TUSA
DC Solar

DC-Solar IQ 1203 CE Dive Computer
Owner's Manual

The CE mark is used to mark conformity with the European Union EMC directive 2004/108/EC.

1st.

Thank you for your selection of the TUSA IQ-1203CE Dive Computer.

◆ This dive computer does not conform to
   the diver watches(100m) stated in the ISO6425 and JISB7023.

Applications

This is a dive computer to support no decompression dive safely.
Solar panel generates electric power to run the dive computer.
It has multi-functions as watch, alarm, timer, stopwatch, direction compass and angle, world time watch in the Time mode, and surface interval time and desaturation time (DESAT time) in surface interval. In the Dive Mode, information of water depth, water temperature,dive time, ascent speed and decompression are provided. When divers exceeds no decompression limit, the dive computer givesdivers alarm with display.
It applies to Nitrox (EANx) dive too. You can set fraction of oxygen(FO$_2$) % per 1 % from 21% (Air) to max. 50%.
The calculation model we use for the decompression program of the dive computer is based on the decompression theory of Dr. A. A. Buhlmann.

Before use, you need understand how to use, all warnings and cautions of the dive computer written on this Instruction Manual. To avoid any serious accidents, please make sure to read and fully understand the dive computer. If you have any questions, please ask the shop you purchased the dive computer.

Whenever there is a thing you do not know in how to use of the dive computer, we strongly recommend to access the web site of TUSA and read this instruction manual well.
Understanding and using the functions of the dive computer ensures safe dive you can enjoy.

Safety Precautions

Please read the followings before use.
TUSA shall assume no responsibility on damages, lost profit and/or any claims caused in use or by malfunctions of this dive computer from customers and any third parties.

⚠ Danger

• Make sure to understand how to use, warnings, and cautions of this dive computer with this Instruction Manual completely before use. Confirm that you understand how to use the dive computer in closed water as in a pool before using in open water.

• When using the dive computer in scuba diving, you need to take dive training course both in learning rules and practical skills, and obtain C card (certification card) issued by internationally acknowledged dive training organizations beforehand. (You can use the dive computer in the training under the guidance of instructors of such organizations)

• When using the dive computer in Nitrox (EANx) dive, you need to take Nitrox (EANx) dive training course and complete it beforehand. Otherwise, do not use the dive computer in Nitrox (EANx) dive.
Ref: EANx: Enriched Air Nitrox (commonly called Nitrox).
It is mixed gas with higher FO_2 % than normal compressedair (FO_2 is 21%)

• If "Decompression stop violation" warning and/or "Out of measurement range" warning are released, cancel dive for a day and pay attentions on changes of your physical condition.

• When you notice abnormal conditions on the dive computer, stop using it immediately and contact the shop you purchased the dive computer.

- Check the battery power level is "H" before dive. If power levelgets low and warning (WARNING!! BATT) is released while dive, exit as soon as possible and recharge the dive computer.
  - ● Even this warning is released in dive, enough power for dive remains. Deal with the situation calmly without panic Ref.
  Power Levels … P.11

- Follow the displayed warnings and messages for cautions on the dive computer at once.

- When using the dive computer, also use other devices as another dive computer, divers watch, and depth indicator together as backup tool.

- The dive computer is to be used for recreational dive only. Do not use the dive computer for any other dive.

- Never lend or share the dive computer with anyone else if residual nitrogen still exists in the body after use of the dive computer.

- Make sure to set FO_2 % in every dive. It is extremely dangerous if FO_2 % in tank and in the dive computer don' t match.

- Dot not disassemble, repair, modify, exchange the secondary battery or conduct pressure chamber test on the dive computer by yourself. This will be extremely dangerous since doing this without sufficient knowledge causes malfunction.

- Check out the dive computer by yourself once a year regardless of frequency of use. Especially, check it out definitely when you have not used the dive computer for more than 3 months since last dive season.

- The dive computer is applicable to the air with FO_2 21 % and Nitrox (EANx) gas with FO_2 22-50%. The dive computer can not be used with any other mixed gas.

- Each diver should be responsible in planning and conducting of safety dive according to each diver' s condition.

- Please try cautious dive not exceeding the displayed data in the dive computer. The dive computer can not prevent from developing decompression illness completely.

- The dive computer does not measure, display and control the air pressure in tank. Use the residual air pressure indicator and check it by yourself.

- When removing the secondary battery from the dive computer, be careful for small children not to swallow it. Put the battery out of reach of children. If swallowed, contact a doctor at once.

Contents

1. About This Instruction Manual

- Button operations are indicated using the letters shown in the illustration.
- Note that the dive computer illustrations in this Instruction Manual are intended for reference only, and so the actual dive computer may appear some what different than depicted by an illustration.

2. Things To Check Before Using The Dive Computer

1. Check the battery power level.

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┌──────────────────────────────────────────────┐      ┌──────────────────────┐
│ Is "H" or "M" displayed for the battery power │      │        Battery power  │
│ indicator (page 11)?                          │    H │        indicator      │
└──────────────────────────────────────────────┘      └──────────────────────┘
              │ NO                                                │ YES
              ▼                                                   ▼
┌──────────────────────────────────────────────┐  ┌──────────────────────────────────┐
│ Does any one of the following conditions      │  │ The watch is charged sufficiently.│
│ exist?                                         │  │ For details about charging, see   │
│ • Battery power indicator shows 'L' and "LOW"  │  │ "Charging the Dive Computer"      │
│   is flashing on the display.                  │  │ (page 9).                         │
│ • "CHG" is flashing on the display.            │  │                                   │
│ • The face is blank.                           │  │                                   │
└──────────────────────────────────────────────┘  └──────────────────────────────────┘
              │ YES                                               │ NEXT
              ▼                                                   ▼
┌──────────────────────────────────────────────┐  ┌──────────────────────────────────┐
│ Power is low. Charge the watch by placing it   │  │ Go to step 2.                     │
│ in a location where it is exposed to light.    │  └──────────────────────────────────┘
│ For details, see "Charging the Dive Computer"  │
│ (page 9).                                       │
└──────────────────────────────────────────────┘
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2. Check the Home City and the daylight saving time (DST) setting. Use the procedure under "To configure Home City and summer time settings" to configure your Home City and daylight saving time settings.

Important!

World Time Mode data depend on correct Home City, time, and date settings in the Time mode or Surface Mode. Make sure you configure these settings correctly.

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3. Set the current time.
   See "Configuring Current Time and Date Settings

3. Charging the Dive Computer

The face of the dive computer is a solar panel that generates power from light. The generated power charges a built-in rechargeable battery, which powers dive computer operations. The dive computer charges whenever it is exposed to light.

Charging Guide

Whenever you are not wearing the dive computer, leave it in a location where it is exposed to light.

• Best charging performance is achieved by exposing the dive computer to the strongest light available.
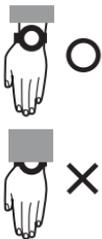
When wearing the dive computer, make sure that its face is not blocked from light by the sleeve of your clothing.

- The dive computer may enter a sleep state if its face is blocked by your sleeve even only partially.

Warning!

Leaving the dive computer in bright light for charging may make it become quite hot.

Take care when handling the dive computer to avoid burn injury. The dive computer can become particularly hot when exposed to the following conditions for long periods.

- On the dashboard of a car parked in direct sunlight
- Too close to an incandescent lamp
- Under direct sunlight

Important!

- Allowing the dive computer to become very hot can cause its liquid crystal display to black out. The appearance of the LCD should become normal again when the dive computer returns to a lower temperature.
- Turn on the dive computer's Power Saving function and keep it in an area normally exposed to bright light when storing it for long periods. This helps to ensure that power does not run down.
- Storing the dive computer for long periods in an area where there is no light or wearing it in such a way that it is blocked from exposure to light can cause power to run down. Expose the dive computer to bright light whenever possible.

Power Levels

You can get an idea of the dive computer's power level by observing the battery power indicator on the display.

Battery power indicator
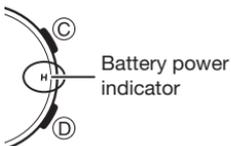
Level	Battery Power Indicater	Function Status
1 (H)	H	All functions enabled.
2 (M)	M	All functions enabled.
3 (M) · (CHG)	CHG M	Mode cannot be changed to Dive Mode.
4 (L)	LOW L	Illumination, beeper, and sensor operation disabled.
5 (CHG)	CHG	Except for the current time and the **CHG** (charge) indicator, all functions and display indicators disabled.
6	– – –	All functions disabled.

- When (**M**) is on and (**CHG**) blinks at the Level 3 (**M** and **CHG**), and all other display is shown OK, mode cannot be changed to Dive Mode. (You can not dive.)
- The blinking LOW indicator at Level 4 (**L**) tells you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
- At Level 6, all functions are disabled and settings return to their initial factory defaults.

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Once the battery reaches Level 2 (**M**) after falling to Level 6, reconfigure the current time, date, and other settings.
- Display indicators reappear as soon as the battery is charged from Level 6 to Level 2 (**M**).
- Leaving the dive computer exposed to direct sunlight or some other very strong light source can cause the battery power indicator to show a reading temporarily that is higher than the actual battery level.
  The correct battery level should be indicated after a few minutes.
- All data stored in memory is deleted, and the current time and all other settings return to their initial factory defaults whenever battery power drops to Level 6 and when you have the battery replaced.

Power Recovery Mode
- Performing multiple sensor, illumination, or alarm operations during a short period may cause all of the battery power indicators (**H**, **M**, and **L**) to start blinking on the display. This indicates that the dive computer is in the power recovery mode. Illumination, alarm, countdown timer alarm, hourly time signal, and sensor operations will be disabled until battery power recovers.
- Battery power will recover in about 15 minutes. At this time, the battery power indicators (**H**, **M**, and **L**) will stop blinking. This indicates that the functions listed above are enabled again.
- If all of the battery power indicators (**H**, **M**, **L**) are blinking and the **CHG** (charge) indicator also is blinking, it means the battery level is very low. Expose the dive computer to bright light as soon as possible.

- Even if battery power is at Level 1 (**H**) or Level 2 (**M**), the Digital Compass Mode, Dive Mode sensor may be disabled if there is not enough voltage available to power it sufficiently. This is indicated when all of the battery power indicators (**H**, **M**, **L**) are blinking.
- Frequent blinking of all of the battery power indicators (**H**, **M**, **L**) probably means that remaining battery power is low. Leave the dive computer in bright light to allow it to charge.

Charging Times

〔 Recharging time 〕

Condition (luminance)	Recharging hours needed for a dive from the time low power alarm is released.	Recharging hours needed to full charge from the time low power alarm is released.
Outdoor sunlight (50,000 lux)	1 hrs.	8 hrs.
Sunlight through a window (10,000 lux)	2 hrs.	30 hrs.
Daylight through a window on a cloudy day (5,000 lux)	4 hrs.	60hrs.
Indoor fluorescent lighting (500 lux)	36 hrs.	

- Actual exposure times depend on lighting conditions.
- For details about the operating time and daily operating conditions, see the "Power Supply" section of the Specifications.

Power Saving

When turned on, Power Saving enters a sleep state automatically whenever the dive computer is left for a certain period in an area where it is dark.

The table below shows how dive computer functions are affected by Power Saving.

- For information about enabling and disabling power saving, see "To Turn Power Saving On And Off".
- There actually are two sleep state levels: "display sleep" and "function sleep".

Elapsed Time in Dark	Display	Operation
60 to 70 minutes (display sleep)	Blank	Display is off, but all functions are enabled.
6 or 7 days (function sleep)	Blank	All functions are disabled, but timekeeping 6 or 7 days (function sleep) Blank is maintained.

- The dive computer will not enter a sleep state between 6:00 AM and 9:59 PM. If the dive computer is already in a sleep state when 6:00 AM arrives, however, it will remain in the sleep state.
- The dive computer will not enter a sleep state while it is in the Dive Mode, Stopwatch Mode or Countdown Timer Mode. In Surface Mode, display becomes blank but functions are enabled.

To Recover From The Sleep State

Move the dive computer to a well-lit area, press any button, or angle the dive computer towards your face for reading.

Low Power Alarm

For safe dive, when power becomes too low to dive, Low power alarm is on with message to urge divers to recharge the power. Since sensors of the dive computer would not function when power level becomes (**L**), dive is not allowed. Suppose you started dive with the power level (**M**), and it becomes (**L**) while dive, no information related the dive is shown anymore.To avoid this dangerous situation, when power becomes too low to dive, you can not dive until the power becomes high enough for dive.

High	**Normal condition** ① **(Pressure sensor works OK)**	①Diving is available
Middle	Battery warning level Can not move to diving mode ②	②Warning is released
Low	**Diving functions disabled** **(Pressure sensor does not work)**	
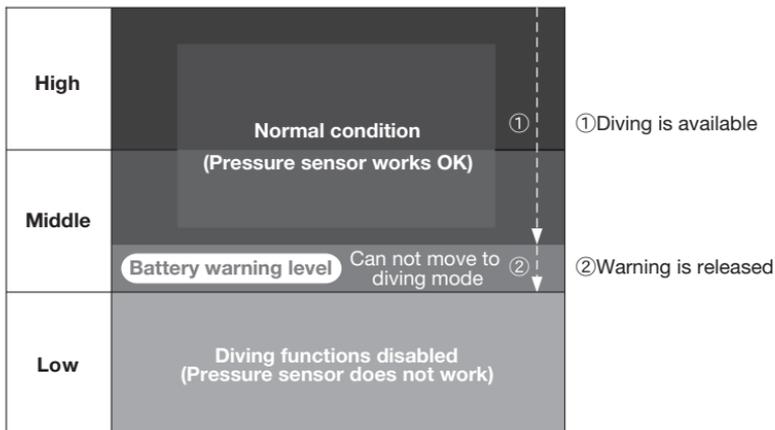
Current mode	Displayed alarms
Time mode or Surface Mode	[CHG] will blink
Dive Mode	[WARNING!! BATT] will move from right to left 5 times, and [M] on the right side of the display will blink. [WARNING!! BATT] will be re-shown every minute. Alarm will be on for 6 seconds

◆ The alarm will continue until power becomes high enough for dive. No dive is allowed when the alarm is on.

4. Mode Reference Guide

Your dive computer has 10 "modes". The mode you should select depends on what you want to do.
Mode types and how to switch them:
The below shows mode types and how to switch them.

Modes	Functions	Ref. page
Time mode and Surface Mode (TIME)	To display current time, date, day • • • • • • • • • • • •	19P
	To view the current date in the Home City • • • • • • • • •	19P
	To configure Home City and daylight savin time (DST) settings • • • • • • •	20P
	To configure time and date settings • • • • • • • • • • • •	21P
Surface Mode (TIME)	To display desaturation time (DESAT time) • • • • • • • •	22P
	To display surface time • • • • • • • • • • • • • • • • • •	22P
Dive Mode (DIVE)	To display no decompression limit (NDL) • • • • • • • • •	24P
	To display safety stop • • • • • • • • • • • • • • • • • • •	25P
	To display NDL warning • • • • • • • • • • • • • • • • • •	26P
	To display decompression dive • • • • • • • • • • • • • • •	27P
	To give warnings in dive • • • • • • • • • • • • • • • • • •	28P
	Nitrox (EANx) dive •	32P
	Dive at high altitude •	34P
Log Mode (LOG)	To display dive history • • • • • • • • • • • • • • • • • • •	35P
	To display dive log •	35P
	To display dive profile • • • • • • • • • • • • • • • • • • •	38P
Plan Mode (PLAN)	To display dive plan •	39P
	To set safety factor (SF) • • • • • • • • • • • • • • • • • •	40P
	To set FO_2 % •	40P
Digital Compass Mode	To determine your current bearing or the direction from your current location • • • • • • •	44P
Stopwatch Mode	To use the stopwatch to measure elapsed time • • • • •	51P
Countdown Timer Mode	To use the countdown timer • • • • • • • • • • • • • • • •	53P
Alarm Mode	To set an alarm time •	56P
World Time Mode	To view the current time in one of 48 cities (31 time zones) around the globe • • • • • • •	58P
Free Diving Mode	To use the Free Diving Mode • • • • • • • • • • • • • • •	67P
Gauge Mode	To use the Gauge Mode • • • • • • • • • • • • • • • • • •	73P

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Selecting A Mode

• The illustration below shows which buttons you need to press to navigate between modes.
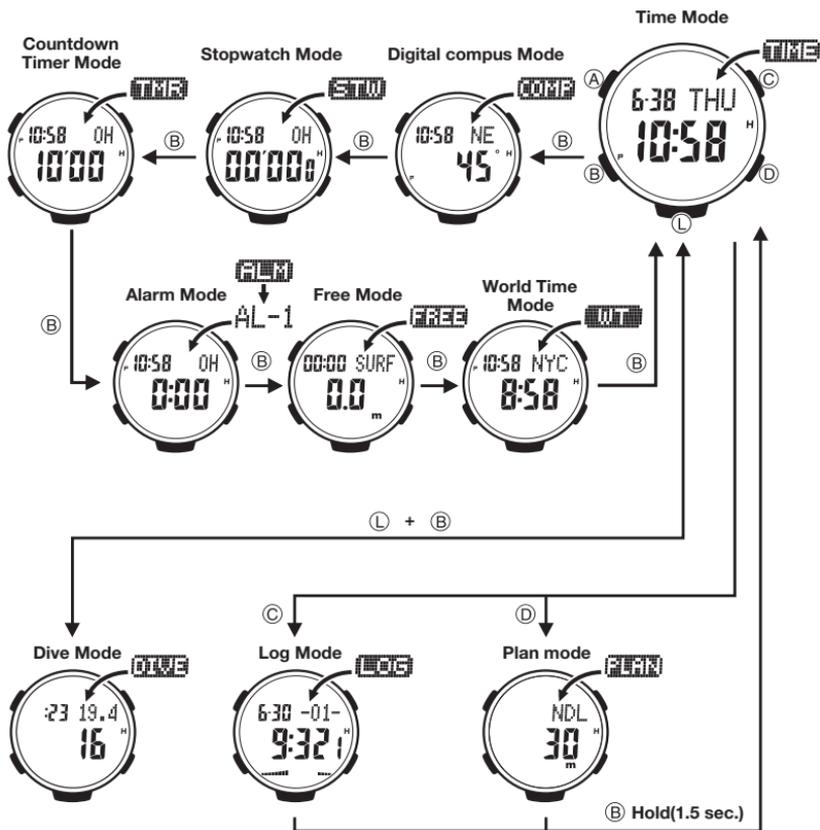
General Functions (All Modes)

The functions and operations described in this section can be used in all of the modes.

Auto Return Features

- The dive computer will automatically return to the Time mode if you do not perform any button operation for a particular amount of time in each mode.

Mode Name	Approximate Elapsed Time
Log, Plan	3 minutes
Alarm, Digital Compass	3 minutes
Setting screen (digital setting blinking)	3 minutes

- If you leave a screen with blinking digits on the display for two or three minutes without performing any operation, the dive computer exits the setting screen automatically.

Initial Screens

When you enter the Alarm, World Time, or Digital Compass Mode, the data you were viewing when you last exited the mode appears first.
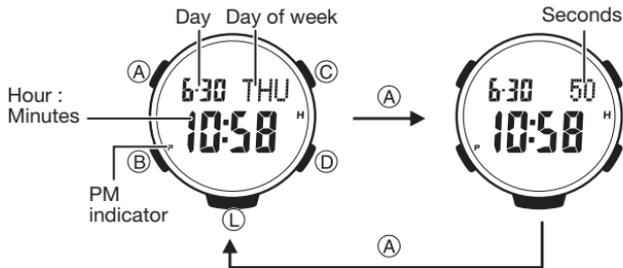
Scrolling

The **C** and **D** buttons are used on the setting screen to scroll through data on the display. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed.
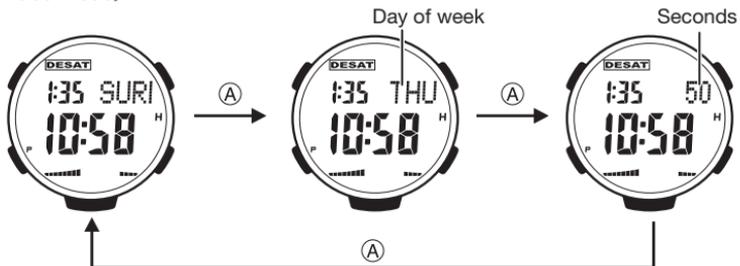
5. Timekeeping

Use the Time mode (TIME) to set and view the current time and date.

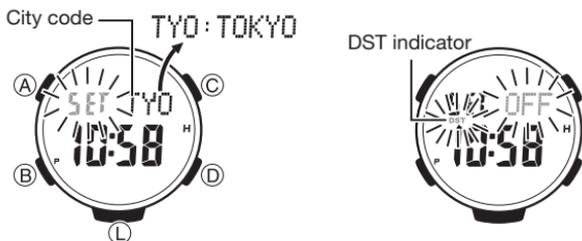• Each press of **A** in the Time mode will change screen contents as shown below.

〔**Surface Mode**〕

6. Configuring Home City Settings

There are two Home City settings: actually selecting the Home City and selecting either standard time or daylight saving time (DST).

City code — TYO : TOKYO

DST indicator

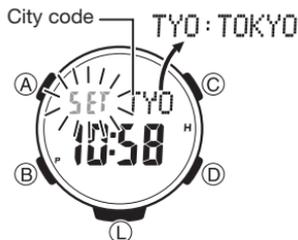**To configure Home City and Daylight Saving Time Settings**
1. In the Time mode, hold down **A** for at least 2 seconds. First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.
• The dive computer will exit the setting mode automatically if you do not perform any operation for about two or three minutes.
• For details about city codes, see the "City Code Table" at the back of this manual.

2. Use **D** (East) and **C** (West) to scroll through the available city codes.
• Keep scrolling until the city code you want to select as your Home City is displayed.

3. Press **B** to display the DST setting screen.

4. Press **D** to toggle the DST setting between Daylight Saving Time (ON) and standard time (OFF).
• Note that you cannot switch between standard time and daylight saving time (DST) while UTC is selected as your Home City.

5. After all of the settings are the way you want, press **A** to exit the setting screen.
• Daylight Saving Time is turned on when the DST indicator is on the display.

Note
• After you specify a city code, the dive computer will use UTC * offsets in the World Time Mode to calculate the current time for other time zones based on the current time in your Home City.
* Coordinated Universal Time, the world-wide scientific standard of timekeeping. The reference point for UTC is Greenwich, England.
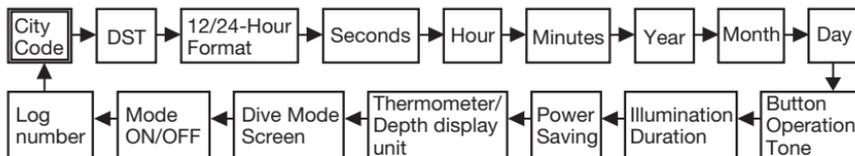
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7. Configuring Current Time and Date Settings

You can use the procedure below to adjust the Time mode time and date settings if they are off.

City code —— TYO : TOKYO

To Change The Current Time And Date Settings
1. In the Time mode, hold down **A** for at least 2 seconds.First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.

2. Press **B** to move the linking in the sequence shown below to select the other settings

City Code → DST → 12/24-Hour Format → Seconds → Hour → Minutes → Year → Month → Day

Log number ← Mode ON/OFF ← Dive Mode Screen ← Thermometer/ Depth display unit ← Power Saving ← Illumination Duration ← Button Operation Tone ←

• The following steps explain how to configure timekeeping settings and surface settings only.

3. When the timekeeping setting you want to change is blinking, use **C** and/or **D** to change it as described below.

Screen	To do this :	Do this :
TYO	Change the city code	Use **D** (East) and **C** (West).
OFF	Toggle between Daylight Saving Time (ON) and Standard Time (OFF).	Press **D** .
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping.	Press **D** .
50	Reset the seconds to 00 (If the current seconds count is between 30 and 59, one is added to the minute count).	Press **D** .
10:58	Change the hour or minutes	Use **D** (+) and **C** (-)
2016 6.30	Change the year, month, or day	

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4. After all of the settings are the way you want, press A to exit the setting screen.

Note
- For information about selecting a Home City and configuring the DST setting, see "Configuring Home City Settings".While the 12-hour format is selected for timekeeping, a P (PM) indicator will appear for times from noon to 11:59 p.m. No indicator appears for times from midnight to 11:59 a.m. With 24-hour format, time is displayed from 0:00 to 23:59, without any P (PM) indicator.
- The dive computer's built-in full automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have the dive computer's rechargeable battery replaced or after power drops to Level 6.
- The day of the week changes automatically when the date changes.
- Refer to the pages shown below for more information on Time mode settings.
    - Button operation tone on/off: "To turn the button operation tone on and off"
    - Illumination duration setting: "To change the illumination duration"
    - Enabling and disabling power saving: "To turn Power Saving on and off"
    - Changing the temperature and depth display units: "To specify temperature and depth display units"

8. Displays In The Surface Mode

Surface Mode is to display the necessary information when nitrogen remains in the body after dive. It displays current time, date, day shown in the Time mode and desaturation time (DESAT time) and surface time.

The below information is shown in the Surface Mode.

Desaturation time (DESAT)	The time remained until the body' s internal nitrogen is desaturated. You can not fly while this is shown.
Surface time (SURF. T)	The time currently elapsed at or shallower than 1.5m from the surface after ascending.
No fly icon	You can not fly while this icon is on. The icon will be off in 18 hours from the mode becomes Surface Mode.
N_2 indicator (PGT= Pressure Gas in Tissue)	Risk degree of nitrogen accumulated in the body is shown with 1 to 10 levels.
O_2 indicator (Oxygen limited indicator) (=OLI) or PO_2 (pressure of oxygen)	Risk degree of oxygen accumulated in the body is Or current hazardous level of oxygen is shown with 1 to10 levels.

- Either higher level above will be shown.

Note
- Surface Mode will be changed to Time mode automatically when residual nitrogen and/or oxygen are released outside.
- Surface Mode will be changed to Time mode automatically in 48 hours even residual nitrogen and/or oxygen is still in the body.
- No fly icon will be canceled in 18 hours. Even though there is no residual nitrogen and/or oxygen in the body and mode changed to Time mode, the icon will be on for 18 hours.

⚠ **Warning: No flying !**

DO NOT fly in the following conditions.
The risk of developing decompression illness will be increased.
- NO Fly icon is on.
- Within desaturating time (DESAT time)

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9. Dive Mode (DIVE)

In the Dive Mode, important information for scuba dive is shown.

How To Switch The Mode To Dive Mode
After entering water, and in max. 20 seconds after the dive computer senses pressure of 1.5m depth, the mode will be changed to Dive Mode automatically. If you want Dive Mode sooner after entering water, press **L** + **B** together to switch the mode manually.
[DIVE] is shown on the display.
Ref. Mode types and how to switch them … P.17

Note
- When you descend to 1.5m or deeper, the dive computer judges you started descending and starts count of dive time.

No Decompression Mode
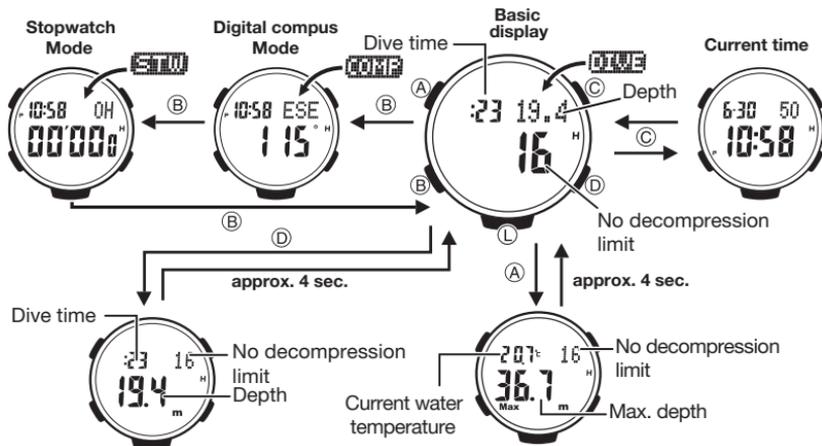
| No decompression limit (NDL)	Time you can stay at the current depth without decompression. * Max. 200 minutes
Current depth (DEPTH)	Current depth is shown per 0.1m after depth of 1.5m. * Max. 99.9m
Dive time	Time elapsed from start of dive *Max 599 minutes
N_2 indicator (PGT)	Risk degree of nitrogen accumulated in the body is shown with 1 to 10 levels
O_2 indicator (OLI) or PO_2	Risk degree of oxygen accumulated in the body is shown with 1 to 10 levels
• Either higher level above will be shown.	
Max. depth (MAX)	The max. depth in the current dive * Max 99.9m
Current water temperature	Displays current water temperature.
Current time	Displays current time with hour and minutes
Direction compass and angle	**Refer to direction measurement ... P.44**

Note

- O_2 and PO_2 FO_2 21%. This is always monitored even in the compressed air.
  Press A to display Max. depth (MAX) and Current water temperature. The display goes back to the basic display automatically in approx. 4 sec.
  Press B to display Current time and Direction compass and angle. Press B again to display Current time and Stopwatch. Press B again to go back to the Dive Mode display.
  Press D to switch the display position between No decompression limit (NDL) and Current depth (DEPTH). The display goes back to the basic display automatically in approx. 4 sec.
  Press C to display the Current month, date, time, and sec. Press C again to go back to Dive Mode display. Even without pressing C, the display goes back to Dive Mode automatically in approx. 1 min.You can set the basic display of Dive Mode as the default display.

Ref. Dive Mode screen setting …P.66

Safety Stop

The dive computer has functions to urge divers to do [Safety stop]. After dive in 10m or deeper, and ascending with no decompression stop, the 3 minutes count-down timer will be on automatically at the depth of 6m. This will be on during you are in the depth of 1.6m to 6m. We recommend you not to ascend to the surface but stop for safety until 3-minutes count-down is finished.

1) At the depth of 6m, safety stop alarm "pi" will be on. STOP will be displayed.
2) Count-down timer displays (03:00), and 3-minutes timer will start.
3) After 3 minutes is passed, [↑ OK] will be displayed for 5 seconds Then start ascending to the surface.

Count-down timer

Blink

Blink
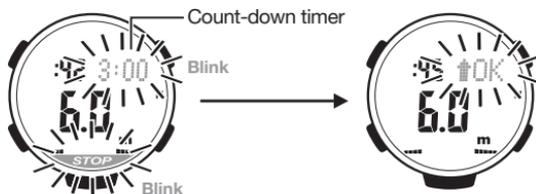
Water depth	Count-down function	display
1.5m or shallower	end (reset)	Surface Mode
1.6m to 6.0m	normal function	Safety stop
6.1m to 9.9m	stop (data is saved)	Dive Mode
10m or deeper	end (reset)	Dive Mode

What Makes "Safety Stop Function" End

- when 3 minutes is passed.
- when you ascend 1.5m or shallower from the surface.
- when you re-descend 10m or deeper.

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Note
Safety stop is always displayed when you descend 10m or deeper even if you have to do decompression dive.

No Decompression Limit (NDL) Warning

The dive computer has the functions to urge divers to ascend when no decompression limit (NDL) is getting less. When it becomes less than 3 minutes, the dive computer will urge divers to ascend as shown below.

1) When NDL is displayed on the dot area at the upper right, NDL value in the dot area will keep on blinking. Or when NDL is displayed on the main display area at the center, NDL value in the main display area will keep on blinking.
2) At the same time, alarm is on for 3 seconds.
3) When No decompression limit (NDL) becomes 3 minutes or more after started ascending, blinking is stopped.

Decompression Dive

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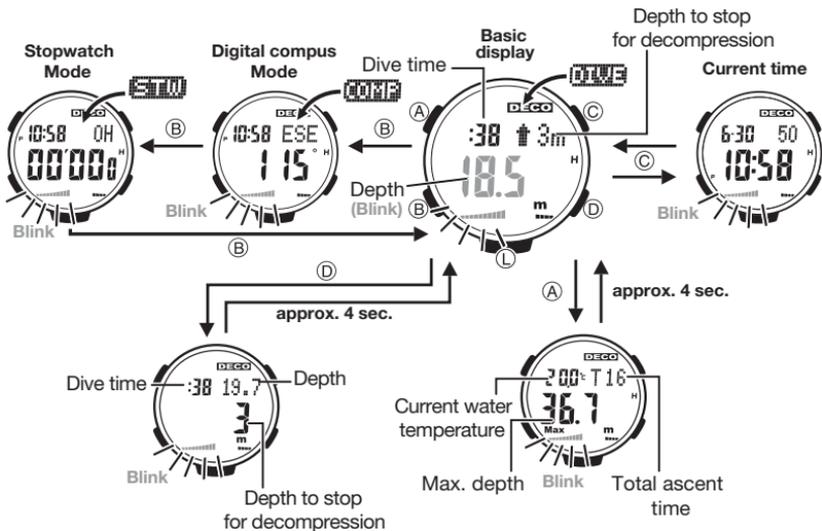
The Below Information Is Shown In Decompression Dive.

Depth to stop for decompression	It is shown in every 3m depending on the dive condition.
DECO	Decompression dive mark. It is shown when NDL is exceeded.
Current depth (DEPTH)	Current depth is shown per 0.1m after depth of 1.5m. * Max. 99.9m
Dive time	Time elapsed from start of dive *Max 599 minutes.
N_2 indicator (PGT)	Risk degree of nitrogen accumulated in the body is shown with 1 to 10 levels.
O_2 indicator (OLI) or PO_2	Risk degree of oxygen accumulated in the body is shown with 1 to 10 levels. Or current hazardous level of oxygen is shown with 1 to 10 levels.
• Either higher level above will be shown.	
Max. depth (MAX)	The max. depth in the current dive * Max 99.9m
Current water temperature	Displays current water temperature.
Current time	Displays current time with hour and minutes
Total ascent time (TOTAL)	Total ascending time from current depth to the surface with the proper ascending speed including decompression stop
Direction compass and angle	**Refer to direction measurement ... P.44**

Press **A** to display Max. depth, Current water temperature and Total ascending time. The display goes back to the basic display automatically in approx. 4 sec

Press **B** to display Current time and Direction compass and angle. Press **B** again to display Current time and Stopwatch. Press **B** again to go back to the Dive Mode display.

Press **D** to switch the display position between Current depth (DEPTH) and Depth to stop for decompression. The display goes back to the basic display automatically in approx. 4 sec.

Press **C** to display the Current month, date, time, and sec. Press **C** again to go back to Dive Mode display. Even without pressing **C**, the display goes back to Dive Mode automatically in approx. 1 min.

Warnings In Dive
Ascent Rate
Ascending speed is monitored and warning is given when ascending speed exceeds than set speed. The ascending speed set in this dive computer is 10m/minutes

- When ascending speed exceeds than 10m/minutes, warning of [SLO] is shown in the center of the main display and it will blink for 6 seconds. Alarm will be on for 6 seconds.
- When ascending speed becomes OK, warning of [SLO] is off, and warning is canceled.
- If the warnings are released 2 times in a row, it will be recorded in the dive log.

Warning Of Three Minutes To Decompression
When NDL becomes three minutes, alarm will be ON for three seconds and main display will start blinking .
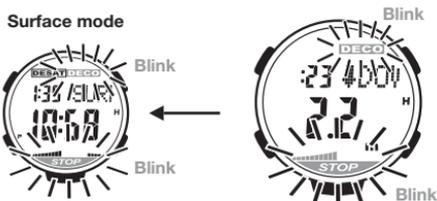

Decompression Dive
When No decompression limit (NDL) is exceeded in a dive, the warning is given for you to stop for decompression. NDL display will change to current water depth.

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- DECO will be on, and N_2 indicator and Current depth will blink.
- Alarm will be on for 6 seconds
- After that, decompression dive will be displayed automatically.
- When you stopped for decompression at the indicated depth, DECO will be off, N_2 indicator will change from blinking to ON, Current depth blinking will be canceled, and dive will become No decompression dive.
- If the warning is given even 1 time, it will be recorded in the dive log.

Decompression Stop Violation
Warning is given when the decompression stop depth is shallower than the indicated depth.Depth range for stop: -0.5m < indicated decompression stop depth < + 1m

- When current depth is shallower than the indicated depth for decompression stop, [↓ DOWN] warning is shown.
- DECO and STOP will blink and alarm will be on for 6 seconds
- When you are back to the right depth for decompression stop, the warning will be off, otherwise it will keep on.
- If the warning is given even 1 time, it will be recorded in the dive log.

Stop for decompression at the indicated depth. Do not stop at the shallower depth than it should be. If sea condition would not allow stopping at the indicated depth, try at 1 – 2 m deeper than the indicated one and stop for 1-2 minutes longer than indicated time.

If you ascended and stayed in the water shallower than 1.5m for 10 minutes ignoring decompression stop warning, the risk of developing decompression illness will be increased. In this case, the dive computer cannot be used for dive next 48 hours.

• DECO, STOP and Current time will all blink indicating the functions are locked.

Out Of Measurement Range

Warning is given in the following conditions.
1) When depth exceeds 99.9m
2) When decompression stop is needed at 33m or deeper in decompression dive
3) When decompression stop time exceeds 99 minutes or when total ascending time exceeds 99 minutes in decompression dive.

• EEEE will be shown in 7-segment display area, and alarm will be on for 3 seconds
• The dive computer cannot be used for dive next 48 hours after the warning.
• If the warning is given even 1 time, it will be recorded in the dive log.
• The dive computer cannot be used for dive next 48 hours after mode becomes Surface Mode. During all that time, EEEE and Current time are shown in 7-segment display area in turn indicating the functions are locked.

Surface mode

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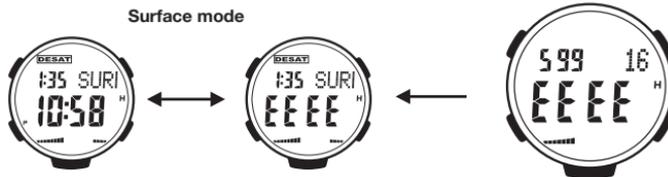
O₂ Indicator (OLI)

Warning is given when oxygen accumulated in the body exceeds the tolerance.

- O₂ indicator and its PO₂ indicator will blink.
- Alarm will be on for 6 seconds.
- Warning continues until OLI inside the body goes back within the tolerance. Move to the shallower area with proper speed at once.
- If the warning is given even 1 time, it will be recorded in the dive log.

Blink

PO₂

Warning is given when PO₂ becomes 1.4 or more.

- O₂ indicator and its PO₂ indicator will blink, and [PO₂] will be shown at the upper right dot area.
- Alarm will be on for 6 seconds.
- Warning continues until PO₂ goes back within the tolerance. Move to the shallower area with proper speed at once.
- If the warning is given even 1 time, it will be recorded in the dive log.

Blink

M Value

Warning is given when M value (no decompression limit) reaches at the set %. (80%, 90%, 95%)

- Accumulated nitrogen indicator will blink, and M-OV(1s)M??% (1s) Current water temperature(4s) will be shown at the upper right dot area.
- Alarm will be on for 3 seconds
- Warning continues until M value becomes below the set %.
- If the warning is given even 1 time, it will be recorded in the dive log.
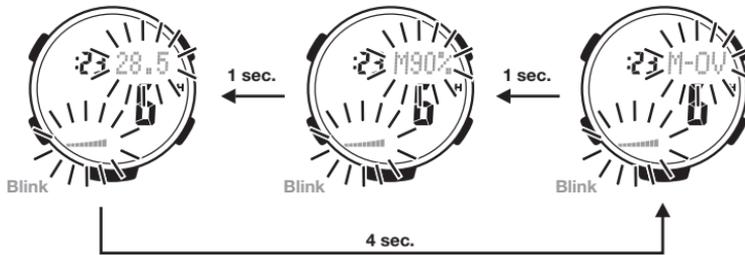
Nitrox (EANx) Dive

Ref.EANx: Enriched Air Nitrox (commonly called: Nitrox) Mixed gas with higher % of FO_2 than normally used compressed air (FO_2 is 21%)

Dive with normal compressed air (FO_2 is 21%) and EANx gas (FO_2 is 22-50%) is available with this dive computer. Beside the normal information on dive, considering the oxygen toxicity due to excess intake, oxygen affecting to diver's body per oxygen level and water depth is to be monitored in the Nitrox dive.

* O_2 and PO_2 level: FO_2 is 21 %: Normal compressed air is also to be monitored all the time.

The below information is shown in the Nitrox (EANx) dive.
- Nx is on.
  When FO_2 % is set to 22-50% as Nitrox (EANx), Nx will be on in all modes except Log mode.

Ref: Set FO_2 % P.40
Default FO_2 % ... P.43

Continuous Dive And Repetitive Dive

[SURF] will be shown on the dot area at the upper right for 10 minutes from the time ascending 1.5m or shallower. When you descend deeper than 1.5m again during that time, the dive computer judges it is [continuous dive]. If you descend deeper than 1.5m again after [SURF] is disappeared and mode becomes Surface Mode, the dive computer judges it is [repetitive dive].

Dive At High Altitude

Air pressure (Ambient pressure) at high altitude is lower than one on sea surface. Higher the altitude in dive is, more difficult the decompression condition becomes compared to the sea surface. The dive computer auto-measures air pressure in every 20 seconds and sets the current air pressure properly to calculate for decompression. You are free from worrying the altitude you are at and can enjoy safe dive according to the altitude. However, you must remember that non decompression limit (NDL) is much shorter in the dive at high altitude than in the sea. Dive at high altitude increases the risk of developing decompression illness. Please keep in mind that you should not have decompression dive in high altitude.

10. Log Mode (LOG)

It is available on Time mode and Surface Mode. Dive logs of last 30 logs are shown in the latest to earliest order. After 30 logs, next dive log will be added, and oldest (earliest) log will be deleted. You can see the depth variation over dive time on the simple dive profile. (max. 60 minutes/dive). The dive history is shown at the end of dive log in which you can see the accumulated data.

- Dive recorded in Log Mode is dive for min. 3 minutes at the depth of 1.5m or deeper.

Check Dive History

1) Make the mode Log Mode.
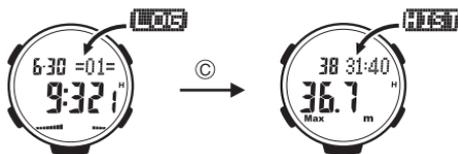   Press **C** once in Time mode or Surface Mode.
   [LOG] is shown in the display, and mode will be changed in Log Mode in approx. 1 second

Ref. Mode types and how to switch them...P.17

After mode is switched to Log Mode, the latest dive log will be shown.

2) Press **C** again.
   [HIST] is shown in the display, and dive history will be shown in approx. 1 second.
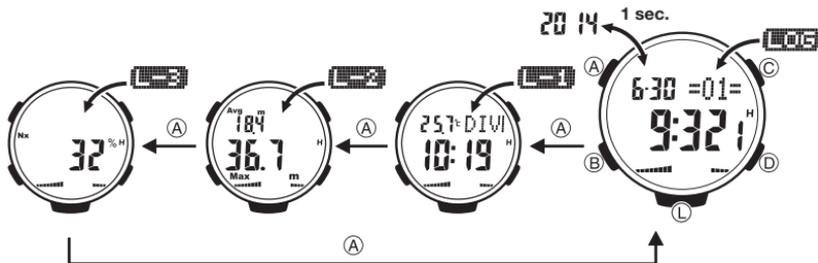

Total dive count ⋯⋯ Automatically accumulated total dive count
Total dive time ⋅ ⋯⋯ Automatically accumulated total dive time
Max. depth   ⋯⋯ The deepest point in the total dive

Check Dive Log

Log is consisted in 4 screens.

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LOG	Log No.	Log No. The latest 30 dives from total dives are shown. Max. No. is 999 (3 digits) When total dive counts exceeds 999, it goes back to 1
	Dive date	Date you dived (year/month/day)
	Dive count/day	Displays the number of the dive in a day
	Entry time	The time you started the dive
L-1	Exit time	The time you finished the dive
	Dive time	The time from starting to ending of the dive
	Lowest water temperature	The lowest water temperature in the dive
L-2	Max. depth	The max. depth in the dive
	Average depth	The average depth in the dive
	Warnings released	Warnings released in the dive
L-3	FO_2	FO_2 used in the tank for the dive
All	N_2 or PO_2	Risk degree of nitrogen accumulated in the body is shown with 1 to 10 levels Risk degree of oxygen accumulated in the body is show with 1 to 10 levels Or current hazardous level of oxygen is shown with 1 to 10 levels.

Ref. In displaying depth in Log Mode :
    In 0.2m for shallower than 50m
    In 0.4m for 50m or deeper.

1) Make the mode Log Mode.
   Press **C** once in Time mode or Surface Mode.
   [LOG] is shown in the display, and mode will be changed in Log Mode in approx. 1 second
   Ref. Mode types and how to switch them... P.17
   After mode is switched to Log Mode, the latest dive log will be shown.
2) Every time pressing **D**, dive log is shown from the latest to the earliest. Every time pressing **C** , dive log is shown from the earliest to the latest.To fast forward the logs, keep pressing **D** or **C**.
* The end of Log (next to the earliest log and before the latest log) is dive history data.
   Ref. Dive history display…P.35

3) Display the dive log you want to see its data, and press **A**.
   [L-1] is shown in the display and the below information will be
   shown in approx. 1 second
   - Exit time
   - Dive time
   - Lowest water temperature
   By pressing **A** again, [L-2] is shown in the display and the below
   information will be shown in approx. 1 second
   - Max. depth
   - Average depth
   - Warnings released
   By pressing **A** again, [L-3] is shown in the display and the below
   information will be shown in approx. 1 second
   - FO_2
4) By pressing **D** or **C**, the next later or older log than the current one
   will be shown. By pressing **B** for about 2 seconds, the mode will
   be changed to Time mode or Surface Mode. After [SET], [Hold],
   [TIME] blinked, and when [TIME] is shown, stop pressing the
   button.

Warnings Recorded In Log
There are 6 warnings as below.

Ascent rate	↑ SLOW	When ascending speed exceeds than 10m/minutes and the warnings are released 2 times in a row.
Decompression dive	DECO is ON	When No decompression limit (NDL) is exceeded in dive and you need to stop for decompression.
Decompression stop violation	↓ DOWN	When the decompression stop depth is shallower than the indicated depth.
PO_2	!!PO_2	When PO_2 becomes 1.4 or more.
O_2	!!O_2	When O_2 in the body exceeds the tolerance.
Out of measurement range	LIMIT	1) When depth exceeds 99.9m 2) When dive time exceeds 599 minutes 3) When decompression stop is needed at 33m or deeper in decompression dive 4) When decompression stop time exceeds 99 minutes or when total ascending time exceeds 99 minutes in decompression dive.
M value	M-VAL	When M value (no decompression limit) reaches at the set %. (80%, 90%, 95%)

Check Dive Profile
Interval of dive profile is 1 minute (fixed)
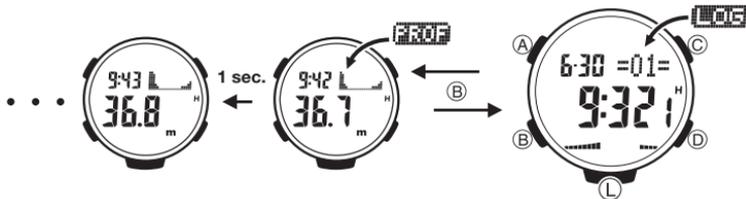
1) Make the mode Log Mode
   Press **C** once in Time mode or Surface Mode.
   [LOG] is shown in the display, and the mode will be changed to
   Log Mode in approx. 1 second
   Ref. Mode types and how to switch them…P.17
When changed to Log Mode, the latest dive log will be shown.
1) Every time pressing **D**, dive log is shown from the latest to the
   earliest. Every time pressing **C**, dive log is shown from the earliest to
   the latest. To fast forward the logs, keep pressing **D** or **C**.
* The end of Log (next to the earliest log and before the latest log) is
   dive history data.
   Ref. Dive History display …P.35
2) Display the dive log you want to see its profile, and press **B**.
   [PROF] is shown in the display and the profile is shown in approx.
   1second. The depth per min. is shown every second from diving
   starting. Display in the graph is shown fixed until 21 minutes after
   starting diving. After 21 minutes, the graph display slides showing
   the current depth at the far right per minute. After showing all
   depth data until the end of diving, the display stops and the
   following operations are available.
3) Every time pressing **D**, the time for the depth to be shown moves
   forward. Every time pressing **C**, the time for the depth to be shown
   moves backward.
4) To stop seeing the sliding depth data before the end, press **A**, **C**,
   and **D**. Press **B** to go back to Log display.
   Note
   The resolution performance of the data is [the deepest depth of a dive/64].
   Deeper you dive, lower the resolution becomes.

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11. Plan Mode (PLAN)

You can plan dive applied to safety factor of 3 types of dives; initial dive, repetitive dive, and Nitrox dive (EANx). By monitoring M value (no decompression limit), risk to develop the decompression illness can be reduced. No decompression limit at every 3 m from the depth of 9 m is shown.
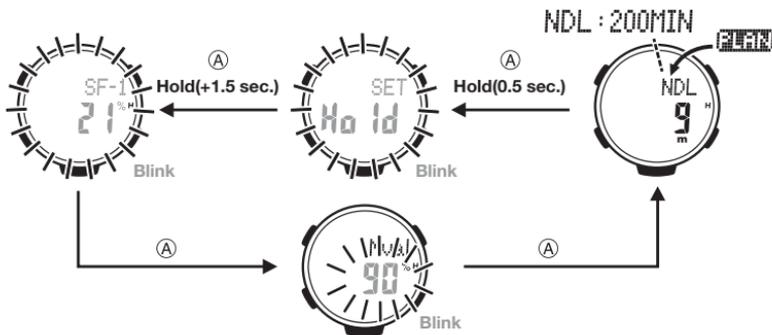
Set Safety Factor
You can select decompression schedule from the 3 dive types.

SF-0 (default)	safety factor	small
SF-1	safety factor	middle
SF-2	safety factor	high

⚠ Attention

Safety factor you select will be effective until changed.
It will effect calculation on dive and after dive.

Set Safety Factor

1) Make the mode Plan Mode
   Press **D** once in Time mode or Surface Mode.
   [PLAN] is shown in the display, and the mode will be changed to
   Plan Mode in approx. 1 second.
   Ref. Mode types and how to switch them...P.17
2) Press **A** for about 2 seconds
   When [SF-0 - 2] [21 - 50%] are shown after [SET] [Hold] were
   blinked, stop pressing the button.

Blink

3) Every time pressing **B**, SF is set as below.
   SF-0 (default) → SF-1 → SF- 2
4) Press **A** to go back to Plan Mode.
5) Press **B** for about 2 seconds to go back to Time mode or Surface
   Mode.When [TIME] is shown after [SET] [Hold] [TIME] were blinked,
   stop pressing the button.

⚠ **Attention**

- Safety factor setting cannot be checked, re-set, changed in
  Dive Mode.
- Setting SF-1, SF-2 makes releasing level of M Value
  Warning more strict synergistically.

Set FO$_2$%

1) Make the mode Plan Mode
   Press **D** once in Time mode or Surface Mode.
   [PLAN] is displayed and mode will be changed to Plan Mode in
   appox. 1 second.
   Ref. Mode types and how to switch them...P.17

2) Press **A** for about 2 seconds
   When [SF-0 - 2] [21 - 50%] are shown after [SET] [Hold] were
   blinked, stop pressing the button.

Blink

3) Press **D** or **C** to set FO_2 between 21% - 50%.
   FO_2 % [22% - 50%] is Nitrox (EANx).

⚠ Attention

Higher FO_2 % is, shallower area you should dive.

To fast forward, keep pressing **D** or **C**. It will stop at 21% and 32%
once.When setting between 22% - 50%, Nx will be on.
4) Press **A** to go back to Plan Mode.
5) Press **B** for about 2 seconds to go back to Time mode or Surface
   Mode. When [TIME] is shown after [SET] [Hold] [TIME] were
   blinked, stop pressing the button.

⚠ Attention

FO_2 % should be set at every dive in Nitrox (EANx) dive.
FO_2 % setting cannot be checked, re-set, changed in Dive
Mode.

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Set M Value Warning

You can set the warning to release when nitrogen is accumulated at the specific % of the M value (no decompression limit) to reduce the risk to develop decompression illness.

Set the M value (no decompression limit) warning. You can select % for M value warning as below.

95%	Warning is given with 95% of M value.
90% (default)	Warning is given with 90% of M value.
80%	Warning is given with 80% of M value.

1) Make the mode Plan Mode
   Press **D** once in Time mode or Surface Mode.
   [PLAN] is displayed and mode will be changed to Plan Mode in appox. 1 second.
   Ref. Mode types and how to switch them…P.17
2) Press **A** for about 2 seconds
   When [SF-0 - 2] [21 - 50%] are shown after [SET] [Hold] were
   Press **A** once again to make the display for M value warning setting.
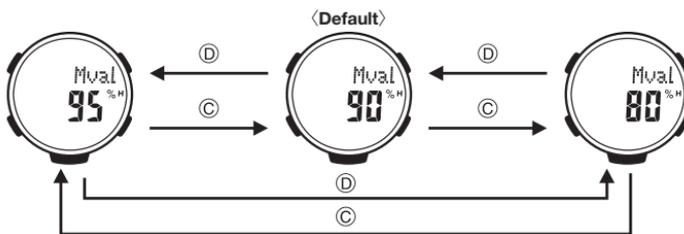
⟨Default⟩

[Mval] [90%] will be shown as default. If you have changed the M value %, [Mval] and either [80% or 90% or 95%] are shown.
4) Press **D** or **C**. to set [Mval] and either [80% or 90% or 95%].
   To fast forward, keep pressing **D** or **C**.
5) Press **A** to go back to Plan Mode.

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FO$_2$ % Default Function
When FO$_2$ % is set between 22 to 50% and date is changed (0:00),the set FO$_2$ % is back to the default setting (FO$_2$: 21% that is the % in the compressed air), and Nx will blink.

- Nx will blink for 24 hours after date is changed (0:00). It will be canceled in 24 hours.
- When display is changed to FO$_2$ % setting, Nx blinking will be canceled.
   Ref. Set FO$_2$ % …P.40

--- ⚠ **Attention** ---

You can change the mode to Dive Mode even when Nx is blinking. Blinking Nx means FO$_2$ % is set to 21%. It is extremely dangerous to do Nitrox dive with Nx blinking. Make sure to match the FO$_2$ % of your tank and the dive computer.

Plan Dive
1) Make the mode Plan Mode
   Press **D** once in Time mode or Surface Mode.
   [PLAN] is displayed and mode will be changed to Plan Mode in appox. 1 second.
   Ref. Mode types and how to switch them …P.17

| Non decompression limit (NDL)	Time you can stay at the planned depth without decompression. * Max. 200 minutes
Planned dive depth	You can set the depth between 9 to 48m in multiples of 3m such as 9m, 12m, 15m, etc.

NDL : 16MIN

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2) Press **D** or **C** to set the planned dive depth (9 to 48m). The depth is shown in multiples of 3m such as 9m, 12m, 15m, etc and NDL calculated for each depth will be shown.

3) Press **B** for about 2 seconds to go back to Time mode or Surface Mode. When [TIME] is shown after [SET] [Hold] [TIME] were blinked, stop pressing the button.

12. Taking Direction Readings

The Digital Compass Mode uses a built-in direction sensor to take direction readings and display the results. The dive computer also displays literal indications of direction that its 12 o'clock position is currently pointed.

• For information about what you can do to improve digital compass reading accuracy, see "Calibrating the Bearing Sensor" and "Digital Compass Precautions".

To Take A Direction Reading

Current time
Direction indicator
12 o'clock position (Pointing direction)
Angle value (in degrees)
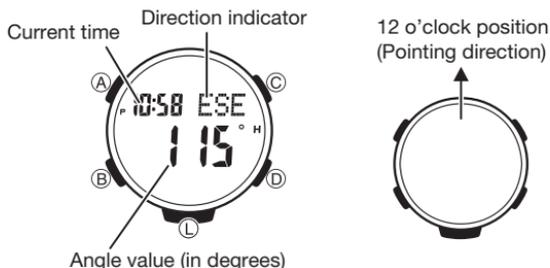
1. Make sure the dive computer is in the Time mode, Surface Mode and Dive Mode.
2. Place the dive computer on a flat surface. If you are wearing the dive computer, make sure that your wrist is horizontal (in relation to the horizon).

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3. Point the 12 o' clock position of the dive computer in the direction whose reading you want to take.
4. To enter the Digital Compass Mode. Use **B** to select the Digital Compass Mode (COMP) as shown on page 17.
- COMP will appear in the upper right display to indicate that a digital compass operation is in progress.
- About 1 seconds after you press **D**, direction will also be indicated by literal direction indicators and by a direction angle.

Digital Compass Readings

- When you press **C** to start digital compass reading operation, COMP will initially appear on the display to indicate that a digital compass operation is in progress.
- After the first reading is obtained, the dive computer will continue to take digital compass readings automatically each second for up to 60 seconds. After that, the reading operation will stop automatically.
- The direction indicator and angle value will show - - - to indicate that digital compass readings are complete.
- The auto light switch is disabled during the 60 seconds that digital compass readings are being taken.
- The following table shows the meanings of each of the direction abbreviations that appear on the display.

Direction	Meaning	Direction	Meaning	Direction	Meaning	Direction	Meaning
N	North	NNE	North-northeast	NE	Northeast	ENE	East-northeast
E	East	ESE	East-southeast	SE	Southeast	SSE	South-southeast
S	South	SSW	South-southwest	SW	Southwest	WSW	West-southwest
W	West	WNW	West-northwest	NW	Northwest	NNW	North-northwest

- The margin of error for the angle value and the direction indicator is ±11 degrees while the dive computer is horizontal (in relation to the horizon). If the indicated direction is northwest (NW) and 315 degrees, for example, the actual direction can be anywhere from 304 to 326 degrees.
- Note that taking a direction reading while the dive computer is not horizontal (in relation to the horizon) can result in large direction reading error.
- You can calibrate the bearing sensor if you suspect the direction reading is incorrect.
- Any ongoing direction reading operation is paused temporarily while the dive computer is performing an alert operation (daily alarm, hourly time signal, countdown timer alarm) or while illumination is turned on (by pressing **L**). The direction reading operation resumes for its remaining duration after the operation that caused it to pause is finished.
- See "Digital Compass Precautions" (page 48) for important information about taking direction readings.

Calibrating The Bearing Sensor
You should calibrate the bearing sensor whenever you feel that the direction readings being produced by the dive computer are off.

Bidirectional Calibration
Bidirectional calibration calibrates the bearing sensor in relation to magnetic north. Use bidirectional calibration when you want to take readings within an area exposed to magnetic force.
This type of calibration should be used if the dive computer becomes magnetized for any reason.
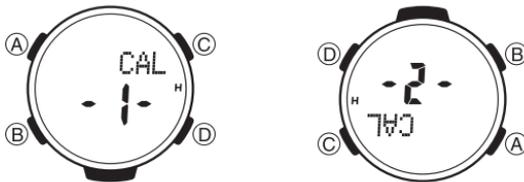
- To ensure correct direction readings by this dive computer, be sure to perform bidirectional calibration before using it. The dive computer may produce incorrect direction readings if you do not perform bidirectional calibration.

Precautions About Bidirectional Calibration

- You can use any two opposing directions for bidirectional calibration. You must, however, make sure that they are 180 degrees opposite each other. Remember that if you perform the procedure incorrectly, you will get wrong bearing sensor readings.
- Do not move the dive computer while calibration of either direction is in progress.
- You should perform bidirectional calibration in an environment that is the same as that where you plan to be taking direction readings. If you plan to take direction readings in an open field, for example, calibrate in an open field.

To Perform Bidirectional Calibration

1. In the Digital Compass Mode, hold down **A** for at least 2 seconds First, SET Hold will blink on the display. After that, CALIBRATION will scroll across the upper right display. Keep **A** depressed until CALIBRATION starts scrolling.

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- At this time, the display will show -1- to indicate that the dive computer is ready to calibrate the first direction.
2. Place the dive computer on a level surface facing any direction you want, and press **C** to calibrate the first direction.
- - - - is shown on the display while calibration is being performed. When calibration is successful, Turn 180° will appear on the display. After about 1 second, CALIBRATION -2- will scroll across the upper right display.
- If ERR-1 appears on the display, press **C** again to restart the direction reading operation.
3. Rotate the dive computer 180 degrees.
4. Press **C** again to calibrate the second direction.
- - - - is shown on the display while calibration is being performed. When calibration is successful, the display will show OK and then change to the Digital Compass Mode screen.

Digital Compass Precautions
Magnetic North And True North
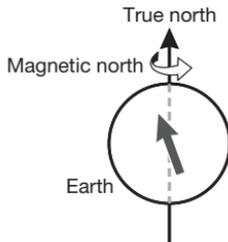
- The northerly direction can be expressed either as magnetic north or true north, which are different from each other. Also, it is important to keep in mind that magnetic north moves over time.
- Magnetic north is the north that is indicated by the needle of a compass.

- True north, which is the location of the North Pole of the Earth's axis, is the north that is normally indicated on maps.
- The difference between magnetic north and true north is called the "declination". The closer you get to the North Pole, the greater the declination angle.

Location
- Taking a direction reading when you are near a source of strong magnetism can cause large errors in readings. Because of this, you should avoid taking direction readings while in the vicinity of the following types of objects: permanent magnets (magnetic necklaces, etc.), concentrations of metal (metal doors, lockers, etc.), high tension wires, aerial wires, household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Accurate direction readings are impossible while in a train, boat, air plane, etc.
- Accurate readings are also impossible indoors, especially inside ferro-concrete structures. This is because the metal framework of such structures picks up magnetism from appliances, etc.

Storage
- The precision of the bearing sensor may deteriorate if the dive computer becomes magnetized. Because of this, you should store the dive computer away from magnets or any other sources of strong magnetism, including: permanent magnets (magnetic necklaces, etc.) and household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Whenever you suspect that the dive computer may have become magnetized, perform the procedure under "To perform bidirectional calibration" (page 48).

Specifying Temperature and Depth Display Units

Use the procedure below to specify the temperature and depth display units to be used in the Dive Mode.
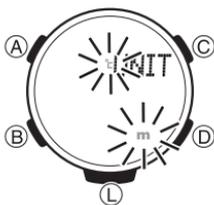
Important!

- When TYO (Tokyo) is selected as the Home City, the depth unit is set automatically to meters (m) and the temperature unit to Celsius (°C). These settings cannot be changed.

To Specify Temperature And Depth Display Units

1. In the Time mode or Surface Mode, hold down **A** for at least 2 seconds. First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.

2. Press **B** as many times as necessary until UNIT appears on the display.
- See the sequence in step 2 of the procedure under "To change the current time and date settings" for information about how to scroll through setting screens.

3. Perform the operations below to specify the display units you want.

To specify this unit:	Press this key:	To toggle between these settings:
Depth	A	m (meters) and ft (feet)
Temperature	C	°C (Celsius) and °F (Fahrenheit)

4. After all of the settings are the way you want, press **A** the setting screen.

13. Using The Stopwatch

The stopwatch measures elapsed time, split times, and two finishes.
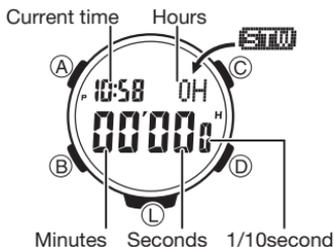
To Enter The Stopwatch mode
Use **B** to select the Stopwatch Mode (STW) as shown on page 17.

To Perform An Elapsed Time Operation

D ➡ D ➡ D ➡ D ➡ C
Start   **Stop**   **(Restart)**   **(Stop)**   **Reset**

To pause at a split time

D ➡ C ➡ C ➡ D ➡ C
Start   **Split**   **Split release**   **Stop**   **Reset**

(**SPLIT** appears
in the upper part
of the display.)

To measure two finishes

D ➡ C ➡ D ➡ C ➡ C
Start   **Split**   **Stop**   **Split release**   **Reset**

|				
	First runner finishes. (**SPLIT** appears in the upper part of the display.) Display time of first runner	Second runner finishes.	Display time of second runner.	

Note
• The Stopwatch Mode can indicate elapsed time up to 999 hours, 59 minutes, 59.9 seconds
• Once started, stopwatch timing continues until you press A to stop it, even if you exit the Stopwatch Mode to another mode and even if timing reaches the stopwatch limit defined above. A paused timing operation will remain paused until you press A to restart it or C to reset.
• Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
• While SPLIT is shown in the upper right display, it alternates with the hour digits of the split time at one-second intervals.

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14. Using The Countdown Timer

The countdown timer can be configured to start at a preset time, and sound an alarm when the end of the countdown is reached.

Countdown time
(Hour,minutes,seconds)

Current time
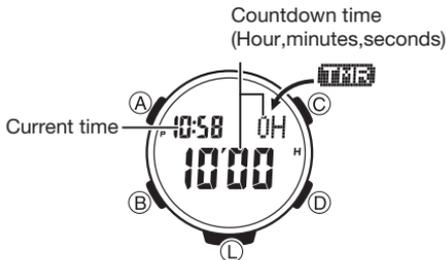
To Enter The Countdown Timer Mode
Use **B** to select the Countdown Timer Mode (TMR) as shown on page 17.
• About 1 second after TMR appears on the display, the display will change to show the countdown time hours.

To Specify The Countdown Start Time
1. Enter the Countdown Timer Mode.
    • If a countdown is in progress (indicated by the seconds counting down), press **D** to stop it and then press **C** to reset to the current countdown start time.
    • If a countdown is paused, press **C** to reset to the current countdown start time.
2. Hold down **A** for at least two seconds.
    • SET Hold will blink on the display and then the current start time setting will start to blink.
      Keep **A** depressed until the start time setting starts to blink.
3. Press **B** to move the blinking between the hour and minute settings.

4. Use **D** (+) and **C** (–) to change the blinking item.
   • To set the starting value of the countdown time to 24 hours, set 0H 00'00.
5. Press **E** to exit the setting screen.

To Perform A Countdown Timer Operation

To pause at a split time

D ➡ D ➡ D ➡ D ➡ C

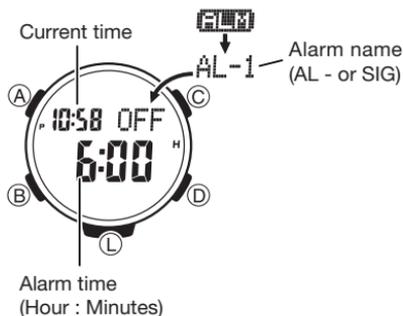**Start**   **Stop**   **(Restart)**   **(Stop)**   **Reset**

• Before starting a countdown timer operation, check to make sure that a countdown operation is not in progress (indicated by the seconds counting down). If it is, press **D** to stop it and then **C** to reset to the countdown start time.
• An alarm sounds for ten seconds when the end of the countdown is reached. This alarm will sound in all modes. The countdown time is reset to its starting value automatically when the alarm sounds.

To Stop The Alarm
Press any button.

15. Using The Alarm

Current time

ALM

AL-1 — Alarm name
(AL - or SIG)

A   10:58 OFF   C

6:00 H

B   D

L

Alarm time
(Hour : Minutes)

You can set five independent daily alarms. When an alarm is turned on, an alarm will sound for about 10 seconds each day when the time in the Time mode reaches the preset alarm time. This is true even if the dive computer is not in the Time mode. One of the daily alarms is a snooze alarm. The other four are one-time alarms. The snooze alarm will sound every five minutes up to seven times or until it is turned off. You can also turn on an Hourly Time Signal, which will cause the dive computer to beep twice every hour on the hour.

To Enter The Alarm Mode
Use **B** to select the Alarm Mode (ALM) as shown on page 17.
- About 1 second after ALM appears on the display, the display will change to show an alarm name (AL-1 to AL-4, or SNZ) or the SIG indicator. The alarm name indicates an alarm screen. SIG is shown when the Hourly Time Signal screen is on the display.
- When you enter the Alarm Mode, the data you were viewing when you last exited the mode appears first.

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To Set An Alarm Time

Alarm ON/OFF indicator
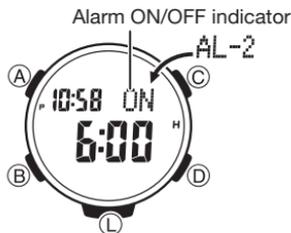
1. In the Alarm Mode, use **A** and **C** to scroll through the alarm screens until the one whose time you want to set is displayed.
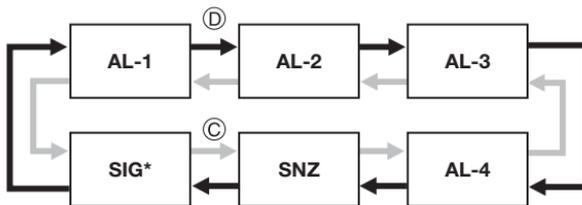
* There is no time setting for the hourly time signal.

2. Hold down **A** until SET Hold appears on the display and then the current settings start to blink.
   • This is the setting screen.
3. Press **B** to move the blinking between the hour and minute settings.
4. While a setting is blinking, use **D** (+) and **C** (–) to change it.
   • When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (P indicator).
5. Press **A** to exit the setting screen.
   • Setting an alarm time causes that alarm to turn on automatically.

To Turn An Alarm And The Hourly Time Signal On And Off

1. In the Alarm Mode, use **D** and **C** to select an alarm or the Hourly Time Signal.
2. When the alarm or the Hourly Time Signal you want is selected, press **A** to turn it on and off.
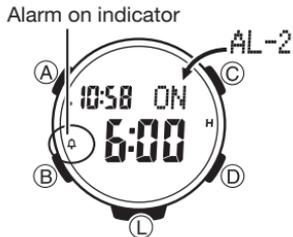
Alarm on indicator

- The alarm on indicator (when any alarm is on) is shown on the display in all modes.

To Stop The Alarm
Press any button.

Note
- The snooze alarm sounds up to seven times at intervals of about five minutes.
- After the snooze alarm first sounds, SNZ will blink on the display until the snooze alarm sounds all seven times or until it is canceled.
- The snooze alarm will be canceled when any of the following occurs while the SNZ indicator is blinking on the display.
- If you turn off the snooze alarm
- If you display the snooze alarm setting screen
- If you display the Time mode setting screen
- If your Home City and World Time City are the same city, and you use the World Time Mode to change the summer time setting of your Home City.

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16. Checking The Current Time In A Different Time Zone

You can use the World Time Mode to view the current time in one of 31 time zones (48 cities) around the globe. The city that is currently selected in the World Time Mode is called the "World Time City".

Currently selected
Word Time City

Current timekeeping
Mode time

Current time in the currently
selected World Time City
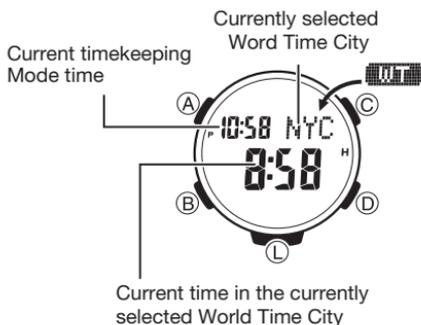
To Enter The World Time Mode
Use **B** to select the World Time Mode (WT) as shown on page 17.
• 1 second after WT appears on the display, the city code of the currently selected World Time City will scroll once in the upper right display. After that, the World Time City's city code will be displayed in the upper right display.

To View The Time In Another Time Zone
In the World Time Mode, use **D** (East) and **C** (West) to scroll through city codes.

To Specify Standard Time Or Daylight Saving Time (DST) For A City

DST indicator
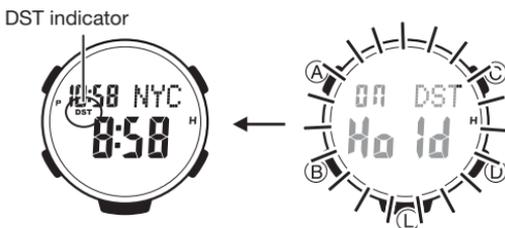
1. In the World Time Mode, use **D**(East) and **C**(West) to scroll through the available city codes.
• Keep scrolling until the city code whose Standard Time/Daylight Saving Time setting you want to change is displayed.
2. Hold down **A** for at least 2 seconds
• Keep **A** depressed until the current setting (DST Hold ON or DST Hold OFF) starts to blink on the display.
• DST Hold ON means that summer time is enabled, and that the current time is advanced accordingly.
   DST Hold OFF means that summer time is disabled, and that the current time shows standard time.
• This toggles the city code you selected in step 1 between Daylight Saving Time (DST indicator displayed) and standard time (DST indicator not displayed).
• Using the World Time Mode to change the DST setting of the city code that is selected as your Home City also will change the Time mode time DST setting.
• Note that you cannot switch between standard time/daylight saving time (DST) while UTC is selected as the World Time City.
• Note that the standard time/daylight saving time (DST) setting affects only the currently selected time zone. Other time zones are DST indicator not affected.

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17. Illumination

The display of the dive computer is illuminated for easy reading in the dark. The dive computer' s auto light switch turns on illumination automatically when you angle the dive computer towards your face.

• The auto light switch must be turned on (page 63) for it to operate.

To Turn On Illumination Manually
Press **L** in any mode to illuminate the display.

• You can use the procedure below to select either 1.5 seconds or 3 seconds as the illumination duration. When you press **L**, the display will remain illuminated for about 1.5 seconds or 3 seconds depending on the current illumination duration setting.
• The above operation turns on illumination regardless of the current auto light switch setting.
• Illumination is disabled while configuring sensor measurement mode settings, and during bearing sensor calibration.

To Change The Illumination Duration
1. In the Time mode or Surface Mode, hold down **A** for at least 2 seconds. First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.

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About The Auto Light Switch
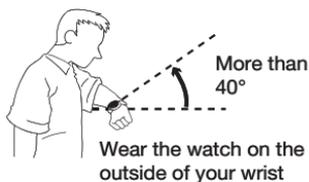
More than 40°

Wear the watch on the outside of your wrist

Turning on the auto light switch causes illumination to turn on, whenever you position your wrist as described below in any mode.

Moving the dive computer to a position that is parallel to the ground and then tilting it towards you more than 40 degrees causes illumination to turn on.

Warning!

- **Always make sure you are in a safe place whenever you are reading the display of the dive computer using the auto light switch. Be especially careful when running or engaged in any other activity that can result in accident or injury. Also take care that sudden illumination by the auto light switch does not startle or distract others around you.**
- **When you are wearing the dive computer, make sure that its auto light switch is turned off before riding on a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.**

Note
- This dive computer features a "Full Auto Light", so the auto light switch operates only when available light is below a certain level. It does not illuminate the display under bright light.
- The auto light switch is always disabled, regardless of its on/off setting, when any one of the following conditions exists.
  - ● While an alarm is sounding
  - ● While a bearing sensor calibration operation is being performed in the Digital Compass Mode
  - ● An auto light switch operation is performed after a sensor reading

To Turn The Auto Light Switch On And Off

Turning on the auto light switch causes illumination to turn on, whenever you position your wrist as described below in any mode.
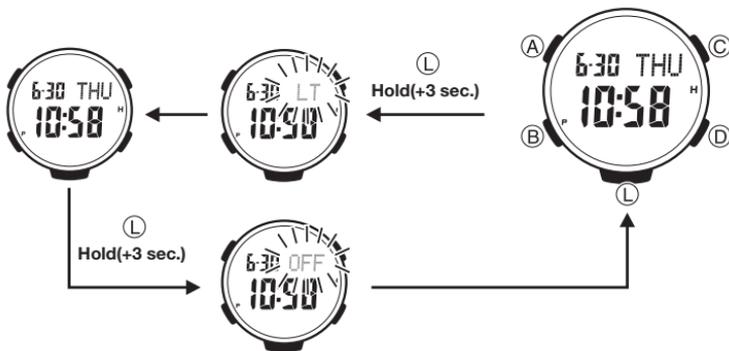
In the Time mode or Surface Mode, hold down **L** for at least 3 seconds to toggle the auto light switch on (LT displayed) and off (OFF displayed).

- The auto light switch turns off automatically whenever battery power drops to Level 4 (page 11).
- [LT] is displayed at upper right dot area for 2 seconds when auto light switch becomes ON, and [OFF] is displayed for 2 seconds when it becomes OFF.
- Since no icon of auto light switch ON/OFF is on the screen, check ON/OFF by holding down **L** for 3 seconds.

Illumination Precautions
- The LED that provides illumination loses power after very long use.
- Illumination may be hard to see when viewed under direct sunlight.
- Illumination turns off automatically whenever an alarm sounds.
- Frequent use of illumination runs down the battery.

Auto Light Switch Precautions
- Wearing the dive computer on the inside of your wrist, movement of your arm, or vibration of your arm can cause frequent activation of the auto light switch and illumination of the display. To avoid running down the battery, turn off the auto light switch whenever engaging in activities that might cause frequent illumination of the display.
- Note that wearing the dive computer under your sleeve while the auto light switch is turned on can cause frequent illumination of the display and can run down the battery.

- Illumination may not turn on if the face of the dive computer is more than 15 degrees above or below parallel. Make sure that the back of your hand is parallel to the ground.
- Illumination turns off after the preset illumination duration (page 60), even if you keep the dive computer pointed towards your face.
- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If illumination does not turn on, try moving the dive computer back to the starting position (parallel with the ground) and then tilt it back towards your face again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.

- You may notice a very faint clicking sound coming from the dive computer when it is shaken back and forth. This sound is caused by mechanical operation of the auto light switch, and does not indicate a problem with the dive computer.

18. Other Settings

- The button operation tone sounds any time you press one of the dive computer' s buttons. You can turn the button operation tone on or off as desired.
- Even if you turn off the button operation tone, the alarm, Hourly Time Signal, barometric pressure change alert, and Countdown Timer Mode alarm, and all alarms in Dive Mode operate normally.

To Turn The Button Operation Tone On And Off
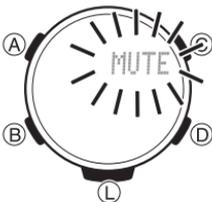
1. In the Time mode or Surface Mode, hold down **A** for at least 2 seconds First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.
2. Use **B** to cycle through settings on the display until the current button operation tone (MUTE or key) is displayed.
- See the sequence in step 2 of the procedure under "To change the current time and date settings (page 21)" for information about how to scroll through setting screens.

To Turn Power Saving On Or Off

1. In the Time mode or Surface Mode, hold down **A** for at least 2 seconds. First, SET Hold will blink on the display, and CITY will be displayed in the upper right display. After that, the currently selected city code and city name will scroll across the upper right display. Keep **A** depressed until the scrolling starts.
2. Use **B** to cycle through the setting screens until the current power saving setting (On or OFF) is displayed.
• POWER SAVING will scroll across the upper right display at this time.
• See the sequence in step 2 of the procedure under "To change the current time and date settings" (page 21) for information about how to scroll through setting screens.
3. Press **D** to toggle Power Saving on (On) and off (OFF).
4. After all of the settings are the way you want, press **A** to exit the setting screen.

Dive Mode Screen Setting (To select the basic screen in dive)

You can select basic Dive Mode screen used for dive.

There are 3 types of screens to select.

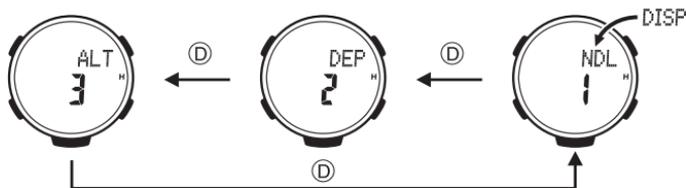|	Main 7-segment display area	Dot area at the upper right
1. NDL	NDL	current depth
2. DEP	current depth	NDL
3. ALT	NDL ↔ current depth	NDL ↔ current depth

1. In the Time mode or Surface Mode, hold down **A** for at least 2 seconds First, SET Hold will blink on the display, and CITY will be displayed for about 1 second
2. Press **B** to cycle through the settings on display until selecting the basic screen is shown. After [DISP] is displayed for about 1 second, [NDL] , [DEP] or [ALT] will be shown.
3. Press **D** to select either [NDL] , [DEP] or [ALT].
4. Press **A** to complete setting.

Mode Switching ON/OFF Setting

Mode of Digital Compass, Stopwatch, Timer, Alarm and World Time can be switched by pressing **B** in Watch and Surface mode. You can make the mode switching function available or not by setting ON or OFF.

1. Press **A** for approx. 2 sec. in Watch and Surface mode.
2. Press **B** to cycle through the settings on display until the Mode switching ON/OFF setting screen is shown.
3. Press **D** to switch ON and OFF.
4. Press **A** to fix the setting. The mode goes back to Watch and Surface mode.

19. Free Diving Mode

The IQ1203CE features a Free diving mode for use during skin diving and free diving. Because nitrogen gas fluctuation is not calculated as during normal diving mode, the bar graph of the amount of nitrogen gas in the tissues (N_2 indicator) is not displayed. Also, displays such as no-decompression dive time and various warnings, such as ascent rate warning, are not shown. During free diving, elapsed time, current water depth and maximum water depth are only displayed. Free diving can be logged, but since the factory setting of scuba diving: free diving maximum number of logs is set to 30:0, please set to 0:60 or 5:50 if you require free diving logs. In addition, if you change the log recording maximum number, please note that all of previous logs are deleted.

Setting Of The Free Diving Log Number
In accordance with the basic operation (P.21), open the setting screen of free diving log number. [S: F] [LOG] and the present setting (default is 30:00) are displayed with blinking.

Maximum number of scuba diving

Maximum number of free diving

1. Each time press the D) PLAN button, scuba diving: free diving maximum number setting of log are displayed in order of 30: 0 (default), 0: 60, 5:50, and you can choose the required settings.
2. Press the A) ADJUST button and setting is complete, returns to Time mode or Surface mode.

NOTE
Please note that, if you change the log record maximum number, all of the recorded log will be deleted. Also, to need for several seconds in deletion processing of log, when changing the setting of the log number, buttons do not become active on Time mode screen for a while.

Switching To Free Diving Mode

When the unit is in Time or Surface mode, press the B)MODE button five times, passing through Compass mode, Stopwatch mode, Timer mode and Alarm mode to switch to Free diving mode. However, if a desaturation time remains after scuba diving, or the unit is in 48 hours locked state, or if the charged amount of the battery is insufficient, the unit switches to World time (WT) mode not to Free diving mode.

Current depth

In addition, if after switching to Free diving mode, you do not dive in water of depth 1m or more for 60 minutes or more, the unit automatically returns to Time mode. In addition, the unit does not return to Time mode when you press the B)MODE button when you are diving a depth of 1m or more, but will stay in Free diving mode. However, if it continues for over 99 minutes, the unit returns to Time mode.

If you press the B)MODE button twice in Free diving mode, the unit returns to Time mode or Surface mode via World time display.

Free Diving Function

If you dive to a depth of more than 1m, the free diving screen displays, and the maximum water depth and current depth of the dive is alternately displayed every second.

Dive time

Current depth

Every second

Maximum depth
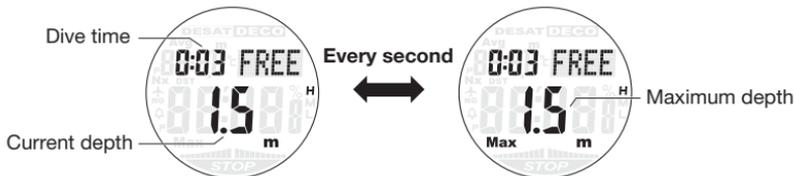
During free diving, since nitrogen gas fluctuation, etc. are not calculated, bar graphs of nitrogen gas content and oxygen gas content in the tissues are not displayed. Also, the unit does not provide decompression related warnings or Ascent rate warnings. While diving at water depth of 1m or more, the unit displays dive time, current water depth and maximum water depth, and when the water depth is less than 1m the display returns to the first of Free diving mode, and the rest time at the water surface is displayed.

Button Operations (at water surface – under water)
A) ADJUST Button
During Free diving mode, each time you press the A) ADJUST button, the screen will change as follows.

A)ADJUST ➡ A)ADJUST ➡ A)ADJUST ➡ A)ADJUST ➡ A)ADJUST ➡

| **Current display** | **Latest simple dive information** | **Compass mode** | **Stopwatch mode** | **Free diving mode** |

Temperature
Dive number
Current time

Water temperature
Dive time
Maximum depth
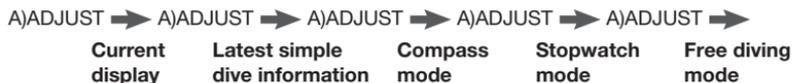
C) LOG Button
During Free diving mode, each time you press the C) LOG button, the screen will change sequentially as follows.

C)LOG ➡ C)LOG ➡ C)LOG ➡
Latest log **DAY history** **History**

Latest Log
* The latest log and earlier log data will display the DAY history unless the maximum scuba diving: free diving log number setting is set to either 0:60 or 5:50 under log number settings.
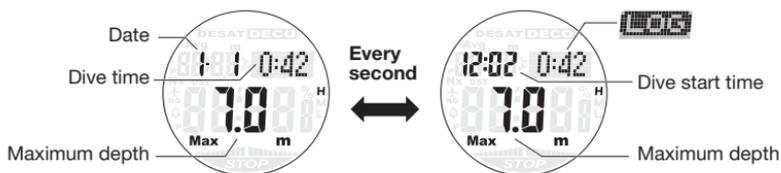
When you press the C) LOG button in Free diving mode once, the most recent log data is displayed. The latest log displays the date of the most recent free dive, dive time, maximum water depth and dive start time alternately every second.
* [LOG] is displayed, and the latest log data is displayed after about 1 second.

Date — 1 1 / 0:42 — **Every second** ⟷ 12:02 0:42 — Dive start time
Dive time — 7.0 — 7.0 — Maximum depth
Maximum depth — Max m — Max m

D) PLAN / C) LOG Button Operation
When the latest log is displayed, press the D) PLAN button once to display the previous log. Press one more time and the log data before that is displayed, and log data will appear in chronological order each time you press the button. Press the C) LOG button to display newer log data in reverse order, and switch to the Free diving screen by pressing the A) ADJUST button.

DAY History
Press the C) LOG button twice in Free diving mode (during log number setting), and DAY history is displayed via the most recent log data. This feature displays the free diving history on that day: the average water depth, the longest dive time, the maximum depth, the number of dives, and the total dive time of the day alternately every second. The DAY history feature displays the free diving history of the day, so will be cleared when the date changes.

* [DAY] and the date are displayed, and the unit switches to DAY history display after about 1 second.

Average water depth of the day

The longest dive time of the day

Maximum water depth of the day

Every second

Dive number of the day

Total dive time of the day

Maximum water depth of the day

History

Press C) LOG three times in free diving mode (during log number setting), and History will be displayed via the most recent log data and DAY history. This feature displays all of the free diving history you have made so far, the average depth of water, the longest dive time, the maximum water depth, the number of dives and the total dive time alternately every second.

* [HIST] is displayed and the unit switches to history after about 1 second.

Average water depth of the history

The longest dive time of the history

Maximum water depth of the history

Every second

Total dive number

Total dive time of the history

Maximum water depth of the history
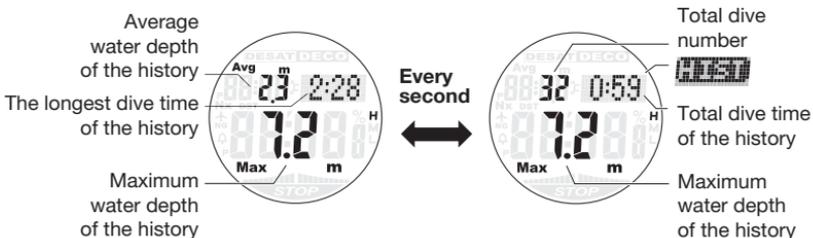
20. Depth Interval Alarm Settings

The IQ1203CE features a Depth interval alarm function in normal Dive mode, Free diving mode and Gauge mode that gives a warning sound of three beeps for each set water depth during diving. For normal diving, of course, it can also be used as a maximum depth alarm. Since the default setting is OFF, please use if needed.

Setting Of Depth Interval Alarm
1. In Time mode or Surface mode, press D) PLAN button once, [PLAN] appears on the screen, and after about 1 second the unit switches to plan mode.
2. Press and hold the A) ADJUST button (for about 2 seconds). After [SET][Hold] blinks, release your finger when you see [SF-0 ~ 2] [21 ~ 50%].

3. By pressing the A) ADJUST button twice, after passing through the M value warning settings screen, [INT] and the setting number (default is OFF) are displayed, and the unit switches to the depth interval alarm settings screen.

4. Press the D) PLAN mode button to increase the water depth in increments of 1m or press C) LOG button to decrease the water depth. Press the B) MODE button to switch the setting ON or OFF.

Setting Range
When using m (meters) as measurement units
OFF, 3, 4, 5, •••• 98, 99 The alarm can be set from 3m in 1m units up to 99m

When using ft (feet) as measurement units
OFF, 10, 15, 20, 25, ······320, 325 The alarm can be set from 10ft
in 5ft units up to 325ft
* The setting remains once it is set. It does not need to be set for
  each dive.

21. Gauge Mode

In Gauge mode the unit does not calculate non-decompression
dive time or decompression dive time, but only displays water
depth and diving time information etc. as a simple gauge. General
users must not use this mode.

• When you select Gauge mode and dive to a depth of 1.5m or
  more for 3 minutes or more, the unit is fixed to Gauge mode
  for 48 hours after the dive ends and you cannot switch to Dive
  mode (computer function) or Free diving mode. In addition, N2
  Indicator (Pressure Gas in Tissue), O_2 indicator (Oxygen Limited
  Indicator), surface interval time and Desaturation time are not
  calculated in Gauge mode.

Setting Of Gauge Mode
1. In Time mode or Surface mode, press D) PLAN button once,
   [PLAN] appears on the screen, and after about 1 second the
   unit switches to Plan mode.
2. Press and hold the A) ADJUST button (for about 2 seconds).
   After [SET] [Hold] blinks, release your finger when you see [SF-0
   ~ 2] [21 ~ 50%].
3. By pressing the A) ADJUST button twice, after passing through
   the M value warning settings screen, [INT] and the setting
   number (default is OFF) are displayed, and the unit switches to
   the Depth interval alarm settings screen.
4. Press and hold the A) ADJUST button (for about 2 seconds).
   After [SET] [Hold] blinks, release your finger when you see
   [GAUGE] and ON / OFF setting (default is OFF). Using the B)
   MODE button, choose ON.

5. By pressing A) ADJUST button twice, after passing through the Depth interval alarm settings screen, the unit switches to fixed display of Gauge mode ON. Press and hold the B) MODE button (for about 2 seconds) and the unit switches to Time mode. In addition, the unit switches to Time mode if left for about three minutes.

* If Gauge mode is turned ON, the user safety factor, FO$_2$ % (oxygen density ratio) and M value warning settings screens are not displayed.

Button operation during the dive in gauge mode

Current time   Gauge mode screen   Temperature / Max depth

LOG   ADJUST   4 seconds after   MODE

Compass   Stopwatch   MODE

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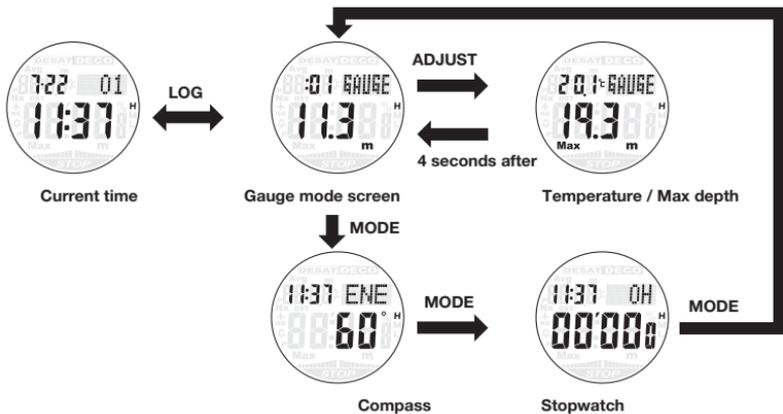
Canceling Gauge Mode

1. In Time mode or Surface mode press the D)PLAN button once, [PLAN] appears on the screen and the unit switches to displaying [GAUGE] ON.
2. Press and hold the A) ADJUST button (for about 2 seconds). After [SET] [Hold] blinks, [INT] and the setting number (default is OFF) are displayed, and the unit switches to the Depth interval alarm settings screen.
3. Press and hold the A) ADJUST button (for about 2 seconds). After [SET] [Hold] blinks, release your finger when you see [GAUGE] and ON / OFF setting (default is OFF). Using the B) MODE button, choose OFF.
4. Press the A) ADJUST button three times and after passing through the user safety factor / FO_2% (oxygen density ratio) settings, M value warning settings and Depth interval alarm settings screens, you can switch the unit to Dive plan mode. Press and hold the B) MODE button (for about 2 seconds) and the unit switches to Time mode. In addition, the unit switches to Time mode if left for about three minutes.

22. Troubleshooting

Time Setting

■ **The current time setting is off by hours.**

→ Your Home City setting may be wrong (page 20).
   Check your Home City setting and correct it, if necessary.

Dive Mode and Surface Mode

■ **Display is too light**

→ Display may become light in the low temperature. Please wait
   for a while. If situation is not changed, please contact the shop
   you purchased the dive computer.

■ **Dive log is already installed in a newly bought dive computer**

→ Test data is installed for quality check in the factory before
   shipping. It is not malfunction.

■ **DECO, STOP and current time are blinking on the surface.**

→ [Decompression stop violation] warning is released. If you
   descend to the requested depth again for decompression stop
   within 10 minutes (= before mode is changed to Surface Mode)
   after the warning is released, the warning will be canceled. If 10
   minutes is passed (= after mode is changed to Surface Mode),
   the dive computer cannot be used next 48 hours in dive.

■ **EEEE and current time are shown in turn**

→ [Out of measurement range] warning is released. The dive
   computer cannot be used for dive. Warning is canceled in 48
   hours after the warning is released. You should not make such
   a dangerous dive that releases [Out of measurement range]
   warning.

■ **Nx is blinking**

→ When FO_2 % was set between 22 to 50% in Nitrox gas (EANx
   gas) and date is changed (0:00), the set FO_2 % is back to the
   default setting (FO_2 : 21% that is the % in the compressed air).

When you dive with Nitrox gas, reset the FO_2 % for sure. Once resetting, Nx blinking is canceled.
Ref. Set FO_2 %...P.40

■ Cannot make Dive Mode
- Either [Decompression stop violation] or [Out of measurement range] warning is released. The dive computer can not be used for dive. In 48 hours after the warning is released, the mode will go back to the normal mode automatically.
- The altitude is detected as approx. 6,000m. Please wait for a while or move to place of lower altitude.
- Power level becomes low. Check the power level. Ref. Power level is low or no power...P.11
  If none of above applies, sensor might be a problem. Please contact the shop you purchased the dive computer. Digital Compass Mode.

■ Cannot change the temperature and depth display units.
→ When TYO (Tokyo) is selected as the Home City, the depth unit is set automatically to meters (m) and the temperature unit to Celsius (°C). These settings cannot be changed.

■ "ERR" appears on the display while using a sensor.
→ Subjecting the dive computer to strong impact can cause sensor malfunction or improper contact of internal circuitry. When this happens, ERR (error) will appear on the display and sensor operations will be disabled.

- If ERR appears while a reading operation is being performed in Digital Compass Mode, restart the operation. If ERR appears on the display again, it can mean there is something wrong with the sensor.
- Even if battery power is at Level 1 (H) or Level 2 (M), the Digital Compass Mode sensor may be disabled if there is not enough voltage available to power it sufficiently. In this case, ERR will appear on the display. This does not indicate malfunction, and sensor operation should resume once battery voltage returns to its normal level.
- If ERR keeps appearing during a reading operation, it could mean there is a problem with the applicable sensor.

■ ERR appears on the display after performed bidirectional calibration.
→ If --- appears and then changes to ERR (error) on the calibration screen, it means that there is something wrong with the sensor.
- If ERR disappears after about 1 second, try performing the calibration again.
- If ERR keeps appearing, contact the shop you purchased the dive computer. Whenever you have a sensor malfunction, take the dive computer to nearest authorized TUSA distributor as soon as possible.

■ What causes incorrect direction readings?
- Incorrect bidirectional calibration. Perform bidirectional calibration (page 47).
- Nearby source of strong magnetism, such as a household appliance, a large steel bridge, a steel beam, overhead wires, etc., or an attempt to take direction readings on a train, boat, etc. Move away from large metal objects and try again. Note that digital compass operation cannot be performed inside a train, boat, etc.

■ **What causes different direction readings to produce different results at the same location?**

→ Magnetism generated by nearby high-tension wires is interfering with detection of terrestrial magnetism. Move away from the high-tension wires and try again.

■ **Why am I having problems taking direction readings indoors?**

→ A TV, personal computer, speakers, or some other object is interfering with terrestrial magnetism readings. Move away from the object causing the interference or take the direction reading outdoors. Indoor direction readings are particularly difficult inside ferro-concrete structures. Remember that you will not be able to take direction readings inside of trains, airplanes, etc.

World Time Mode

■ **The time for my World Time City is off in the World Time Mode.**

→ This could be due to incorrect switching between standard time and daylight saving time. See "To specify standard time or daylight saving time (DST) for a city" (page 20) for more information.

Charging

■ **The dive computer does not resume operation even after exposed to light.**

→ This can happen after the power level drops to Level 5 (page 11).Continue exposing the dive computer to light until the battery power indicator shows "H" or "M".

■ **All (H, M, and L) are blinking on the display.**

→ It is in the Power Recovery Mode. Battery power will recover in about 15 minutes. Exposing the dive computer to bright light makes recovery sooner.

Ref: Performing multiple sensors during a short period runs down battery power rapidly, and mode will change to Power Recovery Mode. In this mode, all of the battery power

indicators (H, M, and L) will be blinking. It is the same situation of [Low power] and available functions will be limited. After recovery, the functions are enabled again.

Ref: Power recovery mode ...P.12

- If all of the battery power indicators (H, M, L) are blinking with CHG (charge) indicator, it means the battery level is very low. Expose the dive computer to bright light as soon as possible.

■ **Need to recharge battery sooner after last recharging by being exposed to light**

→ Battery (secondary battery) is recharged by light solar panel received, and you don't need to replace battery regularly. However, battery quality is getting deteriorated in a long period repeating recharging and discharging. If having trouble in use, we recommend you to replace battery (paid). Please contact the shop you purchased the dive computer.

23. Specification

Accuracy at normal temperature
±15 seconds a month

Timekeeping
Hour, minutes, seconds, p.m. (P), year, month, day, day of the week Time format: 12-hour and 24-hour

Calendar system
Full Auto-calendar pre-programmed from the year 2000 to 2099

Other
Home City code (can be assigned one of 48 city codes); Standard Time / Daylight Saving Time (summer time) Year display on setting screen only.

Sensor precision:

Temperature sensor	accuracy	±2°C	guaranteed in the temperature range of -10°C to 60°C
Pressure sensor	accuracy	±1%+0.5m	guaranteed in the temperature range of 0°C to 40°C

Measuring interval water depth : every 1 second
water temperature : every 1 second
air pressure : every 20 seconds

Measuring range water depth → 0.0 m to 99.9m
dive time → 0 to 599 minutes
altitude → 0 to 6,000m
temperature → -10°C to 60°C

FO_2 %
21% (compressed air) to 50% in every 1 %

Water proof
100m

Max. dive log
30 dives

Digital Compass
60 seconds continuous reading; 16 directions; Angle value 0° to 359°; Calibration (bidirectional)

Bearing Sensor Precision
Direction: Within ±10°
Values are guaranteed for a temperature range of –10°C to 60°C (14°F to 140°F).

Stopwatch
Measuring unit: 1/10 second
Measuring capacity: 999:59' 59.9"
Measuring accuracy: ±0.0006%
Measuring modes: Elapsed time, split time, two finishes

Countdown Timer
Measuring unit: 1 second
Countdown range: 24 hours
Setting unit: 1 minute

Alarms
5 Daily alarms (four one-time alarms; one snooze alarm); Hourly time signal

World Time
48 cities (31 time zones)

Other
Daylight Saving Time/Standard Time

Illumination
LED light; Selectable illumination duration (approximately 1.5 seconds or 3 seconds); Auto Light Switch (Full Auto Light operates only in the dark)
Other: Battery power indicator; Power Saving; Low-temperature resistance (–10°C/14°F); Button operation tone on/off

Power Supply
Solar panel and one rechargeable battery
Approximate battery operating time: 1 month (from full charge to Level 4) under the following conditions:
• Light: 1.5 seconds/day
• Alarm: 10 seconds/day
• Direction readings: 20 times/month
• Display: 18 hours/day
• Dive: 1 time/day

Frequent use of illumination runs down the battery.
Particular care is required when using the auto light switch.

City Code Table

City Code	City	UTC Offset/ GMT Differential
PPG	Pago Pago	-11
HNL	Honolulu	-10
ANC	Anchorage	-9
YVR	Vancouver	-8
LAX	Los Angeles	-8
YEA	Edmonton	-7
DEN	Denver	-7
MEX	Mexico City	-6
CHI	Chicago	-6
NYC	New York	-5
SCL	Santiago	-4
YHZ	Halifax	-4
YYT	St. Johns	-3.5
RIO	Rio De Janeiro	-3
FEN	Fernando de Noronha	-2
RAI	Praia	-1
UTC		0
LIS	Lisbon	0
LON	London	0
MAD	Madrid	+1
PAR	Paris	+1
ROM	Rome	+1
BER	Berlin	+1
STO	Stockholm	+1
ATH	Athens	+2
CAI	Cairo	+2
JRS	Jerusalem	+2
MOW	Moscow	+3
JED	Jeddah	+3
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5

City Code	City	UTC Offset/ GMT Differential
DEL	Delhi	+5.5
KTM	Kathmandu	+5.75
DAC	Dhaka	+6
RGN	Yangon	+6.5
BKK	Bangkok	+7
SIN	Singapore	+8
HKG	Hong Kong	+8
BJS	Beijing	+8
TPE	Taipei	+8
SEL	Seoul	+9
TYO	Tokyo	+9
ADL	Adelaide	+9.5
GUM	Guam	+10
SYD	Sydney	+10
NOU	Noumea	+11
WLG	Wellington	+12

* As of December 2012, the offi cial UTC offset for Moscow, Russia (MOW) was changed from +3 to +4, but this watch still uses an offset of +3 (the old offset) for MOW.
Because of this,you should leave the summer time setting turned on (which advances the time by one hour) for the MOW time.
  • The rules governing global times (GMT differential and UTC offset) and summer time are determined by each individual country.

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