

CITIZEN QUARTZ ANALOG AQUALAND

Model No. AL0XXX/Cal. No. 581 ※

- INSTRUCTION MANUAL
- BETRIEBSANLEITUNG
- MANUEL D'INSTRUCTION
- MANUAL DE INSTRUCCIONES
- MANUALE DI FUNZIONAMENTO
- 説明書

CTZ-B6750

Important

1. The use and accuracy of the Aqualand watch should not be relied upon in any activity in which reliance upon the alarm features or the lack of accurate measurements may affect the health or safety of any person or cause damage to property.
2. Diving conditions can change drastically in a short period of time and caution should be taken in any activities in which a change in such conditions could result in personal injury or property damage.
3. The Aqualand watch is not a precision measurement instrument and is intended only to provide general information as to depth and to supplement other more accurate measuring devices which every diver should consistently use. The functions of the watch should not be relied upon for determining the proper procedures for decompression during a dive.
4. The Aqualand watch registers all depths in meters, not in feet. Be sure that you are familiar with the necessary conversion table shown on the cover back page.

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English Before Use

Specifications are partially different for certain models. Please note the following before using this watch.

1. Confirm the Caliber No. of your watch by the stamp on the case back.
2. Difference in Specifications ; Specifications are different by the model of the watch on the following points.

Caliber No. 5812-0000
< Case back >

Caliber No.	5810 / 5811 / 5861 / 5862	5812 / 5813 / 5863 / 5864
Surfacing Speed Warning	If the diver's speed of ascent exceeds 1.5 meters per 5 seconds (18 meters per minute; quoted from the U.S. Navy diving manual) the surfacing speed warning system will activate an alarm. (Described on p.9 of this instruction manual.) Setting the watch in the Diving mode, the surfacing speed warning will sound when the diver's surfacing speed exceeds the dangerous rate of 1.5 m/5sec.(18 m/min.) (Described on p.14, 37 and 43 of this instruction manual.)	If the diver's speed of ascent exceeds 0.75 meters per 5 seconds (9 meters per minutes; quoted from the U.S. Navy diving manual), the surfacing speed warning system will activate an alarm. Setting the watch in the diving mode, the surfacing speed warning will sound when the diver's surfacing speed exceeds the dangerous rate of 0.75 m/5sec.(9m/ min.)

* The new regulation of the U.S. Navy diving manual is executed on 1993, changing the Surfacing Speed Warning at the rate of 9m/min. from 18m/min.

5. The Aqualand watch is calibrated for diving in salt water. Diving in fresh water will cause the depth indicator to show a depth that is different from the diver's actual depth.
6. Diving is an extremely dangerous activity which should be conducted only by adequately trained individuals in good physical condition.
7. Limit your dives to proper depths and time periods for your own experience and physical condition and in consideration of changing diving conditions. Remain aware at all times of the dangers of improper decompression resulting in the bends and of the hazards of nitrogen narcosis.
8. Before diving always be sure to familiarize yourself with local weather conditions and your diving location. Be sure to check that all of your equipment is functioning properly.
9. Never dive alone. Always follow good diving practices.
10. Be sure to keep the batteries out of reach from infants and small children. Should accidental ingestion occur, consult a doctor at once.

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English

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diving in advance. Knowledge of gravity standardization calculation is essential.

(Example) *The depth indication at a depth of 50 meters (164 ft.).*

Sea water/50 meters (164 ft.)

Fresh water/48.8 meters (160 ft.)

- **For the sake of accuracy, do not use this watch outside of the guaranteed temperature range.**

The accuracy of this product is guaranteed within the temperature range of 10°C to 40°C (50°F to 104°F). Please do not use outside the guaranteed temperature range.

- **Depth indication is limited to 55.0 meters (180.4 ft.).**

The water-resistance performance of this product is reliable to a depth of 200 meters (656.2 ft.), but we generally recommend using this product for non-decompression sports diving at depths not exceeding 30 meters (98.4 ft.) for your safety.

- **Early battery replacement.**

The battery will last for about 2 years after installation. (Refer to the detailed conditions under the heading "14. Battery"). Be aware that the two year life span depends upon the frequency of use. We recom-

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1. Instructions for Safe Diving

This product is a water-resistant watch equipped with an analog depth meter for diving.

The depth meter operates up to a maximum depth of 55 meters.

The water-resistant performance is 200 meters. To ensure correct use, please read this instruction manual carefully before using this product.

- **When you use this product for diving, you must have had appropriate previous training in safe diving and strictly obey all diving rules for your own safety.**

—Be sure to obey "the buddy system" during actual diving, (i.e. Do not dive alone).

- **Be aware that this product is not a test-approved instrument by any officially authorized organization. The use of the diving functions and the warning system is solely limited to a supplementary purpose for the diver.**

- **The depth-meter indicators of this product are based on sea water (specific gravity; 1.025). When you intend to use this product for fresh water diving, it is necessary to get special training in fresh water**

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mend early battery replacement **at the Citizen Service Center** if you plan to take a diving trip abroad for a long period.

WARNING

- **Do not use this product in helium gas atmospheric conditions. Never use this product in a helium gas decompression chamber as it may destroy or cause malfunctions of the product.**
- **Do not use this product as a substitute for a compression measuring instrument.**
- **Do not use this product alone for the purpose of preventing water hazardous situations, or as an aid to judge ones action or in an emergency.**
- **Do not rely on the depth meter in lakes at more than 4,000 meters (13,123.6 ft.) above sea level.**

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***Stop using this product immediately in the following cases:**

- When the warning system for unsafe diving signals.
 - When the error indicator system signals.
(The second hand indicates a warning by moving in 4 seconds increments.)
 - When there is an irregularity, the lock out system operates.
(The operator will be unable to switch to the Diving Mode.)
 - When the battery life warning signals.
(The second hand indicates the warning by moving in 2 second increments.)
- When unusual things are observed while using this product.
 - When the watch stops or the indications are incorrect.
 - When the indications given differ greatly from those of other measuring instruments.

CAUTION

- **Prevent rapid diving (descent rate).**
 - If the diver's speed of descent exceeds 1 meter per second, the depth meter hand will not accurately indicate the depth. Stop or slow down the speed to read accurate data.

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2. Check Points at the Diving Site

Check the following items before using.

1) Before the dive

- **Check these points on the watch:**
 - If the crown is tightly locked.
 - If there are any scratches or cracks on the wrist band or on the glass.
 - If the watch is securely linked with the wrist band.
 - If the register ring rotates correctly.
(Normally it is possible to rotate it only in a counter clockwise direction.)
 - If the time and date settings are correct.
 - If the second hand movement is correct.
Replace the battery at a Citizen Service Center if the second hand advances in 2 seconds increments.
 - *Conduct sound monitoring to see if the alarm sounds correctly.*
Refer to 12-2) sound monitoring

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- **Prevent rapid surfacing (ascent rate)**

- If the diver's speed of ascent exceeds dangerous rate, the surfacing speed warning system will activate an alarm. The dangerous rate is set at 1.5 meters (4.9 ft) per 5 seconds (18 meters per minute; quoted from the U.S.Navy diving manual) for Caliber . No.5810, 5811, 5861 and 5862. For Cal. No. 5812, 5813, 5863, and 5864, the rate is set at 0.75 meters (2.5 ft.) per 5 seconds (9 meters per minute; quoted from the U.S.Navy diving manual). Keep safe speed of ascent for accurate indication, and to prevent danger of rapid surfacing.

- **Do not use this product in an environment where extreme atmospheric pressure and temperature variations exist**

- The depth indicator generally shows 0 when the mode is switched to the diving mode from the normal mode. In case extreme variations in atmospheric pressure and/or temperature exist, the depth indicator may occasionally show more than 1 meter.

Note: In this case switching to normal mode will become impossible.

Refer to the instructions headed "13 Irregular Indications and Resetting".

- **Get special training when you intend to use this product for diving at high altitude.**

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- Confirm the Depth Alarm setting.
 - Refer to item "8. Depth Alarm Setting"
- Switch to the Diving Mode.
 - Never switch modes while in the water.
 - Be conscious of the following points to get more accurate data.
- Switch to the Diving Mode just before starting a dive.
- Immerse the watch in the water for about 2 to 3 minutes before switching modes when the temperature gap between air and water seems to be considerably different.
- Confirm the Diving Mode Indication
 - If the depth hands correctly point to the 0 position.
Note: If the hands fail to point to the 0 position, refer to item "13. Irregular Indication and Resetting".

2) While diving

- If hand movements are normal.
 - When the second hand advances every 2 seconds, it is a low battery warning. In this case, stop using the watch and ask for battery replacement at a Citizen Service Center.

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- When the second hand advances in 4 second increments, it is a depth indication error warning. Stop using the watch.
- Be aware that the depth indication is standardized for sea water use.
 - Gravity standardization calculations are necessary for fresh water diving.
- **Never operate the crown and the buttons in the water.**
- Be aware not to hit a rock or hard material with the watch.
- Take into consideration that the alarm sound may be difficult to hear in the water because of the environment or position of the watch.
- **Obey the rules of safe diving.**
- Be careful that the auto-return to the normal mode will activate when the diver stays for more than 30 minutes in water shallower than 1 meter.

3) After the dive

- **Allow sufficient surface interval between dives as specified in dive tables to prevent decompression sickness (a.k.a. the “bends”).**
This also applies to divers who go up in an aircraft too soon after completing a dive.

3. Integrated Warning System

Functions	Operating Condition	Warning System
Surfacing Speed Warning	(Diving Mode) • When surfacing speed exceeds 1.5m (4.9 ft.)/5 sec. (for Cal. No. 5810, 5811, 5861 and 5862) or 0.75m (2.5 ft.)/5sec. (for Cal. No. 5812, 5813, 5863 and 5864).	• Alarm sounds for at least 5 seconds. • The alarm sounds as long as the dangerous speed continues.
Exceeding Maximum Depth Warning	(Diving Mode) • When the depth exceeds 55.0 meters (180.4 ft.)	• The depth hand and the Maximum depth hand point to the over zone mark. • The alarm sounds as long as the depth exceeds 55.0m. (180.4 ft.)
Depth Hand Error Detector	(Diving Mode) • When an error of the depth hand is detected.	• The second hand advances in 4 second increment.

- Wash the watch with fresh water with the crown tightly locked. Wash away any seawater, mud and/or sand. Completely wipe off any water with a dry cloth.
- **Never disassemble the pressure sensor cover** or use sharp objects inside the sensor to remove debris. Use only fresh water. If debris does not wash out of the sensor, bring the watch to a Citizen Service Center.
- **Do not allow chemicals to touch the watch.**

*Refer to item “15. Care-for Long Term Use” for general care.

Diving Mode Lockout System	(Normal Mode) • When the depth meter is in an irregular state. • When switching to the diving mode is attempted at a depth of more than 5 meters (16.4 ft.).	• The operator is unable to switch to the Diving Mode.
Battery Warning	(Normal Mode/ Diving Mode) • When the battery is nearly dead	• The second hand starts moving in 2 second increments. • The operator will be unable to switch to the diving mode.
Target Depth Alarm	(Diving Mode) When the depth indication exceeds the pre-set target depth.	• The 15-second alarm (pipi-pipi) sounds whenever the diver exceeds the target depth.

- The 15-second alarm rings each minute for as long as the diver stays deeper than the target depth.

Note:

- The alarm sounds in the order of priority when two or more problems occur.
 - 1) Surfacing Speed Warning
 - 2) Excessive Depth Warning
 - 3) Target Depth Alarm
- When the depth error detector and the battery warning are simultaneous, the former has priority: The second hand advances in 4 second increments.
- When the battery warning is activated, the warning may occasionally be stopped by switching to the normal mode. However, the battery should be quickly replaced by the **Citizen Service Center** as the battery is nearly dead.

4. Features

This product is the world's first diver's watch equipped with an electronically integrated depth meter in an analog display.

It's easier to read the current depth and the maximum depth by reading the angles made by the familiar analog display. Especially, you can read the rest depth to the target at a glance; It's a merit of this watch.

- Water-resistance performance of this product satisfies the 200 meter diving standard of the *ISO diver's watch regulation*. (*1)
- Simultaneous display of time, current depth and maximum depth is essential for diving.
- Warning system for safe diving
 - Surfacing speed warning system
 - Exceeding maximum depth warning system
- Target depth alarm which sounds automatically when the diver reaches the preset target depth.

WARNING

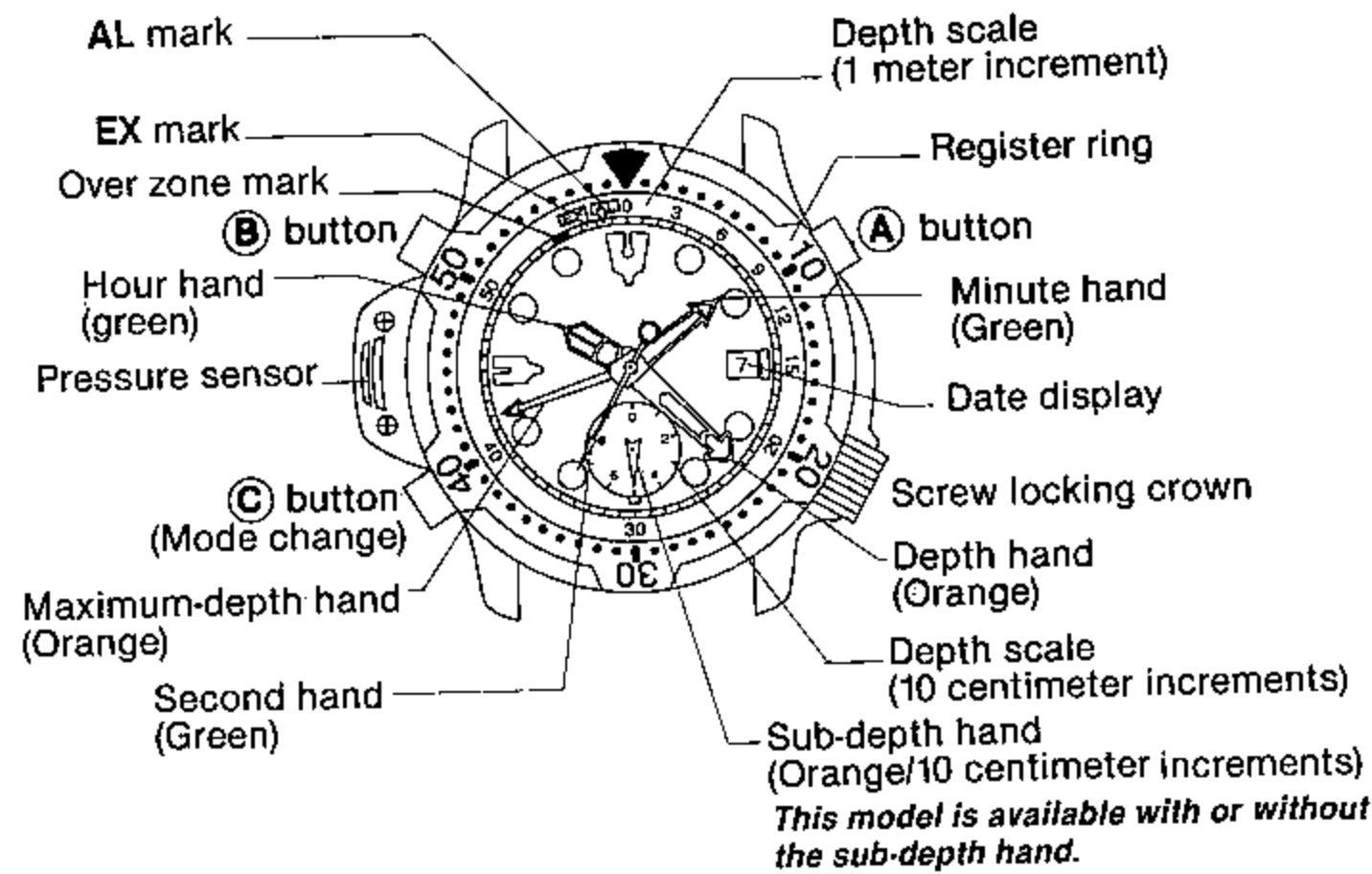
The degree of danger during a dive can change quickly and unpredictably depending upon diving conditions, the health and experience of the diver and many other factors. A diver should exercise extreme caution at all times. Under no circumstances should a diver rely upon the alarm features of this watch in any situation in which the diver's health or safety may be at risk. These warning systems are solely intended to supplement other more reliable measuring equipment which every diver should have and consistently use.

- Differently *colored hands* for respective functions
 - Time (hour hand, minute hand and second hand)
 - ... Green (Luminous)
 - Depth (Depth hand and the maximum depth hand)
 - ... Orange (Luminous)
 - Depth (sub-depth hand) ... *Orange (Not luminous)*
- The brightness of luminous paint will fade out as time goes by.
- Battery warning system which activates when the battery is nearly dead.

*1 *ISO DIVER'S WATCH REGULATION* is the standard for diver's watches (ISO/6425) determined by the INTERNATIONAL ORGANIZATION FOR STANDARDIZATION on 15, May, 1984.

* This watch registers all depths in meters. Refer to the conversion table on the cover back page.

5. Parts Description



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EX: Abbreviation for Exit (Normal display)

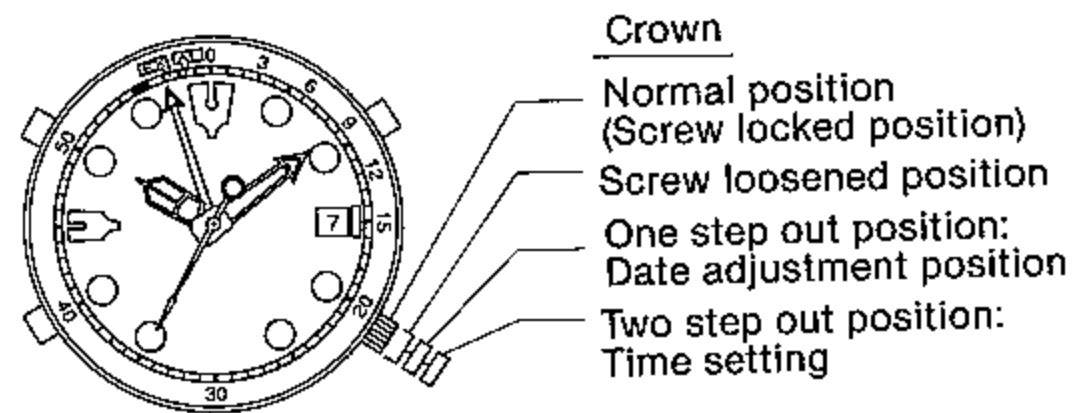
AL: Abbreviation for Alarm Set (Depth alarm set display)

Over zone mark (Red):

Both the depth hand and the maximum depth hand point to this mark when depth exceeds 55.0 meters while diving.

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6. Time and Calendar Setting



Note:

- Set the time and the calendar in the Normal Display of the Normal Mode.
- Never operate the crown when it is wet.
- Never touch the buttons with the crown pulled out to the one step out or the two step out positions.

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Adjustment procedure

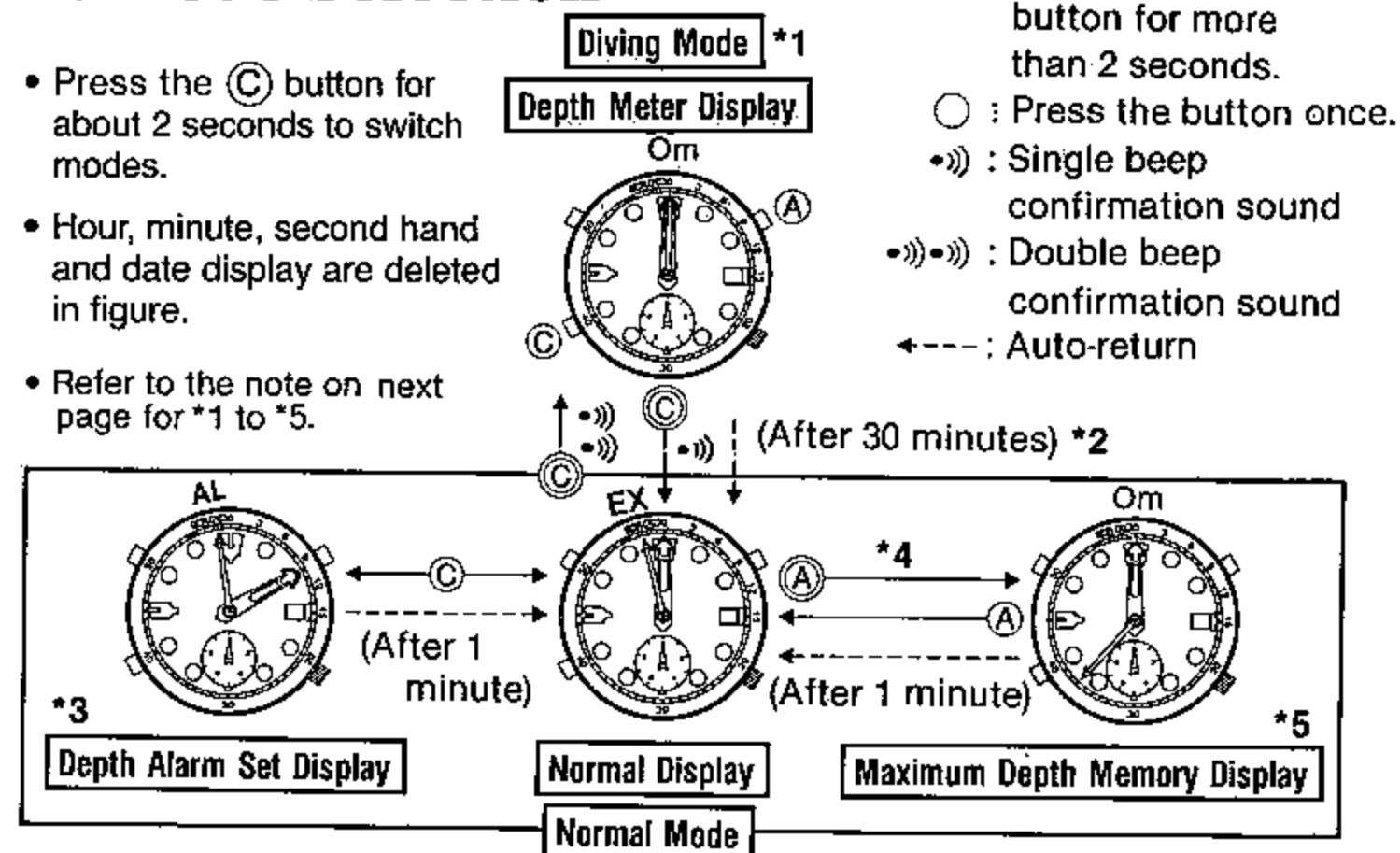
- 1) Confirm that the display is in the normal display of the normal mode.
 - If the display is in another mode, change to the normal display by referring to the next item "7. Mode Selection".
- 2) Unscrew the crown.
- 3) Pull the crown out two steps so that the second hand stops at the 0 position.
- 4) Set the hour and minute by turning the crown.
 - Be careful to adjust the AM/PM correctly by watching the date display.
 - Adjust the minute hand by turning it back from a 4 to 5 minute advanced position for correct setting.
- 5) Synchronize the second hand to a standard time signal by pressing the crown back in.
 - The second hand starts.
- 6) Adjust the date by turning the crown while it is in the one step out position.

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- The date display may not change correctly, if the date adjustment is conducted while the time display is between 8:30pm and 1:00am. Avoid this time zone for correct setting.
- 7) Press the crown and screw it in tightly after the time and date setting.

- *1 Simultaneously displays the current depth and the maximum depth throughout a diving session.
- *2 Auto-return activates after 30 minutes when the diver remains less than 1 meter from the surface (0 meter indication).
- *3 Set the target depth and the alarm sound at the preset target depth.
- *4 The mode will not switch if a data memory is not stored.
- *5 The memorized maximum depth of a diving session is indicated.

7. Mode Selection

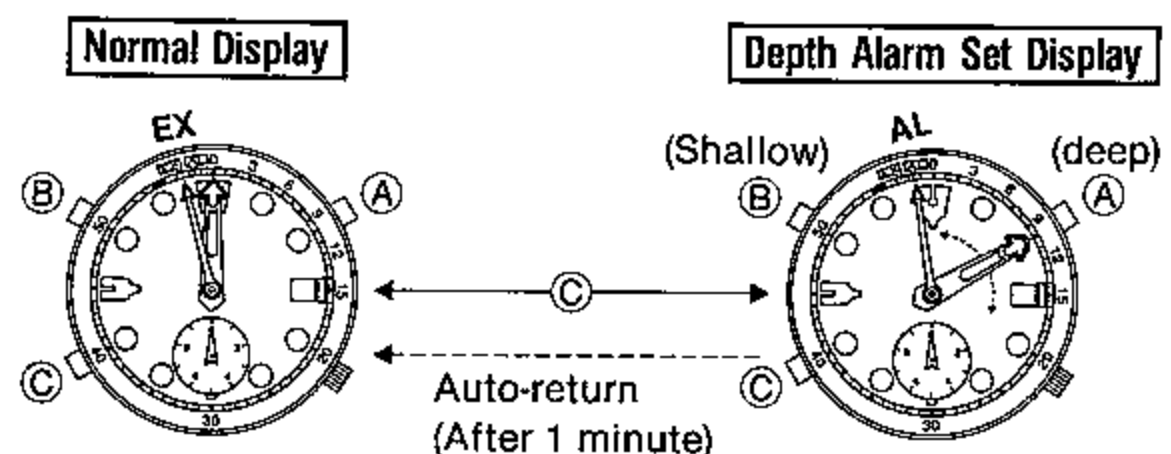


8. Depth Alarm Setting

Set the target depth in the depth alarm set display before the dive. The depth alarm sounds automatically when the diver reaches the preset target depth.

Adjustment procedure

- 1) Switch to the Depth Alarm Set Display by pressing the (C) button in the normal display.
 - The mode hand (maximum depth hand) points to the AL mark.
 - The depth hand points to the former target depth.
- 2) Adjust the target depth by pressing the (A) or (B) button.
 - (A) button: Deeper / (B) button: Shallower
- 3) Return to the normal display by pressing the (C) button.
 - Auto-return also activates after 1 minute.



Note:

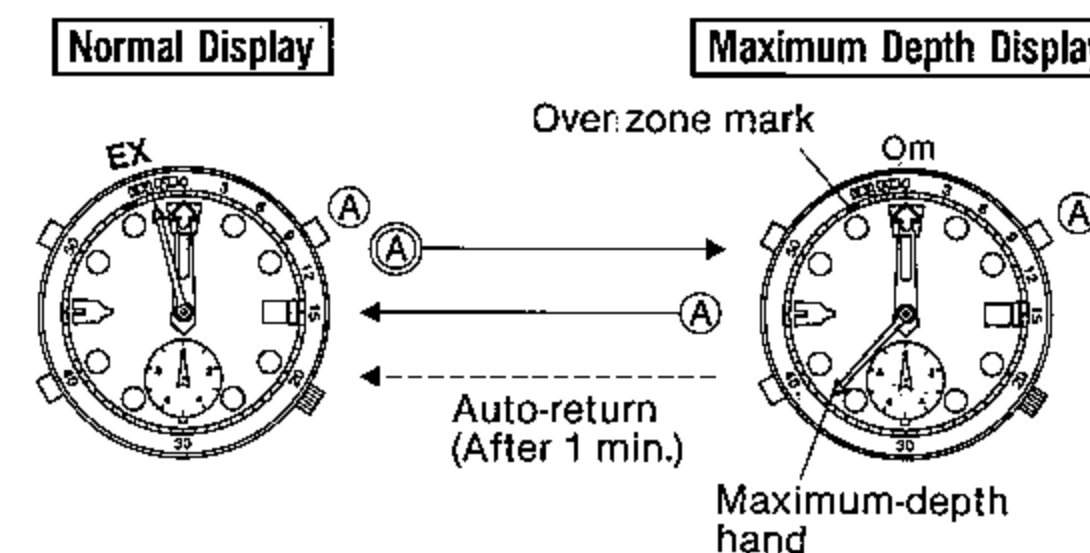
- It is impossible to change the depth alarm set while in the water. Confirm the setting before starting to dive.
- The depth alarm setting range is from 1 meters to 55 meters in 1 meter increments.
- The depth alarm will not activate in the diving mode when the depth is set to 0 meters. Set to 0 meters when the alarm is not needed.

Note:

- The stored data will be displayed by the maximum depth hand.
- The data will be stored in the memory until the new data of more than 1 meter depth is memorized at the next diving session.
- The memorized depth range is limited to 55.0 meters. The depth hands will point to the over zone mark when the depth exceeds 55.0 meter.
- The depth less than 1 meter from the surface will be not memorized and the mode can't be switched to the maximum depth display mode when there is no data stored in the memory.
- When the watch is left in the maximum depth recall display for about 1 minute, the watch will automatically return to the normal display.
- The stored maximum depth memory will be cancelled when the battery is dead. So keep important data in your log book etc.

9. Maximum Depth Memory Recall

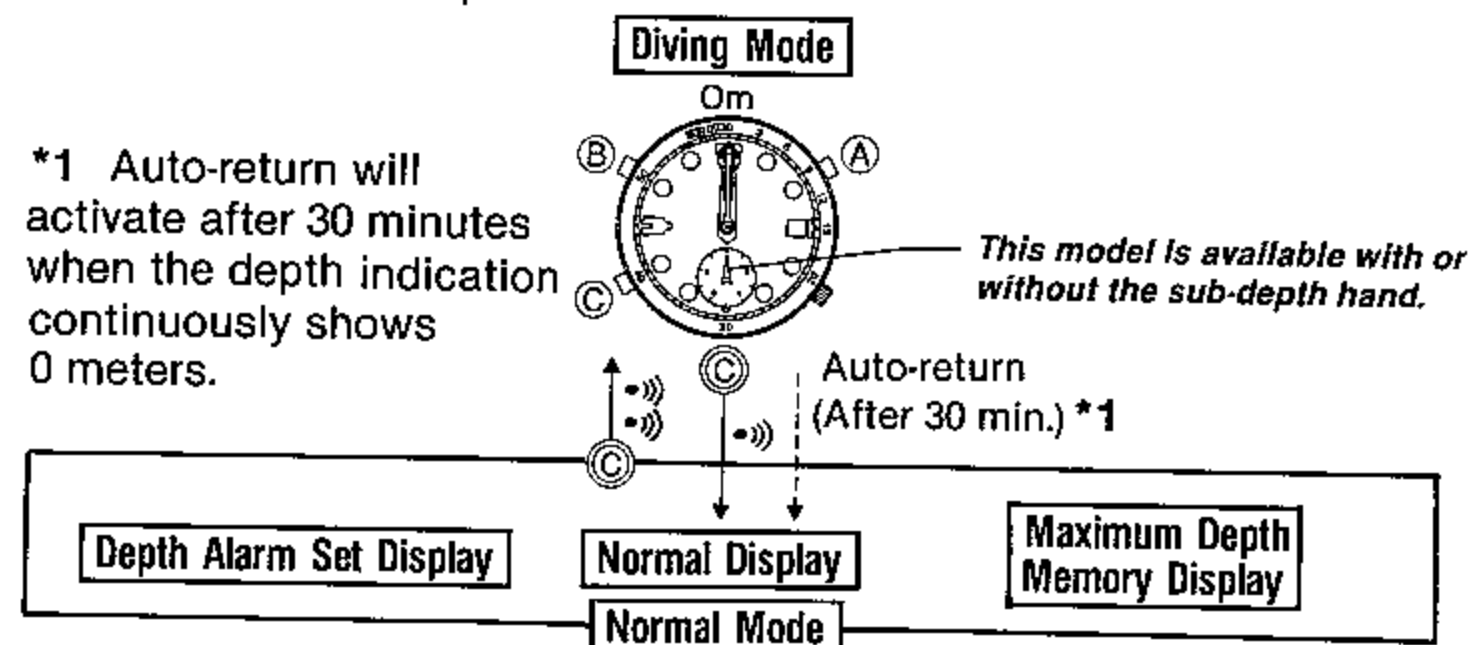
The maximum depth memory of a diving session can be recalled by pressing and holding the (A) button for more than two seconds in the normal display.



10. Using the Diving Mode

10-1. Switching to the Diving Mode

Press and hold the (C) button for more than 2 seconds in the normal mode. The switching confirmation beep sounds at first and then the set confirmation beep will sound.

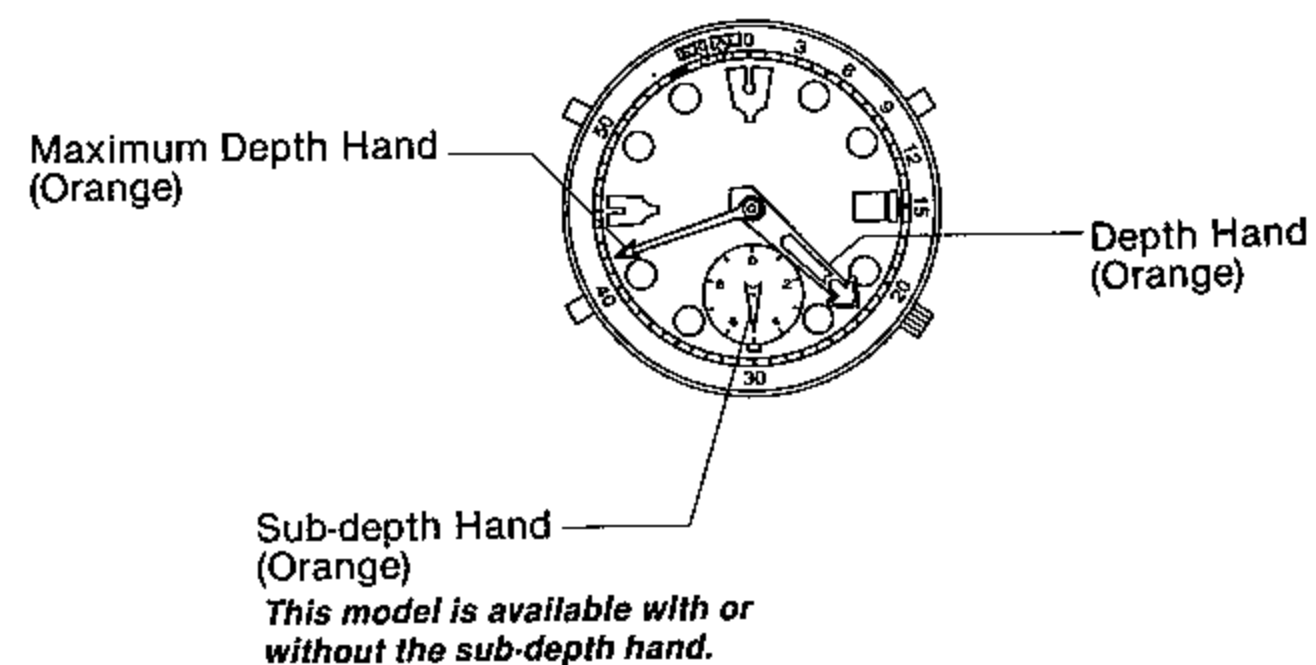


*1 Auto-return will activate after 30 minutes when the depth indication continuously shows 0 meters.

Note:

- Never switch modes in the water.
- Be conscious of the following points to get more accurate data.
 - Switch to the Diving Mode just before diving.
 - Immerse the watch in the water for about 2 to 3 minutes before switching the mode when the temperature gap between the air and the water seems to be considerably different.
- Be sure to confirm that the depth hand, sub-depth hand and maximum depth hand are all pointing to the 0 position after switching modes.
 - If the hands fail to point to the 0 position, refer to item “13. Irregular Indications and Resetting.”

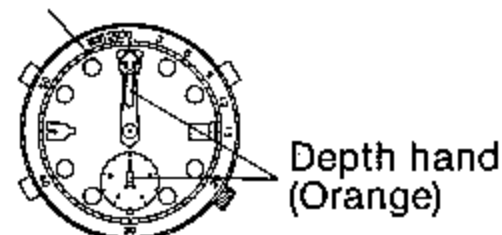
10-2. Reading the Depth Hands Data



10-3. Features of the Diving Mode

1) Current Depth Indication

Over zone mark

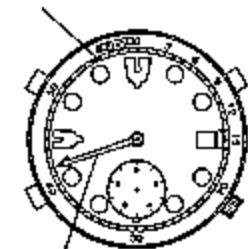


This model is available with or without the sub-depth hand.

The depth hand indicates the depth in 1 meter increments and the sub-depth hand indicates by 10 centimeters increments from 1 meter to 55.0 meters. When the depth exceeds 55.0 meters, both hands point to the over zone mark.

2) Maximum Depth Indication

Over zone mark



Maximum Depth Hand (Orange)

The maximum depth hand statically indicates the maximum depth of a diving session in 1 meter increments. When the depth exceeds 55.0 meters, the hand points the over zone mark.

3) Maximum Depth Memory

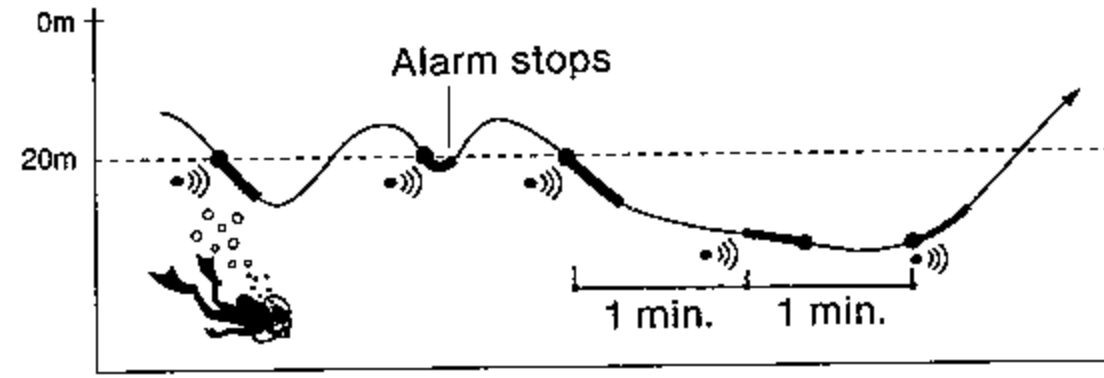
The maximum depth of a diving session is stored in the memory and it can be recalled after leaving the water. Depths less than 1 meter will be not memorized. When the depth exceeds 55 meters, the memory function indicates the over zone mark. The stored memory will be retained until new data of the next diving session is recorded.

4) Depth Alarm

A 15 second alarm sounds when the diver exceeds the preset target depth. The alarm stops when the diver rises to shallower level than the target depth.

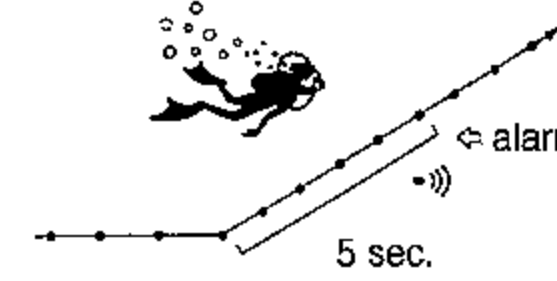
The 15 second alarm repeats every minute, if the diver stays at a deeper level than the target depth.

(Example: The depth is set to 20 meters.)



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5) Surfacing Speed Warning



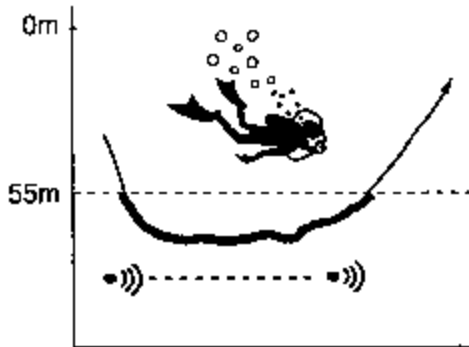
The warning alarm will sound when the diver's surfacing speed exceeds the dangerous rate. The warning will last at least 5 seconds and keeps sounding as long as the speed is at a dangerous rate. The rate is set 1.5m/5sec. (18m/min.) for Cal. No. 5810, 5811, 5861 and 5862. For Cal. No. 5812, 5813, 5863 and 5864, the rate is set at 0.75m/5sec. (9m/min.).

6) Excessive Depth Warning



When the diver goes deeper than 55.0 meters, the depth hand and the maximum-depth hand point to the over zone mark and the warning alarm sounds continuously. The alarm sound will stop when the diver rises up less than 55 meters. (The maximum depth hand remains pointing at the over zone mark.)

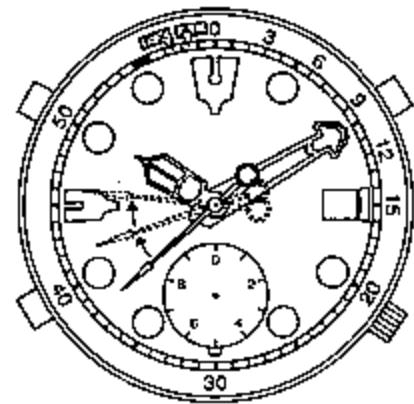
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Note:

The priority order of the alarms when they occur simultaneously.
1) Surfacing Speed Warning, 2) Excessive Depth Warning, 3) Target Depth Alarm

7) Depth Hand Error Detector



When a strong shock is detected causing error in the depth measurements, the second hand will advance in 4 second increments.

This error alarm will continue until the mode is switched to the normal mode.

Note:

The priority is on the error movement alarm (advancing every 4 seconds) over the battery warning (advancing every 2 seconds).

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WARNING

- Please refer to the warning listed on item 3.
Do not rely on these warning systems in any situation in which the diver's health or safety may be at risk.

CAUTION

- Dive safely, keeping in mind that the alarm sounds may be difficult to hear in the water by the environment or position of the watch.
- The safe depth for each diver will vary depending upon diving conditions, the health and experience of the diver and many other factors. A diver should remain cautious and aware of all of these factors. The warning systems of the watch should not be relied upon and should only supplement other more accurate measuring devices which every diver should have and consistently use. Please refer to other warning on item 3.

Note:

Be conscious that auto-return to the normal display activates after 30 minutes if the diver stays less than 1 meter from the surface.

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11. Operating Example of the Dive Function

When you intend to use the product for diving, read the following two items thoroughly and ensure that you understand them.

"1. Instructions for Safe Diving"

"2. Check Points at the Diving Site".

Note:

The priority of the Alarm Functions are:

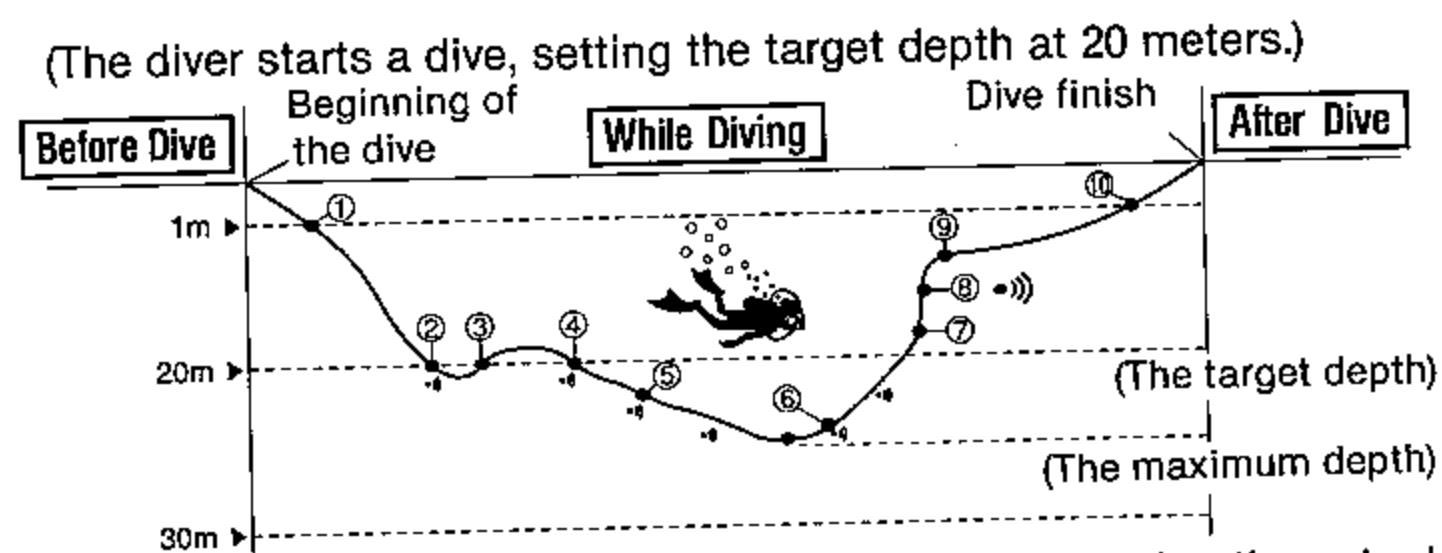
(Alarm Sound)

1) Surfacing Speed Warning Sound, 2) Exceeding the maximum Depth Warning Sound, 3) The target Depth Alarm Sound

(Hand Indication)

1) Depth hand error detector (in 4 second increments), 2) Battery Warning (in 2 second increments)

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*The above figures are for explanation. Never do this during the actual dive.

B. While Diving

- ① Depth indication starts. (Both of the depth hand and the maximum depth hand indicate 1 meter.) The maximum depth memory of the previous diving session will be cancelled during this dive.
- ② The 15 second alarm sounds as the diver reaches the target depth (20 meters).

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A. Before the Dive

- Check the watch. — Refer to item "2. Check Points at the Diving Site".
- Confirm the depth alarm sound and set the target depth. — Refer to item "8. Depth Alarm Setting".
- Set the register ring. — Refer to item "12. Additional Functions".
- Switch to the diving mode by pressing and holding the  button for about 2 seconds. It's ready to dive. — Refer to item "2. Check Points at the Diving Site".

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- ③ Depth alarm stops as the diver rises to a shallower point than the target depth. The maximum depth hand remains indicating the maximum depth.
- ④ The depth alarm sounds as the diver goes down to the target depth again.
- ⑤ The 15 second alarm sounds again as the diver stays deeper than the target depth. The alarm repeats every 1 minute. The maximum depth hand moves again together with the depth hand when the diver goes deeper. (This action is repeatable.)
- ⑥ The diver leaves the depth as the dive time elapses.
- ⑦ The diver unintentionally surfaces rapidly.
- ⑧ The surfacing speed warning sound starts as the diver's speed exceeds 1.5m/5sec. (Cal. No. 5810, 5811, 5861 and 5862) or 0.75m/5sec. (Cal. No. 5812, 5813, 5863 and 5864). The warning sounds for at least 5 seconds and it keeps sounding as long as the rapid speed is maintained. — Refer to item "3. Integrated Warning Systems".
- ⑨ The diver stops rapid surfacing and the warning sounds also stops after 5 seconds.
- ⑩ The depth meter indicates 0 meters as the diver reaches less than

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1 meter from the surface.

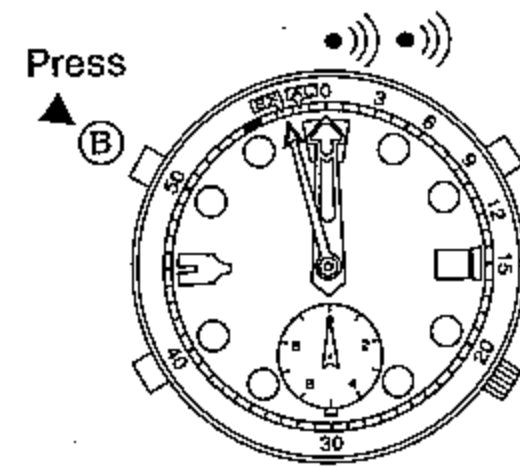
C. After the Dive

- Switch to the normal mode by pressing and holding the (C) button for more than 2 seconds. Though the watch will automatically return to normal mode after 30 minutes, return to the mode manually soon after leaving the water to save the battery.
- It is possible to read the data of the maximum depth memory of the current diving session by pressing and holding the (A) button for more than 2 seconds.
The memorized data are stored until new data is memorized at the next diving session.
 - Refer to item "9. Maximum Depth Memory Recall".
- Take care of the watch.
 - Refer to item "2. Check Points at the Diving Site".

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2) Sound Monitoring

- It is possible to monitor the sound of the depth alarm and the surfacing speed warning by pressing the (B) button in the normal display.



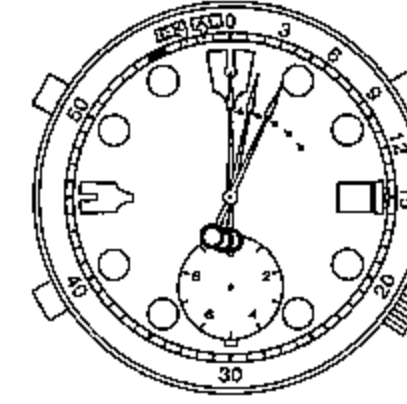
- The depth alarm initially sounds twice with short double signal (pipi-pipi) and the surfacing alarm signal follows with a long double signal (beep-beep).
When the battery warning is activated, it is impossible to monitor the sound.

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12. Additional Functions

1) Battery Warning

- This watch has a battery warning system.
- When the battery is nearly dead, the second hand starts moving in 2 second increments. Ask for a battery replacement and an inspection at the Citizen Service Center as soon as possible.

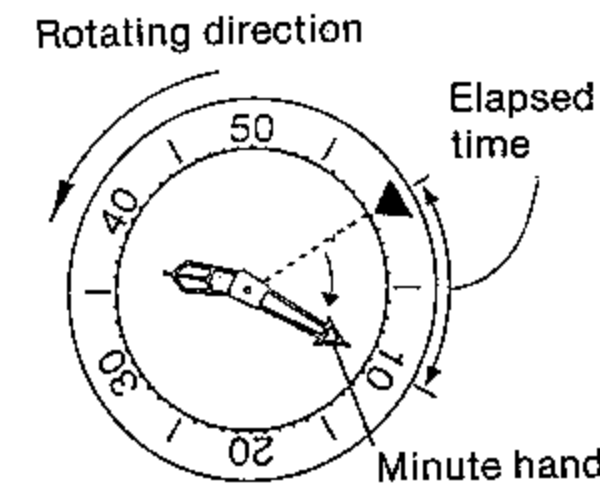


- Mode switching to the Diving Mode is locked out when the battery warning is activated in the normal mode.
Although, the warning occasionally ceases when the mode is switched to the normal mode from the diving mode, it is recommended that the battery be replaced as soon as possible.

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3) Using the Register Ring

- Elapsed time measurement
 - Adjust the triangle mark (▼) to the current minute indication when you start diving. You can easily read the elapsed time on the scale of the register ring while diving.



The ring rotates in a counter-clockwise direction only.

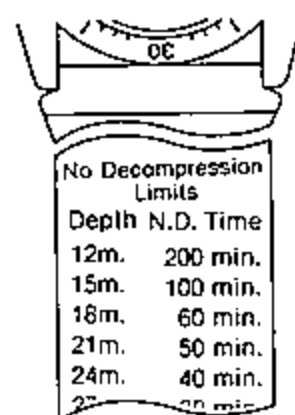
- (Example)
The figure shows 10 minutes have elapsed after the dive began.

Note: The register ring rotates in a counterclockwise direction only for safety (reverse turn prevention system). Never force it to turn clockwise.

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4) No Decompression Limits Table

- The no decompression limits table which is based on the U.S. Navy Diving Manual is imprinted on the wrist band of some models.
- The table indicates the permitted time limit without decompression according to the depth.



No Decompression Limits	
Depth	N.D. Time
12m.	200 min.
15m.	100 min.
18m.	60 min.
21m.	50 min.
24m.	40 min.
27m.	30 min.

For example:
Decompression is not needed when diving depth is 21 meters and the elapsed time is less than 50 minutes.

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CAUTION

The no-decompression limits table attached to the watch is for supplementary information purposes only and should not be relied upon in any situation in which the health or safety of the diver is at risk. The no-decompression limits table of the watch does not contain all information necessary to ensure proper decompression.

13. Irregular Indications and Resetting

Correct indication and mode switching becomes impossible in the following cases. Resetting of the watch is required as described below.

— In the normal display

- The depth hand and the sub-depth hand are not in the 0 position.
- The maximum depth hand (mode hand) is not in the EX position.

— When switched to the Diving Mode

- The respective depth hand doesn't point to the 0 position.

— When the second hand starts to move in 4 second increments while the mode is in the diving mode in the water and switched to the normal mode after coming to the surface.

- The depth hand and the sub-depth hand fails to point 0 position.
- The maximum depth hand does not point to the EX mark.

— When trying to change the mode from the diving to the normal mode.

The depth hand indicates more than 1 meter and mode switching is impossible.

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— When other irregular indications are observed.

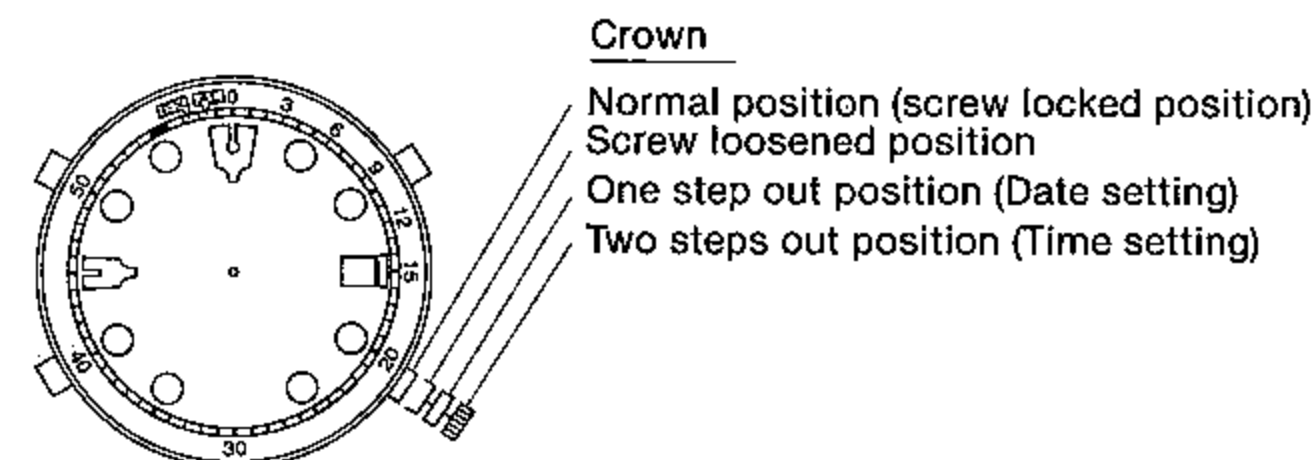
5) Screw Locked Crown

- This product is equipped with a screw lock crown to avoid water penetration and damage to the watch's mechanism. Confirm that the crown is tightly locked for daily use and for diving.

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Adjustment procedure

1. Pull the crown out to the two step out position. (The time display stops)
— The watch should not be wet when you pull the crown out.

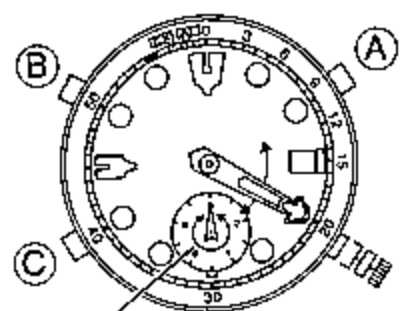


2. Press the (A), (B) and (C) buttons simultaneously. A confirmation beep sounds when they are released.

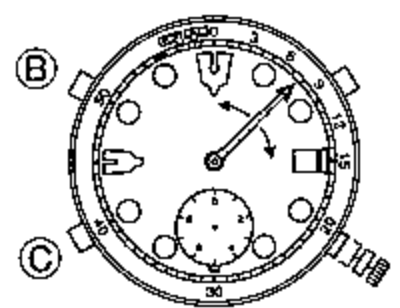
Note: The target depth and the maximum depth memory are cancelled at this moment.

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3. Adjust the respective depth hand to the 0 position.



This model is available with or without the sub-depth hand.



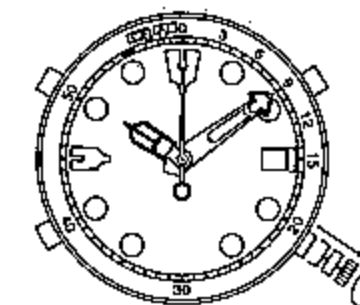
— The depth and the sub-depth hands turn clockwise when the (A) button is pressed and counter clockwise when the (A) button is pressed while the (C) button is pressed. Press and hold the buttons for quick adjustment.

— The maximum depth hand turns in a clockwise direction by pressing the (B) button and in a counter clockwise direction by pressing the (B) button while the (C) button is pressed. Press and hold the buttons for quick adjustment.

Note:

Consult a Citizen Service Center in such case that the above mentioned adjustments cannot be achieved or such phenomenon occur frequently.

4. Press the crown back in to the screw loosened position (The time display starts). The depth hand returns to the 0 position and the maximum depth hand points to EX mark.
5. Pull the crown out to the two step out position so that the second hand stops at the 0 position.



6. Adjust the hour and minute by turning the crown.
 - Carefully adjust the AM/PM while watching the date display.
 - Adjust the minutes by turning the hand back from 4 to 5 minutes ahead of the desired time.
7. Press the crown back in while synchronizing to a standard time signal.
8. Adjust the date setting with the crown at the one step out position and by turning it in a counter-clockwise direction.
9. Tightly lock the crown after setting the time and the date. (The display is in the normal display of the normal mode.)

14. Battery

1) Battery Life

A new battery installed in this watch will last for approximately two years based on the following conditions of use:

- Frequency of use for diving: 50 times/year
- Average diving time at a stretch: 1 hour
- Average diving depth: 15 meters
- Average use of the watch's functions at a stretch of diving
 - Changing the mode of the watch: 2 times
 - Depth alarm: 15 seconds × 5 times
 - Alarm when diving in excess of the range of the depth indicator: 1 minute
 - Alarm for excessive surfacing speed: 1 minute
 - Sound monitor: 2 times

*Battery life will vary depending a great deal on the frequency of use of the watch's functions. Be sure to use the watch in the normal display mode when not diving.

*The estimated battery life based on the frequency of use for diving is as follows:
(Estimated battery life based on the same conditions of use as given above.)

Frequency of use for diving:

100 times a year/each stretch for 1 hour of diving
Approx. 1.7 year

200 times a year/each stretch for 1 hour of diving
Approx. 1.0 year

2) Life of Initial Battery

The battery installed in the watch before your purchase has been used for monitoring the watch's functions and performance. Please note that it's life may run out before the span of two years.

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replaced before you leave.

- There will be a charge for battery replacement and related inspection and parts replacement even during the period covered under limited warranty.

WARNING

- **Be sure to keep the battery out of reach of your children. If the battery is accidentally swallowed by a child, take him or her immediately to a doctor.**

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3) Battery Life Indicator

When the battery requires replacement, the second hand will start jumping in two second increments and switching to the Diving Mode will become impossible. Have the battery replaced and the watch inspected at the Citizen Service Center.

4) Battery Replacement

- **This watch's battery needs to be replaced at the Citizen Service Center only.**
- The Service Center will check water resistance and replace packings if necessary at the time of battery replacement.
- The maximum depth data will be cleared from the memory at the time of battery replacement. Make sure to copy necessary data in a log book before replacing the battery.
- If a dead battery is left in the watch, it may cause malfunctioning or damage due to fluid leakage.
- If you are planning to use this watch for a long period of time in a foreign country, we recommend that you have the battery

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15. Care for Long Term Use

1) Pressure Sensor

- Never disassemble the sensor cover which protects the pressure sensor.
- Be careful that foreign objects such as sand, dust or other matter does not enter into the sensor. If such objects has entered into the sensor, wash it away with fresh water. Do not use alcohol, gasoline, thinner or other chemical substances.
- If you cannot clean the sensor, bring the watch to the Citizen Service Center.

2) Watch Band

- If the watchband shows cracks, replace it with a new band.
- When replacing the watchband, also replace the spring bars connecting the watch and the band.

3) Water-resistance

- This diver's watch is designed to resist water pressure to a maximum depth of 200 meters. Before using this watch under water, push in the crown and tighten the screw lock completely.

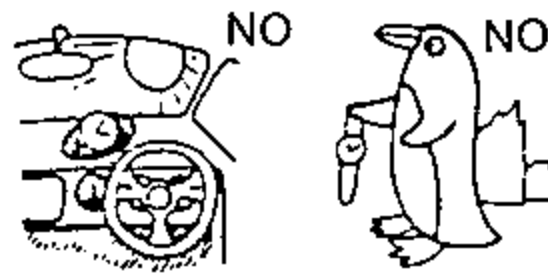
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- All services after sale including battery replacement are provided by the Citizen Service Center. Never have the case back opened or the screws on the sensor loosened at facilities other than the Citizen Service Center.



- In order to maintain water-resistance, we recommend that you have the watch checked at the Citizen Service Center at the time of battery replacement once every one or two years.
- The case back is marked "Don't Open. Service Center Repair Only."

4) Temperature



- Avoid exposing the watch to direct sunlight or leaving it in extremely hot or cold locations for a long period of time.
- This will cause malfunctioning and shorten the life of the battery.
 - This may cause your watch to gain or lose time and affect its other functions.

7) Static electricity

The integrated circuits used in the watch are sensitive to static electricity. If exposed to intense static electricity, the watch's display may lose its accuracy.

8) Chemicals and Gases

Avoid wearing the watch in the presence of strong chemicals or gases. If the watch comes in contact with such solvents as thinner and benzene or products containing materials such as gasoline, nail polish, detergent or adhesive, its components may discolor, dissolve or crack. Be especially careful to avoid chemicals. The watchcase or band may discolor if they come in contact with mercury from a broken thermometer or other equipment.

9) Luminous Display

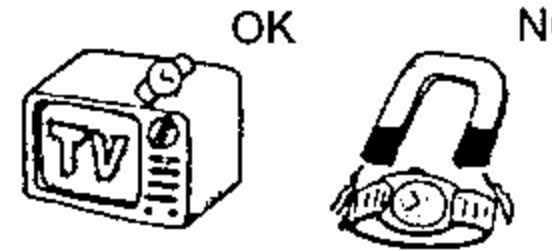
Luminous paint is applied to the hands of this watch for use in dark areas. This does not cause any health problems since the amount of luminous paint used in the watch is well within the limit allowed and is protected by the glass. Even if the amount used is extremely small, luminous paint is a hazardous substance. If the glass is broken, bring it immediately to the Citizen Service

5) Shock



- This watch will withstand the bumps and jars normally incurred in daily use and while playing such non-contact sports as golf and catchball.
- Dropping the watch on the floor or otherwise imparting severe shock to it may cause malfunctioning or damage.

6) Magnetic Fields



This watch is antimagnetic up to 60 gauss and not affected by the magnetic fields produced by ordinary household electric appliances. If used in the immediate vicinity of strong magnetism, however, the watch's functions may temporarily be affected.

Center for repair or replacement.

10) Safekeeping

If you do not use the watch for an extended period of time, wipe off perspiration, soil and moisture thoroughly and keep it in a place not exposed to extremely high or low temperatures or high humidity. Don't leave a dead battery in the watch for a long time and be sure to replace it with new one. If battery fluid leaks out, it may damage movement components.

11) Keep Your Watch Clean

Wipe off soil and moisture from the glass with a soft, absorbent cloth. If you wear the watch when the back side of the case and watchband is soiled they may cause a skin rash as they come in direct contact with your skin. Keep your watch clean also to avoid staining your cuffs.

How to clean the watchband:

- Metal band
Wash soiled parts with a tooth brush in mild, soapy water.
- Plastic or rubber band
Wash in water. Do not use solvent.

- **Leather band**
Rub lightly on the front side with a soft, dry cloth. Use a cloth moisturized with alcohol to clean the under side.

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the parts which are not covered under the warranty.

*If you have damaged the watch accidentally, such as cracks in the glass by strong shock, do not try to repair it by yourself but consult the Citizen Service Center. Also inquire at the Service Center for any matters you wish to know regarding our warranty and services after sale.

*All services after sale of this watch are provided by the Citizen Service Center. We will not be responsible for troubles caused by battery replacement and services performed at other facilities.

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16. Warranty and After Sale Services

1) **Warranty**

If there should be anything wrong with the watch when used in normal conditions as described in this manual during the warranty period, it will be repaired free of charge in accordance with the terms and conditions of the enclosed warranty. We will not, however, be responsible for providing any services other than the repair of the watch. Troubles caused by maintenance and repair performed at other facilities than the Citizen Service Center are not covered under the warranty.

2) **Please have your watch examined periodically and its parts replaced as needed for a longer operating life.**

We recommend that you have **the watch checked at the Citizen Service Center** once every one or two years. However, the periodical inspection period will vary depending a great deal on the conditions of use and the surroundings. Bring the watch to the Citizen Service Center determine if it is repairable or not. Please note that there will be a charge for inspection and replacement of

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17. Specifications

- 1) Model name: Citizen Quartz Analog Aqualand
- 2) Type: Analog display diver's watch with depth meter
- 3) Quartz oscillator frequency: 32,768 Hz
- 4) Time accuracy: Within ± 15 seconds per month in normal temperatures
- 5) Depth meter accuracy:
Within $\pm 3\%$ of the indicated data plus 30 cm at a uniform temperature.
(Under the conditions of a temperature range of 10°C to 40°C (+ 50°F ~ + 104°F). Accuracy will be affected by temperature variation.)
- 6) Display method: Analog hand display
Time mode: Hour hand, Minute hand, Second hand and the Date display
Diving mode: Depth hand, Sub-depth hand and Maximum depth hand (mode hand)
This model is available with or without the sub-depth hand.

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- 7) Operative temperature of the time mode:
 – 10°C to 60°C (14°F ~ 140°F)
- 8) Display functions:
 Time (hour, minute and second)
 Date
 Current depth: 1.0 m (3.2 ft) to 55.0 m (180.4 ft)
 (10 cm (3.94 inches) increments)
 Indicates 0 m for less than 1 m (3.2 ft).
 Maximum depth: 1.0 m (3.2 ft) to 55.0 m (180.4 ft)
 Maximum depth indicator mark: When depth
 exceeds 55.0 m (180.4 ft).
 Maximum depth memory recall: 1.0 m (3.2 ft) to
 55.0 m (180.4 ft).
 Depth alarm setting: 1.0 m (3.2 ft) to 55 m (180.4 ft)
 (1 m (3.2 ft) increments).
- 9) Integrated Functions:
 Depth measurement (every second)
 Depth alarm
 Maximum depth.memory

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- Diving time of a diving: 1 hour
 Operating frequency of a diving session:
 – Mode switching/2 times
 – Depth alarm/75 seconds alarms
 – Average depth at 15 meters (49.2 ft)
 – Exceeding depth indication warning/1 min.
 – Surfacing speed warning/1 min.
 – Sound monitoring/2 times
 *Battery life depends upon the operating
 frequency of each function.

- Specifications are subject to change without any prior information.

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- Surfacing speed warning
 Exceeding maximum depth warning
 Depth error warning.
 Irregular operation lock out system
- 11) Additional functions:
 Battery warning
 Sound monitor
 Second hand stop system
 Quick date adjustment system
- 12) Mechanical Systems:
 200 meter (656 ft) diving water-resistance ability
 Register ring
 Register ring counter rotation protection system
 No decompression limits table
- 13) Integrated IC: C/MOS-LSI/1 piece
- 14) Battery life: Approximately 2 years after new battery
 installation
 Operating condition:
 Diving frequency: 50 times/year

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