Bism
Legend of Bism

DIVE DEMO SOLIS

OPERATING MANUAL

Watch & Dive Computer
Operating Manual

Introduction

Thank you for purchase of our product.

This product is diving gear for recreational diving use. It monitors depth and time, and displays information useful for safe recreational diving.

This manual provides instructions on how to use your Dive Computer for recreational diving. We believe this manual is useful in learning the right usage of a Dive Computer for people who use it at C-card training as well as people who have obtained a C-card through proper training at an internationally recognized diving instruction organization.

Please carefully read and digest the contents of this manual before use. We also suggest that you take this manual with you to refer to before diving.

Keep this manual in a safe place. Should you lose it, contact your original dealer or authorized distributor of our company for a replacement. We are constantly researching and improving our Dive Computers, and so the product you purchased may differ in certain details from the one described in this manual. If you have any queries regarding the Dive Computer or the information contained in this manual, please feel free to contact our company at the following address.

IMPORTANT INFORMATION

Safety Precautions

It is vital to safety that you use and maintain your Dive Computer correctly and have it inspected periodically. Carefully read and understand the advice on safety given in this manual before diving.

We use a various symbols in this manual and on the product indication to have you use the product correctly and safely, and to prevent the danger and damage to the property of you and other people.

The indications and their meanings are as follows;

⚠ Danger Danger is used to indicate the presence of a hazard which highly causes severe personal injury, death if the warning is ignored.

⚠ Warning Warning is used to indicate the presence of a hazard which can probably cause severe personal injury, death if the warning is ignored.

⚠ Caution Caution is used to indicate the presence of a hazard which can possibly cause personal injury, property damage if the caution is ignored

[Note]: Useful Information to know.

⚠ Danger

- Before use of this product, obtain a C-card after completing a proper training program at an internationally recognized diving instruction organization, and be familiar with the proper use of a diving gear, or use it under the direction of the diving instruction organization. It may cause accident resulting in injury or death
- Never dive without a buddy. Make sure you keep buddy system. The diving without a buddy is very dangerous as it may lead to a serious accident.
- When you use it for Nitrox (EANx) diving, you are required to attend and complete a class of the Nitrox (EANx) diving. Please do not use it for the Nitrox (EANx) diving if you do not take and complete the lectures.
  Reference: EANx: Enriched Air Nitrox (Abbr.: Nitrox)
  The mixed gases which raised a ratio of oxygen than usually use compressed air (21% of FO2).
- Please always set the fraction of oxygen (FO2) every diving. It is very dangerous when the fraction of oxygen (FO2) of the tank and the setting value of this product are not equal.

IMPORTANT INFORMATION

⚠️ Danger
- ●Before use of this product, please recognize handling methods, warnings and cautions in this manual. In addition, please understand how to use it before you actually use it in the ocean.
- ●When the warnings of decompression stop violation and violation gauge are displayed, always cancel the diving of the day, and a symptom like decompression sickness appears, see a specialist doctor for the medical examination.
- ●When abnormality occurs to this product, stop to use it immediately, and please consult with your original dealer or authorized distributor of our company.

⚠️ Warning
- ●When you perform scuba diving, please always perform it with good health condition. When you feel uneasiness in physical condition, avoid unreasonableness and stop the diving.
- ●Avoid to drink alcohols and to take medicines before performing scuba diving. Those who are in bad physical condition and are with the chronic disease have to see a doctor beforehand.
- ●This product is designed with a normal healthy person of average physical strength as a standard.
- ●Each diver is requested to take own responsibility to make and accomplish the safe diving plan that fitted oneself each.
- ●This product cannot always prevent conditions such as decompression sickness. Dive more cautiously than the display data indicate. Otherwise it may cause decompression sickness and other diseases come from diving.
- ●Do not attempt decompression diving. This product is designed for no-decompression diving. Although it will do decompression calculations in an emergency if you accidentally enter a decompression dive, diving under such condition may cause accident resulting in injury or death.
- ●Do not use this product in a purpose except the recreational diving.
- ●This product is designed for diving using compressed air (21% of FO2) and Nitrox (EANx) gas (22-50% of FO2). It cannot be used for other mixed gases.
- ●Do not fly or ascend to high place within 24 hours after diving. There is high possibility that you suffer from decompression sickness due to the drop in barometric pressure. We recommend that you should rest for at least 24 hours, or 48 hours if possible, before flying or ascending to altitudes.
- ●Please follow the display of warning and caution message of this product immediately. Otherwise, it is much possible that you suffer from decompression sickness.

IMPORTANT INFORMATION

⚠ Warning

- ●Use other equipment as backup (a depth gauge, diver's watch, etc.) with this product together when using this product.
- ●This product does not measure, display or control your remaining air in a tank. Use a pressure gauge to check your air supply.
- ●In the state that residual nitrogen remains after using this product, you must not lend it to or share it with another person.
- ●Do not use the data of this product as data of divers other than a user.
- ●Do not disassemble, repair, modify, replace a rechargeable battery or chamber test under pressure by yourself. It causes the trouble when you perform these things in a state without appropriate knowledge and is very dangerous.
- ●When you remove the battery (rechargeable battery) used in this product, prevent you from swallowing it by mistake. Please put the battery out of reach of small child. Please see a doctor immediately when child swallows it by any chance.
- ●Regardless of frequency in use, please check the product regularly once a year. Particularly, when you do not use it more than three months from the last season, please use it after checking it.

⚠ Caution

- ●Solvents such as gasoline, sprays and cleaners such as cosmetic, adhesives and paints will adhere to the product, and substances such as alkali and acid cause it to deteriorate. Please mind these chemicals as they may damage the product and reduce its waterproofness .
- ●Do not blow air at high pressure. This could damage the sensor.
- ●Because a sensor of this product is a precision instrument, never dismantle it. In addition, do not push the sensor part with a thin stick, and, mind so that garbage and dust do not enter the sensor. In the case of use in seawater, always wash it away with fresh water as it may lead to the trouble of the sensor.
- ●Please do not leave the product in the dashboard of the car or the place near the heater where the temperature becomes high. In addition, please do not leave it for a long time in the cold place either as they cause the trouble such as delay, progress and stop of the time.
- ●Please be careful that liquid crystal screen may be affected when you leave the product in the place where the temperature is more than +60 C for a long time. The liquid crystal display may become hard to show indication under the temperature less than 0 C and more than +40 ℃.

IMPORTANT INFORMATION

⚠ Caution

- Please keep a record of the data memorized in this product in the notebook, etc. Memory data may be lost by trouble, repair and low battery of the product.
- When you watch the information displayed by this product, for the prevention of the unexpected injury and accident, please do it at the place where the safety is secured enough. Please be careful watching the display as it may cause the accident during diving in particular. In addition, please be careful enough about accident prevention by the contact to a third party.
- Because the metal portion of the main body and the belt produces rust from a dirt and may pollute the cuffs of clothes, please use it as always keeping it clean. Particularly, it becomes easy to be rusted after having used it in the seawater and leave it as it is.
- You may get a rash from the body and the belt depending on a using condition, as they touch direct your skin.
  1. Allergy for metal and the plastic.
  2. The dirt, rust and sweat, etc. of the body of the product and the belt.
  3. Poor physical condition, etc.
  - When you fasten a belt too tightly, it becomes easy to sweat and the air does not flow smoothly, then it becomes easy to get a rash. In normal use, please fasten the belt with some room.
  - When abnormality occurs to your skin by any chance, stop to use it, and please see a doctor.
- In order to prevent the rash due to unexpected injury and allergy, please take off the product at the time to go to bed.
- When you embrace or contact an infant, in order to prevent the rash from an injury and allergy of the infant, please take off this product.
- When a product protection seal is put on the body, including the battery hatch, and the belt, please remove it off completely before start to use. Otherwise dirt attaches to the opening between "the body and belt" and "the seal" and may cause rust and the rash.
- When auto light switch is on, if you drive a car while wearing the product to your arm, the light turns on unexpectedly and it disturbs the driving. So please stop to wear the product while driving as it is dangerous and it may cause the traffic accident.
- Do not remove the battery hatch on the case back. It causes submergence and the trouble.
- Low battery, static electricity and shocks may cause trouble, computer resetting and log data loss.

IMPORTANT INFORMATION

⚠ Caution

- Though magnetism does not affect the operation of the product, please be careful that it affects the precision if the product itself becomes magnetized. In addition, please also be careful that the extremely strong magnetism such as the medical equipment causes malfunction and damage of electronic parts.
- When the plastic parts stick firmly to other products or leave with other products while being wet for long time, as it discolors or the color of other products may move to the plastic parts, please wipe off water immediately and do not keep on sticking to other products.
- When the plastic parts are exposed to the direct rays of the sun (ultraviolet rays) and are left with a dirt for long time, the plastic parts may fade in color.
- The painted parts may wear and discolor caused by the working condition such as excessive external force, continued rubbing and shocks.

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DIVE DEMO SOLIS

Buckle

Retainer

Belt

M Button

P Button

Pressure sensor

A Button

L Button

B Button

NAMES OF PARTS, MAIN FUNCTIONS AND SPECIAL FEATURES

M Button   P Button

A Button   L Button

B Button

This product has 5 operation buttons.
  Upper left - M (Mode) button
  Upper right - P (Plan) button
  Lower right - L (Log) button
  Lower left - A (Adjust) button
  Lower center - B (Backlight) button
In this manual, they are described under the name of M button, P button, L button, A button and B button respectively.

Function as watch

This product has 8 kinds of watch modes.
○Watch Mode 1   "TIME 1" display
  Hour/Minutes, Date, Day of the week
○Watch Mode 2   "TIME 2" display
  Hour/Minutes, Date, Seconds
○Direction Reading   "COMP" display
  Measurement of direction and angle value
○Stopwatch   "STW" display
  Measurement of the elapsed time
○Timer   "TMR" display
  Setting and measurement of timer
○Alarms   "ARM" display
  Setting of alarms and hourly time signal
○World Time   "WT" display
  Display the time of 48 cities, 31 time zones, of the world
○Barometric Pressure Indication   "BARO" display
  Measurement of barometric pressure and temperature

NAMES OF PARTS, MAIN FUNCTIONS AND SPECIAL FEATURES

Functions as Dive computer

This product has 4 kinds of dive computer modes.

○Dive Mode   "DIVE" display
    No-decompression limit
    Safety stop
    Decompression diving
    Nitrox

○Surface Mode   "TIME 1 and 2" display
    Desaturation time
    Surface time

○Log Mode   "LOG" display
    Dive log
    (Dive profile)
    Dive history

○Plan Mode   "PLAN" display
    Dive plan
    Fraction of oxygen
    Safety factor

NAMES OF PARTS, MAIN FUNCTIONS AND SPECIAL FEATURES

□ Time accuracy	:	±15 seconds a month
□ Sensor precision		
Bearing sensor	:	Within ±10°
Temperature sensor	:	Within ±2 ℃
Pressure sensor	:	±1% + 0.5m
□ Measuring interval		
Depth measurement	:	1 sec.
Water temperature measurement	:	1 sec.
Barometric pressure measurement	:	20 sec.
□ Measuring range		
Depth	:	1.5m~99.9m
Dive time	:	0~599 min.
Operating barometric pressure	:	More than 460 hPa (Approx. up to 6,000m)
Temperature	:	-10 ℃ ~ 60 ℃
Direction	:	0~359°Bearing sensor calibration function
(Bidirectional calibration-		
□ Fraction of oxygen	:	21% (compressed air)~50%
□ Waterproof	:	100m
□ Log data	:	30 dives
□ Battery	:	Rechargeable battery
		Operating time from the full charge condition without the solar generation:
		Approx. 1 month (1 one-hour dive a day)
□ Decompression model	:	A. A. Buhlman 16 tissue

[Note]
About the battery life time, this product works with battery (rechargeable battery) which charges the electricity generated by solar panel. When you take off the product, put it in a bright place getting light. It can be more stable to use when you expose it to the light for approximately half day a month to charge it. When you ware it on your wrist, please keep it in mind so that the cuff of clothing does not cover the dial (solar panel) of the product. When the dial (solar panel) hides even partly, generation efficiency decreases.

BEFORE USE

Before using this product, "charge" and "the setting of the time and date" are necessary. Please use it after charge it enough and set the display of time and date.

Confirmation of Charging Amount

■Charging status
Please confirm the charging status by "H", "M" and "L" displays at the right side of the screen.

"H" lights up.
"M" lights up.
Battery is charged.

→ Please go to "Home city setting and the time adjusting"
(To p.20)

Battery Indicator

"LOW" flashes.
"L" lights up.
"CHG" flashes.
     Charging amount is not enough.

→ Expose the product to the light to charge.
(To p.16)

Battery Indicator

BEFORE USE

Charge by Light (Solar Charge)

This product works with battery (rechargeable battery) which charges the electricity generated by solar panel.

●Solar panel is united with dial.

●When the dial gets enough light, it generates and charges.

When you use it, please keep it in mind to expose the dial (solar panel) to light.

How to charge

When you take off the product, put it in a bright place getting light.

It can be more stable to use when you expose it to the light for approximately half day a month to charge it.

When you ware it on your wrist, please keep it in mind so that the cuff of clothing does not cover the dial (solar panel) of the product. When the dial (solar panel) hides even partly, generation efficiency decreases.

⚠ Caution

●When you charge the product, the body may become very hot depending on a condition and the environment of the light source. Please be careful not to burn yourself. In addition, please avoid to charge under the following high temperatures.

- On the dashboard of a car parking under hot weather.
- The place close to the heating element such as incandescent lamps.
- The place where the temperature becomes high because of the direct sunlight for long time.

●Liquid crystal panel may become black under the extreme high temperature, but comes back normally if temperature falls.

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CHARGE BY LIGHT (SOLAR CHARGE)

Shortage of and Out of Battery

DISPLAY	CHARGING STATUS	CONDITION OF THIS PRODUCT
H	Good condition	Normal condition
M		
Just "CHG" flashes	Shortage of battery	When just a letter of "CHG" flashes, and other indication lights up as usual, it cannot move to the dive mode. You cannot use it in diving. Other functions are available as usual.
"LOW" or "L" flashes		When "LOW" and "L", sometimes "L" only, flashes, you cannot use the following functions. ・Dive mode ・Direction reading ・Light on ・Sound (such as alarm)
"H", "M", "L" and "CHG" flashes		When "H", "M", "L" and "CHG" flash together, you can use some functions including the indication of the current time.
Just "CHG" flashes (All lights out)		When just "CHG" flashes, and all other indication disappear, you cannot use all functions.
All lights out	Out of battery	All breakdowns. Condition of the initial setting (at the time of factory shipment).

[Note]
●Functions stop if the product becomes out of battery, and all setting returns to the state of the initial setting (at the time of factory shipment). When you set various functions such as the time and the date again, please charge it until display at right side of the screen becomes "M" or "H".
●When you charge the product at the place getting direct rays of the sun and strong light, it may display the charging level higher than the actual one temporarily.

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CHARGE BY LIGHT (SOLAR CHARGE)

Charging Time

Please use the list below as the Standard Time of charge.

◆Time required for charging a battery.

ENVIRONMENT (ILLUMINATION)	CHARGING TIME FROM CHARGING LEVEL WARNING TO THE STATE BECOMING ABLE TO DIVE	CHARGING TIME FROM CHARGING LEVEL WARNING TO THE STATE OF FULL CHARGE
Outdoors on a fine day (50,000 luces)	Approx. 1 hour	Approx. 8 hours
Window side on a fine day (10,000 luces)	Approx. 2 hours	Approx. 30 hours
Window side on a cloudy day (5,000 luces)	Approx. 4 hours	Approx. 60 hours
Indoors under fluorescent light (500 luces)	Approx. 36 hours	— — —

＊Actual charging time varies depending on environment.

Charging Level Warning

Charging level warning is the function to urge charge by alarm and a message when charging amount falls down to a certain battery level in order to use it in diving safely.
As sensors do not work when the charging level becomes "L", you cannot use this product for diving. For example, when you start diving in the state of charging level of "M" and becomes "L" in the middle of diving, the product cannot display the information about the diving. In order to avoid such a dangerous condition, the product has the mechanism to urge charge until it becomes "H" and prevent you from diving until it gets "H" when the charging amount is less than certain battery level.

MODE BEING USED	WARNING TO BE DISPLAYED
Watch Mode and Surface Mode	Letter of "CHG" flashes
Dive Mode	"WARNING！！BATT " is displayed 5 times as flowing, and at the same time, "M" icon at the right side of the screen flashes. Alarm sounds for six seconds.

＊The warning continues until the charging level becomes "H". Meanwhile, you cannot use it for diving.

CHARGE BY LIGHT (SOLAR CHARGE)

Power Saving Function

Power saving function is the mechanism which becomes the power saving state automatically when you put this product in the dark place from 10:00 p.m. to 6:00 a.m.

A power saving state has two phases of level 1 and level 2.

POWER SAVING LEVEL	TIME REQUIRED TO START POWER SAVING	CONDITION
Level 1	Approx. 1 hour after putting it in the dark place.	Sensors stop in Watch Mode.
Level 2	When the state of Level 1 continues for 6 to 7 days.	Only a watch function works.

You can cancel the power saving state by the following methods.

・Depress either button.

・Put the product in the bright place.

・Angle the product to turn on "Auto Light Switch".

[Note]

●When you wear the product, it may become the power saving state when solar panel is covered by a cuff.

●It does not become the power saving state at the time of Stopwatch Mode, Timer Mode and Dive Mode.

●You can turn power saving function on and off.

WATCH MODE

In Watch Mode, you can set and display the current time and a date.
Display is switched by depressing the A button.

Watch Mode 1
Day of the week display

Watch Mode 2
Seconds display

Date — Day of the week

Seconds

6·30 SUN

6·30   50

Time

10:58

10:58

A button
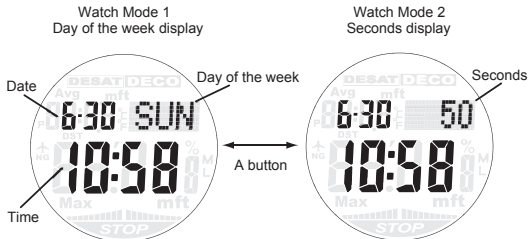
Home City Setting and the Time Adjusting

Select the city of the place using the product as the Home City in the same time zone from 48 cities (31 time zones) in the City Code Table. Also select Standard Time or Summer Time (DST) depending on a country and an area to use the product.

* When you use it in Japan, select the city in Tokyo (TYO).

[Note]
●The Summer Time, also called DST (Daylight Saving Time), is the system adjusting 1 hour faster from the normal time (Standard Time). An enforcement period and the enforcement area of the Summer Time vary according to a country. In addition, there is a country and the area that do not adopt the Summer Time system.

HOME CITY SETTING AND THE TIME ADJUSTING

Home City and Summer Time Setting

1) While in the Watch Mode, continue to depress the A button for more than 2 seconds.
   Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.

2) Select a City by depressing P button or L button.
   Depress P button or L button until it displays the City you need.
   Continue to depress P button or L button for fast-forward.

3) Depress M button.

4) Depress P button and select Summer Time (DST) setting.
   It switches on and off by depressing the P button as follows.
      "DST OFF" : Displays Standard Time.
      "DST ON"   : Displays Summer Time.

5) Depress A button.
   Setup is completed.
   When Summer Time DST) is on, the screen displays "DST" while in Watch Mode.

[Note]
● When you select "UTC" (Universal Time Coordinated) as the Home City, the Summer Time (DST) setting cannot be changed.
● Please refer to "City Code Table" as to the City Code. (p. 88)

HOME CITY SETTING AND THE TIME ADJUSTING

Watch and Date Setting

Please do not set the watch and date before setting Home City.

1) While in the Watch Mode, continue to depress A button for more than 2 seconds.
   Release the button when a City Code and its city name are displayed as flowing following
   the display of "CITY" for about 1 second after "SET" "Hold" flashes.

2) Depress M button and select the item to set up.
   Setup item changes by depressing the M button as following order.
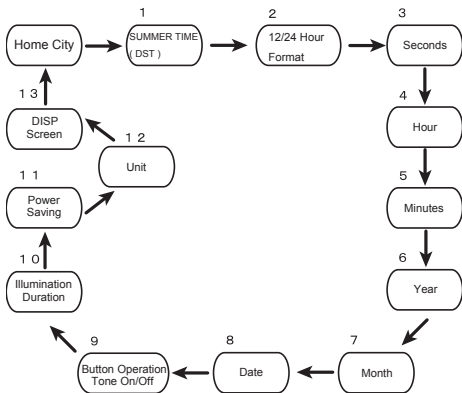
∗ The number expresses the number of times to depress the M button.

HOME CITY SETTING AND THE TIME ADJUSTING

3) In each setup item, depress P button (UP) or L button (DOWN) to change the setup.

Display Item to Change   Button
TYO・・・Change the city code. ・・・・・・・・・・・・・・・・・P or L button
OFF・・・Switch the Summer Time (DST) and Standard Time.・・・・・・P button
12H・・・Switch the 12-hour and 24-hour format. ・・・・・・・・P button
50・・・・Reset the seconds to "00". ・・・・・・・・・・・・・・P button
　　　　　When the seconds count is between 30 and 59,
　　　　　one is added to the minutes count.
10:58・・Change the hour or minutes ・・・・・・・・・・・・・P or L button
2014・・ Change the year.・・・・・・・・・・・・・・・・・・P or L button
2,17・・ Change the month or day.・・・・・・・・・・・・・・P or L button

4) Depress A button.
 Setup is completed.

[Note]

●While the 12-hour format is selected, "P" as p.m. indicator lights up for the times from noon to 11:59 p.m. With 24-hour format, "P" does not light up.
●Once you set the date, it allows different month lengths and leap years. (Full automatic calendar up to 2099.)
●Once you set the year, month and date, the day of the week is set automatically.
●When you use the product at the place except the Home City, please reset similarly the city at which you stay as the Home City.
●You can change unit of temperature and depth when you set the Home City in any place other than Tokyo (TYO). Please refer to "Unit Setting" in page 79 for the way of setting.
●As to the settings after the time and date, please refer to "Other Settings" in page 76.

DIVE MODE (DIVE)

DIVE MODE

No button operation

Watch Mode

Surface Mode

When you ascend to the depth of 1.5m

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When you descend
deeper than 1.5m for less than 20 seconds

WATER

Dive Mode
(No-decompression
Diving)

Page 26

Safety Stop
Screen

Page 30

Dive Mode
Decompression Diving
(Before Decompression
Stop)

PAge 36

Dive Mode
Decompression Diving
(Under Decompression
Stop)

Page 39
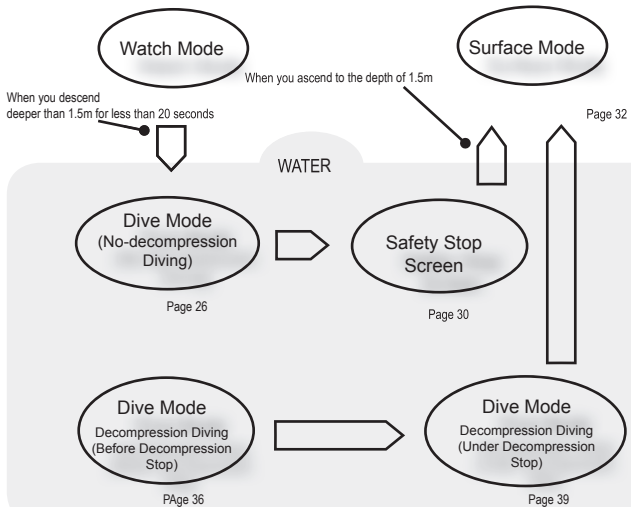
DIVE MODE (DIVE)

No-decompression Diving

→ A Button

→ M Button

→ P Button

→ M Button

⬠ No button operation

THE WATER

Direction reading

Pagw 29

Depth Basic Screen

Pagw 28

No-decompression Limit Basic Screen

Pagw 28

Maximum Depth Screen

Pagw 29

Watch Screen

Pagw 30
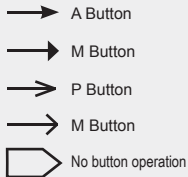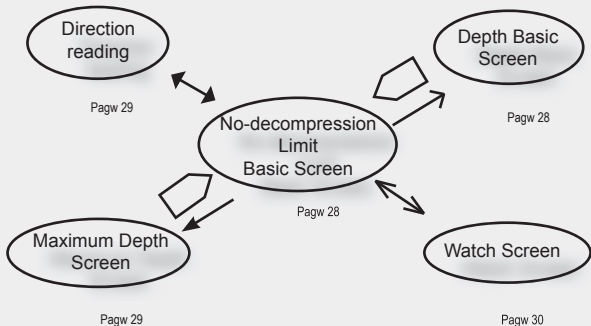
DIVE MODE (DIVE)

In the Dive Mode, it displays important information necessary at the time of scuba diving.

Elapsed dive time

No-decompression limit

Current depth

Tissue Loading Bar Graph
(TLBG)

Oxygen Accumulation (O2) or
Partial Pressure of Oxygen
(PO2) Bar Graph
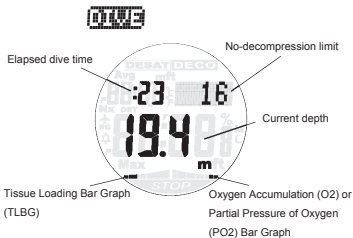
This product enters to Dive Mode automatically within 20 seconds after entry and sensing pressure of the water equivalent to the depth of 1.5m. When you want to change it to Dive Mode at the time of entry immediately, please change it manually by depressing B and M buttons at the same time just before diving. It keeps the Dive Mode for one minute.
When no-decompression limit becomes less than 3 minutes, alarm starts to beep for 3 seconds.

[NOTE]
●This product judges that the diving starts when you descend deeper than 1.5m, and start counting of the elapsed dive time.

DIVE MODE (DIVE)

When in no-decompression diving, the following information is displayed.

○No-decompression Limit (NDL) · · · Possible time to stay at the current depth as
no-decompression.
*Maximum 200 minutes.

○Current Depth (DEPTH) · · · · · Current depth of water. It displays by 0.1m unit
starting from 1.5m.
*Maximum 99.9m.

○Elapsed Dive Time · · · · · · · · Time elapsed since the start of diving.
*Maximum 599 minutes.

○Tissue Loading Bar Graph · · · · Displays degree of risk of the quantity of nitrogen
(TLBG) accumulated in the body tissue with ten phases.

○Oxygen Accumulation (O2) or · · Displays degree of risk of the quantity of oxygen
Partial Pressure of Oxygen (PO2) accumulated in the body or current partial pressure
Bar Graph of oxygen with ten phases.
*Displays either one with higher risk.

○Maximum Depth (MAX) · · · · · Maximum depth reached during the dive.
*Maximum 99.9m

○Current Water Temperature · · · · Displays current water temperature.

○Current Time · · · · · · · · · · · Displays current time with hour, minutes and seconds.
(TIME 2 screen)

○Direction and Angle Value · · · · Direction reading.

DIVE MODE (DIVE)

DIVE

Elapsed dive time

:23 16

19.4
m

No-decompression limit

Current depth

Tissue Loading Bar Graph (TLBG)

Oxygen Accumulation (O2) or Partial Pressure of Oxygen (PO2) Bar Graph

4 Seconds Later | P Button

Elapsed dive time

:23 19.4

16

Current depth

No-decompression limit

Tissue Loading Bar Graph (TLBG)

Oxygen Accumulation (O2) or Partial Pressure of Oxygen (PO2) Bar Graph
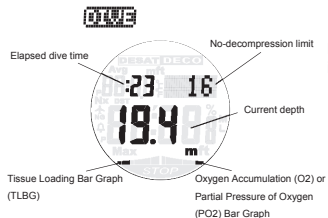
■Basic screen

Basic screen of Dive Mode displays the following information

・Elapsed dive time (Minutes)
・No-decompression limit (Minutes)
・Current depth
・Tissue loading bar graph (TLBG)
・Oxygen accumulation (O2) or partial pressure of oxygen (PO2) bar graph

Display position of the current depth and no-decompression limit interchange when you depress the P button.

Display goes back to the basic screen in 4 seconds automatically.

You can choose the basic screen with "Current Depth" as a basic display or the one with "No-decompression Limit"as a basic display. (Please refer to "DI SP Screen Setting" of "Other Settings" in page 80)

DIVE MODE (DIVE)
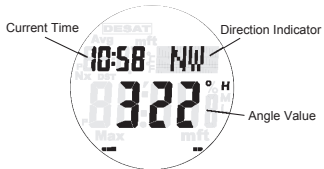
■Depress M button to display digital compass reading screen.

Current Time

Direction Indicator

10:58 NW

322 ° H

Angle Value

Digital compass reading screen displays the following information.
- ・Current time
- ・Direction
- ・Angle value

Depress P button for remeasurement.
Depress M button to return to the basic screen.

Please refer to page 60 as to directionreading.
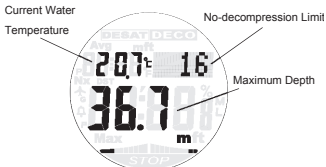
■Depress A button to display maximum depth screen.

Current Water Temperature

No-decompression Limit

20.7℃ 16

36.7 m

Maximum Depth

Maximum depth screen displays the following information.

- ・Current water temperature
- ・No-decompression limit (Minute)
- ・Maximum depth

Display goes back to the basic screen in 4 seconds automatically.

DIVE MODE (DIVE)

■Depress L button to display watch screen.
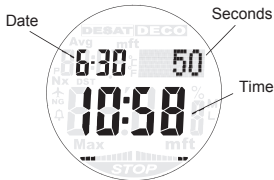
Watch screen displays the following information.

Date

Seconds

Time

- ・Date
- ・Seconds
- ・Hour
- ・Minutes

Watch screen is displayed for 1 minute.
After 1 minute, it goes back to the basic screen automatically. For immediate return to the basic screen, please depress L button.

Safety Stop

This product has a function to recommend "Safety Stop" for 3 minutes at the 5m depth.

Elapsed Dive Time

Countdown

Current Depth

STOP Indicator
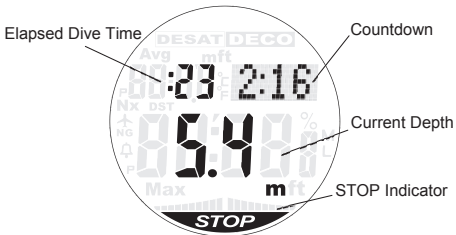
DIVE MODE (DIVE)

When you ascend in a no-decompression diving condition after having descended to the depth deeper than 10m, 3-minute timer starts automatically from the depth of 6.5m and continues while you stay at the depth of 1.5m to 9.9m. We recommend that you perform "Safety Stop" until the 3-minute countdown is completed without ascending to the surface of the water.

1)At the depth of 6.5m, safety stop alarm starts to beep.
・STOP indicator lights up.

2)Countdown timer is displayed as " SAFE → 5m → 03:00", and 3-minute timer starts. Also, the timer displays as "SAFE → 5m → 02:30" and "SAFE → 5m → 02:00" every 30 seconds until the last 1 minute, and it displays only countdown indication for the last 1 minute.

3)As "↑ OK " is displayed for 5 seconds at the time of 3 minutes have elapsed, please start to ascend to the surface of the water.

Safety Stop completes;
・When 3 minutes have elapsed.
・When you ascend to a depth of less than 1.5m.
・When you descend to the depth deeper than 10m again.
(When you ascend to the depth of 6.5m again after descending to the depth deeper than 10m again, the countdown begins all over again.)

DIVE MODE (DIVE)

Surface Mode

Surface Mode is a display mode when residual nitrogen is still in the body tissue after diving.

SURF.T:36MIN

Desaturation Time

DESAT DECO

Surface Interval Time
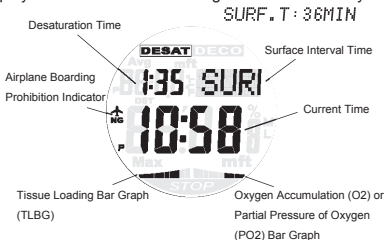
1:35 SURI

Airplane Boarding
Prohibition Indicator

10:58

Current Time

Tissue Loading Bar Graph
(TLBG)

Oxygen Accumulation (O2) or
Partial Pressure of Oxygen
(PO2) Bar Graph

In addition to the current time, date and day of the week displayed in a normal Watch Mode, it displays desaturation time and surface interval time.

In addition to the current time, date and day of the week displayed in a normal Watch Mode, it displays desaturation time and surface interval time.
Surface Mode screen displays the following information.
○Desaturation Time (DESAT) · · · The time when nitrogen accumulated in the body tissue
                                  is released outside a body
○Surface Interval Time(SURF. T) · The time elapsed since the last diving.

○Airplane Boarding · · · · · · · Prohibit to board to airplane. (Prohibit it during lighting)
  Prohibition Indicator
○Tissue Loading Bar Graph · · · Displays degree of risk of the quantity of nitrogen
  (TLBG)   accumulated in the body tissue with ten phases.
○Oxygen Accumulation (O2) or · · Displays degree of risk of the quantity of oxygen
  Partial Pressure of Oxygen (PO2) accumulated in the body or current partial
  Bar Graph   pressure of oxygen with ten phases.
                                  *Display either one with higher risk.

DIVE MODE (DIVE)

● When nitrogen and oxygen remaining in the body tissue disappear, Surface Mode returns to Watch Mode automatically.
● Even a state with nitrogen and oxygen remaining in the body tissue, when it passes for 48 hours, the screen returns to the Watch Mode automatically.
● Airplane boarding prohibition indicator continues turning on for 24 hours after diving.
  Even if nitrogen and oxygen remaining in the body tissue disappear and the screen returns to the Watch Mode, the indicator turns on until it passes for 24 hours.

⚠ Warning

Never board to airplane in the following states. The risk to contract decompression sickness increases.
・When the airplane boarding prohibition indicator turns on.
・When desaturation time (DESAT) still remains.

Repetitive Diving

When you descend to the depth deeper than 1.5m again after having changed from Dive Mode to Surface Mode, this product judges it as repetitive diving (A new diving).

● A timing to change to Surface Mode is 10 minutes after you ascend to the depth less than 1.5m

DIVE MODE (DIVE)

Nitrox (EANx) Diving

●EANx : Enriched Air Nitrox (Abbr. : Nitrox)

The mixed gases which raised a ratio of oxygen than compressed air (Fraction of oxygen 21%) of usually use

You can use this product to the diving using usually use compressed air with 21 % fraction of oxygen and EANx with 22 to 50% fraction of oxygen.

In the case of diving using Nitrox (EANx), this product monitors influence on human body with oxygen by the fraction of oxygen and the depth in consideration of oxygen poisoning by the excess oxygen absorbed to the body tissue in addition to the normal diving display.

When it is Nitrox (EANx) diving, the screen displays the following information.

・Nx mark lights up

Nx Mark

Nitrox (EANx) setting with fraction of oxygen 22 to 50% is selected, Nx mark lights up in all mode except Log Mode.

It always monitors oxygen accumulation (O2) and partial pressure of oxygen (PO2) even when using compressed air with fraction of oxygen 21%.

As to the setup of fraction of oxygen, please refer to "Plan Mode, Fraction of Oxygen Setting" in page 58.

DIVE MODE (DECOMPRESSION DIVE)

Dive Mode (Decompression Dive)

Decompression Dive Warning

The warning activates when the no-decompression time is exceeded and decompression stop becomes necessary.

DECO Mark

Elapsed Dive Time

No-decompression Limit

DECO

:23   0

19.4

m   Current Depth

Tissue Loading Bar Graph
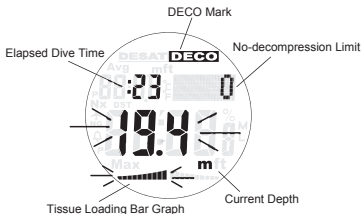
1) DECO Mark lights up, Tissue Loading Bar Graph (TLBG) and Current Depth flash.

2) Alarm sounds for 6 seconds.

3) After that, the screen switches to the Decompression Dive Screen (Before Decompression Stop) automatically. (Page 37)

4) When you complete the decompression stop at the depth required, DECO mark lights off, Tissue Loading Bar Graph (TLBG) switches to light up, and it becomes no-decompression dive.

● If warning occurs even once, it will be recorded on dive log.

DIVE MODE (DECOMPRESSION DIVE)

Decompression Dive (Before Decompression Stop)

When the screen switches to Decompression Dive (Before Decompression Stop),
decompression stop depth is displayed.
It displays the depth every 3m depending on the diving situation. (Decompression stop depth display, 3~33m)
At the time of decompression dive (Before decompression stop), it displays the following information.

○Decompression Stop Depth · · · · · Decompression stop depth is displayed every 3m depending on the diving situation.

○DECO · · · · · · · · · · · · · · Decompression stop mark. When you exceed no-decompression limit, this mark turns on.

○Current Depth (DEPTH) · · · · · · · Current depth of water. It displays by 1m unit starting from 1.5m.   *Maximum 99.9m.

○Elapsed Dive Time · · · · · · · · · Time elapsed since the start of diving.   *Maximum 599 minutes.

○Tissue Loading Bar Graph · · · · · Displays degree of risk of the quantity of nitrogen
 (TLBG)   accumulated in the body tissue with ten phases.

○Oxygen Accumulation(O2) or · · · · · Displays degree of risk of the quantity of oxygen
 Partial Pressure of Oxygen (PO2)   accumulated in the body or current partial
 Bar Graph   pressure of oxygen with ten phases.
                                      *Displays either one with higher risk.

○Total Ascent Time (TOTAL) · · · · · Time required to ascend from present depth to surface at proper speed with decompression stop.

○Maximum Depth (MAX) · · · · · · Maximum depth reached during the dive.   *Maximum 99.9m

○Current Water Temperature · · · · · Displays current water temperature.

○Current Time · · · · · · · · · · · Displays current time with hour, minutes and seconds. (TIME 2 screen)

○Direction and Angle Value · · · · · Direction reading.

DIVE MODE (DECOMPRESSION DIVE)

Decompression Stop
Depth

Elapsed Dive Time

:38 ↑3m

18.5

Current Depth

↑

4 Seconds Later | P Button

↓

Elapsed Dive Time

Current Depth

:38 19.7

3 H

Decompression Stop Depth

■Decompression Dive Screen
(Before Decompression Stop)

Decompression dive basic screen of Dive Mode
(Before decompression stop) displays the
following information.
　・Elapsed dive time (Minutes)
　・Decompression stop depth
　・Current depth
　・Tissue loading bar graph (TLBG)
　・Oxygen accumulation (O2) or partial
pressure of oxygen (PO2) bar graph

Display position of the decompression stop depth
and current depth interchange when you depress
the P button.

Display goes back to the decompression dive
basic screen (Before decompression stop)in 4
seconds automatically.

DIVE MODE (DECOMPRESSION DIVE)

Current Water Temperature

Total Ascent Time

2 0.0℃ T I 6

3 6.7 H

Max m

Maximum Depth

■Depress A button to display maximum depth screen.

Maximum depth screen displays the following information.
・ Current water temperature
・ Total ascent time (TOTAL)
・ Maximum depth

Display goes back to the decompression dive basic screen (Before decompression stop)in 4 seconds automatically.

Current Time

Direction Indicator

P 10:58 ESE

1 1 5°

Max mft

Angle Value

■Depress M button to display digital compass reading screen.

Digital compass reading screen displays the following information.

・ Current time
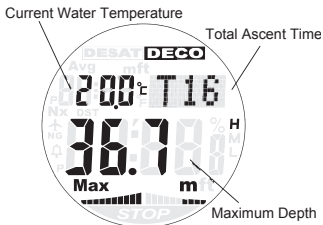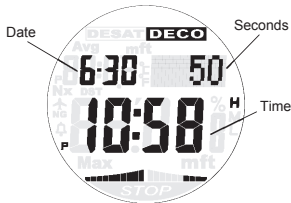・ Direction
・ Angle value

Depress P button for remeasurement.Depress M button once to return to the decompression dive basic screen (Before decompression stop).

DIVE MODE (DECOMPRESSION DIVE)

Date
DECO
Seconds
6:30   50
Time
10:58   H
P
Max
mft
STOP

■Depress L button to display watch screen.

Watch screen displays the following information.

・Date
・Seconds
・Hour
・Minutes

Watch screen is displayed for 1 minute. After 1 minute, it goes back to the decompression dive basic screen (Before decompression stop) automatically. For immediate return to the decompression dive basic screen (Before decompression stop), please depress L button.

Decompression Dive (Under Decompression Stop)

When you ascend to the decompression stop depth, the screen switches to decompression dive (Under decompression stop), "STOP" mark turns on and a decompression stop timer starts.

●Stop range of the decompression stop is an interval of -0.5<Decompression stop depth<+1.0m.
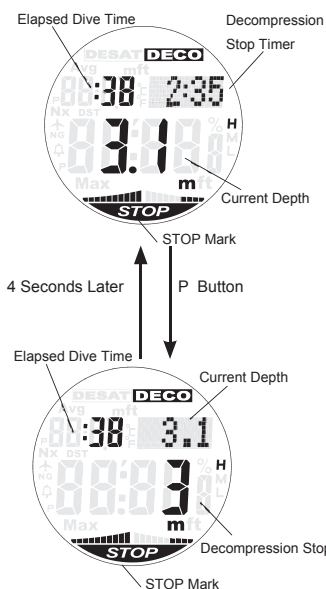 When your depth is within the range, it starts countdown.
(Example) In the case that the decompression stop depth is 3m, interval of 2.5 to 4m is the stop range.

DIVE MODE (DECOMPRESSION DIVE)

At the time of decompression dive (Under decompression stop), it displays the following information.

○Decompression Stop Depth ・・・・ Decompression stop depth is displayed every 3m depending on the diving situation.

○Decompression Stop Timer ・・・・・ It displays the time necessary for decompression stop.

○DECO ・・・・・・・・・・・・・ Decompression stop mark
When you exceed no-decompression limit, this mark turns on.

○Current Depth (DEPTH) ・・・・・・ Current depth of water. It displays by 1m unit starting from 1.5m. *Maximum 99.9m.

○Elapsed Dive Time ・・・・・・・・・ Time elapsed since the start of diving.
*Maximum 599 minutes.

○Tissue Loading Bar Graph ・・・・・ Displays degree of risk of the quantity of nitrogen
(TLBG) accumulated in the body tissue with ten phases.

○Oxygen Accumulation (O2) or ・・・ Displays degree of risk of the quantity of oxygen
Partial Pressure of Oxygen (PO2) accumulated in the tissue or current partial
Bar Graph pressure of oxygen with ten phases.
*Displays either one with higher risk.

○Total Ascent Time (TOTAL) ・・・・ Time required to ascend from present depth to surface at proper speed with decompression stop.

○Maximum Depth (MAX) ・・・・・・ Maximum depth reached during the dive.
*Maximum 99.9m

○Current Water Temperature ・・・・ Displays current water temperature.

○Current Time ・・・・・・・・・・・ Displays current time with hour, minutes and seconds.
(TIME 2 screen)

○Direction and Angle Value ・・・・ Direction reading.

DIVE MODE (DECOMPRESSION DIVE)

Elapsed Dive Time

Decompression
Stop Timer

Current Depth

STOP Mark

4 Seconds Later   P Button

Elapsed Dive Time

Current Depth

Decompression Stop

STOP Mark

■Decompression Dive Screen
(Under Decompression Stop)

Decompression dive basic screen of Dive
Mode (Under decompression stop) displays the
following information.

・Elapsed dive time (Minutes)
・Decompression stop timer (Minutes)
・Decompression stop depth
・Current depth
・Tissue loading bar graph (TLBG)
・Oxygen accumulation (O2) or partial
pressure of oxygen (PO2) bar graph

Display of the decompression timer switches
to the current depth, and the current depth to
decompression stop depth when you depress
the P button.

Display goes back to the decompression dive
basic screen (Under decompression stop) in 4
seconds automatically.

DIVE MODE (DECOMPRESSION DIVE)

Current Water Temperature

Total Ascent Time

DESAT **DECO**

2:0.0°C T16

36.7

Max m

Maximum Depth

STOP

■ Depress A button to display maximum depth screen.

Maximum depth screen displays the following information.

・Current water temperature
・Total ascent time (TOTAL)
・Maximum depth

Display goes back to the decompression dive basic screen (Under decompression stop) in 4 seconds automatically.

Current Time

Direction Indicator

DECO

10:58 ESE °

1:15

Angle Value

Max mft

STOP
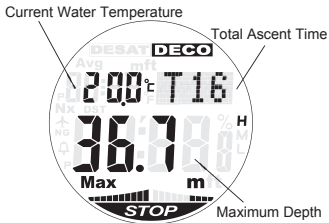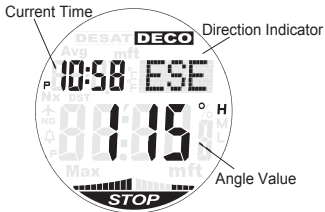
■ Depress M button to display direction reading screen.

Direction reading screen displays the following information.

・Current time
・Direction
・Angle value

Depress P button for remeasurement.
Depress M button to return to the decompression dive basic screen (Under decompression stop).

DIVE MODE (DECOMPRESSION DIVE)

■ Depress L button to display watch screen.
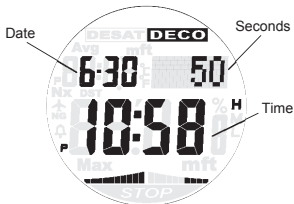
Watch screen displays the following information.

Date

Seconds

Time

・Date
・Seconds
・Hour
・Minutes

Watch screen is displayed for 1 minute.
After 1 minute, it goes back to the decompression dive basic screen (Under decompression stop) automatically. For immediate return to the decompression dive basic screen (Under decompression stop), please depress L button.

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WARNING WHILE DIVING

Warning While Diving

Ascent Rate Warning

It monitors ascent rate and gives warning when the ascent rate exceeds the specified rate. The specified rate is 10m/minute.

Elapsed Dive Time

No-decompression Limit

Ascent Rate Warning (SLO)
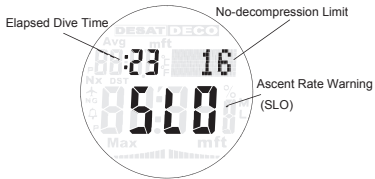
- When the ascent rate exceeds 10m/minute, warning of "SLO" displays in the main portion of the screen and alarm beeps for 3 seconds.

- When the ascent rate becomes the appropriate one, the warning of "SLO" disappears, and the warning is canceled.
- When the ascent rate warning is given twice in one dive, it is recorded on a dive log.

44

WARNING WHILE DIVING

Decompression Stop Violation Warning

When you are in the depth within the range of -0.5<Decompression stop depth<+1.0m, it performs countdown. When the depth becomes -0.5m less than the decompression stop depth while under decompression stop, it gives warning.

1. When current depth becomes less than the range of decompression stop depth, a warning letter of "↓DOWN" flows.

2. DECO mark and STOP mark flash, and alarm sounds for 6 seconds.
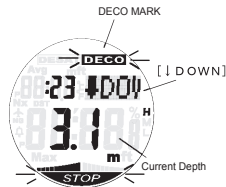
3. It cancels the warning automatically when you return to the depth within the range of the decompression stop depth, but continues warning when you do not return.

●If warning occurs even once, it will be recorded on dive log.

[Note]
●In the case that the decompression stop depth is 3m, it starts warning at the depth less than 2.5m.

Please perform the decompression stop at the depth required. Do not perform the decompression stop at the depth less than the one required.

⚠ Warning

●When you ascend (less than 1.5m depth) ignoring the decompression stop, alarm sounds every 1 minute for 10 minutes after ascent. After 10 minutes, the use of this product for diving becomes impossible until it passes for 48 hours since then.

●During the basic Watch and Surface Mode, DECO mark, STOP mark and the current time flash and is in a condition to be locked.

45

WARNING WHILE DIVING

High Oxygen Accumulation Alarm (High O2 Alarm)

The warning activates when the oxygen accumulation exceeds acceptable range.
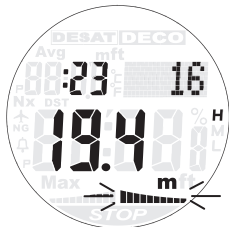
1. Oxygen accumulation (O2) and partial pressure of oxygen (PO2) bar graph flash.

2. Alarm sounds for 6 seconds.

3. The warning continues until the oxygen accumulation (O2) returns to the normal range.

● If warning occurs even once, it will be recorded on dive log.

High Partial Pressure of Oxygen Alarm (High PO2 Alarm)

The warning activates when the partial pressure of oxygen becomes 1.4 or more.

1. Oxygen accumulation (O2) and partial pressure of oxygen (PO2) bar graph flash, and at the same time, the dot display shows the letter of "PO2".

2. Alarm sounds for 6 seconds.

3. The warning continues until the partial pressure of oxygen (PO2) returns to the normal range.

● If warning occurs even once, it will be recorded on dive log.

WARNING WHILE DIVING

Violation Gauge Warning

Violation gauge warning activates when applied to the following conditions;

When the depth exceeds 99.9m.

When the elapsed dive time exceeds 599 minutes.

When decompression is needed at the depth of deeper than 33m while decompression diving.

When decompression stop time or total ascent time exceeds 99 minutes, while decompression diving.

1. "E E E E" mark lights up in a main display portion.

2. Alarm sounds for 3 seconds.

●If warning occurs even once, it will be recorded on dive log.

●When the violation gauge warning occurs, it judges that dangerous diving is performed and it becomes impossible to use it in diving for 48 hours after ascent to surface.

●During the basic Watch and Surface Mode, it displays "E E E E" mark and the current time alternately and is in a condition to be locked.

Alternate Display

47

LOG MODE (LOG)

Log Mode

Watch Mode
Surface Mode

LOG   L—1   L—2   PROF   L—3

LOG   L—1   L—2   PROF   L—3

LOG

HIST

→ A Button
→ L Button
→ P Button
→ M Button
(for more than
2 seconds)
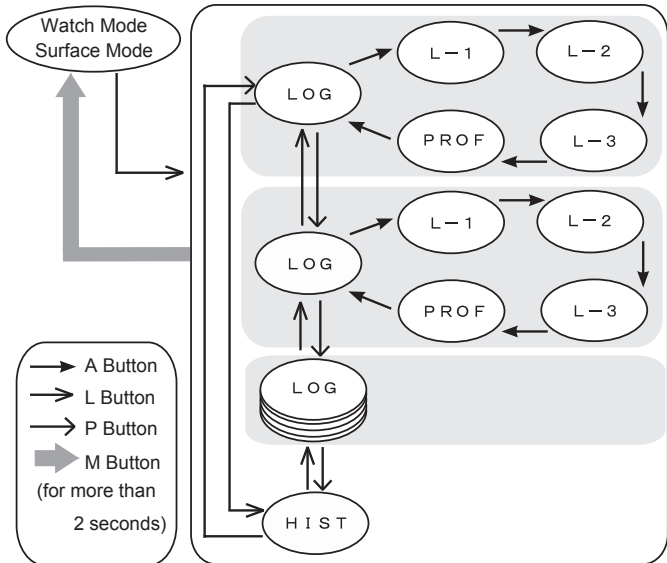
LOG MODE (LOG)

Log can be used in Watch Mode and Surface Mode.
It displays logs of 30 dives from the newest one.

Since a simple diving profile can be checked, you can get to know the depth change according to the dive time elapsed. (Max. 200 minutes / 1 dive)
Also, as a history is displayed on the last of a log, you can check total data.

[Note]
A log is recorded when you dive into the depth deeper than 1.5m for more than 3 minutes.

Enter the Log Mode

Depress L button once at the time of Watch Mode or Surface Mode to Log Mode.
  It switches to Log Mode in 1 second after the screen displays "LOG".
  It displays the newest log once it switches to Log Mode.

Depress P button to display the 2nd newest log data.
  Depress P button furthermore to display the 3rd newest log data.

Depress L button to display history screen.
  Depress L button furthermore to display the oldest log data recorded.

When you depress and hold M button (for more than 2 seconds), it switches to Watch Mode or Surface Mode after flashing "TIME" and "Hold".

When no operation is performed, it returns to Watch Mode or Surface Mode after 2 minutes.

LOG MODE (LOG)

Check a Log

Log consists of five screens.

○LOG

Log No. ・・・Number is given to each dive in order.

Dive date ・・・Year, month and date of dive.

Dive No. ・・・Number showing the order of diving on the day.

Entry time ・・・Time dive started.

○L-1

Exit time ・・・Time dive ended.

Dive time ・・・Time from dive started to dive ended.

Temperature at ・・・Water temperature at maximum depth of dive.
maximum depth

○L-2

Maximum depth ・・・Maximum depth reached during the dive.

Average depth ・・・Average depth during the dive.

Warning occurred ・・・Warning occurred during the dive.

○L-3

Fraction of oxygen used ・・・Fraction of oxygen of tank used during the dive.

○Common items

Tissue loading ・・・Displays the quantity of nitrogen accumulated during the dive with ten
phases.

Oxygen accumulation or ・・・Displays the quantity of oxygen accumulated, or partial
Partial pressure of oxygen　　　pressure of oxygen during the dive with ten phases.

○Dive profile

Graph start time or ・・・Displays graph start time and maximum depth of the dive
Maximum depth　　　　　　alternately.

Graph finish time ・・・Graph finish time of the dive.

LOG MODE (LOG)

Button Operation

LOG No.

2013 ⬅ **6·30 -01-**

Alternate display of year/month and date

10:58¹

Dive No.

Entry Time

■ LOG

When you enter the Log Mode, the newest diving log is displayed.

Log screen displays the following information.

・Log No.
・Dive date
・Dive No.
・Entry time

Depress A button to display "L-1" screen.

Dive Time

Temperature at Maximum Depth **25·7ᵗ DIVI**

11:22
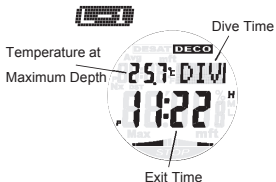
Exit Time

■ L-1

L-1 screen displays the following information.

・Exit time
・Dive time
・Temperature at maximum depth

Depress A button to display "L-2" screen.

LOG MODE (LOG)

■ L-2

L-2 screen displays the following information.

Average Depth

Maximum Depth
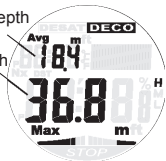
・Maximum depth
・Average depth
・Warning occurred

Depress A button to display "L-3" screen.

●When it displays the depth in the Log Mode, if the depth is less than 50m, it becomes 0.2m unit, and is deeper than 50m, it becomes 0.4m unit.

■ Warning to be recorded in log.
There are 6 warning as follows;

○Ascent Rate Warning	↑SLOW	When the ascent rate exceeds 10m/minute, and the ascent rate warning is given twice continuously.
○Decompression Dive Warning	DECO Mark Lighting	When the no-decompression time is exceeded, and decompression stop becomes necessary.
○Decompression Stop Violation Warning	↓DOWN	When the depth becomes less than the decompression stop depth required while under decompression stop.
○High Partial Pressure of Oxygen Alarm (High PO2 Alarm)	! ! PO2	When the partial pressure of oxygen becomes 1.4 or more.
○High Oxygen Accumulation Alarm (High O2 Alarm)	! ! O2	When the oxygen accumulation exceeds dangerous level.
○Violation Gauge Warning	LIMIT	When the depth exceeds 99.9m. When the elapsed dive time exceeds 599 minutes. When decompression is needed at the depth of deeper than 33m while decompression diving.

LOG MODE (LOG)

Fraction of Oxygen Used

■ L-3

L-3 screen displays the following information.

・Fraction of oxygen used

Depress A button to display "PROF" screen.

LOG MODE (LOG)

PROF

Time Graph Started

Time Graph Ended

Graph

11:08

10:58 ⟷ **36.0**

Max   m

Alternate Display of Depth and Time
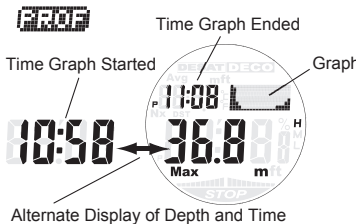
■ Dive Profile (PROF)

Dive profile (PROF) screen displays the following information.

・Time graph ended
・Graph
・Alternate display of time graph started and maximum depth.

Depress A button to display "LOG" screen.

●Whenever you depress the P button, data is updated at intervals of 30 seconds, and the time graph started and the time graph ended progress.
●Whenever you depress the L button, data is updated at intervals of 30 seconds, and the time graph started and the time graph ended return.
 Continue to depress P or L button for fast forward
●Since it is a 30-second interval, there may be no change in the time graph started and the time graph ended.
 The time which can be displayed on a graph is 10 minutes.

When you depress P or L button on a detailed screen, it changes to an old log, a new log, a history, etc.
When you depress and hold M button, it changes from every screen in "LOG" mode to Watch Mode or Surface Mode after "TIME" "Hold" display.

LOG MODE (LOG)

Check a History

HIST — Total Dive Time

Total Number of Dive

1 0:24

36.8 Max

Maximum Depth
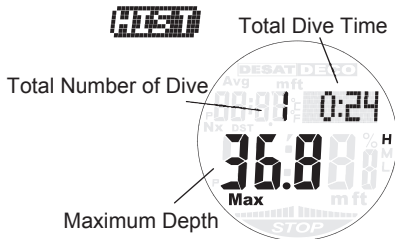
1. Enter the Log Mode.
- Depress L button once at the time of Watch Mode or Surface Mode.
- "LOG" is displayed on a screen and it switches to Log Mode in about 1 second.
- The newest log is displayed when it switches to Log Mode.

2. Depress L button again.
- "HIST" is displayed on a screen and it displays history in about 1 second.

History (HIST) screen displays the following information.

- Total number of dive.
- Total dive time.
- Maximum depth

PLAN MODE (PLAN)

Plan Mode

In Plan Mode, no-decompression limit corresponding to the safety factor in compressed air and Nitrox (EANx) diving can be checked.
Setup of fraction of oxygen (FO2) and the safety factor is performed in Plan Mode.

PLAN

NDL : 20MIN

No-decompression Limit

NDL

30

m
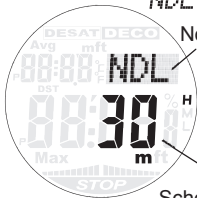
Scheduled Dive Depth

Check a Plan

1. Depress P button once at the time of Watch Mode or Surface Mode.
· "PLAN" is displayed on a screen and it switches to Plan Mode in about 1 second.

2. Depress P button (UP) or L button (DOWN) to set scheduled dive depth "9~48m".
· Scheduled dive depth is displayed at intervals of 3m, and the no-decompression limit calculated with the depth is displayed.
· Continue to depress P or L button for fast forward

[Note]
●No-decompression limit is calculated based on fraction of oxygen (FO2) and safety factor, etc. set at that time.

PLAN MODE (PLAN)

Safety Factor Setting

Safety factor can be selected from 3 steps of levels. Default value is SF- 0.
The safety factor becomes high in order of SF- 0, SF-1 and SF-2.
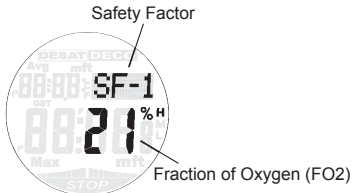
Safety Factor

SF-1

21 %H

Fraction of Oxygen (FO2)

1. Enter the Plan Mode.
・Depress P button once at the time of Watch Mode or Surface Mode.
・"PLAN" is displayed on a screen and it switches to Plan Mode in about 1 second.

2. Depress and hold A button (for about 2 seconds).
・Release the button when "SF-0～2" and "21～50%" are displayed after "SET" "Hold" flashes

3. Every time you depress the M button, it is set up as follows.
・"SF-0" (Default value) → "SF-1" → "SF-2"

4. Depress A button to return to Plan Mode.
・Setup is completed. (As to the details of safety factor, please refer to the page 87.)

●Precautions at safety factor setting.
・Once you set up the safety factor, it becomes effective until you change it.
　The safety factor also influences the calculation under diving and after diving.
・Check of a setting situation and setup/change of the safety factor in Dive Mode cannot be
　performed.

PLAN MODE (PLAN)

Fraction of Oxygen (F02) Setting

1. Enter the Plan Mode.
・Depress P button once at the time of Watch Mode or Surface Mode.
・"PLAN" is displayed on a screen and it switches to Plan Mode in about 1 second.

2. Depress and hold A button (for about 2 seconds).
・Release the button when "SF-02" and "21～50%" are displayed after "SET" "Hold" flashes.

3. Depress P button (UP) or L button (DOWN) to set fraction of oxygen "21%～50%".
・"22%～50%" is Nitrox (EANx).
・Continue to depress P (UP) or L (DOWN) button for fast forward.
It stops once at 21% and 32%.
When you set up to "22%～50%", "Nx" mark lights up.

4. Depress A button to return to Plan Mode.
・Setup is completed.

> ### ⚠ Caution
> ●In Nitrox (EANx) diving, you have to set up fraction of oxygen (FO2) ratio for every dive.
> ●Check of a setting situation and setup/change of the fraction of oxygen in dive mode cannot be performed.

When repetitive diving is performed without carrying out a re-setup of the fraction of oxygen after Nitrox (EANx) diving, it calculates at 50% of the fraction of oxygen by oxygen calculation and at 79% of the fraction of nitrogen by nitrogen calculation for safety.

After the Nitrox (EANx) setup, it returns to a compressed air setup (21% fraction of oxygen) automatically in 24 hours, and "Nx" mark disappears.

ALTITUDE DIVING AND FRESH WATER DIVING

⚠ Warning

●When performing altitude diving, no-decompression limit (NDL) becomes shorter than the one at sea level of 0m.

Please reconfirm NDL in the low state of barometric pressure which passed 15 minutes or more after you ascend to the high place.

Otherwise, you may get decompression sickness.

As this product measures the barometric pressure of the place which the diver moved, and calculates the release of residual nitrogen and oxygen by non-step automatically, it also can be used at high place without any switch operation or a special setup.

Moreover, since depth displayed is based on sea water, it displays somewhat shallower depth in fresh water of the light specific gravity. This also shows that the depth displayed is sea water standard, and at the same time, the water pressure which the diver has received is equal to the pressure at the depth in sea water

Since it calculates on this pressure standard, there is no adverse effect on decompression calculations in fresh water.

DIRECTION READING (COMP)

It measures direction with the bearing sensor built in this product.
Direction abbreviations (16 directions) and angle value are displayed.
・In order to measure correctly, please refer to "Calibrate Bearing Sensor" and "Precautions at Digital Compass Measurement".
・It can be used in Watch Mode, Surface Mode and Dive Mode.

Current Time   Direction Indicator
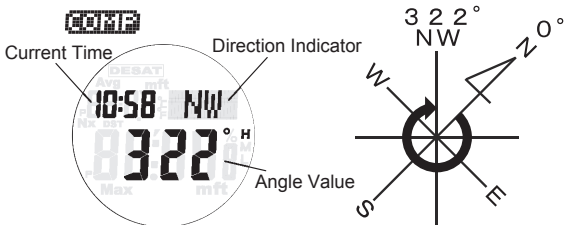
Angle Value

How to get Angle Value

<Meanings of the Direction Abbreviations>

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

DIRECTION READING (COMP)

Digital Compass Measurement

1. When you depress M button once at the time of Watch Mode or Surface Mode, it switches to Digital Compass Mode.
   ・"COMP" is displayed and it switches to Digital Compass Mode in about 1 second.
2. The 12 o'clock position of this product is "Measuring Direction".
3. Depress P button while placing this product on a flat surface.
   ・When it starts digital compass measurement, it shows an abbreviation and an angle value in about 1 second.

Even after displaying the first measuring result, it continues measurement and display in every second for about 60 seconds.
After measurement finishes, the display of the direction abbreviation and angle value changes to "---".

Calibrate a Bearing Sensor

In order to raise the accuracy of measurement, please calibrate the bearing sensor before measurement.
■ How to calibrate the bearing sensor.

"Bidirectional Calibration": Please use it when the angle value has shifted as compared with an accurate compass, and at the preparation before diving.
◆ Precautions about bidirectional calibration
・Do not move the product and keep it placing on a flat surface while calibration is in progress.
・If bidirectional calibration is performed to the every digital compass measurement, a more accurate measuring result can be obtained.
・Please perform bidirectional calibration whenever environment to use changes.
・At the place with strong magnetism such as near home electronics, OA equipment and cellular phone, it may be unable to calibrate correctly.
・Please make sure to select two opposing directions that are 180 degrees opposite each other.

DIRECTION READING (COMP)

■Bidirectional Calibration

1.Continue to depress A button for more than 2 seconds in Digital Compass Mode.
・Release the button if "CALIBRATION" "-1-" is displayed after "SET" "Hold" flashes
"CALIBRATION" is displayed as flowing.
2. epress L button.
・It starts to calibrate the first direction.
・"---" is shown on the display while calibration is being performed.
・When calibration is successful, display shows "Turn 180°", then "CALIBRATION" "-2-" is
displayed.
・When "ERR" "-1-" is displayed, please repeat the same procedure by depressing L button
again.
3. Rotate the product 180 degrees.
4. Depress L button.
・It starts to calibrate the second direction.
・"---" is shown on the display while calibration is being performed.
・When calibration is successful, display shows "OK", then it switches to digital compass
measurement.
・Calibration is completed.
・When "ERR" "-2-" is displayed, please repeat the same procedure starting from 2.

●If nothing is operated for 2 to 3 minutes, the display of the direction abbreviation and angle
value switches to "---", finishes calibration screen automatically in 2 to 3 minutes after, and
returns to Watch Mode, Surface Mode or Dive Mode.

DIRECTION READING (COMP)

Precautions at Digital Compass Measurement

●Magnetic north and True north.

There are two kinds of geography terms showing north, magnetic north and true north.

・Magnetic north : north which compass (bearing magnetic needle) indicates.

・True north : the direction of the North Pole point.

As shown in the right figure, the magnetic north and the true north are not same.

●The "north" of the map generally marketed is true north.

●This product indicates magnetic north.

●Place to use.

If you measure a direction near what has strong influence to geomagnetism, an error arise at a measurement value.

Please use it keeping away from the following items.

・Permanent magnet (Wrist compass, Magnetic necklace etc.)

・Metal (Metal door, Metal locker etc.) ・High-voltage line

・Overhead wires ・Electrical home appliances (Television, Personal computer, Washing machine and Refrigerator etc.)

Accurate measurement cannot be performed in vehicles, such as a train, a ship and an airplane.

Accurate measurement cannot be performed in a room, especially in the building of reinforced concrete construction.

●Place to keep.

When this product becomes magnetized, the accuracy of digital compass measurement may be affected. Please do not keep it near the items which become magnetized strongly such as permanent magnet (wrist compass, magnetic necklace etc.), electrical home appliances (TV, PC, washing machine and refrigerator etc.)

When the measured direction has an error, there is a possibility that the product became magnetized. Please perform the bidirectional calibration.
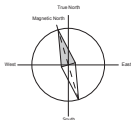
[Note]

●The auto light switch is disabled during the 60 seconds that digital compass measurement is being performed.

●When an alarm sounds or a light is turned on by having depressed B button during the digital compass measurement, it stops the measurement temporarily and resumes the measurement after the alarm stops and the light turned off.

STOPWATCH (STW)

The stopwatch measures elapsed time up to 999 hours, 59 minutes, 59.9 seconds by 1/10 second unit.
When a measuring range is exceeded, it returns to 0 and continues measurement.
Stopwatch can be used at the time of Watch Mode and Surface Mode.

Current Time

Hour

1/10 Second

Minutes

Second

Enter the Stopwatch Mode

When you depress M button twice at the time of Watch Mode or Surface Mode, it switches to the Stopwatch Mode.
"STW" is displayed and it switches to the Stopwatch Mode in about 1 second.

STOPWATCH (STW)

Time Measurement

■ To perform an elapsed time operation

P button Start	→	P button Stop	→	P button Restart	→	P button Stop	→	L button Reset

■ To pause at a split time

P button Start	→	L button Split	→	L button Reset release	→	L button Reset	→	L button Reset

■ To measure two finishes

P button Start	→	L button Split First runner finishes (Display time of first runner)	→	P button Stop Second runner finishes	→	L button Split relese (Display time of first runner)	→	L button Reset

---
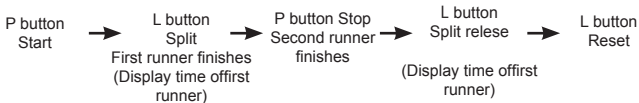
[Note]
- Once you started, stopwatch continues until you depress L button for reset even if you switch to another mode or it reaches the stopwatch limit.
- When you switch to another mode while measuring a split time, it clears the split time and returns to elapsed time measurement.

TIMER (TMR)

You can set up a timer from 1 minute to 24 hours.
When it reaches the time you selected, time up alert sounds for 10 seconds.
Timer can be used at the time of Watch Mode and Surface Mode.

Current Time

Hour

Minutes
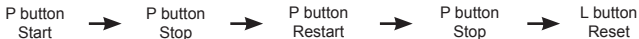
Second

Select a Timer

When you depress M button three times at the time of Watch Mode or Surface Mode, it switches to the Timer Mode.
"TMR" is displayed and it switches to the Timer Mode in about 1 second.

TIMER (TMR)

Setting a Timer

1. Continue to depress A button for more than 2 seconds.
   ・Release the button if "Hour" display of Timer flashes after "SET" "Hold" flashes,
2. Depress M button to select "Hour" or "Minutes".
   ・The one you selected flashes.
3. Depress P button (UP) or L button (DOWN) to set up "Hour" or "Minutes".
   ・Continue to depress P (UP) or L (DOWN) button for fast forward.
   ・When you set up a timer for 24 hours, adjust the display of timer to "0H00'00".
4. Depress A button.
   ・Setting is completed.
   ・If nothing is operated for 2 to 3 minutes, it finishes the setup screen automatically.

Use a Timer

P button
Start → P button
Stop → P button
(Restart) → P button
Stop → L button
Reset
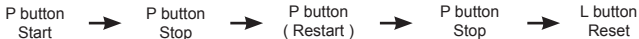
[Note]
●When it reaches the time you selected, time up alert sounds for 10 seconds and the screen returns to the state before using a timer.
●Even if it has changed to other modes, such as dive mode, time up alert sounds.

ALARM / HOURLY TIME SIGNAL (ALM)

Four usual alarms and one snooze alarm can be set up.
In the case of usual alarm, when the time reaches the time preset, alarm sounds for about 10 seconds.
In the case of snooze alarm, when the time reaches the time preset, alarm sounds for about 10 seconds, and repeats it 7 times in every 5 minutes.
You can also turn on an hourly time signal every hour on the hour (00 minutes).

Current Time

Alarm Indicator

P (p.m.) Indicator

Hour

Minutes

AL-1
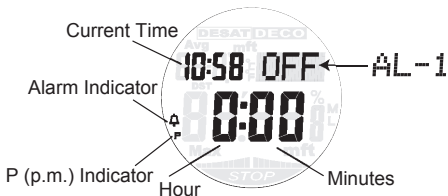
Using Alarm / Hourly Time Signal

When you depress M button four times at the time of Watch Mode or Surface Mode, it switches to the Alarm Mode.
"ALM" is displayed and it shows alarm number such as "AL-1~AL-4", "SNZ" and "SIG" in about 1 second.

ALARM / HOURLY TIME SIGNAL (ALM)

Setting an Alarm Time

1. Depress P button (UP) or L button (DOWN) to find alarm number to set up while in Alarm Mode.

```
   ┌──────┐  ──────→  ┌──────┐  ──────→  ┌──────┐
   │ AL-1 │           │ AL-2 │           │ AL-3 │
   └──────┘  ←──────  └──────┘  ←──────  └──────┘
    ↑  ↓                                  ↑  ↓
   ┌──────┐  ──────→  ┌──────┐  ──────→  ┌──────┐
   │ SIG  │           │ SNZ  │           │ AL-4 │
   │(Time │           │(Snooze)│         └──────┘
   │Signal)│  ←──────  └──────┘  ←──────
   └──────┘
```
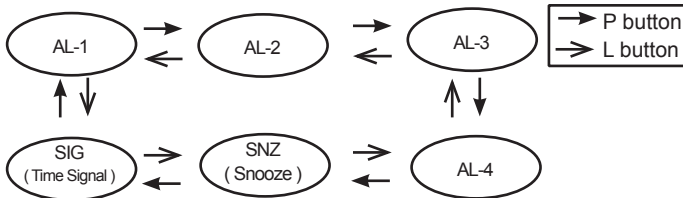
```
──→  P button
──→  L button
```

2. Continue to depress A button for more than 2 seconds.
   ・ Release the button if "Hour" display of Alarm flashes after "SET" "Hold" flashes,
3. Depress M button to select "Hour" or "Minutes".
   ・ The one you selected flashes.
4. Depress P button (UP) or L button (DOWN) to set up "Hour" or "Minutes".
   ・ Continue to depress P (UP) or L (DOWN) button for fast forward.
   ・ When using the 12-hour format, it displays P indicator in p.m.
5. Depress A button.
   ・ Setup is completed.
   ・ Alarm number set up the time becomes "ON".
   ・ If nothing is operated for 2 to 3 minutes, it finishes the setup screen automatically.
   ・ In this case too, the alarm number you tried to set up the time becomes "ON".
   ・ There is no time setting in hourly time signal.

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ALARM / HOURLY TIME SIGNAL (ALM)

Turn Alarm On and Off

1. Depress P button (UP) or L button (DOWN) to find alarm number to set up while in Alarm Mode.
2. Depress A button to turn alarm or time signal on and off.
   ・ When any alarm (one or multiple among five) is turned on, "ALM" indicator lights up.
   ・ The "ALM" indicator does not light up even when snooze alarm or hourly time signal is on.

[Note]

● Depress any button to stop the alarm.
● Even if it is switched to other displays such as dive mode, alarm sounds.
● In the case of snooze alarm, when the time reaches the preset alarm time, alarm sounds for about 10 seconds, and repeats it 7 times in every 5 minutes.
● If the following operations are carried out when snooze alarm is on, a snooze alarm function will be interrupted.
   ・ When you turn the snooze alarm off.
   ・ When you start to set up a snooze alarm time.
   ・ When you start to perform various settings in Watch Mode.
   ・ When you change a setup of summer time in world time while the home city and the world time city are same.

WORLD TIME (WT)

You can view the current time in one of 48 cities (31 time zones) around the world.
The city that is selected in the World Time Mode is called the "World Time City".
Please refer to City Code Table as to the City Code. (p. 88)

Current Time

Selected World Time City

Summer Time

Indicator

Current Time at the
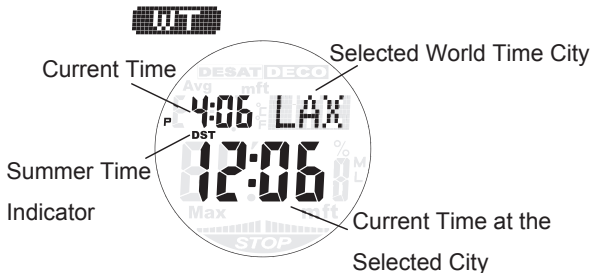
Selected City

Enter the World Time Mode

When you depress M button five times at the time of Watch Mode or Surface Mode, it switches
to the World Time Mode.
• "WT" is displayed and it shows once currently selected City Code and its city name as flowing
in about 1 second. After that it displays just City Code.

WORLD TIME (WT)

View the Time in Another Time Zone

Depress P button (UP) or L button (DOWN) to select a City Code while in World Time Mode.
・ It displays current time of the selected city.
・ Continue to depress P button or L button for fast forward.

Summer Time (DST) Setting

1. Depress P button (UP) or L button (DOWN) to select a City Code while in World Time Mode.

2. Continue to depress A button for more than 2 seconds.
・ Setting switches after "DST" "Hold" "ON" or DST" "Hold" "OFF" flashes.
・ When "DST" Hold" "ON" flashes, summer time (DST) is set up. It displays summer time.
・ When "DST" Hold" "OFF" flashes, summer time (DST) is released. It displays standard time.
・ It displays "DST" when it is in summer time (DST) setting.

[Note]
● The Summer Time, also called DST (Daylight Saving Time), is the system adjusting 1 hour faster from the normal time (Standard Time). An enforcement period and the enforcement area of the Summer Time vary according to a country. In addition, there is a country and the area that do not adopt the Summer Time system.
● You cannot switch between standard time/summer time (DST) while "UTC" is selected as the World Time City.
● The standard time/summer time (DST) setting affects only the currently selected city (time zone).

BAROMETRIC PRESSURE AND TEMPERATURE (BARO)

It displays current barometric pressure and temperature.

BARO

Temperature

$$287^t$$

$$1001$$

Barometric Pressure (hPa)

Barometric Pressure and Temperature Measuring

While in the Watch Mode or the Surface Mode, depress M button six times to enter the Barometer/Thermometer Mode.

- ・"BARO" is displayed and the current barometric pressure and temperature are displayed in about 1 second.
- ・It calculates every 5 seconds. It performs remeasurement by depressing P button.
- ・The screen continues to display for 60 minutes.

■ Barometric Pressure Display
Measuring unit : 1 hPa (hectopascals)
Measuring range : 0~9999 hPa
When the barometric pressure deviates from the measuring range, numeric display changes to "---" and dot display indicates "ERR".

■ Temperature Display
Measuring unit : 0.1℃
Measuring range : -10~+60 ℃
When the temperature deviates from the measuring range, numeric display changes to "---" and dot display indicates "ERR".
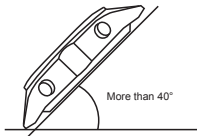
ILLUMINATION

The display is illuminated for easy reading in the dark.
Also, auto light switch turns on illumination automatically when you angle it in the dark.

M Button   P Button

A Button   L Button
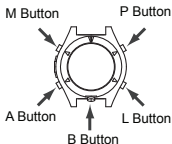
B Button

●Turn on illumination manually.
・Depress B button to turn on illumination.
  Illumination is disabled while an alarm is sounding.
  Illumination is disabled during sensor measurement.

More than 40°

●Turn on illumination automatically. (Auto Light)
・Illumination turns on automatically when you angle the
  product more than 40°while the Auto Light Switch is on.

[Note]
●The auto light switch does not illuminate the display under bright light.
●The auto light function does not operate when under the following conditions.
　・While an alarm is sounding.
　・During a bearing sensor calibration is being performed in Digital Compass Mode.
●The auto light function operates after sensor measurement is completed.
　・Depending on timing, illumination may turn on late.

ILLUMINATION

Turn the Auto Light Switch On and Off

While in the Watch Mode or the Surface Mode, continue to depress B button for more than 3 seconds.
・Dot display indicates "LT" while the auto light switch is turned on.
・Dot display indicates "OFF" while the auto light switch is turned off.

> [Note]
> ●The auto light switch turns off automatically whenever battery power drops and display indicates "CHG".

◆Auto light switch precautions

・Illumination may not turn on if the face of this product is more than 15 degree above or below parallel.
・Wearing this product under your sleeve can cause frequent illumination of the display and may run down the battery.
・Static electricity or magnetic force may interfere with proper operation of the auto light switch. In that case, try moving this product back to the position that is parallel to the ground and then tilt it again.
・You may notice a clicking sound coming from this product when you tilt it. This sound is caused by operation of the auto light switch, and does not indicate a problem with the product.
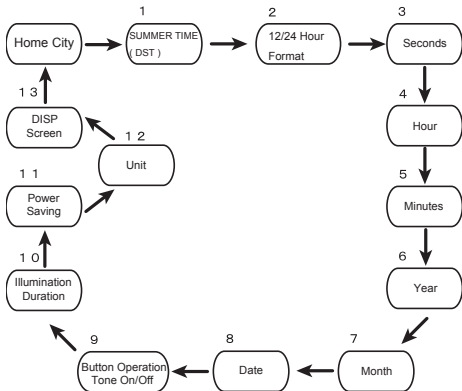
You can change the illumination duration.
Please refer to "Illumination Duration Setting" in Other Settings (Page 78).

OTHER SETTINGS

Other than time settings, you can change the following settings.
・Button operation tone
・Illumination duration
・Turn power saving on and off
・Unit setting
・DISP screen setting

∗ The number expresses the number of times to depress the M button.

OTHER SETTINGS

Turn the Button Operation Tone On and Off

You can turn the button operation tone on or off as desired.

1. While in the Watch Mode or the Surface Mode, continue to depress A button for more than 2 seconds.
   ・Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.
2. Depress M button nine times.
   ・It enters the screen to select the button operation tone on and off.
   ・"Key♪" or "MUTE" is displayed.
3. Depress P button to select "Key♪" (operation tone on) or "MUTE" (operation tone off).
4. Depress A button.
   ・Setting is completed.

[Note]
●Even if you turn off the button operation tone, the alarm, Hourly Time Signal, and time up alert operate normally.

OTHER SETTINGS

Illumination Duration Setting

You can select the illumination duration.

1. While in the Watch Mode or the Surface Mode, continue to depress A button for more than 2 seconds.
   ・Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.
2. Depress M button ten times.
   ・Screen displays "LIGHT".
   ・"1" or "3" lights up in the middle of the screen.
3. Depress P button to select "1" (1.5 seconds duration) or "3" (3 seconds duration).
4. Depress A button.
   ・Setting is completed.

Turn Power Saving On and Off

You can turn power saving on and off.

1. While in the Watch Mode or the Surface Mode, continue to depress A button for more than 2 seconds.
   ・Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.
2. Depress M button eleven times.
   ・Screen displays "POWER SAVING" as flowing and "ON" or "OFF" flashes in the middle of the screen.
3. Depress P button to select "ON" or "OFF".
4. Depress A button.
   ・Setting is completed.

OTHER SETTINGS

DISP Screen Setting

You can set up DISP screen.

You can select "Current Depth" or "No-decompression Limit" as the basic screen of Dive Mode.

1. While in the Watch Mode or the Surface Mode, continue to depress A button for more than 2 seconds.
   ・Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.
2. Depress M button thirteen times.
   ・Screen displays "DISP" and it switches to setup screen in about 1 second.
   ・Screen displays "DEP" "1" or "NDL" "2".
3. Depress P button to select "DEP" "1" (Current Depth) or "NDL" "2" (No-decompression Limit).
4. Depress A button.
   ・Setting is completed.

[Note]
●In the above operation 2., when "TOKYO" is selected as the Home City, "DISP" is displayed by depressing M button twelve (12) times.

OTHER SETTINGS

Unit Setting

You can change unit of temperature and depth when you set the Home City in any place other than Tokyo (TYO).

When you select Tokyo (TYO) as the Home City, you cannot change the unit.

The unit of temperature is Celsius and the one of depth is meter when you select Tokyo (TYO) as the Home City.

1. While in the Watch Mode or the Surface Mode, continue to depress A button for more than 2 seconds.
   ・Release the button when a City Code and its city name are displayed as flowing following the display of "CITY" for about 1 second after "SET" "Hold" flashes.
2. Select any city other than Tokyo (TYO) as the Home City by depressing P or L button.
   ・Continue to depress P or L button for fast forward.
3. Depress M button twelve times.
   ・Dot display indicates "UNIT", "℃" or "℉" is shown in the top of the screen and "m" or "ft" is displayed in the bottom of the screen.
4. Depress P button to select "m" or "ft". Depress L button to select "℃" or "℉".
5. Depress A button.
   ・Setting is completed.

TROUBLESHOOTING

SITUATIONS	CAUSES AND MEASURES
Display is weak.	At the time of low temperature, display may become weak. Please leave it as it is to see how it is going for a while. When a situation does not improve, please consult with your original dealer.
Inside of the glass screen mists.	When cooled suddenly, the inside of glass may mist. If the mist disappears soon, there is no problem. When the mist does not disappear or water remains inside, please stop use immediately and consult with your original dealer.
Log data has been recorded since I bought it.	These are test data left from quality inspection when shipped from the factory. It is not fault or abnormality.
DECO mark and STOP mark are flashing on the water surface.	It is because decompression stop violation was carried out. If it has been less than 10 minutes since the decompression stop violation warning came out, please perform the decompression stop at the depth required again. When 10 minutes or more have passed, you cannot use the product in diving for the next 48 hours.
EEEE mark and time are displayed alternately on the water surface.	It is because the violation gauge warning was given. You cannot use the product in diving for the next 48 hours.
It does not enter Dive Mode.	・Decompression stop violation warning or violation gauge warning was given. You cannot use the product in diving. It returns normal automatically when 48 hours pass after warning is issued. ・The product identifies that it is equivalent to the altitude level of 6,000m. Please leave it for a while or move to a lower altitude place. ・The shortage of battery can be considered. Please check a charge level. Please refer to "Shortage of and Out of battery" (Page 17). When it does not correspond the above cases, failure of a sensor can be considered. Please consult with your original dealer.

TROUBLESHOOTING

SITUATIONS	CAUSES AND MEASURES
The current time display is off by hours.	Your Home City setting may be wrong. Check your Home City setting. Please refer to "Home City and Summer Time Setting" (Page 21).
The current time display is off by one hour.	Check your summer time (DST) setting and adjust it if necessary. Please refer to "Home City and Summer Time Setting" (Page 21).
"ERR" is displayed on the screen while using a sensor.	When sensor or internal circuitry is damaged, "ERR" (error) is displayed on the screen and sensor operation is disabled. ・If "ERR" is displayed while a measurement operation is being performed, restart the measurement. If "ERR" is displayed again, sensor malfunction is considered. ・When "ERR" does not disappear, sensor trouble is considered. Please consult with your original dealer.
"ERR" is displayed after having performed bidirectional calibration	If "ERR" is displayed after showing the calibration screen, sensor malfunction is considered. ・When "ERR" disappears in about 1 second, try to perform the calibration again. ・When "ERR" does not disappear, please consult with your original dealer.
Correct compass measurement cannot be performed.	・Bidirectional calibration is not performed correctly. Please refer to "Calibrate a Bearing Sensor" (Page 61). ・Nearby source of strong magnetism, such as a home appliance, a large steel bridge, a steel beam, overhead wires, move away from large metal objects. Also compass measurement cannot be performed inside a train, boat, etc. Please refer to "Precautions at Digital Compass Measurement" (Page 63).

TROUBLESHOOTING

SITUATIONS	CAUSES AND MEASURES
Different compass measurements give different results at the same place.	Magnetism generated by nearby high-tension wires is interfering with detection of terrestrial magnetism. Move away from the high-tension wires and try it again.
Correct compass measurement indoors cannot be performed.	TV, personal computer, speakers, or some other object is interfering with terrestrial magnetism detection. Move away from the object causing the interference or perform the compass measurement outdoors. Indoor compass measurement is particularly difficult inside ferroconcrete structures. You cannot perform compass measurement inside trains, airplanes, etc.
The time set as the World Time City is off.	Summer time (DST) setting (standard time and summer time) is incorrect. Please refer to "Home City and Summer Time Setting" (Page 21)
"H", "M" and "L" are all flashing.	The product is in the power recovery mode. Battery power will recover in about 15 minutes. Expose the product to bright light for faster recovery. Please refer to "How to Charge" (Page 16). ・Performing multiple sensor in a short period may cause the shortage of battery, and it enters in the power recovery mode. "H", "M" and "L" are all flashing during the power recovery mode. During the mode, as the condition is the same as "Shortage of Battery", the functions which can be used are restricted. After recovery it returns to the usual state. Please refer to "Shortage of and Out of Battery" (Page 17) ・When "H", "M", "L" and "CHG" are all flashing, the battery level is very low. Expose the product to bright light as soon as possible.
Even if it is exposed against light and charged, the battery operating time becomes short.	Since battery (rechargeable battery) is charged by the light which solar panel receives, it is not necessary for periodical battery exchange, but performance deteriorates by repeating of charge and discharge for long time. We recommend you battery exchange if the state interferes with use. Please consult with your original dealer.

MAINTENANCE

■How to maintain this product.

You wear a Dive Computer directly on your body like clothing. In order to use it for a long time, please wipe off any dirt, sweat and water, etc. frequently with a soft cloth. Use this product by keeping it always clean.

When sea water and mud stick, please wash away well with fresh water. Especially after diving in sea water, please wash away well after dipping in fresh water for a while.

When you find abnormalities on belt such as no elasticity, cracking, discoloration, slack, and running out / falling out of the pin of a buckle, please stop use. Please consult with your original dealer on check, repair, or exchange with a new belt.

Scrub and wash the metallic portion of a metal belt and a plastic belt with a soft toothbrush by using thinned neutral detergent with water and soapsuds. Then, please rinse a detergent ingredient well with water and wipe off the water with soft hygroscopic cloth. Also, when you wash, please keep detergent and soapsuds away from the body by rolling "kitchen wrap" around the body.

Please wash the plastic belt with water and wipe off the water with soft cloth. Although a pattern like a spot may come out on the surface of a plastic belt, it does not have the influence on a human body and clothing. Please wipe off with cloth.

If a button is not operated for a long period of time, a motion may worsen. Please touch a button sometimes.

In order to maintain waterproof performance, we recommend you a periodical airtight inspection (standard is 2 to 3 years). When a problem of airtightness is revealed in the airtight inspection, please ask your original dealer for maintenance service, such as exchange of packing seal.

SERVICE AFTER THE SALES

■Precautions when you ask for repair.
・As the all log data currently recorded in the product may be eliminated when it is repaired, please copy the data in a logbook etc.
・When you send it to repair, please specify your request of repair, your name, your address and telephone number, and send it to your original dealer.

■ Reserving period of parts.
Our company reserves the performance parts (the parts required to maintain the function of the product) for dive computer repair for at least seven years after the production is discontinued. Since repair may be possible depending on a problem even after this reserving period passes, please consult with your original dealer or authorized distributor of our company.

SPECIFICATIONS

☐ Time accuracy : ±15 seconds a month
Basic functions : Hour, minutes, seconds, year, month, day, day of the week, a.m./p.m. (P), 24-hour format, full auto-calendar (up to year 2099)

☐ Sensor precision
Bearing sensor   :   Within ±10°
Temperature sensor :   Within ±2℃
Pressure sensor   :   ±1% + 0.5m

☐ Measuring interval
Depth measurement   : 1 second
Water temperature measurement   : 1 second
Barometric pressure measurement : 20 seconds

☐ Measuring range
Depth   :   1.5m～99.9m (Based on sea water)
Dive time   :   0～599 min.
Operating barometric pressure   :   More than 460 hPa (Approx. up to 6,000m)
Temperature   :   -10～60℃
Direction   :   0～359°Bearing sensor calibration function
(Bidirectional calibration)

☐ Fraction of oxygen   :   21 (compressed air)～50% (1% interval)

☐ Waterproof   :   100m

☐ Log data   :   30 dives

☐ Stopwatch
Measuring unit   : 1/10 second
Measuring range   : 999 hours 59 minutes 59.9 seconds
Measuring precision : ±0.0006%
Measuring modes   : Time, elapsed time, split time, two finishes

SPECIFICATIONS

☐ Alarm : Time alarm
4usual alarms
1 snooze alarm
Setting unit : Hour, minutes
Alarm sounds for 10 seconds.
Hourly time signal : Electronic sound reports twice every hour on the hour.

☐ Other : LED light. Selectable illumination duration. Full Auto Light. Power Saving
Battery power indicator. Button operation tone on and off.

☐ Battery : Rechargeable battery
Operating time from the full charge condition without the solar generation:
Approx. 1 month (1 one-hour dive a day)
☐ Decompression model : A. A. Buhlman   16 tissue

☐ Altitude diving : Barometric pressure linked non-step calculation system
The system measures the barometric pressure of the place where the
diver moves, and calculates accumulation and discharge of nitrogen and
oxygen by non-step according to the barometric pressure.
This calculation system is higher-precision than an altitude rank switching.
☐ Safety factor : 3 level switching system

Setting standard of each safety level. (NDL at the time of 1013hPa)

Setting standard of each safety level. (NDL at the time of 1013hPa)

Depth (m)	9	12	15	18	21	24	27	30	33	36	39	42	45	48
S F－0	200	104	66	46	35	25	20	16	14	11	9	8	7	6
S F－1	200	95	60	44	33	23	19	16	13	11	9	8	7	6
S F－2	180	80	52	39	30	22	17	15	13	11	8	7	6	5

CITY CODE TABLE

Please confirm the time zone you need on the map.
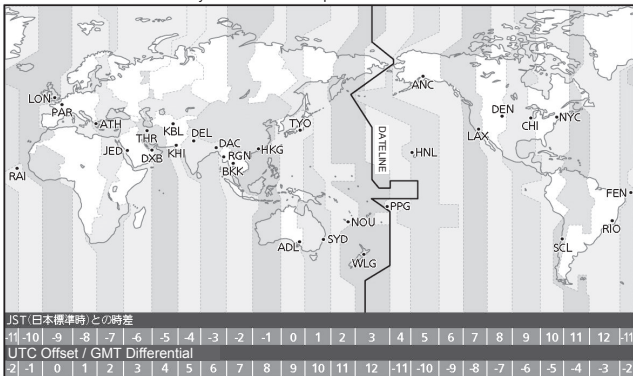
City Code Table

City Code	City	UTC Offset / GMT Differential
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

CITY CODE TABLE

City Code	City	UTC Offset / GMT Differential
JRS	Jerusalem	+2
MOW	Moscow	+3
JED	Jeddah	+3
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5
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
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

CITY CODE TABLE

City Code	City	UTC Offset / GMT Differential
YYT	St. Johns	-3.5
RIO	Rio De Janeiro	-3
FEN	Fernando de Noronha	-2
RAI	Praia	-1

●As of December, 2012, though the time difference (UTC offset) of Moscow has been changed to "+4", it does not correspond with this product. Please use it by setting summer time (DST) forward for 1 hour.

●This list is the city code table of this product.

●When the city code to set up is unknown, please check the time difference (UTC offset) of the place to use and choose the city code with the same time difference.

●Time difference is based on Universal Time Coordinated (UTC).

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