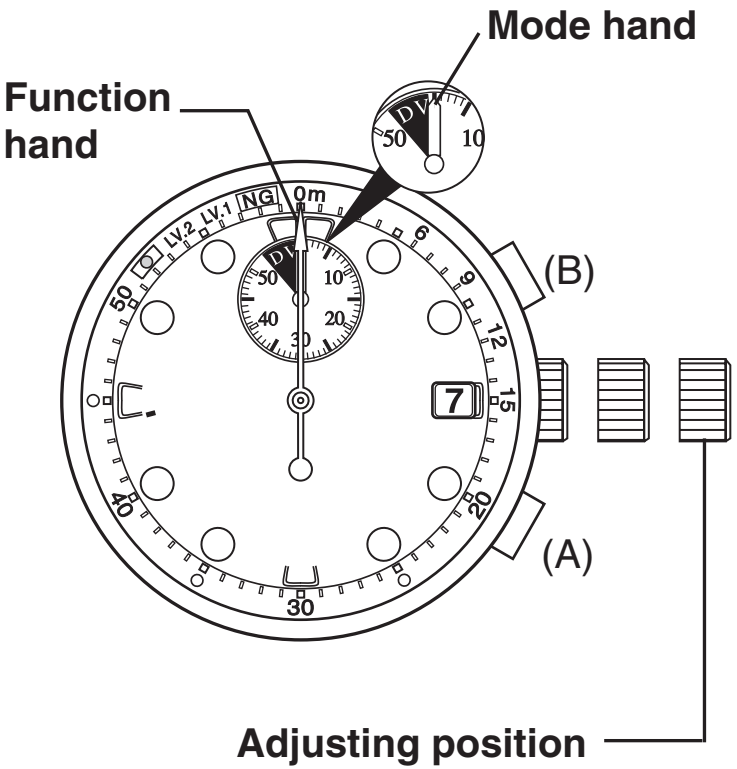
(3) Press the crown in to the normal position and turn it until it is tightly screwed against the case.

* 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 “11. 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 the 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 watch 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 crown is turned during adjustment, the watch will not indicating a correct time. If 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.

11. ALL RESET/ADJUSTING HAND POSITION



(1) Unscrew the crown and pull it out to the second click stop position.

(2) Press buttons (A) and (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.
(Holding down the button will advance the hand quickly.)
* The function hand and the mode hand move interlocking with each other.

(4) Correct the time indication by turning the crown. (Refer to “6. ADJUSTING TIME AND DATE (Time mode)”.)

(5) Press the crown in to 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 power of the watch. 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 dive 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 Citizen Service Center about the trouble.

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

12. NOTE ON RECHARGEABLE CELL

The rechargeable cell used in this watch is a clean energy battery that incorporates no toxic substance such as mercury inside. The rechargeable cell has no need of periodical replacement because it is capable of repeated charging and discharging.
However, power consumption may increase after using for an extended period of time due to deterioration, and the power may run out earlier than expected. To avoid this, we recommend that you have your watch inspected (Charge basis) periodically.

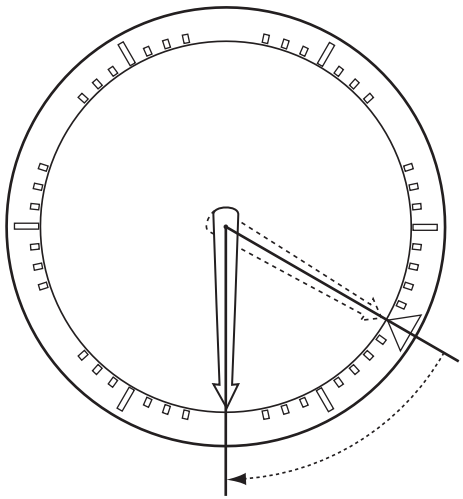
13. OTHER FUNCTIONS

[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 (▽) 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 ▽ mark was set at the starting point).



Elapsed time:
10 minutes

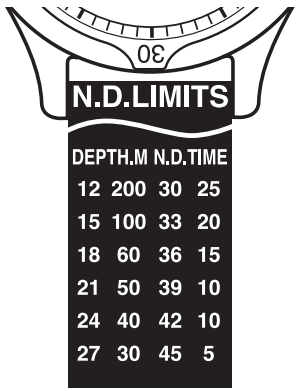
⚠ CAUTION

- 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).

No Decompression Limits



— How to read no decompression limits —

DEPTH.m (Max. depth in meter)	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 21 m (70 ft) 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 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.

14. PROPER CARE FOR LONG TERM USE

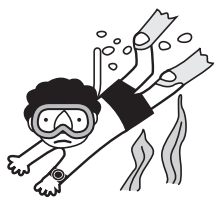
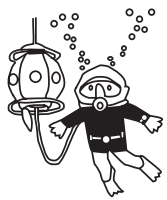
⚠ WARNING — About water-resistance —

- 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.

Indication		Specifications	Water splashes on the watch (when washing face, in rain)
Dial	Case (Case back)		
DIVER'S 200m	WATER RESIST (ANT)	200 m deep water – resistance	OK

For maintaining the water-resistance

For maintaining the water-resistance, ask the nearest Citizen Service Center 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 the wet					
	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
	OK	OK	OK	NO	NO

⚠ 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 Center to overhaul it. If the watch is left in such 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 Center to overhaul it. If the watch is left with seawater inside, there is a 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 authorized Citizen Service Center 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 substance such as a radioactive material.
  This luminous paint accumulates light of the sun and indoor lighting and emits light in a dark place. 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 emits light, its luminance rapidly fades. Therefore, carefully expose 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 back 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 owner's 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 the quartz watch has a characteristic that it cannot withstand 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 discoloration, 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 discolored. Pay careful attention to chemicals when you are wearing the watch near them.

15. SPECIFICATIONS

1. Model B740/B745
2. Watch accuracy. . . . . ±15 seconds per month (average)
   [at normal temperatures (+5°C to +35°C/+41°F to +95°F)]
3. Depth gauge accuracy . . . At depth of 1 to 10 m (5.0 to 25.0 ft): within ±1 m (±5.0 ft)
   At depth of 11 to 50 m (27.5 to 125.0 ft): within ±2 m (±7.5 ft)
   (On the condition that the water temperature is constant and error in reading is excluded.)
   * 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.
4. Range of watch operating temperatures . . –10°C to +60°C (+14°F to +140°F)

5. 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 memorized: 1 m to 50 m (5 ft to 125 ft)

6. Additional functions. . . . . .

- Charge level indication function
- Insufficient charge warning function
- Stop warning function
- Time reset warning function
- Overcharge prevention function

7. Duration of operation . . . .
- From full charge to stopping of watch: 2 months approx.
- From full charge to NG indication: 1 month approx.
- From insufficient charge warning to stopping of watch: 2 days approx.

* Duration of operation greatly varies depending on frequency of use of the depth gauge and chronograph. If the watch gets wet, though it is not used in diving, the water sensor is activated and the duration is shortened accordingly.

8. Battery . . . . . Rechargeable cell 1 pc.

* Specifications are subject to change without notice.

CE

Model No.BJ2＊
Cal.B74＊
CTZ-A8001④