OCEANIC®

PRO PLUS 2

dive computer

operating manual

LIMITED TWO-YEAR WARRANTY

For details, refer to the Product Warranty Registration Card provided.

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Pro Plus 2 Operating Manual, Doc. No. 12-2328
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San Leandro, Ca. USA 94577

TRADEMARK NOTICE

PATENT NOTICE

U.S. Patents have been issued, or applied for, to protect the following design features:
Dive Time Remaining (U.S. Patent no. 4,586,136), Data Sensing and Processing Device (U.S. Patent no. 4,882,678), Air Time Remaining (U.S. Patent no. 4,586,136), and Variable Ascent Rate Indicator (U.S. Patent no. 5,156,055). User Setable Display (U.S. Patent no. 5,845,235) is owned by Suunto Oy (Finland).

DECOMPRESSION MODEL

The programs within the Pro Plus 2 simulate the absorption of nitrogen into the body by using a mathematical model. This model is merely a way to apply a limited set of data to a large range of experiences. The Pro Plus 2 dive computer model is based upon the latest research and experiments in decompression theory. **Still, using the Pro Plus 2, just as using the U.S. Navy (or other) No Decompression Tables, is no guarantee of avoiding decompression sickness, i.e. "the bends."** Every diver's physiology is different, and can even vary from day to day. No machine can predict how your body will react to a particular dive profile.

CONTENTS

CONTENTS (continued)

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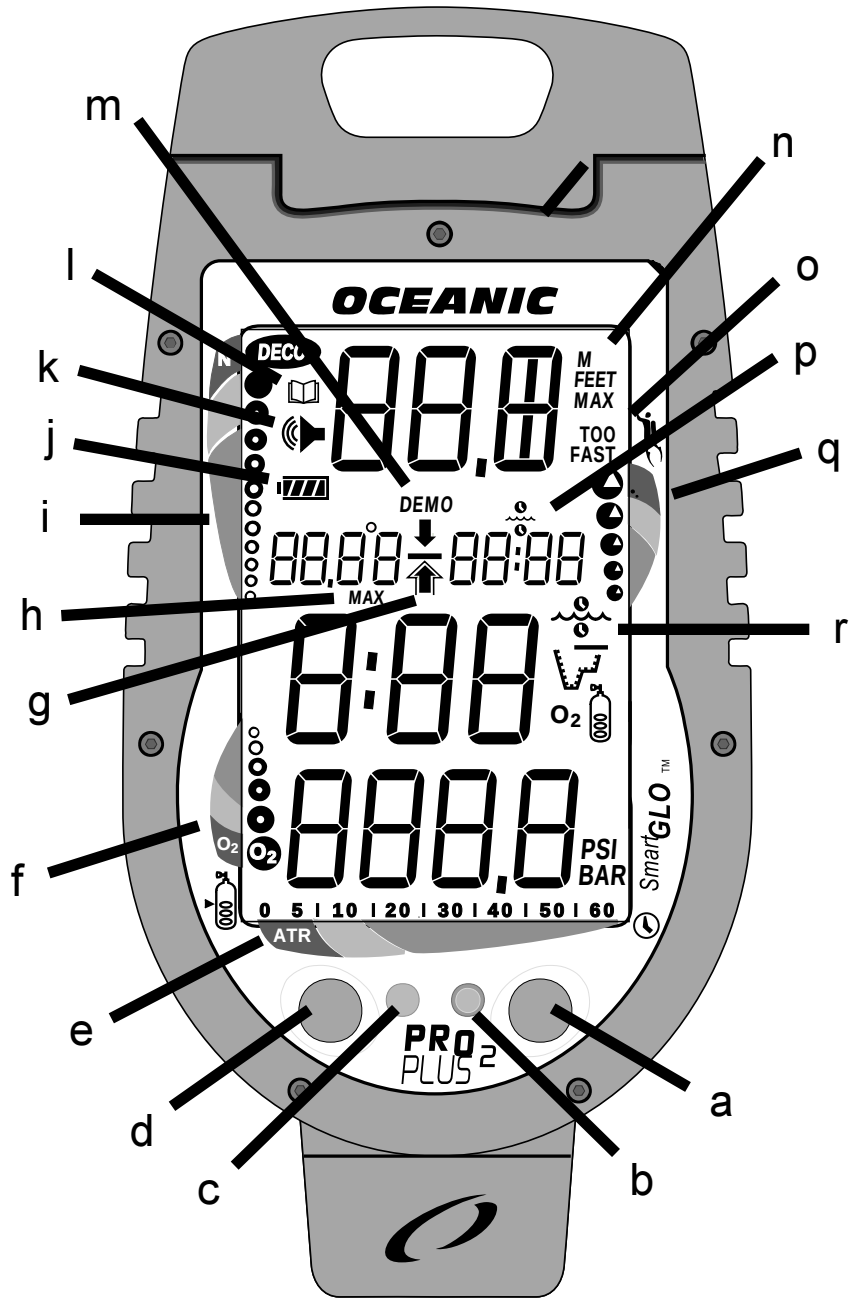
Pay special attention to items marked with this Warning symbol.

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual.



PRO PLUS 2

Components:

a. Select (right) Button
b. LED Warning Light
c. Smartglo Sensing Port
d. Advance (front) Button
e. Air Time Remaining Bar Graph
f. O2 (oxygen) Bar Graph
g. Icon - Descend Arrow
   Icon - Decompression Ceiling
   Icon - Ascend Arrow
h. Graphic - Maximum Depth
i. Tissue Loading Bar Graph
j. Battery Indicator
k. Icon - Alarm (Set Mode)
l. Icon - Log Mode
m. Graphic - Demo Mode
n. Graphic - Depth
o Graphic - Ascent Too Fast
p. Icon - Time
q. Variable Ascent Rate Indicator
r. Icon - Operating Mode

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

FEATURES and DISPLAYS

INTRODUCTION

Welcome to Oceanic and thank you for choosing the Pro Plus 2 !

It is extremely important that you read this Operating Manual in sequence and understand it completely before attempting to use the Pro Plus 2.

It is equally important that you read the Oceanic Dive Computer Safety and Reference Manual (Doc. No. 12-2262) provided with your Pro Plus 2. It contains information that you must become familiar with prior to diving with your Pro Plus 2.

Remember that technology is no substitute for common sense, and a dive computer only provides the person using it with data, not the knowledge to use it.

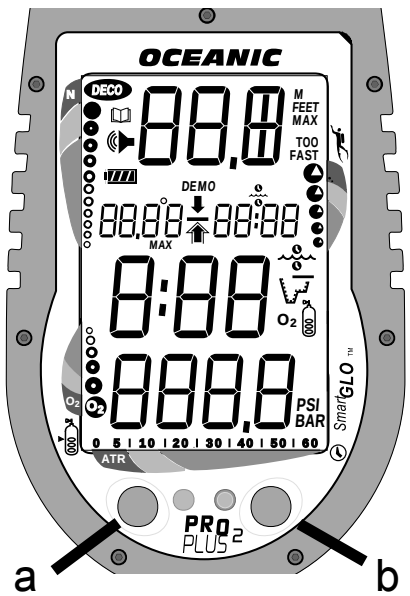


Fig. 1 - Interactive Control

INTERACTIVE CONTROL CONSOLE

The Interactive Control Console consists of two Control Buttons that allow you to select display options and access specific information when you want to see it. They are also used to enter Settings, activate the Backlight, and acknowledge the Audible Alarm.

The Left button is referred to as **Advance** (Fig. 1a) and the Right button as **Select** (Fig. 1b).

BAR GRAPHS

Tissue Loading Bar Graph (TLBG)

The Tissue Loading Bar Graph (Fig. 2a) represents tissue loading of nitrogen, showing your relative no decompression or decompression status. As your depth and elapsed dive time increase, segments will add to the Graph, and as you ascend to shallower depths, the Bar Graph will begin to recede, indicating that additional no decompression time is allowed for multilevel diving.

The Tissue Loading Bar Graph monitors 12 different nitrogen compartments simultaneously and displays the one that is in control of your dive. It is divided into a green No Decompression (normal) zone, a yellow Caution zone (also No Decompression), and a red Decompression (danger) zone.

While you cannot provide a guarantee against the occurrence of decompression sickness, you may choose your own personal zone of caution based upon age, physique, excessive weight, etc., to reduce the statistical risk.

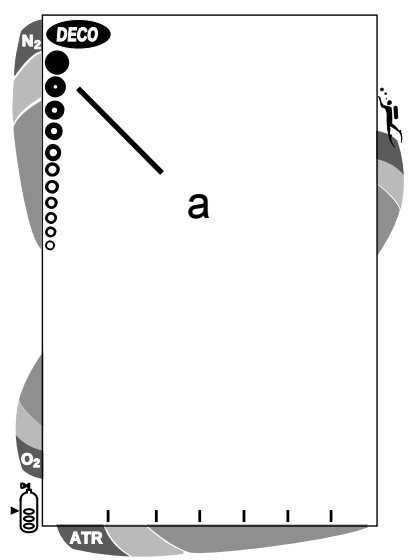


Fig. 2 - TLBG

NOTE: Displays associated with oxygen and the O2 Bar Graph will only appear if FO2 has been set at a value other than 'Air' (e.g., a numerical value).

Oxygen Accumulation Bar Graph (O2BG)

The O2 Bar Graph (Fig. 3a) represents oxygen loading, showing the maximum of either per dive accumulated oxygen, or 24 hour period accumulated oxygen.

As your oxygen exposure (accumulation) increases during the dive, segments will add to the Bar Graph, and as loading decreases, it will begin to recede, indicating that additional exposure is allowed for that dive and 24 hour period.

Variable Ascent Rate Indicator (VARI)

The Variable Ascent Rate Indicator (Fig. 3b) provides a visual representation of ascent speed (i.e., an ascent speedometer). Green is a 'normal' rate, yellow a 'caution' rate, and red is 'Too Fast'. The segments of the VARI represent two sets of speeds which change at a reference depth of 60 FT (18 M). Refer to the chart (Fig. 4) for segment values.

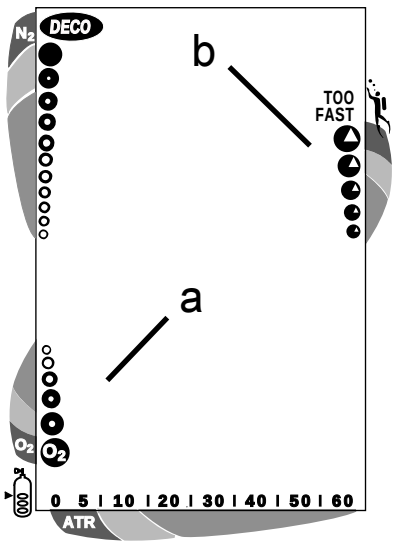


Fig. 3 - O2BG and VARI

Deeper than 60 feet (18 m)			60 feet (18 m) & Shallower		
Segments Displayed	Ascent Rate = FPM	MPM	Segments Displayed	Ascent Rate = FPM	MPM
0	0-20	0 - 6	0	0-10	0 - 3
1	21-30	6.5-9	1	11-15	3.5-4.5
2	31-40	9.5-12	2	16-20	5-6
3	41-50	12.5-15	3	21-25	6.5-7.5
4	51-60	15.5-18	4	26-30	8-9
5	>60	>18	5	>30	>9

Fig. 4 - VARI Values

WARNING: At depths greater than 60 FT (18 M), ascent rates should not exceed 60 fpm (18 mpm). At depths of 60 FT (18 M) and shallower, ascent rates should not exceed 30 fpm (9 mpm).

Air Time Remaining Bar Graph (ATRBG)

The Air Time Remaining Bar Graph (Fig. 5a) provides a graphic representation of the time that you can remain at your present depth and then, following a safe ascent, surface with a predetermined reserve of breathing gas.

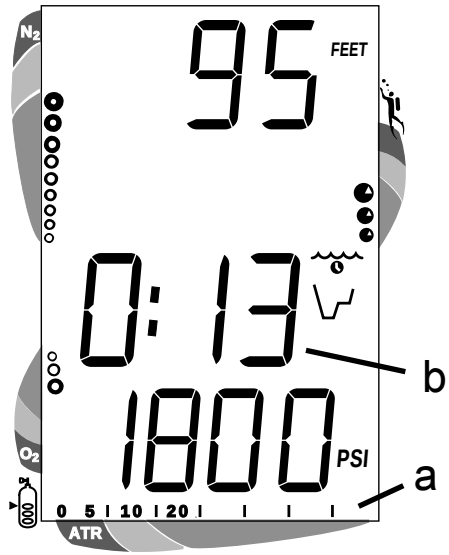


Fig. 5 - ATRBG

This calculation and display is based on your Breathing Gas Consumption Rate that is continuously monitored by the Pro Plus 2, and it takes into account the breathing gas required for a safe ascent including any required decompression stops.

The green, yellow, and red zones adjacent to the bar graph enable you to quickly focus on remaining breathing gas times of 60 minutes and less, based on your pre selected End Pressure Alarm Set Point (described later). The bar graph is more precise as time decreases toward the red zone.

DIVE TIME REMAINING

The Pro Plus 2 constantly monitors three critical pieces of information; no decompression status, oxygen accumulation, and breathing gas consumption rate. Refer to the Oceanic Dive Computer Safety and Reference Manual which describes Dive Time Remaining which is a display that indicates the time that is more critical for you at that particular moment (i.e.; whichever time is the least amount available of the three).

Displayed will be either Time Remaining before reaching the No Decompression limit (Fig. 5b), or Time Remaining before reaching the limit for Oxygen Accumulation, or Time Remaining before reaching the End Pressure Alarm set point.

ALPHA / NUMERIC DISPLAYS

Cylinder Pressure Display

Cylinder Pressure (Fig 6a) is displayed any time the Pro Plus 2 is connected to a pressurized cylinder and in an active operating mode.

Values of pressure are displayed numerically from 10 PSI (.5 BAR) up to 5000 PSI (352 BAR) in increments of 10 PSI (.5 BAR).

Depth Displays

During a dive, the **Current Depth** display (Fig. 6b), indicates depths from 0 to 330 feet (99.9 meters) in 1 foot (.1 meter) increments.

By pressing the Left (Advance) button, the **Maximum Depth** reached during that dive will be displayed in the center/left portion of the display (Fig. 6c).

During a Decompression Dive, the required **Ceiling Stop Depth** is displayed in the center of the screen. Maximum Depth can be viewed by pressing the Left (Advance) button.

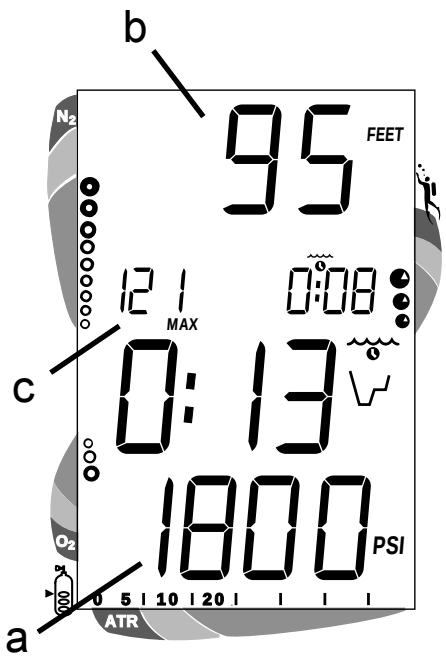


Fig. 6 - Cylinder Pressure and Depth Displays

Time and Date Displays

Time displays are shown in hour:minute format (i.e., 1:16 represents 1 hour and 16 minutes, not 116 minutes!). The colon that separates hours and minutes blinks once per second when the display is indicating real time (e.g., Elapsed Dive Time), and is solid (non-blinking) when times are calculated projections (e.g., Time to Fly).

The **Main Time** display is located in the lower/middle portion of the display (Fig. 7a) and a **second time** display (Fig. 7b) is located in the center/right. Both displays are identified by clock icons.

- Time of Day can be set for 12 hour format (Am/Pm) or 24 hour format.

Date is displayed in the center/left portion of the screen only to identify dive data while it is viewed in the Log Mode (see page 70). When Units of Measure are set for 'Imperial', the Month appears to the left of Day. When set for Metric, the Month appears to the right of Day.

Temperature Display

Ambient Temperature is displayed in the center/left portion of the screen (Fig. 7c) while in the Surface Mode and Log Mode, and can be viewed as part of an Alternate Display when the Left (Advance) button is pressed while in a dive mode. If the Temperature exceeds a value of '99', two dashes (- -) will be displayed on the screen until the unit's temperature decreases to '99'.

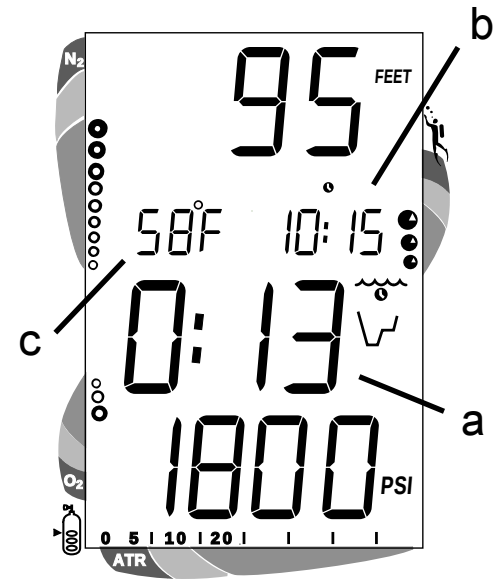


Fig. 7 - Time and Temperature Displays

△ **NOTE: Each numeric and graphic display represents a unique piece of information. It is imperative that you understand the formats, ranges, and values of the information represented to avoid any possible misunderstanding that could result in error. The Informational Displays are described in detail as the various operating modes they appear in are presented throughout this manual.**

AUDIBLE ALARM

LED Warning Light

A red LED Warning Light will light and a Speaker icon will appear when the Audible Alarm emits a tone. They will turn off when the Alarm is acknowledged, and will not activate if the Audible is Set OFF (a user setting).

When warning situations activate the Alarm, the unit will emit a continuous tone for 10 seconds, or until the situation is corrected, or it is acknowledged by the user pressing the Left (Advance) button for 2 seconds. If acknowledged by the user and the situation corrected, the Alarm will sound again upon reentry into the warning situation, or entry into another type of warning situation.

A single short beep (which cannot be disabled) is emitted for the following -

- After the Diagnostic countdown, if everything is okay.
- If the unit automatically returns to Surface Mode from Simulator Mode.
- Upon completion of a Hot Swap battery change with calculations saved.
- Change from Delayed to Full Violation 5 minutes after the dive.

Situations that will sound the Alarm, if it is turned ON (a user setting), include -

- Entry into Decompression Mode.
- Air Time Remaining Bar Graph Alarm (a user setting).
- Air Time Remaining = 5 minutes.
- Air Time Remaining = 0 minutes.
- Turn Pressure Alarm (a user setting).
- End Pressure Alarm (a user setting).
- PO2 => than the Max PO2 Alarm (a user setting), or => 1.60 ATA.
- Descent deeper than the Max Depth Alarm (a user setting).
- Tissue Loading Bar Graph Alarm (a user setting).
- Dive Time Remaining Alarm (a use setting).
- Elapsed Dive Time Alarm (a use setting).
- O2 Accumulation => allowable per dive limit, or limit for a 24 hour period.
- Ascending above a required Decompression ceiling stop depth for less than 5 minutes (referred to as a Conditional Violation).
- Ascent rate exceeds 60 feet/minute (18 meters per minute) if greater than 60 feet (18 meters), or 30 feet/minute (9 meters/minute) at 60 feet (18 meters) and shallower.

During the following situations, the 10 second continuous tone will be followed by a 5 second steady beep that will not turn off when acknowledged, even if it was user Set OFF -

- Ascending above a required Decompression ceiling stop depth for more than 5 minutes (referred to as a Delayed Violation).
- Decompression requires a ceiling stop depth of 70 feet/21 meters or deeper.
- Being on the surface for 5 minutes after a Conditional Violation (Permanent Violation).

SMARTGLO® BACKLIGHT

To activate the Backlight - press the Right (Select) button.

- The Smart Glo® feature senses the intensity of natural light present. If a low level of light is present, the Backlight will activate and illuminate the display for button depression time plus the user set additional Duration time (3 or 7 seconds).
- Press the button again to activate as desired.

NOTE: Extensive use of the Backlight reduces estimated Battery life. Also, the Backlight does not operate during a Low Battery Condition or when downloading data to a PC.

Fig. 8 - Battery Indicator

POWER SUPPLY

The Pro Plus 2 utilizes one (1) 3 volt, CR2 Lithium Battery that should provide from 50 dive hours of operation, if you conduct 1 - one hour dive each time the unit is activated, to over 150 dive hours of operation, if you conduct 3 or more one dives each time the unit is activated.

Battery Indicator

A Battery Indicator (Fig. 8a) provides an indication of Battery condition. The Battery Indicator will be displayed during Surface Mode. It will not be displayed during Dive Mode(s).

Low Battery Condition

- Voltage level is checked upon activation and every 10 minutes during operation.

- When 75 % of the Rated Power has been consumed, only the lower bar of the Indicator will be displayed and the full icon will flash (Fig. 9) once per second as a warning that the Battery is to be replaced prior to conducting any further dives.

- Upon decreasing to a voltage level that will no longer sustain proper operation, the Battery Indicator will flash 5 times followed by shutdown of the unit.

- If a Low Battery Condition exists when the unit is manually activated (by pressing the button), the graphic bAT and the Battery Indicator will appear flashing for 5 seconds followed by shutdown of the unit.

- If the button is not pressed to activate the unit prior to a dive (e.g., the unit activated automatically by immersion in water), and a Low Battery Condition exists, the Battery Indicator will appear flashing as a warning upon descent past 4 feet (1.2 meters). No other information will be displayed and the unit will not enter Dive Mode.

Fig. 9 - Low Battery Condition

- If the unit did not display a Low Battery Condition prior to entering the Dive Mode, and a Low Battery Condition occurs during the dive, there will be sufficient Battery power to maintain unit operation for the remainder of that dive. The Battery Indicator will appear after the dive upon entry into Surface Mode.

- When the Battery is removed, settings and calculations for repetitive dives will be retained, if a new battery can be inserted within 8 seconds. Otherwise the calculations will reset to zero and settings must be reset.

FO2 MODE

Fig. 10 - FO2 set for AIR

After Activation, the Pro Plus 2 will operate as an Air computer without displaying information associated with oxygen calculations, unless it is set for a percentage of oxygen (FO2) other than Air (a numerical value between 21 and 50 %).

When set with an **FO2 value of 'Air'** (Fig. 10), the Pro Plus 2 will perform calculations the same as if FO2 were set for 21% oxygen, internally accounting for oxygen loading for any subsequent Nitrox dives. However, oxygen related displays, warnings, and the O2 Bar Graph will not appear on the display for that dive, or subsequent dives, unless FO2 is set for a numerical value (21 - 50).

Once a dive is made with the unit set as a Nitrox Computer (FO2 set for a numerical value), it cannot be programmed to operate as an Air Computer until 24 hours after the last dive. 'Air' will not be displayed as an option in the FO2 Mode. However, you can set FO2 for 21% for use with Air.

When FO2 is set at a **value of 21%** (Fig. 11), the unit will remain set at 21% for subsequent nitrox dives until FO2 is set to a higher value, or until it automatically turns off and is reactivated.

Fig. 11 - FO2 set for 21%

FO2 50% Default

<u>If the Default function is set to ON</u> (Fig. 12) and FO2 is set to a value 'greater than 21%', the FO2 set point value will automatically revert to 50% 10 minutes after that dive. The Maximum Depth that can be achieved with a PO2 of 1.60 ATA will also be displayed.

- <u>FO2 must therefore be reset for each repetitive nitrox dive</u>, or the value will automatically 'default' to 50(%) and the dives will be calculated based on 50% O2 (50% nitrogen) for oxygen calculations and 21% O2 (79% nitrogen) for nitrogen calculations.

Fig. 12 - FO2 Default ON

<u>If the Default function is set to OFF</u> (Fig. 13), the FO2 value for repetitive dives remains the same as previously set until the set point is manually changed.

WARNING: When the unit shuts off, the FO2 set point will default to AIR regardless if the 50% Default is set ON or OFF. Always set, or verify, the FO2 set point prior to each nitrox dive.

Setting FO2 for a nitrox dive is described on page 25.

Fig. 13 - FO2 Default OFF

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

ACTIVATION and SETUP

ACTIVATION

To Activate the Pro Plus 2, press and release the Left (Advance) Button.

- Upon manual activation, the unit will enter Diagnostic Mode (Fig. 14), displaying all segments of the LCD as 8's, followed by dashes (- -), then a countdown from 9 to 0. Diagnostic Mode checks the display and battery voltage to ensure that everything is within tolerance and functioning properly.

Backup Activation (only if Water Activation is set ON)

As a backup, the Pro Plus 2 will also automatically activate by water contact. This is accomplished by bridging the gap between contacts located on the Button stems and case. The graphic H2O that will be displayed as an indication is described later.

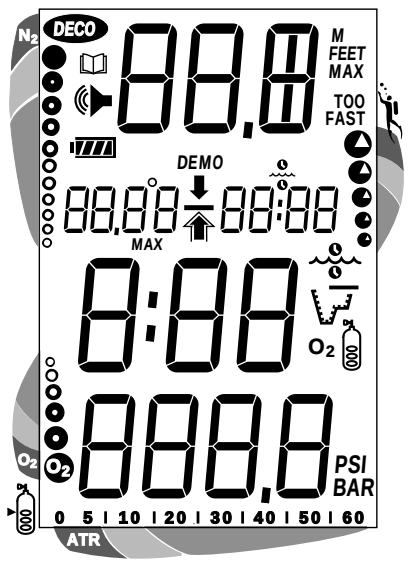


Fig. 14 - Diagnostic Mode

If no dive is made within 2 hours after initial activation, the unit will automatically deactivate. If the wet contacts are still bridged, the unit will reactivate and display the H2O graphic.

WARNING: If the unit is manually activated at elevations higher than 14,000 feet (4,267 meters), it will perform a diagnostic check followed by immediate shutdown.

SURFACE MODE

Surface Mode (Fig. 15), identified by the Surface Time icon, follows Diagnostic Mode after Activation. Information includes Dive Number '0' (no dive made yet), Temperature (and icon), Time of Day (with icon), the Battery Consumption Indicator, and Surface Time (with flashing colon).

Fig. 15 - Surface Mode

NOTE: If the wet contacts are bridged, the graphic 'H2O' will appear in place of the dive number '0' (Fig. 16). After the unit is rinsed and dried, '0' will replace 'H2O'.

To activate the Backlight:

- press the Right (Select) button.

Accessing Other Modes

While in the Surface Mode you can access various other Modes that are described in detail throughout this manual.

- Press the Left (Advance) button to access a sequence that includes Plan, Fly, DeSaturation, and Log Modes.
- Press the Right (Select) button to activate the Backlight.
- Press Both buttons (simultaneously) to access Set and Simulator Modes.

Fig. 16 - Surface Mode (rinse and dry the unit)

Fig. 17 - Set Mode 1

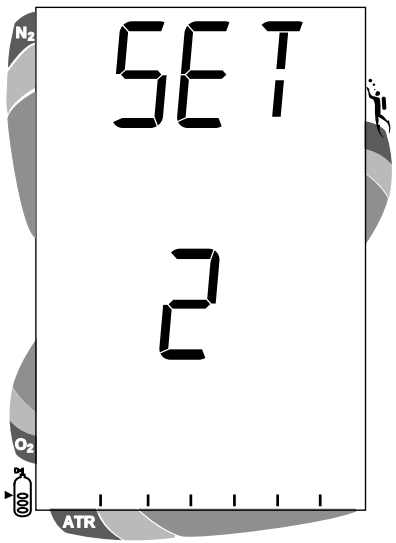


Fig. 18 - Set Mode 2

SET MODES

Settings are divided into 2 categories. Set Mode #1 includes several settings that you would change more often and Set Mode #2 includes those items not likely to change once you set them. Set Mode 2 can be accessed by first entering settings in Set Mode 1, or by bypassing Set Mode 1.

Settings can be made one after the other, or you can access a specific item that you want to set, bypassing others. Set points can be advanced by scrolling (press/hold) or one increment at a time (press/release < 2 seconds)

Set Mode Access Timing

While in Surface Mode, press Both buttons simultaneously and hold -

- after 2 seconds, SET: 1 appears (Fig. 17)
- after 2 more seconds, SET: 2 appears (Fig. 18)
- Access is gained by releasing the buttons during the 2 second window in which SET: 1 or SET: 2 appears. then pressing the Left (Advance) button.
- If the buttons are held longer, and SET 1 and 2 are both bypassed, the unit will go to Simulator (Demo) Mode which is described on page 75.
- While in the Set Mode, if neither button is pressed during a 2 minute period, the unit will revert to Surface Mode.

ENTERING SETTINGS -SET MODE #1

TO SET - FO2 (while in the Surface Mode)
Factory set for AIR, FO2 can also be set to values between 21 and 50% in increments of 1%.

- Press Both buttons simultaneously, release when SET: 1 appears (2 seconds).
- Press and release the Left (Advance) button, **FO2** appears with the set point value flashing (Fig. 19).
- Press and release the Right (Select) button repeatedly to increase the FO2 value from 21 to 50% in increments of 1%, then display AIR again; - or - Press and hold the Right (Select) button to scroll from AIR to 32%, then press and hold again to scroll from 32 to 50%, then AIR.
- For each FO2 value that appears, the display indicates the Maximum Depth that can be achieved for a PO2 of 1.60 ATA (Fig. 20a), or the PO2 Alarm set point. If FO2 is set for AIR, no Depth value is displayed.
- Press the Left (Advance) button to accept the setting and advance to Set Depth Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 19 - Set FO2

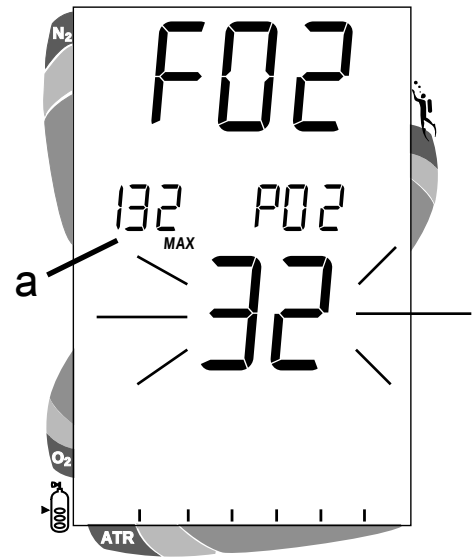


Fig. 20 - FO2 set for 32%

TO SET - MAX DEPTH ALARM

(while in the Surface Mode)

Factory set for 330 feet, the Alarm can be set to values between 30 feet (3 meters) and 330 feet (99 meters) in increments of 10 feet (3 meters).

- Press Both buttons simultaneously, release when SET: 1 appears (2 seconds).
- Press and release the Left (Advance) button, **FO2** appears with the value flashing.
- Press the Left (Advance) button **1 more time.**
- The graphics **FEET MAX** and **dEEP**, and Alarm icon appear with the **Max Depth** set point value flashing (Fig. 21).
- Press and release the Right (Select) button until the desired Depth Alarm value appears; or press and hold to scroll through the set points.
- Press the Left (Advance) button to accept the setting and advance to Elapsed Dive Time Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 21 - Set Max Depth Alarm

TO SET - ELAPSED DIVE TIME ALARM

(while in the Surface Mode)

Factory set for 3:00 (hr:min), the Alarm can be set to values between 0:10 and 3:00 (hr:min) in increments of 5 minutes.

- Press Both buttons simultaneously, release when SET: 1 appears (2 seconds).
- Press and release the Left (Advance) button, **FO2** appears with the set point value flashing.
- Press the Left (Advance) button **2 more times.**
- The graphic **EdT**, and Alarm and Dive Time icons appear with the **Elapsed Dive Time** value flashing (Fig. 22).
- Press and release the Right (Select) button until the desired Alarm value appears; or press and hold to scroll through the set points.
- Press the Left (Advance) button to accept the setting and advance to PC Interface, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 22 - Set Elapsed Dive Time Alarm

NOTE: For more information regarding PC Interface, refer to page 74 of this manual and to documents provided with the PC down-load product.

PC INTERFACE

PC Interface is not a setting, it is included in the Set 1 menu for easy access when data in the unit's memory is to be downloaded (copied) to the PC download software program for storage and viewing.

To download data (while in the Surface Mode)-

- Press Both buttons simultaneously, release when SET: 1 appears (2 seconds).
- Press and release the Left (Advance) button, **FO2** appears with the set point value flashing.
- Press the Left (Advance) button **3 more times.**
- The graphic **PC** appears with a 120 second countdown timer (Fig. 23). Download must be initiated before the timer reaches 00 (within 2 minutes).
- Download is initiated by the external device requesting data transfer (i.e., the PC download program).
- The unit reverts to Surface Mode after completion of the Download operation, or after 2 minutes if neither button is pressed.

Fig. 23 - PC Interface

ENTERING SETTINGS -SET MODE #2

These settings are ones that are not likely to change. To save time at the dive site, verify the set points and adjust them as desired prior to departing on the day's dive trip.

To return to Surface Mode at any time while in Set Mode, press and hold Both buttons for 2 seconds.

TO SET - UNITS OF MEASURE

(while in the Surface Mode)

Factory set for Imperial, Units of Measure can also be set for Metric.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the graphics FT, F, and PSI (or M, C, and BAR) flashing (Fig. 24).
- Press and release the Right (Select) button to toggle between Imperial and Metric units.
- Press the Left (Advance) button to accept the setting and advance to Set Hour Format, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 24 - Set Units of Measure

TO SET - HOUR FORMAT (while in the Surface Mode) Factory set for 12 Hr (12: Am to 11: Pm), the Format can also be set for 24 Hr (0: to 23: hours).

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **1 more time.**
- The graphic **Hour** appears with **12** (or 24) flashing (Fig. 25).
- Press and release the Right (Select) button to toggle between 12 and 24.
- Press the Left (Advance) button to accept the setting and advance to Set Hour, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 25 - Set Hour Format

TO SET - TIME (while in the Surface Mode)
Set for factory local time, the Time can be set to values between 1:00 and 12:59 (AM/PM) or 0:00 and 23:59.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **2 more times.**
- Time appears with the **Hour** value flashing (Fig. 26).
- Press and hold the Right (Select) button to scroll through the Hour values in increments of one hour.
- Press the Left (Advance) button to accept the setting.
- The **Minute** value flashes (Fig. 27).
- Press and hold the Right (Select) button to scroll through the Minute values in increments of one minute.
- Press the Left (Advance) button to accept the setting and advance to Set Year.

Fig. 26 - Set Hour

Fig. 27 - Set Minute

Fig. 28 - Set Year

Fig. 29 - Set Month

Fig. 30 - Set Day

TO SET - DATE (after setting Time)
Factory set for the factory local Date, the Date can be set to values between 01/01/01 and 12/31/20.

- After having set and accepted the Time, the Date appears with the graphic **dAY,** and **Year** value flashing (Fig. 28).
- Press and hold the Right (Select) button to scroll through the Year values in increments of one Year.
- Press the Left (Advance) button to accept the setting.
- The **Month** value flashes (Fig. 29).
- Press and release the Right (Select) button to scroll through the Month values in increments of one month.
- Press the Left (Advance) button to accept the setting.
- The **Day** value flashes (Fig. 30).
- Press and hold the Right (Select) button to scroll through the Day values in increments of one day.
- Press the Left (Advance) button to accept the setting.

TO SET - AUDIBLE ALARM (while in the Surface Mode)
Factory set for ON, the Alarm can be also be set to OFF. This setting also applies to the red LED Warning Indicator that is synchronized with the Audible Alarm.

When set OFF, the Alarm will not sound during the conditions described on page 14.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **7 more times.**
- The graphic **ALM** and Alarm (speaker) icon appear with **On** (or OFF) flashing (Fig. 31).
- Press and release the Right (Select) button to toggle between ON and OFF.
- Press the Left (Advance) button to accept the setting and advance to Set Max TLBG Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 31- Set Audible Alarm

TO SET - MAXIMUM TISSUE LOADING BAR GRAPH (TLBG) ALARM (while in the Surface Mode)

Factory set for DECO (all 8 segments), the Maximum Tissue Loading Bar Graph (TLBG) Alarm can be set to values between DECO (all 12 segments) and 1 segment.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **8 more times.**
- The graphic **ndc** and Alarm (speaker) icon appear with the full **TLBG** flashing (Fig. 32).
- Press and release the Right (Select) button to decrease the number of segments one at a time.
- Press the Left (Advance) button to accept the setting and advance to Set Air Time Remaining Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

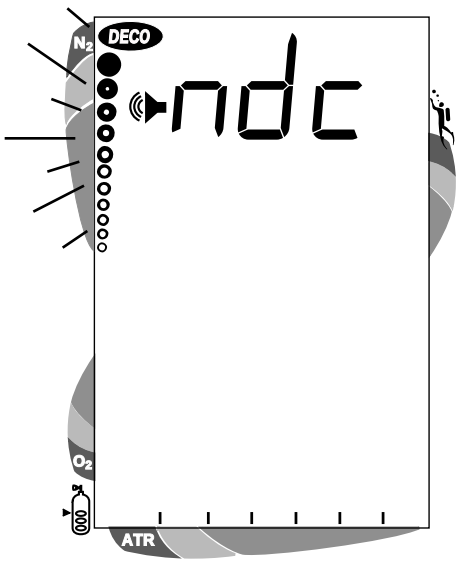


Fig. 32 - Set Max TLBG Alarm

TO SET - AIR TIME REMAINING BAR GRAPH ALARM

(while in the Surface Mode)

Factory set for 5 minutes, the Air Time Remaining Bar Graph Alarm can be set to values of 0, 5, and 10 to 60 minutes in increments of 5 minutes.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **9 more times.**
- The graphic **Atr**, and Alarm (speaker) and Cylinder icons appear with the **Air Time Remaining Bar Graph** value flashing (Fig. 33).
- Press and release the Right (Select) button to decrease the Alarm value in increments of 5 minutes. Or press and hold to scroll.
- Press the Left (Advance) button to accept the setting and advance to Set Turn Pressure Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 33 - Set Air Time Remaining Bar Graph Alarm

TO SET - TURN PRESSURE ALARM

(while in the Surface Mode)

Factory set for 00 PSI/BAR (disabled), the Turn Pressure Alarm can be set to values between 1000 and 3000 PSI (69 to 205 BAR) in increments of 250 PSI (17 BAR).

- Press Both buttons simultaneously, release when SET: 2 appears.
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **10 more times.**
- The graphic **trn** and Alarm (speaker) icon appear with the **Turn Pressure Alarm** value flashing (Fig. 34).
- Press and hold the Right (Select) button to scroll through the Alarm values in increments of 250 PSI (17 BAR).
- Press the Left (Advance) button to accept the setting and advance to Set End Pressure Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 34 - Set Turn Pressure Alarm

TO SET - END PRESSURE ALARM

(while in the Surface Mode)

Factory set for 00 PSI/BAR (disabled), the End Pressure Alarm can be set to values between 300 and 1500 PSI (20 to 104 BAR) in increments of 100 PSI (7 BAR).

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **11 more times.**
- The graphic **End** and Alarm (speaker) icon appear with the **End Pressure Alarm** value flashing (Fig. 35).
- Press and hold the Right (Select) button to scroll through the Alarm values in increments of 100 PSI (6 BAR).
- Press the Left (Advance) button to accept the setting and advance to Set Dive Time Remaining Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 35 - Set End Pressure Alarm

TO SET - DIVE TIME REMAINING ALARM

(while in the Surface Mode)

Factory set for 5 minutes, the Dive Time Remaining Alarm can be set to values between 0:00 and 0:20 (minutes) in increments of 1 minute.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **12 more times.**
- The graphic **dtr**, and Alarm (speaker) and Dive Mode icons appear with the **Dive Time Remaining** value flashing (Fig. 36).
- Press and hold the Right (Select) button to scroll through the Alarm values in increments of one minute.
- Press the Left (Advance) button to accept the setting and advance to Set Max PO2 Alarm, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 36 - Set Dive Time Remaining Alarm

TO SET - MAXIMUM PO2 ALARM

(while in the Surface Mode)

Factory set for 1.60 (ATA), the Maximum PO2 Alarm can be set to values between 1.20 and 1.60 (ATA) in increments of .10 (ATA).

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **13 more times.**
- The graphics **PO2** and MAX, and Alarm (speaker) icon appear with the **PO2** value flashing (Fig. 37).
- Press and release the Right (Select) button to advance the Alarm value in increments of .10 (ATA).
- Press the Left (Advance) button to accept the setting and advance to Set FO2 50% Default, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 37 - Maximum PO2 Alarm

TO SET - FO2 50% DEFAULT

(while in the Surface Mode)

Factory set ON, the FO2 50% Default feature can be set to OFF. The effects of this feature being ON or OFF are described on page 19.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **14 more times.**
- The graphics **FO2** and **50** appear with **ON** (or OFF) flashing (Fig. 38).
- Press and release the Right (Select) button to toggle between ON and OFF.
- Press the Left (Advance) button to accept the setting and advance to Set Backlight Duration, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 38 - Set FO2 50% Default

TO SET - BACKLIGHT DURATION

(while in the Surface Mode)

Factory set for 3 seconds, the Backlight Duration can be set to values of 0 (disabled), 3, or 7 seconds. This is the length of time the Backlight stays On after the button is released.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **15 more times.**
- The graphic **GLO** and Time icon appear with the **Duration** value flashing (Fig. 39).
- Press and release the Right (Select) button to advance the Duration from :00 to :03 to :07 (seconds).
- Press the Left (Advance) button to accept the setting and advance to Set Sampling Rate, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 39 - Set Backlight Duration

NOTE: Sampling Rate is the interval at which data samples are recorded during a dive for subsequent download to the PC program. <u>This setting has no effect on displayed data or data in the unit's viewable Log.</u>

TO SET - PC SAMPLING RATE

(while in the Surface Mode)

Factory set at 15 seconds, the Sampling Rate can be set at values of 2, 15, 30, or 60 seconds, or 2, 5, or 10 feet (.5, 1.5, or 3 meters).

- Press <u>Both buttons</u> simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the <u>Left (Advance) button</u>, the Units screen appears with the set point flashing.
- Press the <u>Left (Advance) button</u> **<u>16 more times.</u>**
- The graphics **SR** and **SECS** appear with the **Sampling Rate** value flashing (Fig. 40).
- Press and release the <u>Right (Select) button</u> advance the Rate one selection at a time.
- Press the <u>Left (Advance) button</u> to accept the setting and advance to Set Digital Gauge Mode, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

Fig. 40 - Set PC Sampling Rate

TO SET - USER SET DIGITAL GAUGE MODE

(while in the Surface Mode)

Factory set OFF, Digital Gauge Mode can also be set ON. The effects of this feature being ON or OFF are described on page 64.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **17 more times.**
- The graphic **GAU** appears with **OFF** (or ON) flashing (Fig. 41).
- Press and release the Right (Select) button to toggle between ON and OFF.
- Press the Left (Advance) button to accept the setting and advance to Set Water Activation, or press and hold Both buttons for 2 seconds to revert to Surface Mode.

NOTE: Once a dive is made with this feature set ON, the setting will be locked ON for 24 hours after the dive. Set Digital Gauge Mode will not appear as a selection during that 24 hour period.

Fig. 41 - Set Digital Gauge Mode

WARNING: If this feature is set for OFF, the Pro Plus 2 must be manually activated prior to commencing a dive.

TO SET - WATER ACTIVATION

(while in the Surface Mode)

Factory set for ON, the Water Activation feature can also be set for OFF (disabled) to prevent inadvertent activation during travel or storage. When set ON, the Pro Plus 2 will automatically Activate when immersed in water.

- Press Both buttons simultaneously, release when SET: 2 appears (4 seconds).
- Press and release the Left (Advance) button, the Units screen appears with the set point flashing.
- Press the Left (Advance) button **18 more times** (14 more times after a dive in Digital Gauge Mode).
- The graphics **ACT** and **H20** appear with **ON** (or OFF) flashing (Fig. 42).
- Press and release the Right (Select) button to toggle between ON and OFF.
- Press the Left (Advance) button to accept the setting and revert to Surface Mode.

Fig. 42 - Set Water Activation

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

PLAN and DIVE MODES

PRE DIVE PLANNING SEQUENCE™

Oceanic strongly recommends that you review the Pre Dive Planning Sequence (PDPS) prior to every dive to help you plan your dive as required to avoid exceeding no decompression or oxygen exposure limits.

This is especially important for repetitive dives when the PDPS indicates adjusted dive times that are available for the next dive, based on residual nitrogen or oxygen accumulation (whichever is in control) following the last dive and surface interval.

The PDPS provides a sequence of theoretical dive times available for depths ranging from 30 feet (9 meters) to 190 feet (57 meters) in 10 foot (3 meter) increments.

During the sequence, no decompression times are only displayed for depths where there is at least 1 minute of theoretical dive time available at the depth, taking into account a descent and ascent rates of 60 feet (18 meters) per minute.

Depth feet (meters)		NDL hours:mins	
30	(9)	4:20	(4:43)
40	(12)	2:17	(2:24)
50	(15)	1:21	(1:25)
60	(18)	:57	(:59)
70	(21)	:40	(:41)
80	(24)	:30	(:32)
90	(27)	:24	(:25)
100	(30)	:19	(:20)
110	(33)	:16	(:17)
120	(36)	:13	(:14)
130	(39)	:11	(:11)
140	(42)	:09	(:09)
150	(45)	:08	(:08)
160	(48)	:07	(:07)
170	(51)	:07	(:06)
180	(54)	:06	(:06)
190	(57)	:05	(:05)

No Decompression Limits for an Air Dive (no dive made yet)

To access the Pre Dive Planning Sequence

(while in the Surface mode) -

- Press the Left (Advance) button **1 time**
- Press and release the Right (Select) button to advance through the Depths/Times, one screen at a time; and then to Surface Mode.
- Press the Left (Advance) button to access Fly Mode.
- The unit will revert to Surface Mode after 2 minutes if no button is pressed.
- With each depth displayed by the Pre Dive Planning Sequence, you will see either predicted no decompression limits (NDLs) based upon your previous dive profiles (if calculated to be nitrogen controlled), or predicted oxygen tolerance limits (OTLs) based upon either a single dive exposure or your 24 hour accumulation of oxygen (if calculated to be oxygen controlled).
- The Maximum Depth allowed for the PO2 Alarm and FO2 set points will also be displayed.
- Depths greater than the maximum depth that can be achieved with a PO2 of 1.60 ATA will not be displayed.
- If the Tissue Loading Bar Graph is displayed (Fig. 43), that next dive is calculated to be controlled by nitrogen loading.
- If the O2BG and O2 symbol are displayed (Fig. 44), it is calculated to be controlled by oxygen loading.

Fig. 43 - Nitrogen Control

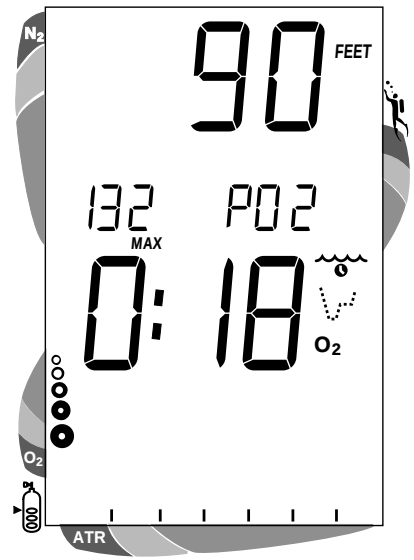


Fig. 44 - Oxygen Control

NOTE: The Pro Plus 2 will store oxygen accumulation calculations for up to 10 dives conducted during a 24 hour period. If the maximum limit for oxygen loading has been exceeded for that day (24 hour period), all of the segments of the O2 bar graph will be displayed flashing .

Depth/Time values will not appear until the O2 bar graph recedes into the green (normal) zone (i.e., your daily oxygen dosage decreases an amount equivalent to the amount accumulated during the latest dive completed).

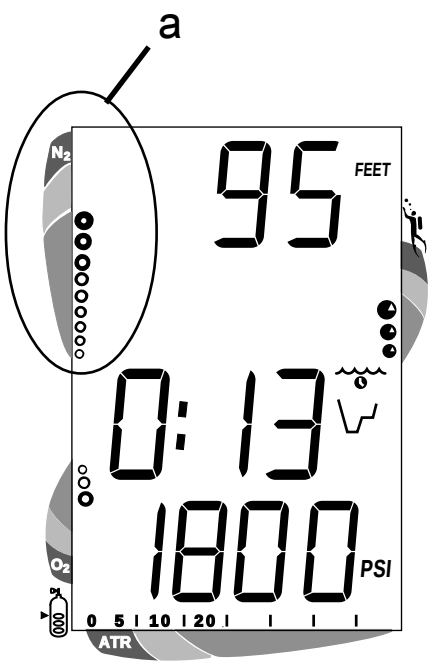


Fig. 45 - Tissue Loading Bar Graph

TISSUE LOADING BAR GRAPH (Fig. 45a)

As your Depth and Elapsed Dive Time increase, the Tissue Loading Bar Graph (TLBG) will add segments (green toward red) to represent the absorption of nitrogen.

While ascending to shallower depths, the number of segments displayed will begin to recede, offering a graphic representation of your multilevel diving capability.

OXYGEN ACCUMULATION BAR GRAPH (Fig. 46a)

If FO2 was set for a numerical value (nitrox), the Oxygen Accumulation (O2) Bar Graph will add segments (green toward red) to represent oxygen accumulation for that dive, or 24 hour period, whichever amount is greater.

VARIABLE ASCENT RATE INDICATOR (Fig. 46b)

The Variable Ascent Rate Indicator (VARI) shows how fast you are ascending. When you exceed the maximum recommended ascent rate for the depth you are at (see below), it will enter the red (Too Fast) zone and you will be alerted by the graphic **TOO FAST**, all segments of the bar graph flashing, an Audible alarm and the red LED Warning Indicator, unless set OFF (Fig. 47). The warnings will stop when your ascent rate is slowed.

- At depths greater than 60 feet (18 meters), maximum recommended rate is 60 feet/minute (18 meters/minute).
- At depths of 60 feet (18 meters) and shallower, maximum recommended rate is 30 feet/minute (9 meters/minute).

NOTE: Refer to page 10 for additional information pertaining to the Variable Ascent Rate Indicator.

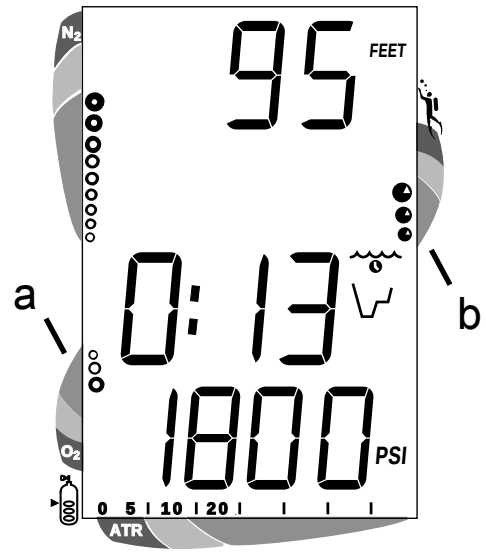


Fig. 46 - O2 Bar Graph & VARI

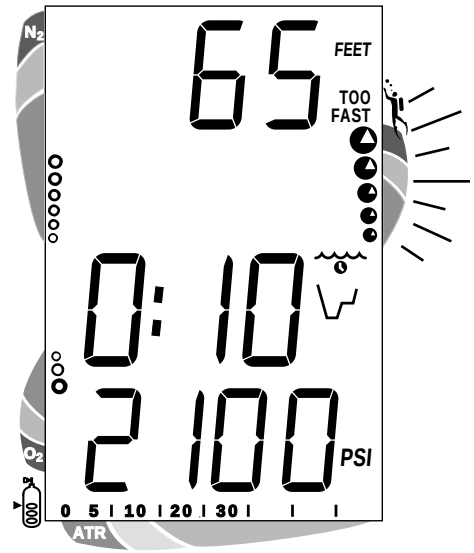


Fig. 47 - Ascent Alarm

Fig. 48 - Air Time Remaining Bar Graph

AIR TIME REMAINING BAR GRAPH

The Air Time Remaining Bar Graph (Fig. 48a) displays remaining breathing gas times of 60 minutes and less. As time remaining decreases, segments are removed from the bar graph from the right (green) toward the left (red) in increments of 5 minutes (from 60 to 0 minutes).

When the time decreases to the Alarm set point, the Audible Alarm will emit a beep and the red Warning LED will flash until acknowledged. You should begin a safe controlled ascent to the surface.

CONTROL OF DISPLAYS

During No Decompression conditions, various displays of information (up to 4) are available. Each provides Depth, Dive Time Remaining, and additional information. The intent of this feature is to provide the diver control of how much information is on the display at any given time during the dive. The diver can change from one display to another as often as desired by pressing the Left (Advance) button, otherwise it does not change. An exception to this is during a 3 minute no decompression dive Safety Stop (described on page 53).

During conditions in which Cautionary type information is displayed (e.g., No Decompression Safety Stop, Decompression, High PO2, etc.), there is a Main Display of important information relevant to the specific condition. The diver can access another display, but it will automatically revert to the Main Display after 3 seconds.

To activate the **Backlight** during a dive, press the Right (Select) button.

- The display will be illuminated as long as the button is depressed, plus it will remain illuminated for the Backlight Duration time that has been set (3 or 7 seconds).
- The Backlight will not activate during a Low Battery condition or if the Backlight duration is set for 0.

NO DECOMPRESSION DIVE MODE

The Pro Plus 2 will enter the No Decompression Dive Mode when you descend deeper than 4 feet (1.2 meters).

No Deco Dive Mode - Display #1 (Fig. 49)

Information includes Current Depth, Dive Time Remaining and icon, Tank Pressure, and the applicable bar graphs.

- Press and release the Left (Advance) button to view Display #2.

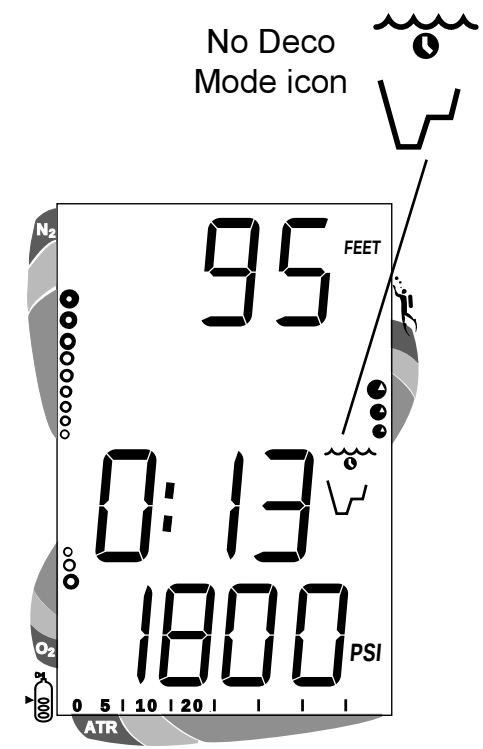
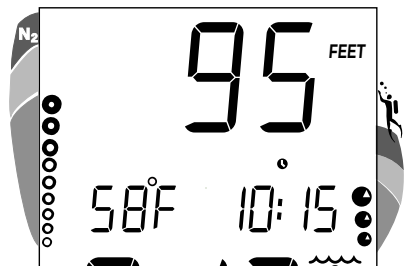


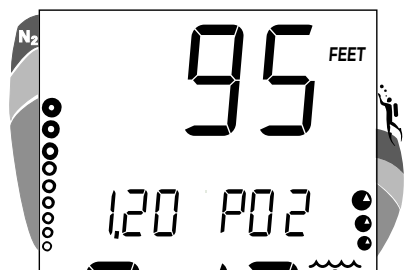
Fig. 49 - No Deco #1

Fig. 50 - No Deco #2



(lower portion same as Fig. 50)

Fig. 51 - No Deco #3



(lower portion same as Fig. 50)

Fig. 52 - No Deco #4

No Deco Dive Mode - Display #2 (Fig. 50)

Information includes Current Depth, Max Depth for that dive and icon, Elapsed Dive Time and icon, Dive Time Remaining and icon, Tank Pressure, and the applicable bar graphs.

- Press and release the Left (Advance) button again to view Display #3.

No Deco Dive Mode - Display #3 (Fig. 51)

Information includes Current Depth, Temperature, Time of Day, Dive Time Remaining and icon, Tank Pressure, and the applicable bar graphs.

- Press and release the Left (Advance) button again to view Display #4 (only if FO2 is set for a numerical value - Nitrox), or revert to Display #1 (if FO2 is set for Air).

No Deco Dive Mode - Display #4 (Fig. 52)

Information includes - Current Depth, current value of PO2 (if a nitrox dive) and PO2 graphic, Dive Time Remaining and icon, Tank Pressure, and applicable bar graphs.

- press the Left (Advance) button to view Display #1.

No Deco Dive Mode - Secondary Display (Fig. 53)

To view, press the Left (Advance) button for 2 seconds.

Information includes Current Depth, Air Time Remaining (and Mode icon), and applicable bar graphs.

The Display will remain on the screen for 3 seconds then revert back to the Display previously selected (#1, 2, 3, 4).

Fig. 53 - No Deco Secondary

No Deco Dive Mode - SAFETY STOP (Fig. 54)

Upon ascending to 20 feet (6 meters) on any No Decompression dive in which depth exceeded 30 feet (9 meters), a short beep will be emitted and a Safety Stop at 15 feet (4.5 meters) will appear on the display with a 3 minute countdown timer that counts down from 3:00 to :00 (min:sec).

The Safety Stop will be displayed until the countdown times out, or the diver descends below 30 feet (10 meters), or the diver surfaces. There is no Penalty if the diver surfaces prior to completing the Safety Stop.

Information includes Current Depth, Stop Depth (15 feet or 4.5 meters), Stop Bar icon, Countdown Timer, Dive Time Remaining, Cylinder Pressure, and applicable bar graphs.

Fig. 54 - No Deco Safety Stop

DECOMPRESSION DIVE MODE

The Pro Plus 2 is designed to help you by providing a representation of how close you are to entering Decompression. Decompression Dive Mode (Fig. 55) activates when theoretical No Decompression time/depth limits are exceeded.

Upon entering Decompression Mode, the Audible Alarm will sound and the red LED Warning Light will flash for 10 seconds (unless set OFF), or until acknowledged.

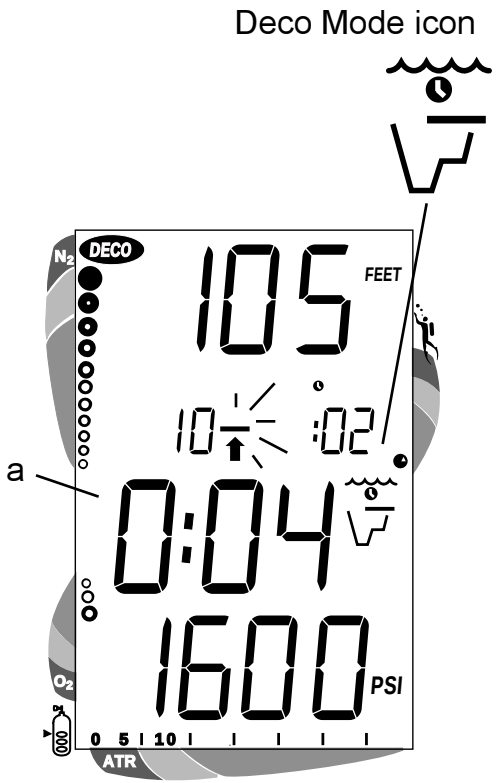


Fig. 55 - Entry into Deco Mode

- Press and hold the Left (Advance) button for 2 seconds to acknowledge/silence the Audible Alarm (unless set OFF).
- The UP Arrow and Deco Bar will flash if you are greater than 10 feet (3 m) deeper than the Required Stop Depth.
- Once you are within 10 feet (3 m) of, and below, the Stop Depth, both Arrows and the Bar appear solid.

Total Ascent Time

Total Ascent Time (Fig. 55a) includes Stop Times required at all required decompression ceilings and vertical Ascent Time calculated at 60 feet (18 meters) per minute for depths deeper than 60 feet (18 meters), and 30 feet (9 meters) per minute for depths of 60 feet (18 meters) and shallower.

Managing Decompression Stops

To fulfill your decompression obligation, you should make a safe controlled ascent to a depth slightly deeper than, or equal to, the Required Ceiling Stop Depth indicated (Fig. 56a) and decompress for the Stop Time indicated (Fig. 56b).

The amount of decompression credit time that you receive is dependent on depth, with slightly less credit given the deeper you are. You should stay slightly deeper (Fig. 56c) than the Required Stop Depth indicated until the next shallower Stop Depth appears. Then, you can slowly ascend to, but not shallower than that indicated ceiling Stop Depth.

- While in Decompression Mode, the Pro Plus 2 will automatically revert to the Main Display after 3 seconds unless the Left (Advance) button is pressed to view another display of information.

Decompression Dive Mode - Main Display #1 (Fig. 56)
Information includes - Current Depth, required Ceiling Stop Depth and Time, Total Ascent Time (and Mode icon), both Arrows and the Deco Bar, and the applicable bar graphs.

- Press and release the Left (Advance) button to view Display #2.

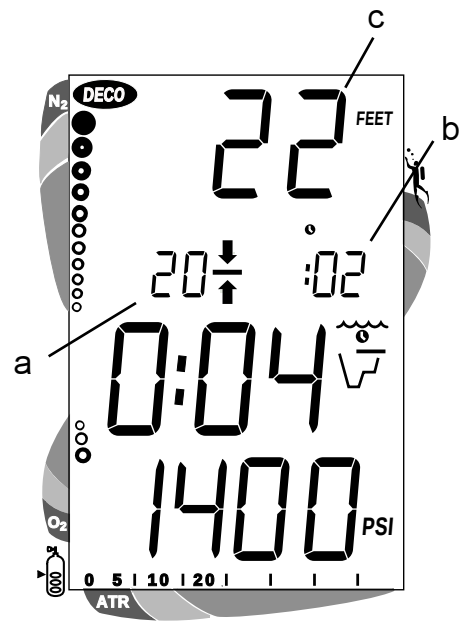
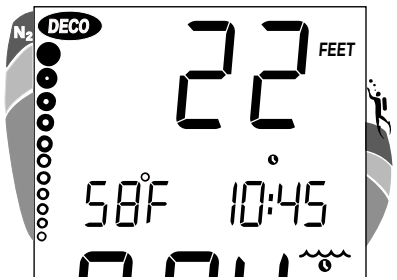


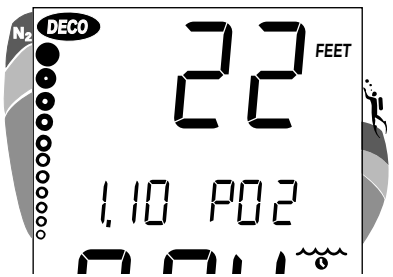
Fig. 56 - Deco #1

Fig. 57 - Deco #2



(lower portion same as Fig. 57)

Fig. 58 - Deco #3



(lower portion same as Fig. 57)

Fig. 59 - Deco #4

Decompression Dive Mode - Display #2 (Fig. 57)

Information includes - Current Depth, Maximum Depth for that dive (and icon), Elapsed Dive Time (and icon), Total Ascent Time (and Mode icon), both Arrows and the Deco Bar, and the applicable bar graphs.

- Press and release the Left (Advance) button again to view Display #3.

Decompression Dive Mode - Display #3 (Fig. 58)

Information includes - Current Depth, Temperature, Time of Day (and icon), Total Ascent Time, both Arrows and the Deco Bar, and the applicable bar graphs.

- Press and release the Left (Advance) button again to view - Display #4 (only if FO2 is set for a numerical value - Nitrox), or revert to Display #1 (if FO2 is set for Air).

Decompression Dive Mode - Display #4 (Fig. 59)

Information includes - Current Depth, the current value of PO2 (if a nitrox dive) and PO2 graphic, Total Ascent Time, Mode icon, both Arrows and the Deco Bar, and applicable bar graphs.

- Press the Left (Advance) button to view Display #1.

VIOLATION MODES

While in Violation Modes the Alternate Displays previously described can be accessed using the Left (Advance) button, and the Backlight can be activated using the Right (Select) button.

- The Pro Plus 2 will automatically revert to the Main Display after 3 seconds unless the Left (Advance) button is pressed to view another display of information.

Conditional Violation Mode (Fig. 60)

I**f you ascend shallower** (Fig. 60a) **than a Required Decompression Ceiling Stop Depth** displayed (Fig. 60b), the Down Arrow, Deco Bar, and Total Ascent Time will flash until you descend below the Required Stop Depth. Also displayed will be Current Depth and applicable bar graphs.

Unless set OFF, the Audible Alarm will emit a continuous tone and the red LED Warning Light will flash for 10 seconds, or until acknowledged by pressing the Left (Advance) button.

If you descend below the required decompression ceiling before 5 minutes have elapsed, the Pro Plus 2 will continue to function in Decompression Dive Mode. In this case, no off-gassing credit will be given, and for each minute above the ceiling $1^{1}/_{2}$ minutes of **Penalty Time** will be added to Required Stop Time.

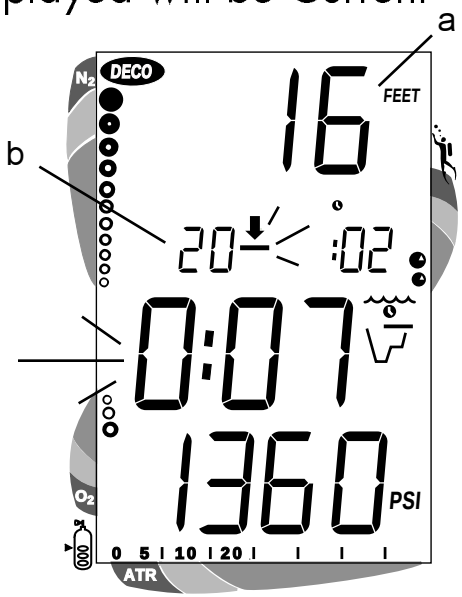


Fig. 60 - Conditional Violation

The added Penalty (decompression) Time will have to be 'worked off' first, before obtaining off-gassing credit. Once the Penalty Time is worked-off, and off-gassing credit begins, required decompression Stop Depths and Time will decrease toward zero. The Tissue Loading Bar Graph will recede into the yellow Caution Zone and the Pro Plus 2 will revert to the No Decompression Dive Mode.

NOTE: Upon entry into the following 3 Delayed Violation Modes, the red LED warning light will light and the Audible Alarm will sound, <u>even if Set OFF.</u> The Alarm cannot be acknowledged (silenced) by pressing the Left (Advance) button.

Fig. 61 - Delayed Violation #1

Delayed Violation Mode #1 (Fig. 61)
(This is a continuation of a Conditional Violation.)

If you remain above the Required Ceiling Stop Depth for more than 5 minutes, the full Tissue Loading Bar Graph and Total Ascent Time will flash until you descend below the Required Stop Depth.

Delayed Violation Mode #2 (Fig. 62)

The Pro Plus 2 cannot calculate decompression times for Stop Depths much greater than 60 feet (18 meters) and offers no indication of how much time spent underwater would result in the need for a greater Stop Depth.

If the Decompression obligation requires a Ceiling Stop Depth between 60 feet (18 meters) and 70 feet (21 meters), the Tissue Loading Bar Graph will flash. Total Ascent Time will still be displayed.

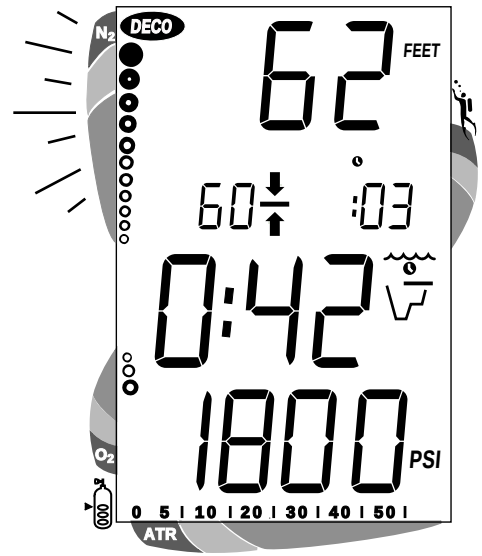


Fig. 62 - Delayed Violation #2

You must ascend to just deeper than, and stay as close as possible to, 60 feet (18 meters) without causing the Total Ascent Time display to flash. When the Required Stop Depth indicates 50 FT/ 15 M, etc., you can ascend to those depths and continue decompressing.

Delayed Violation Mode #3 (Fig. 63)

If you descend deeper than 330 feet (99.9 meters), the accumulated Tissue Loading Bar Graph segments will flash, and the Current Depth and Max Depth displays will only indicate 3 dashes (- - -).

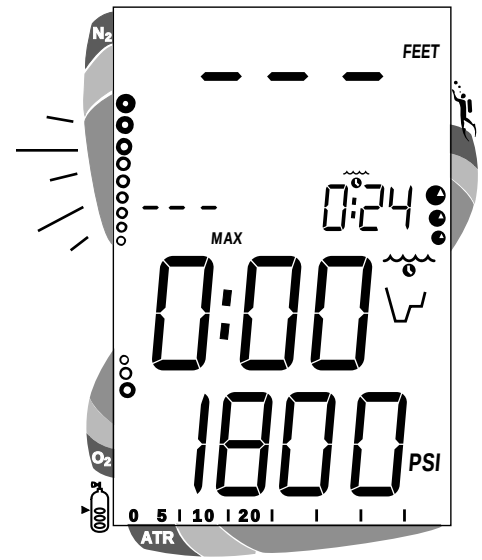


Fig. 63 - Delayed Violation #3

Upon ascending above 330 feet (99.9 meters), the Current Depth display will be restored, however Max Depth will only display 3 dashes for the remainder of that dive. The Log for that dive will display 3 dashes as the Max Depth achieved.

Immediate Violation Mode and Gauge Mode

During a Dive, if a ceiling much greater than 60 feet (18 meters) is required, an **Immediate Violation Mode** will be entered. This situation would be preceded by entering Delayed Violation Mode #2.

The Pro Plus 2 would then operate with limited functions in **Gauge Mode** during the remainder of that dive and for 24 hours after surfacing. Gauge Mode turns the Pro Plus 2 into a digital instrument without any decompression or oxygen monitoring functions.

Only Current Depth, Max Depth, Elapsed Dive Time, and the bar graphs will be displayed (Fig. 64). The full Tissue Loading Bar Graph and O2 Bar Graph will both flash as a warning of this condition.

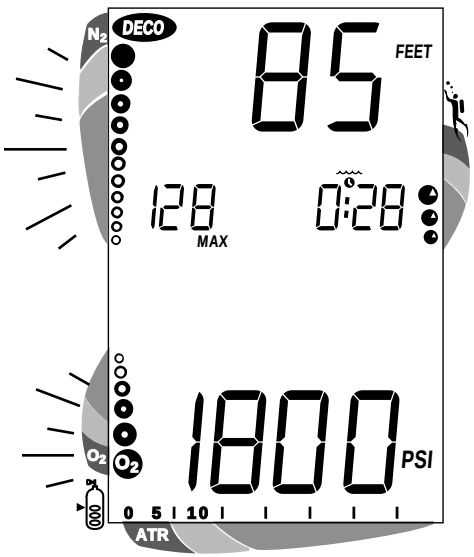


Fig. 64 - Immediate Violation Gauge Mode (underwater)

- Press the Left (Advance) button to view Temperature and Time of Day.
- Press the Right (Select) button to activate the Backlight.

The Pro Plus 2 will also enter an **Immediate Violation Mode** 5 minutes after reaching the surface from a dive in which a Delayed Violation occurred.

On the surface, **Gauge Mode** displays the Dive Number, Temperature, Time of Day, and Surface Interval (Fig. 65). It does not provide the FO2, PDPS, or Time to Fly and Desaturate features.

The countdown timer that appears when you try to access Time to Fly does not represent 'Time to Fly'. It is only provided to inform you of the time remaining before normal Pro Plus 2 operation can resume with full features and functions.

This condition is a Permanent Violation, and in the event that a dive is made during the 24 hour period, a full 24 hour surface interval must then be served before all functions are restored.

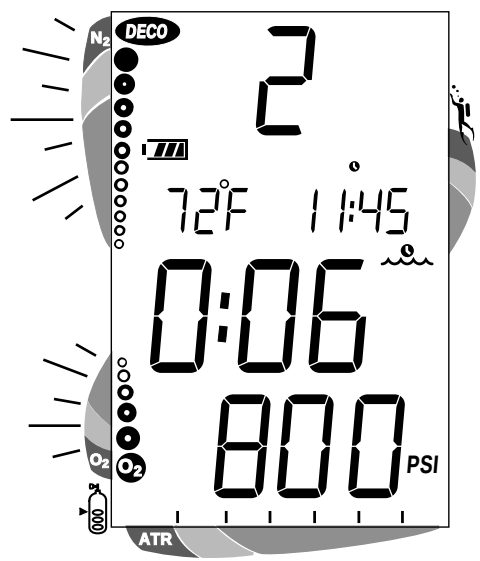


Fig. 65 - Immediate Violation Gauge Mode (after surfacing)

Fig. 66 - PO2 Warning

Fig. 67 - PO2 Alarm

HIGH PO2 DIVE MODE

When partial pressure of oxygen (PO2) becomes equal to, or greater than, **1.40 ATA, or 0.2 ATA less than the PO2 Alarm set point (a user setting);** the red LED warning will flash, the Audible Alarm will sound (unless set OFF), and the current PO2 value, PO2 symbol, O2 segment of the O2 Bar Graph, and UP Arrow will appear on the Main Display as a warning until PO2 decreases. Current Depth and Dive Time Remaining will also be displayed (Fig. 66).

If PO2 continues to increase, the value displayed will increase toward a maximum value of 5.00 ATA in increments of .01 ATA. When it reaches a value of **1.60 ATA**, **or the PO2 Alarm set point (a user setting),** the Audible Alarm will sound (unless set OFF) and the current PO2 value, PO2 symbol, O2 segment of the O2 Bar Graph, and UP Arrow will flash as a warning until PO2 decreases (Fig. 67).

- Press the Left (Advance) button to view the Alternate Displays.
- The unit will revert to the Main Display after 3 seconds.
- Press the Right (Select) button to activate the Backlight.

HIGH OXYGEN ACCUMULATION

The O2 Bar Graph displays either oxygen accumulated during that nitrox dive, or during the repetitive nitrox dives you conduct during that 24 hour period, whichever of the two is greater at that time.

The yellow **Caution Zone** of the O2 Bar Graph offers you a convenient way to consistently monitor how close you are coming to the limits of oxygen exposure. **Use it as a visual reference to place a wider margin of protection between you and the Limits.**

If the theoretical amount of oxygen accumulated equals, or exceeds, the limit for a single exposure, or the exposure limit for a 24 hour period, Oxygen Dive Time Remaining becomes zero (0:00) and the O2 Bar Graph will enter the red **O2 (Danger) Zone** (Fig. 68). The red LED warning will flash, the Audible Alarm will sound (unless set OFF), and the UP Arrow and the full O2 Bar Graph will flash as a warning until the level of oxygen decreases below the limit.

- Press the Left (Advance) button to view the Alternate Displays.
- The unit will revert to the Main Display after 3 seconds.
- Press the Right (Select) button to activate the Backlight.

Fig. 68 - High O2

Fig. 69 - User Set Gauge Mode

USER SET DIGITAL GAUGE MODE

When Digital Gauge Mode is set for ON, the Pro Plus 2 will operate as a Digital Depth Gauge/Timer without performing nitrogen and oxygen calculations (Fig. 69).

Time of Day and Elapsed Dive Time will also be displayed.

- Press the Left (Advance) button to view Air Time Remaining for 3 seconds in place of Elapsed Dive Time (Fig. 70).

UNEXPECTED LOSS OF DISPLAYED INFORMATION

If your Pro Plus 2 stops working for any reason, it is important that you have anticipated this possibility and are prepared for it. This is an important reason for not pushing the no decompression and oxygen accumulation limits, and a critical reason to avoid entering decompression. If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your Pro Plus 2, a backup instrument system is highly recommended.

Fig. 70 - User Set Gauge Mode
(Air Time Remaining)

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

POST DIVE MODES

POST DIVE SURFACE MODE

When you ascend to 3 feet (1 meter) or shallower, the Pro Plus 2 will enter Surface Mode and begin counting your surface interval.

TRANSITION PERIOD

The first 10 minutes is, in affect, a Transition Period during which time the following information is displayed (Fig. 71):

- Number of that dive (during that day)
- Battery Consumption Indicator
- Temperature (ambient)
- Time of Day and icon
- Surface Interval time (colon flashing) and icon (flashing)
- Tissue Loading Bar Graph indicating current nitrogen loading
- O2 Bar Graph indicating current oxygen accumulation (if nitrox)

- During the Transition Period, Log Mode can be accessed. No other modes (e.g., PDPS, Fly, Desat, Set, PC) are accessible.

- Press the Right (Select) button to activate the Backlight.

Fig. 71 - Transition Period

To view that dive's Log (Fig. 72) -
Refer to page 64 for a description of the Log Mode displays.

- Press the Left (Advance) button **1 time**.
- Press the Right (Select) button **1 time** to view the Nitrogen data screen.
- Press the Right (Select) button **again** to view the Oxygen data screen (if a nitrox dive).
- Press Both buttons simultaneously for 2 seconds to return to Surface Mode.
- The unit will revert to Surface Mode after 2 minutes if no button is pressed.

Log Data will not be stored in the unit's memory until the 10 minute Transition Period on the surface is completed.

Once 10 minutes have elapsed, the Surface Mode icon and Surface Interval time display colon stop flashing indicating that the Dive and Transition Period are completed, and a subsequent descent will be considered a new dive.

If you descend during the 10 minute Transition Period, time underwater will be considered a continuation of that dive. The time at the surface (if less than 10 minutes) will not be added as Dive Time.

Fig. 72 - Log Mode
(during Transition Period)

Fig. 73 - Surface Mode (>10 min)

Fig. 74 - Adjusted NDLs

AFTER THE TRANSITION PERIOD (THE FIRST 2 HOURS)

For the remainder of the **first 2 hours after surfacing**, information will continue to be displayed as Surface Mode (Fig. 73) and you will have full access to other modes (e.g., PDPS, Fly, Desat, Log, Set, etc.).

To activate the Backlight -

- Press the Right (Select) button.

To access the Pre Dive Planning Sequence -

(Also refer to page 46)

- Press the Left (Advance) button **1 time** (while in Surface Mode).
- Press and release the Right (Select) button to advance through the sequence of available 'adjusted' depths and times one screen at a time.
- The unit will revert to Surface Mode after 2 minutes, unless the Left (Advance) button is pressed to access the Fly Mode.

The Pre Dive Planning Sequence now shows **adjusted** No Decompression Limits (Fig. 74) based on residual nitrogen and accumulated oxygen calculated to be remaining from the previous dives.

To access the Time to Fly Countdown (while in Surface Mode)

- Press the Left (Advance) button **2 times**.
- The Time to Fly counter (Fig. 75) begins counting down 10 minutes after surfacing from a dive (after the Transition Period) displaying the word 'FLY' and a countdown that begins at 23:50 (hr:min) and counts down to 0:00 (hr:min).
- If a Violation occurred during the dive a single dash (-) will appear instead of the letters FLY.
- The unit will revert to Surface Mode after 2 minutes, unless the Left (Advance) button is pressed to access the Desat Time Countdown.

Fig. 75 - Time to Fly

To access the Time to Desaturation Countdown
(while in Surface Mode)

- Press the Left (Advance) button **3 times**.
- The unit will revert to Surface Mode after 2 minutes, unless the Left (Advance) button is pressed to access the Log Mode.
- If a Violation occurred during the dive, Desaturation Time will not be displayed.

The Time to Desaturate counter (Fig. 76) provides calculated time for tissue desaturation at sea level. The countdown starts 10 minutes after surfacing at 23:50 (hr:min) maximum and counts down to 0:00 (hr:min).

Fig. 76 - Time to Desaturate

LOG MODE

Information from your latest 24 dives is stored in the **Log** for viewing. The first dive of a new 'activation period' will be #1, then #2, etc. After 24 dives are accumulated, each subsequent dive will overwrite the oldest dive in the Log (i.e., the most recent dive deletes the oldest). Log information will not be lost when the battery is removed, but factory service will delete data.

Dives are displayed in a reverse sequence that starts with the dive most recently recorded back to the oldest of the 24 dives stored. Thus, your most recent dive will always be the first shown in the sequence. Each dive has three log screens - Date/Time started, Nitrogen data, and Oxygen data (not displayed if the dive included a Violation). Dives are identified by the Date/Time started and 'number' that day.

Button Control in Log Mode -

- The Left (Advance) button is used to access a specific dive's Log.
- HINT: To bypass a dive's Log and search for another in the sequence, press the Left (Advance) button repeatedly. Do not press the Right (Select) button until you find the dive Log you wish to view.
- The Right (Select) button is used to view the second and third screens (Nitrogen and Oxygen related data) for that dive.
- To return to Surface Mode at any time while in Log Mode, press Both buttons simultaneously for 2 seconds.
- The unit will automatically revert to Surface Mode after 2 minutes if no button is pressed while in the Log Mode.

To access the Log Mode and view the First Screen
(While in Surface Mode) -

- Press the Left (Advance) button **4 times**.
- The First Screen of the most recent dive will appear displaying (Fig. 77) -
    - The Log Mode icon
    - Dive Number
    - Time/ Date the dive started

Fig. 77 - Log (Date / Time)

To view the Second Screen of the Log (Nitrogen data) -

- Press the Right (Select) button **1 time** (while viewing the Time/Date). Displayed will be (Fig. 78) -
- Log Mode icon
- Maximum Depth - reached during the dive (and icon)
- Temperature - minimum during the dive (and icon)
- Surface Interval - prior to that dive (and icon)
- Elapsed Dive Time (and icon)
- Variable Ascent Rate Indicator - showing the maximum ascent rate maintained for 4 consecutive seconds during the dive
- Tissue Loading Bar Graph - showing tissue nitrogen loading at the time you surfaced at the end of the dive. Also, the segment that reflects the maximum loading will appear flashing.

Fig. 78 - Log (Nitrogen Data)

Fig. 79 - Log (Oxygen Data)

To view the Third Screen of the Log (Oxygen data)

- Press the Right (Select) button **1 time** (while viewing the Nitrogen data). Displayed will be (Fig. 79)-
- Log Mode icon
- FO2 graphic and value set for that dive
- Maximum PO2 level reached during that dive and PO2 graphic
- O2 Bar Graph - showing oxygen loading at the end of the dive

To access the first screen of the previous dive's Log

- Press the Left (Advance) button **1 time**.

Fig. 80 - Surface Mode

AFTER THE FIRST 2 HOURS

Two hours after the last dive, Surface Mode will no longer be displayed, the Time to Fly and Desaturation countdowns will be displayed alternately for 3 seconds each until they count down to 0:00 or another dive is made.

To access other modes or enter settings -

- Press Either button to return to Surface Mode (Fig. 80).
- The unit will again revert to the Time to Fly and Desaturation countdowns after 2 hours, if no button is pressed.

WET CONTACTS

If the graphic **H2O** appears during the Fly Mode (Fig. 81) and Desaturation Mode (Fig. 82) countdowns that alternate 2 hours after a dive, it is an indication that the water activation contacts are bridged (still wet) and the unit must be rinsed in fresh water and thoroughly dried.

One contact is located between the control buttons and the other at the base of the Right (Select) button's stem.

- Once the unit is dry, the graphic **H2O** will disappear from the display.
- If the unit is not cleaned and dried prior to the countdowns reaching 0:00 (hr:min), or making another dive, it will shut off then automatically reactivate.
- The graphic **H2O** would then appear in place of Dive Number when Surface Mode is displayed during the Surface Mode.
- If no dive is made, the unit would shut off after 2 hours, then automatically reactivate again, repeating the action until cleaned and dried.

Fig. 81 - Fly Mode
(Activation Contacts Wet)

Fig. 82 - Desaturation Mode
(activation contacts wet)

DOWNLOADING DATA TO A PC

Using special linking hardware, dive data can be downloaded (copied) from your Pro Plus 2 to an IBM compatible PC program running on a Windows® operating system. Compatibility requirements and instructions are provided with the optional download package that is available from your Authorized Oceanic Dealer. The software program provides dive tabular and graphic profile data sampled throughout the dives at the interval you set.

NOTE: Ensure that the download product that you acquire is compatible with the Pro Plus 2 and the PC equipment that you will be using.

Fig. 83 - PC Interface

The Interface Cable will be connected to the Data Port located on the side of the Pro Plus 2 housing.

Prior to attempting to download data from your Pro Plus 2, refer to the instructions provided in the User Manual that is incorporated into the CD for the download package.

Refer to page 28 of this manual for instructions regarding access to PC Interface (Fig. 83).

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

SIMULATOR (DEMO) MODE

Fig. 84 - Simulator Mode

SIMULATOR MODE

This mode provides you with the ability to practice various dive mode scenarios and computer functions while observing the various displays.

- The SmartGlo Backlight functions as it normally does.
- At any time while in Simulator Mode, pressing and holding both buttons simultaneously for 2 seconds shall revert operation to real Surface Mode.
- The real set points entered into the Pro Plus 2 do not affect the operation of the Simulator which has its own settings that allow Digital Gauge Mode to be set ON or OFF, calculations to be cleared, and FO2 to be set.

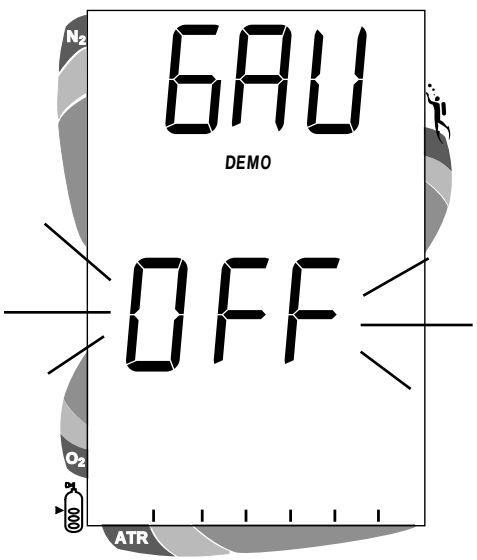


Fig. 85 - Set Demo Gauge

Access and Setup (while in real Surface Mode)

- Press and hold Both buttons for 6 seconds.
- Release the buttons during the 2 second window when **SIM** and **DEMO** appear (Fig. 84).
- Press and release the Left (Advance) button to access SIM MODE. The graphics **GAU** and **DEMO** will appear with **OFF** (or ON) flashing (Fig. 85).
- When set **ON**, the SIMULATOR will operate as the unit would in User Set Digital Gauge Mode only displaying Depth and Elapsed Dive Time. When set **OFF**, it operates as it would as an Air or Nitrox computer.

- Press and release the Right (Select) button to toggle between Gauge **ON** and **OFF**.

- Press and release the Left (Advance) button to accept the setting and advance to **DEMO: NI-O2** with **CUR** (or **NEW**) flashing (Fig. 86).
- When set for **NEW**, calculations are based on zero residual nitrogen and oxygen loading (a clean dive).
- When set for **CUR**, calculations take into consideration any residual nitrogen and oxygen remaining from previous 'actual' dives.
- Subsequent (repetitive) Simulated dives do not take into consideration previous Simulated dives.
- Press and release the Right (Select) button to toggle between **NEW** and **CUR**.

- Press and release the Left (Advance) button to accept the setting and advance to **DEMO: PSI** (or **bAr**) with **OFF**, **CYL**, or **3000** flashing (Fig. 87).
- When set for **OFF**, no calculations are made and no displays appear relating to tank pressure.
- When set for **CYL**, Air Time Remaining is calculated based upon actual pressure of the tank that the Pro Plus 2 is connected to.
- When set for **3000**, Air Time Remaining is calculated based upon a simulated tank pressure of 3000 psi.

Fig. 86 - Set Demo Calibration

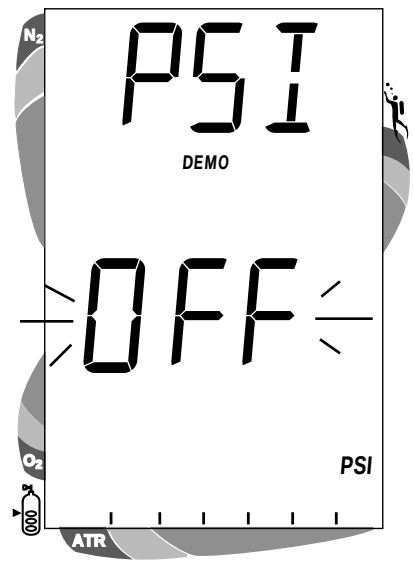


Fig. 87 - Set Pressure On/Off

Fig. 88 - Set Demo FO2

- Press and release the Right (Select) button to toggle between Pressure **ON** and **OFF**.
- Press and release the Left (Advance) button to accept the setting and revert to **Demo Surface Mode** with the DEMO icon flashing.

- Press and release the Left (Advance) button to access **DEMO: FO2** with the DEMO icon and **Air** (or a numerical value) flashing (Fig. 88).
- Press and hold the Right (Select) button to scroll from **Air** to **21**% through **32**% in 1% increments. The scroll will stop when the button is released, or at **32**%.
- Press and hold the Right (Select) button again to scroll from 32% through 50% in 1% increments, then to Air. The scroll will stop when the button is released, or at Air.
- Note that pressing and releasing the Right (Select) button advances the FO2 setting from **AIR** to **21** through **50**, in increments of 1% per button depression (no scroll).
- Press and release the Left (Advance) button to accept the setting and revert to **Demo Surface Mode** with the DEMO icon flashing.

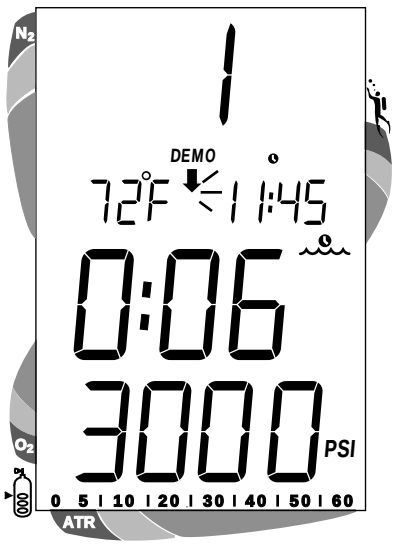


Fig. 89 - Demo Dive Mode

Demo Dive Mode

- Press and hold the Right (Select) button for 2 seconds to access **Demo Dive Mode**. The **DOWN Arrow** will appear flashing (Fig. 89).

Descending

Hint: Quick taps (<2 seconds) of the Right (Select) button starts/stops Descents and Time Acceleration. Quick taps of the Left (Advance) button accesses Alternate displays.

- While the Down Arrow is flashing, tap (press/release) the Right (Select) button to begin a **Descent** at a rate of 5 feet (1.5 meters) per real second.
- Tap (press/release) the Right (Select) button during the Descent to stop the Descent.
- Tap (press/release) the Left (Advance) button during the Descent, or stopped, to access the Alternate Displays.
- Press and hold the Right (Select) button for 4 seconds to access **Time Acceleration**. The small clock icon begins flashing (Fig. 91).
- Tap (press/release) the Right (Select) button to increase Elapsed Dive Time 1 minute per real time second.
- Tap (press/release) the Right (Select) button during Time Acceleration to restore normal time rate of 1 second per real second.
- To start an Ascent, tap (press/release) the Right (Select) button to stop a Descent.

- To revert operation to real Surface Mode, press and hold Both buttons simultaneously for 2 seconds.

Fig. 90 - Dive Mode Setup

Fig. 91 - Time Acceleration

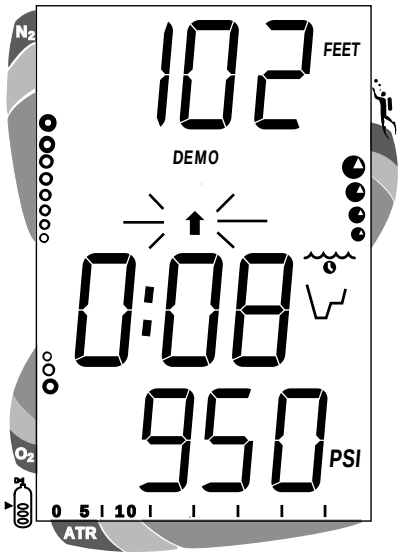


Fig. 92 - Ascent set at 1 fps

Fig. 93 - Ascent set at 3 fps

Ascending

Rate of Ascent can be set for 1 or 3 feet per seconds (fps) prior to start of the Ascent. To change the Rate during an Ascent, it must first be stopped.

- Pressing and holding the Left (Advance) button for 2 seconds will access an **Ascent Rate** of 1 fps. The green and yellow segments of the VARI and small **UP Arrow** will appear with the Arrow flashing (Fig. 92).
- To set the Rate at 3 fps (Too Fast), press and hold the Left (Advance) button for 2 seconds. The red segment of the VARI will appear together with the graphic TOO FAST and an outer Arrow around the small one (Fig. 93). The Alarm will sound and red LED will flash.
- Pressing and holding the Left (Advance) button for 2 seconds will return the Rate to 1 fps.
- Tap (press/release) the Left (Advance) button while the Arrow is flashing to begin an Ascent at the Rate set.
- Tap (press/release) the Left (Advance) button during the Ascent to stop the Ascent.
- Tap (press/release) the Left (Advance) button while the Ascent is stopped to access Alternate displays.
- Press and hold the button for 2 seconds while the Ascent is stopped to restart the Ascent.
- Pressing and holding both Buttons simultaneously for 2 seconds will revert operation to real Surface Mode.

Surfacing from a Simulated Dive

- The Simulator will enter **Demo Surface Mode** (Fig. 94) upon ascending to 3 feet (1 meter) or shallower.
- Press and hold the Right (Select) button for 4 seconds to access Time Acceleration. The small Time Clock icon will begin flashing.
- Tap (press/release) the Right (Select) button to increase Surface Interval Time 1 minute per real time second.
- Tap (press/release) the Right (Select) button during the Time Acceleration to restore the time rate to normal.

- FO2 can be set 10 minutes after surfacing.
- Tap (press/release) the Left (Advance) button to access FO2 Set Mode. The FO2 graphic and value previously set will appear with the value flashing.
- Press/release the Right (Select) button to increase the FO2 value in increments of 1%, or press and hold it to scroll.
- Tap (press/release) the Left (Advance) button to accept the FO2 setting and return to Demo Surface Mode.
- To make another dive, press and hold the Right (Select) button for 2 seconds to access Dive Mode.
- To revert operation to real Surface Mode, press and hold Both buttons simultaneously for 2 seconds.

Fig. 94 - Demo Surface Mode

Be a -
RESPONSIBLE DIVER
at all times.

WARNING: Prior to diving with the Pro Plus 2, you must also read and understand the Oceanic Dive Computer Safety and Reference Manual which provides Important Warnings and Safety Recommendations as well as general product information.

GENERAL

CARE AND CLEANING

Protect your Pro Plus 2 from shock, excessive temperatures, chemical attack, and tampering. Protect the lens against scratches with a transparent Instrument Lens Protector. Small scratches will naturally disappear underwater.

- Soak and rinse the Pro Plus 2 in fresh water at the end of each day of diving, and check to ensure that the areas around the Low Pressure (Depth) Sensor (Fig. 95a), Download Interface Port (Fig. 95b), and Buttons are free of debris or obstructions.
- To dissolve salt crystals, use lukewarm water or a slightly acidic white vinegar/water bath. After removal from the bath, place the unit under gently running water and towel dry before storing.
- Transport your unit cool, dry, and protected.

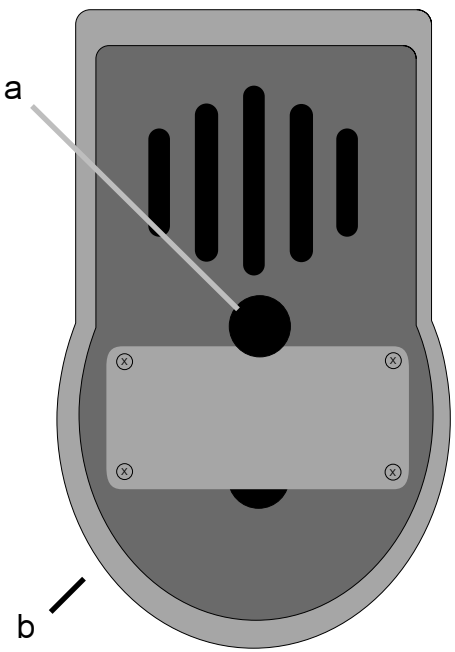


Fig. 95 - Case Back

INSPECTIONS AND SERVICE

Your Pro Plus 2 should be **inspected annually** by an Authorized Oceanic Dealer who will perform a factory prescribed function check and inspection for damage or wear. To keep the 2 year limited warranty in effect, this inspection must be completed one year after purchase (+/- 30 days). Oceanic recommends that you continue to have this inspection performed every year to ensure it is working properly. The costs of annual inspections are not covered under the terms of the 2 year limited warranty.

To Obtain Service:

Take your Pro Plus 2 to an Authorized Oceanic Dealer or send it to the nearest Oceanic Regional Distributor Facility.

To return your Pro Plus 2 to Oceanic:

- Record all dive data in the Log and/or download the data in memory. All data will be erased when it receives factory service.
- Package it using a protective cushioning material.
- Include a legible note stating specific reason for return, your name, address, daytime phone number, serial number, and a copy of your original sales receipt and Warranty Registration Card.
- Send freight prepaid and insured using a traceable method to the nearest Oceanic Regional Service Facility (see page 96), or to Oceanic USA.
- If shipping to Oceanic USA, obtain an RA (Return Authorization) number by contacting Oceanic at 510/562-0500 or send an e-mail to service@oceanicusa.com.
- Non-warranty service must be prepaid. COD is not accepted.
- Additional information is available at the Oceanic web site OceanicWorldWide.com

NOTE: The procedures that follow must be closely adhered to. Damage due to improper Battery replacement is not covered by the unit's 2 year warranty.

BATTERY REPLACEMENT

The Battery Compartment should only be opened in a dry and clean environment with extreme care taken to prevent the entrance of moisture or dust.

As an additional precautionary measure to prevent formation of moisture in the Battery Compartment, it is recommended that the Battery be changed in an environment equivalent to the local outdoor temperature and humidity (e.g., do not change the Battery in an air conditioned environment then take it outside during a hot sunny day).

Inspect the Buttons, Lens, and Housing to ensure they are not cracked or damaged. If there is any sign of moisture in the module, DO NOT use the Pro Plus 2 until it receives proper service by an Authorized Oceanic Dealer, or the Oceanic factory.

Hot Swap

If the new Battery can be inserted within 8 seconds after the old one is removed (Hot Swap), settings and nitrogen and oxygen calculations for repetitive dives will be retained.

Battery Removal

Examine the Case Back to locate the Battery Hatch (Fig. 96a):

- Remove the 4 screws that secure the Battery Hatch to the Housing by turning counter clockwise.
- Lift the Hatch up and away from the Housing.
- Lift the Battery, positive (+) end first, out of the Battery Compartment.
- Remove the Battery Hatch O-ring and inspect it for any signs of deterioration or deformity. DO NOT use tools to remove the O-ring.
- O-ring replacement is highly recommended to ensure proper sealing.
- Closely examine the sealing surfaces of the Battery Hatch and Housing for any signs of damage that might prevent proper sealing. If found, return the Pro Plus 2 to an Authorized Oceanic Dealer, and DO NOT attempt to use it until it has received factory service.
- Closely examine the inside of the Battery Compartment for any signs of corrosion indicating entrance of moisture into the unit.
- If corrosion is found, return the Pro Plus 2 to an Authorized Oceanic Dealer, and DO NOT attempt to use it until it has received factory service.

(continued on page 88)

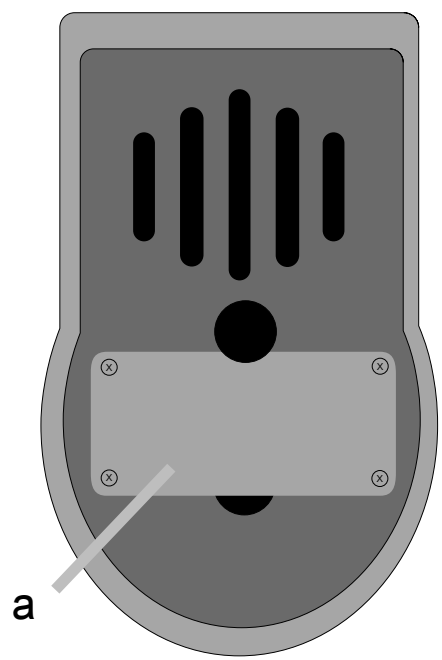


Fig. 96 - Battery Hatch

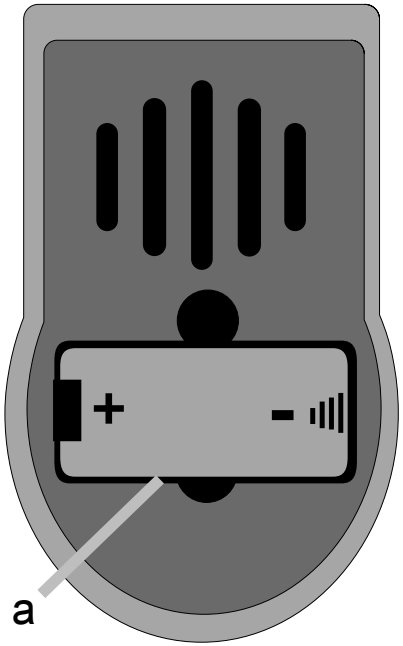


Fig. 97 - O-ring Installation

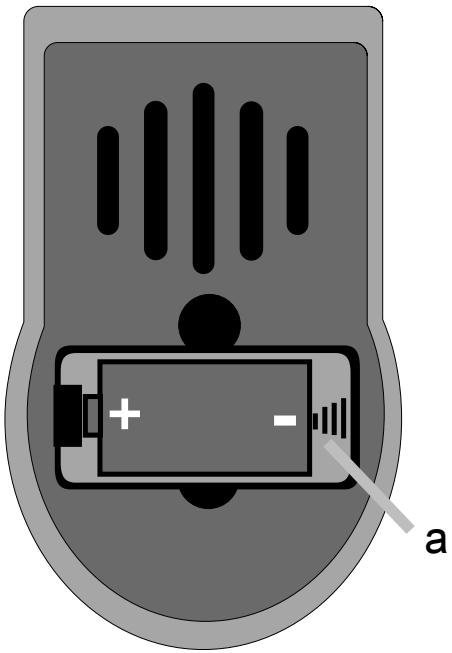


Fig. 98 - Battery Orientation

Moisture in the Battery Compartment

- If moisture is found, it is best to have the unit inspected and cleaned by an Authorized Oceanic Dealer.
- If it is necessary to clean the Battery Compartment, flush the it and all components with a solution of 50% white vinegar and 50% fresh water. Rinse with fresh water, and allow to dry overnight, or blow dry with a hair dryer (set at 'no heat').
- Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the Buttons, Lens, and Housing to ensure they are not cracked or damaged.

Battery Installation

- Replace the Hatch O-ring with a new one. This O-ring must be a genuine Oceanic part that can be purchased from an Authorized Oceanic Dealer. Use of any other O-ring will void the warranty.
- Lightly lubricate the **new** Hatch O-ring with silicone grease and place it on the beveled outer edge of the Battery Compartment (Fig. 97a). Ensure that it is evenly seated.
- Place a new 3 volt, CR2, .75 AHr, Lithium Battery (Duracell model DL-CR2 or equivalent) negative end first into the Battery Compartment with the negative end toward the spring (Fig. 98a).

Battery Hatch Installation

- Ensure that the Battery is properly oriented and the Hatch O-ring is evenly seated.
- Carefully place the Battery Hatch into position so that it seats on top of the O-ring, and while holding it in place, secure it with the 4 screws by turning them clockwise. DO NOT attempt to use any other screws.
- Carefully tighten the screws by alternately turning them each one turn at a time (Fig. 99). Turn the upper left one (a), then the lower right (b), then the lower left (c), then the upper right (d).
- Repeat the sequence until all of the screws are evenly secure. The outer surface of the Battery Hatch should be flush with the outer surface of the Housing. DO NOT overtighten.

Inspection

- Activate the unit and watch carefully as it performs a full diagnostic and battery check, and enters Surface Mode. Observe the LCD display to ensure it is consistently clear and sharp in contrast throughout the screen.

- If any portions of the display are missing or appear dim, or if a Low Battery Condition is indicated, return your Pro Plus 2 to an Authorized Oceanic Dealer for a complete evaluation before attempting to use it.

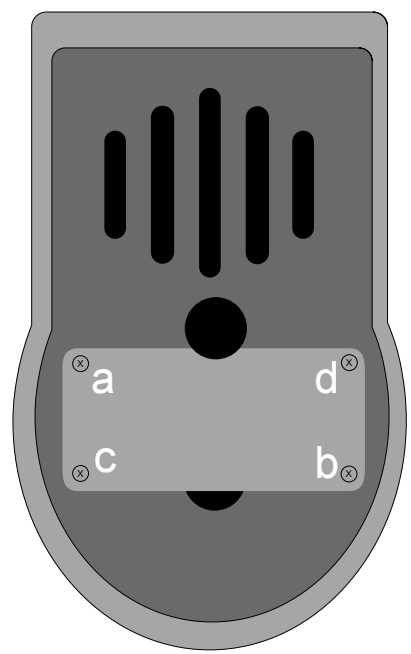


Fig. 99 - Hatch Installation

SPECIFICATIONS

CAN BE USED AS

- Air Computer
- Nitrox Computer
- Digital Depth Gauge/Timer

NO DECOMPRESSION MODEL

Basis:

- Modified Haldanean Algorithm
- 12 tissue compartments

Data Base:

- Diving Science and Technology (DSAT) - Rogers/ Powell

Performance:

- Tissue compartment halftimes (mins.) Spencer's "M" values
  5, 10, 20, 40, 80, 120, 160, 200, 240, 320, 400, 480
- Reciprocal subsurface elimination
- 60 minute surface credit control for compartments faster than 60 minutes
- Tissue compartments tracked up to 24 hours after last dive

Decompression Capabilities (stop ceilings):

- 10, 20, 30, 40, 50, and 60 FT
  (3, 6, 9, 12, 15, and 18 M)

Altitude Algorithm:

- Based on NOAA tables

Oxygen Exposure Limits:

- Based on NOAA tables

OPERATIONAL MODES (SURFACE)

- Activation/Diagnostic
- Surface
- Pre Dive Planning Sequence
  (30 to 190 feet / 9 to 57 meters)
- Time to Fly Countdown
- Desaturation Countdown
- Dive Log (Date / Time, Nitrogen, and Oxygen)
- Set Mode 1:
  - FO2 (Air, 21 to 50% O2)
  - Max Depth Alarm (30 to 300 FT /9 to 99 M)
  - Elapsed Dive Time Alarm (0:10 to 3:00 hr:min)
  - PC Interface (to Download data)
- Set Mode 2:
  - Units of Measure (Imperial / Metric)
  - Hour Format (12 / 24)
  - Time (Hour, Minute)
  - Date (Year, Month, Day)
  - Audible Alarm / LED Warning (On/Off)
  - Max TLBG Alarm (1 to 12 segments)
  - Air Time Remaining BG Alarm (0 to 60 minutes)
  - Turn Press Alarm (1000 to 3000 PSI/69 to 205 BAR)
  - End Press Alarm (300 to 1500 PSI/20 to 104 BAR)
  - Dive Time Remaining Alarm (0:00 - 0:20 min)
  - Max PO2 Alarm (1.20 - 1.60 ATA)
  - FO2 50% Default (On/Off)
  - Backlight Duration (:00 / :03 / :07 seconds)
  - Sampling Rate - memory storage for download (2, 15, 30, 60 seconds; 2, 5, 10 FT, .5, 1.5, 3 M)
  - Digital Gauge Mode (On / Off)
  - Water Activation (On / Off)
- Simulator Mode

SPECIFICATIONS (CONTINUED)

OPERATIONAL MODES (DIVE)

No Decompression Dive:

- #1 - Current Depth, Dive Time Remaining, Cylinder Pressure, Bar Graphs
- #2 - Current Depth, Dive Time Remaining, Max Depth, Elapsed Dive Time, Cylinder Pressure, Bar Graphs
- #3 - Current Depth, Dive Time Remaining, Temperature, Time of Day, Cylinder Pressure, Bar Graphs
- #4 - if a nitrox dive - Current Depth, Dive Time Remaining, Current PO2, Cylinder Pressure, Bar Graphs
- Secondary - Current Depth, Air Time Remaining, Cylinder Pressure, Bar Graphs

- Safety Stop - Current Depth, Stop Depth (15 FT/5 M), Countdown Timer (3:00 to 0:00 min:sec), Dive Time Remaining, Cylinder Pressure, Bar Graphs

Digital Gauge Mode:

- Default - Current Depth, Max Depth, Time of Day, Elapsed Dive Time, Cylinder Pressure, Bar Graphs
- Secondary - Current Depth, Air Time Remaining, Cylinder Pressure, Bar Graphs

Decompression Dive:

- #1 - Default - Current Depth, Stop Depth / Time, Total Ascent Time, Cylinder Pressure, Bar Graphs
- #2 - Current Depth, Stop Depth / Time, Total Ascent Time, Max Depth, Elapsed Dive Time, Cylinder Pressure, Bar Graphs
- #3 - Current Depth, Temperature, Time of Day, Total Ascent Time, Cylinder Pressure, Bar Graphs
- #4 - if nitrox dive - Current Depth, Current PO2, Total Ascent Time, Cylinder Pressure, Bar Graphs

Violation - Conditional, Delayed, and Immediate/Gauge

High PO2 (1.20 to 1.60 ATA)

High Oxygen Accumulation (300 OTU per dive / 24 hr)

SPECIFICATIONS (CONTINUED)

DISPLAY RANGE/RESOLUTION

Numeric Displays:	Range:	Resolution:
• Dive Number	0 to 24	1
• Depth	0 to 330 FT (0 to 99.9 M)	1 FT (.1 M)
• Maximum Depth	330 FT (99.9 M)	1 FT (.1 M)
• FO2 Set Point	Air, 21 to 50 %	1 %
• PO2 Value	0.00 to 5.00 ATA	.01 ATA
• Dive Time Remaining	0:00 to 9:59 hr:min	1 minute
• Air Time Remaining	0:00 to 9:59 hr:min	1 minute
• Total Ascent Time	0:00 to 9:59 hr:min	1 minute
• Safety Stop Time	3:00 to 0:00 min:sec	1 second
• Decompression Stop Time	0:00 to 9:59 hr:min	1 minute
• Elapsed Dive Time	0:00 - 9:59 hr:min	1 minute
• Surface Time	0:00 - 23:59 hr:min	1 minute
• Dive Log Surface Interval	0:00 - 23:59 hr:min	1 minute
• Time to Fly	23:50 - 0:00 hr:min* (* starting 10 min after the dive)	1 minute
• Time to Desaturate	23:50 - 0:00 hr:min* (* starting 10 min. after the dive)	1 minute
• Temperature	0 to 99°F (-9 to 60°C)	1°
• Cylinder Pressure	0 to 5000 PSI (0 to 352 BAR)	10 PSI (.5 BAR)

Special Displays:	Occurrence
• Diagnostic Display	After Manual Activation
• Out of Range (- - -)	>330 FT (>99.9 M)
• Gauge Mode Countdown Timer	23:50 to 0:00 hr:min (after violation)

SPECIFICATIONS (CONTINUED)

BAR GRAPHS

Tissue Loading Bar Graph:	segments
• No Decompression zone (green)	9
• No Deco Caution zone (yellow)	2
• Decompression Warning zone (red)	1

Oxygen (O2) Bar Graph:	segments
• Normal zone (green)	4
• Caution zone (yellow)	1
• Danger zone (red)	1

Variable Ascent Rate Indicator:

	60 feet (18 m) & Shallower			Deeper than 60 feet (18 m)		
	segments	feet/min	meters/min	segments	feet/min	meters/min
	0	0 - 10	0 - 3	0	0 - 20	0 - 6
• Normal Zone (Green)	1	11 - 15	3.5 - 4.5	1	21 - 30	6.5 - 9
• Normal Zone (Green)	2	16 - 20	5 - 6	2	31 - 40	9.5 - 12
• Normal Zone (Green)	3	21 - 25	6.5 - 7.5	3	41 - 50	12.5 - 15
• Caution Zone (Yellow)	4	26 - 30	8 - 9	4	51 - 60	15.5 - 18
• Too Fast Zone (Red - flashing)	5	> 30	> 9	5	> 60	> 18

OPERATIONAL PERFORMANCE

Function:	Accuracy:
• Depth	±1% of full scale
• Timers	1 second per day

Dive Counter:
- Displays Dives #1 to 24, 0 if no dive made yet
- Resets to Dive #1, upon diving (new activation period)

Dive Log Mode:
- Stores 24 most recent dives in memory for viewing
- After 24 dives, adds 25th dive in memory and deletes the first dive

SPECIFICATIONS (CONTINUED)

OPERATIONAL PERFORMANCE (continued)

Altitude:
- Operational from sea level to 14,000 feet (4,270 meters) elevation
- Measures ambient pressure every 30 minutes and when manually activated (no when wet contacts are bridged)
- Compensates for Altitude when manually activated (no compensation if activated by immersion in water)
- Compensation begins at 2,000 feet (610 meters) elevation and every 1,000 feet (305 meters) higher

Power:

• Battery	1 - 3 vdc, CR2, .75 Ahr, Lithium battery (Duracell model DL-CR2 or equivalent)
• Shelf life	Up to 5 years
• Replacement	User replaceable (annual recommended)
• Life expectancy	50 dive hours (if 1 - 1 hour dive per dive day) to over 150 dive hours (if 3 - 1 hour dives per dive day)

Battery Indicator:

segments displayed	estimated power remaining
all	25 to 100%
1 (inside)	< 25%

Activation:
- Manual - push button (recommended)
- Automatic - by immersion in water (as a backup if set ON)
- H2O graphic indicates Wet Contacts are bridged (unit must be dried prior to transport or storage)
- Cannot be manually activated deeper than 4 FT (1.2 M), if the Water Activation feature is set OFF.
- Cannot be activated at elevations higher than 14,000 feet (4,270 meters)

Shutoff:
- Automatically shuts off if no dive is made within 120 minutes after initial activation. Reactivation required.
- Automatically shuts off 24 hours after last dive (will reactivate if the H2O graphic is displayed).
- Cannot be shut off manually.

SPECIFICATIONS (CONTINUED)

OPERATIONAL PERFORMANCE (continued)

Setting FO2:
- Automatically set for 'Air' upon activation
- Remains set for Air unless an FO2 numerical value is set
- Nitrox set points from 21 to 50 %
- If set for 21%, remains set for 21% until changed
- If set for >21%, it reverts to 50% 10 minutes after the dive, if the FO2 Default is ON. If the FO2 Default is OFF, the value will remain at the value set.

Operating Temperature:
- Out of the water - between 20 °F and 140 °F (-6 and 60 °C)
- In the water - between 28 °F and 95 °F (-2 and 60 °C).

  At extremely low temperatures, the LCD may become sluggish, but this will not affect it's accuracy. If stored or transported in extremely low temperature areas (below freezing), you should warm the unit and its battery with body heat before diving.

ACCESSORIES (optional items available from your Authorized Oceanic Dealer):
- Lens Protector - adheres to lens face, prevents scratches
- PC download package (hardware and software)
- Battery Kit - includes 1 Battery, 1 Battery Hatch O-ring, Silicone Grease

OCEANIC WORLD WIDE

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E-mail: oceanicint@aol.com

INSPECTION / SERVICE RECORD

Serial Number _____

Date of purchase _____

Purchased from _____

Below to be filled in by an Authorized Oceanic Dealer:

Date	Service Performed	Dealer / Technician

NOTES

RESET FEATURE

This dive computer is configured with a RESET feature that allows data to be cleared, including Nitrogen and Oxygen calculations, FO2 set point, Log Mode entries, and Download data.

⚠ WARNING: Reset after a dive and subsequent use for a repetitive dive conducted by the same diver could result in serious injury to or death.

RESET PROCEDURE

- While in SURFACE MODE (new activation period or greater than a 10 minute post dive surface interval), press the Left (Advance) button one (1) time to access PLAN MODE.
- While 30 feet (or 9 meters) is displayed in the PLAN MODE, press and hold Both buttons until SET 2 appears, then release the buttons.
- Press and release the Left (Advance) button to display the first 2 digits of the assigned KEY CODE, flashing as 00.
- Press and release the Right (Select) button to increase the digits to **01**.
- Press and release the Left (Advance) button again to display the second 2 digits of the KEY CODE, flashing as 00.
- Press and release the Right (Select) button to increase the digits to **01**.
- Press and release the Left (Advance) button to complete the RESET operation and turn the unit OFF.

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