AERIS®

XR1

DIVE COMPUTER

OPERATING MANUAL

CONTENTS

CONTENTS (continued)

⚠ Pay special attention to items marked with this WARNING symbol.

LIMITED TWO-YEAR WARRANTY

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

COPYRIGHT NOTICE

XR1 Operating Manual, Doc. No. 12-7197
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San Leandro, CA USA 94577

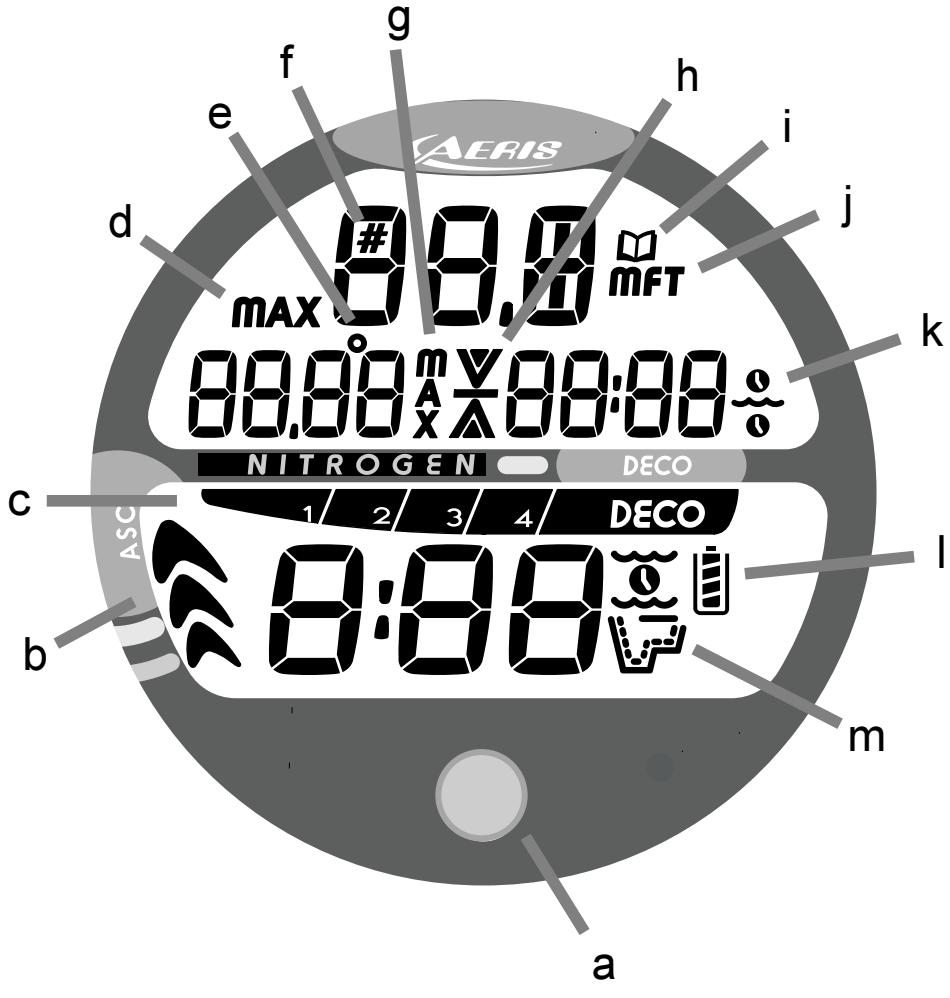
TRADEMARK NOTICE

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), and 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 XR1 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 XR1 dive computer model is based upon the latest research and experiments in decompression theory. **Still, using the XR1, 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.



Components:

a. Control Button
b. Variable Ascent Rate Indicator
c. Nitrogen Loading Bar Graph
d. Icon - Max Depth (Log Mode)
e. Icon - Temperature
f. Icon - Dive Number
g. Icon - Max Depth (Dive Mode)
h. Icon - Descend Arrow
   Icon - Decompression Ceiling
   Icon - Ascend Arrow
i. Icon - Log Mode
j. Icon - Depth units
k. Icon - Time
g. Battery Status Indicator
n. Icon - Operating Mode

XR1 FULL LCD

WARNING: Prior to diving with the XR1, you must also read and understand the AERIS Dive Computer Safety & Reference Manual, Doc. No. 12-7203, which provides Important Warnings and Safety Recommendations as well as general product information.

FEATURES and DISPLAYS

INTRODUCTION

Welcome to AERIS and thank you for choosing the XR1 !
It is extremely important that you read this Owner's Guide in sequence and understand it completely before attempting to use the XR1.

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.

The XR1 has numerous features that are described throughout this manual.

Be a -
RESPONSIBLE DIVER
at all times.

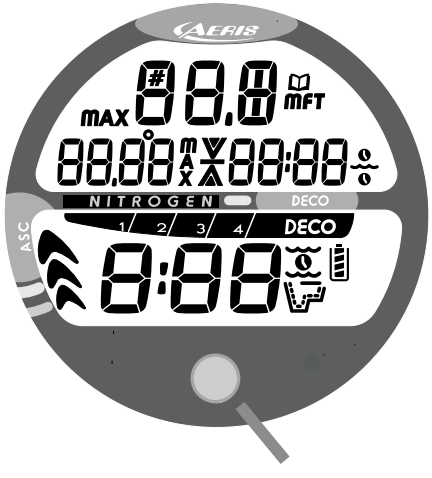


Fig. 1 - Control Button

CONTROL BUTTON

The Control Button (Fig. 1) allows you to select display options and access specific information when you want to see it.

BAR GRAPHS

Nitrogen Bar Graph

The Nitrogen Bar Graph (Fig. 2a) represents tissue loading of nitrogen, showing your relative no decompression or decompression status.

The Nitrogen Bar Graph monitors 12 different nitrogen compartments simultaneously and displays the one that is in control of your dive.

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.

It is divided into a gray 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.

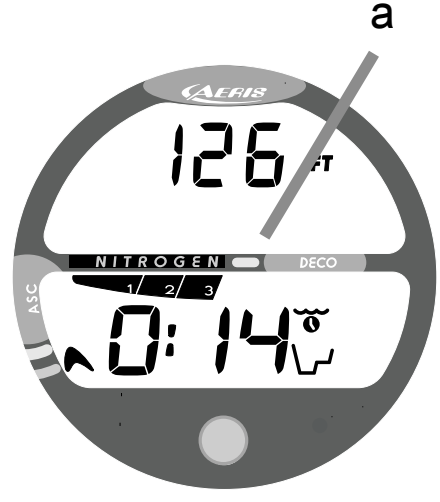


Fig. 2 - NiBG

Deeper than 60 feet (18 m)

Segments Displayed	Ascent Rate = FPM	MPM
0	0-20	0 - 6
1	21-50	6.5-15
2	51-60	15.5-18
3	>60	>18

60 feet (18 m) & Shallower

Segments Displayed	Ascent Rate = FPM	MPM
0	0-10	0 - 3
1	11-25	3.5-7.5
2	26-30	8-9
3	>30	>9

VARI Values

Variable Ascent Rate Indicator (VARI)

The Variable Ascent Rate Indicator (Fig. 3a) provides a visual representation of ascent speed (i.e., an ascent speedometer). Gray 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 feet (18 meters). Refer to the chart for segment values.

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

INFORMATIONAL DISPLAYS

Depth Displays

During a dive, the **Current Depth** display (Fig. 3b), indicates Depths from 0 to 330 feet (99.9 meters) in increments of 1 foot (.1 meter). The Depth range is extended to 399 feet (120 meters) when it is set to operate in Digital Gauge Mode.

By pressing the button, the **Maximum Depth** reached during that dive will be displayed (Fig. 3c).

During a Decompression Dive, the required **Ceiling Stop Depth** is displayed in the Max Depth position.

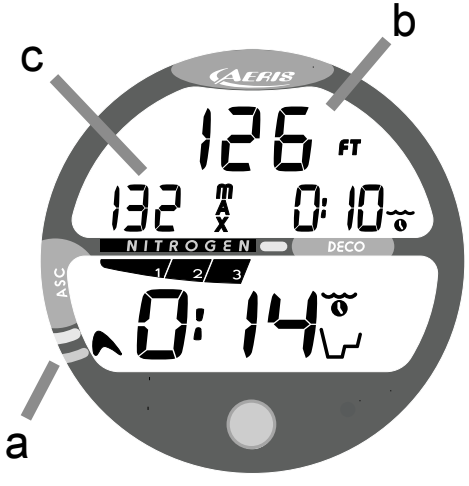


Fig. 3 - VARI & Depth

Time 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 has the largest digits of the display (Fig. 4a) A **second time** display (Fig. 4b) is located above it. Both displays are identified by clock icons.

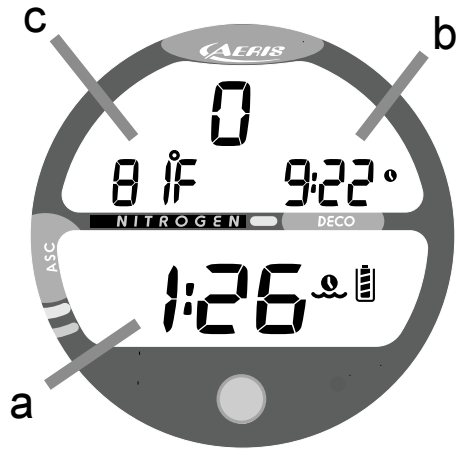


Fig. 4 - Time Displays & Temperature (Surface)

Date Display

Date is displayed only to identify dive data while it is viewed in the Log Mode. 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 Surface Mode (Fig. 4c) and Log Mode, and can be viewed on Main Display 3 while in a dive mode (Fig. 5a). If the Temperature exceeds a value of '99', 2 dashes (- -) will be displayed until temperature decreases to '99'.

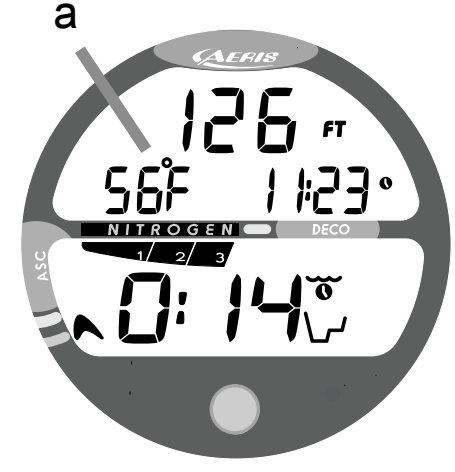


Fig. 5 - Temperature (dive mode)

POWER SUPPLY

The XR1 utilizes one (1) type CR 2450 Lithium 3 volt cell that should provide approximately 300 Hours of continuous operation, or 50 activation Periods of operation.

- If you conduct 1 dive each time the unit is activated, you should obtain approximately 50 dives.

- If you conduct 3 dives each time the unit is activated, you should obtain approximately 150 dives.

Battery Indicator

A Battery Indicator provides an indication of battery condition. When power is sufficient for normal unit operation (> 2.75 volts), the full Battery icon will be displayed solid during Surface, Plan, and Fly, and Desat modes (Fig. 6a).

When a Low Battery Condition is sensed (< 2.75 volts), the Indicator will only display the shell and lower segment as a Warning.

NOTE: When the icon indicates a Low Battery Warning condition, the Battery should be replaced prior to conducting dives.

(continued on page 11)

Fig. 6 - Battery Indicator

Low Battery Condition

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

- If a Low Battery Warning Condition exists (< 2.75 volts, > 2.50 volts), the Battery icon (shell and lower segment only) will be displayed solid as previously described (Fig. 7a).
- If the Battery is not changed and voltage continues to decrease until a Low Battery Alarm Condition exists (< 2.50 volts), the Battery icon (shell and lower segment only) will flash once per second for 5 seconds (Fig. 8a) followed by shutdown of the unit.
- If the button is not pressed to activate the unit prior to a dive, and a Low Battery Alarm Condition exists (< 2.50 volts), the Battery icon will appear flashing as a warning upon descent past 4 feet (1.2 meters). No other information will be displayed.
- If the unit did not display the Low Battery icon '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' only. The Battery icon will appear as a warning upon surfacing when Surface Mode is displayed.

When the Battery is removed, nitrogen calculations for repetitive dives are reset to zero after 8 seconds. Also, settings such as Time and Date must be reset. If a new battery can be inserted within that 8 seconds, the calculations and settings will be retained.

Fig. 7 - Low Battery Warning

Fig. 8 - Low Battery Alarm

DIVE TIME REMAINING (DTR)

One of the most important pieces of information on AERIS dive computers is the 'Dive Time Remaining (DTR) display'. The dive computer constantly monitors no decompression status.

No Deco Dive Time Remaining (DTR)

No Deco Dive Time Remaining (DTR) is the maximum amount of time that you can stay at your present depth before entering a decompression situation. It is calculated based on the amount of nitrogen absorbed by hypothetical tissue compartments. The rates each of these compartments absorb and release nitrogen is mathematically modeled and compared against a maximum allowable nitrogen level. Whichever one is closest to this maximum level is the controlling compartment for that depth. Its resulting value will be displayed numerically (Fig. 9a) along with the No Decompression Dive icon and graphically as the Nitrogen Bar Graph (Fig. 9b).

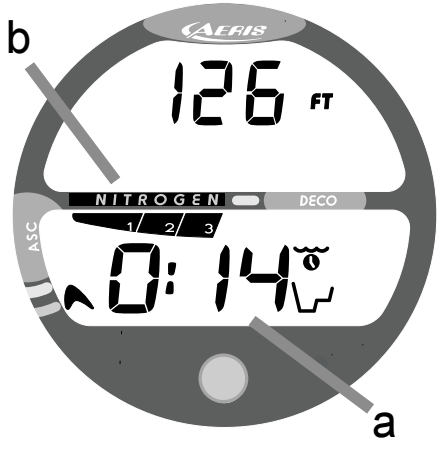


Fig. 9 - No Deco DTR

<u>As you ascend from depth following a dive that has approached the no decompression limit, the Nitrogen Bar Graph will recede as control shifts to slower compartments. This is a feature of the decompression model that is the basis for multilevel diving, one of the most important advantages that AERIS dive computers offer.</u>

The no decompression algorithm is based upon Haldane's theory using maximum allowable nitrogen levels developed by Merrill Spencer. Repetitive diving control is based upon experiments designed and conducted by Dr. Ray Rogers and Dr. Michael Powell in 1987. Diving Science and Technology® (DSAT), a corporate affiliate of PADI®, commissioned these experiments.

WARNINGS AND SAFETY RECOMMENDATIONS

- **It should not be considered that the capabilities built into the XR1 provide an implied approval or consent from AERIS for individuals to exceed the defined limits for recreational diving, as agreed on by all internationally recognized training agencies.**

- **The XR1 provides information based upon a personal dive profile, and therefore must not be shared between divers. It is impossible for two divers to stay precisely together underwater, and your computer's dive profile tracking of previous dives will be pertinent to you only. Nitrogen and oxygen loading of a second user may be significantly different and swapping dive computers could lead to inaccurate and dangerous predictions of decompression status.**

NOTE: Each display represents unique pieces 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.

NOTICE

WET ACTIVATION

The XR1 is configured with contacts that will automatically activate the unit when the space between the contacts is bridged by a conductive material (immersed in water).

The contacts are the pins of the Data Port and stem of the Push Button.

It is important that the Data Port and Button be kept clean and free of any contamination or debris that could cause the unit to activate unnecessarily resulting in premature depletion of battery power.

It is also important that they be kept clean to ensure that the unit will activate and enter dive mode upon immersion and descent.

The Data Port and Button can be cleaned with fresh water and a soft bristle brush.

⚠ **WARNING: The Wet Activation feature will not function unless it is Set ON (a user setting) and the contacts are bridged without interference. If the contacts remain dry during a descent and an attempt is made to activate it at depth by pressing the button or if the contacts then become wet, it will come On briefly then shut Off and not operate in dive mode.**

WARNING: Prior to diving with the XR1, you must also read and understand the AERIS Dive Computer Safety & Reference Manual, Doc. No. 12-7203, which provides Important Warnings and Safety Recommendations as well as general product information.

ACTIVATION AND SETUP

ACTIVATION

Fig. 10 - Diagnostic Mode

To Activate the XR1 - press and release the Button.

- Upon manual activation, the unit will enter Diagnostic Mode (Fig. 10), 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.
- It will also check the ambient barometric pressure, and calibrate its present Depth as zero. At elevations of 2,000 feet (610 meters) or higher, it will adjust its Depth readings and No Decompression Limits for that elevation.

⚠ WARNING: If it is manually activated at elevations higher than 14,000 feet (4,270 meters), it will perform a diagnostic check followed by immediate shutdown.

Fig. 11 - Serial Number

To view a screen that displays the unit's Serial Number and firmware revision level, hold the button depressed as the Diagnostic countdown reaches 00. The Serial Number screen appears (Fig. 8) as long as the button is depressed. Upon releasing the button, the unit shuts Off. Press and release the button to reactivate the unit and enter Surface Mode.

Wet Activation (only if set ON, a user setting)

The XR1 will also automatically activate by water contact. This is accomplished by bridging the gap between contacts located on the Button and Data Port on the side of the housing.

If no dive is made within 2 hours after activation, the unit will de-activate. If the wet contacts are still wet, it will reactivate.

Fig. 12 - Surface Mode
(module is dry)

SURFACE SEQUENCE

While on the surface, the unit will automatically scroll through a Sequence of displays including -

SURFACE > FLY > SAT > PLAN

As the Surface Sequence is scrolling, you can use the button to access Log Mode and Set Mode.

SURFACE MODE

Surface Mode information includes (Fig. 12) -

- Dive Number if the module is dry (0 if no dive made yet), or the graphic H2O if the module is wet (Fig. 13)
- Temperature (and degree icon and F or C graphic).
- Time of Day (with clock icon).
- Surface Interval (with flashing colon) and clock/wave icon.
- Battery Status icon.

Fig. 13 - Surface Mode
(module is wet)

Depth FT (M)		NDL hr: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)

NDLs at Sea Level (no dive made yet)

Fig. 14 - Dive Planner

DIVE PLANNER (PLAN MODE)

The Dive Planner (Fig. 14) 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.

No decompression times (limits), or NDLs, are only displayed for depths where there is at least 3 minutes of theoretical dive time available at the depth, taking into account a descent rate of 60 feet (18 meters) per minute.

The Dive Planner should be reviewed prior to every dive to help you plan your dive as required to avoid exceeding no decompression limits. For repetitive dives, it indicates adjusted dive times that are available for the next dive, based on residual nitrogen following the last dive and surface interval.

⚠ WARNING: The available dive times provided by the Dive Planner are only predictions. Depending on cylinder size and air consumption rate you may have less time available than indicated because of those or other limitations.

SET MODE

After gaining access to Set Mode, settings can be made in sequence one after the other, or you can access a specific item that you want to set, bypassing others.

Scrolling Surface Sequence, you can set:

- Units of Measure - Imperial or Metric
- Hour Format - 12 or 24
- Time of Day - Hour:Minute
- Date - Year, Month, Day
- Digital Gauge Mode - On or Off
- Wet Activation - On or Off

HINT: To bypass a parameter that you do not want to set, keep the Button depressed until the item you do want to set appears, then release it.

Fig. 15 - Set Units of Measure

To Access Set Mode and enter Settings:

While the unit is scrolling through the Surface Sequence -

- Press and hold the Button for 2 seconds, release when the Set Units screen appears with the graphics FT and F (or M and C) flashing (Fig. 15).

To change the setting for Units of Measure -

- Press and release the Button momentarily to toggle between Imperial (FT and F) and Metric (M and C).

- Press and hold the Button for 2 seconds to save the setting, release when the graphic Hour and 12 (or 24) appear flashing (Fig. 16).

Fig. 16 - Set Hour Format

Fig. 17 - Set Time

<u>To change the setting for Hour Format</u> -

- Press and release the Button momentarily to toggle between 12 and 24.

- Press and hold the Button for 2 seconds to save the setting, release when AM (or PM) and the Time of Day appear with the Hour value flashing (Fig. 17).

<u>To change the setting for Time of Day</u> -

- Repeatedly press and release the Button momentarily until the correct value for Hour appears (1: to 12:, or 0: to 23:). Do Not Hold the Button depressed.

- Press and hold the Button for 2 seconds to save the setting, release when the Minute value flashes.

- Repeatedly press and release the Button momentarily until the correct value for Minute appears (:00 to :59). Do Not Hold the Button depressed.

- The Set Date screen appears with the graphic dAY and Year value flashing (Fig. 18).

Fig. 18 - Set Date

To change the setting for Date -

- Repeatedly press and release the Button momentarily until the correct value for Year appears (2005 to 2042). Do Not Hold the Button depressed.

- Press and hold the Button for 2 seconds to save the setting, release when the Month value flashes.

- Repeatedly press and release the Button momentarily until the correct value for Month appears (1 to 12). Do Not Hold the Button depressed.

- Press and hold the Button for 2 seconds to save the setting, release when the Day value flashes.

- Repeatedly press and release the Button momentarily until the correct value for Day appears (1 to 31). Do Not Hold the Button depressed.

- Press and hold the Button for 2 seconds to save the setting, release when the Set Gauge Mode screen appears with the graphic GAU and OFF (or ON) flashing (Fig. 19).

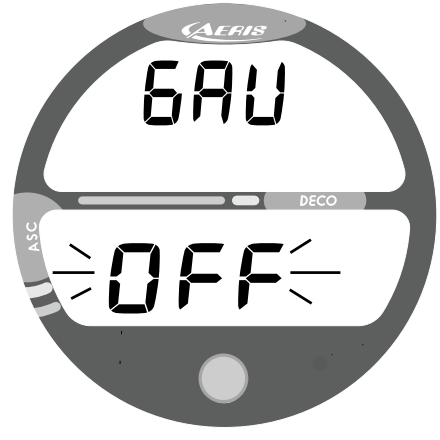


Fig. 19 - Set Digital Gauge Mode

Fig. 20 - Set Wet Activation

To change the setting for Digital Gauge Mode -

- Press and release the Button momentarily to toggle between OFF and ON.

- Press and hold the Button for 2 seconds to save the setting, release when the Set Wet Activation screen appears with the graphics ACT, H2O, and ON (or OFF) flashing (Fig. 20).

To change the setting for Wet Activation -

- Press and release the Button momentarily to toggle between ON and OFF.

- Press and hold the Button for 4 seconds to save the setting, release when the Surface Mode screen appears.

- During the 4 seconds, a PC screen will appear (Fig. 21) and can be bypassed.

Fig. 21 - PC Interface

PC INTERFACE

PC Interface is not a setting or user function. It is included in the Set menu for access by the factory personnel when calibrating the XR1 module prior to shipping.

WARNING: Prior to diving with the XR1, you must also read and understand the AERIS Dive Computer Safety & Reference Manual, Doc. No. 12-7203, which provides Important Warnings and Safety Recommendations as well as general product information.

DIVE MODES

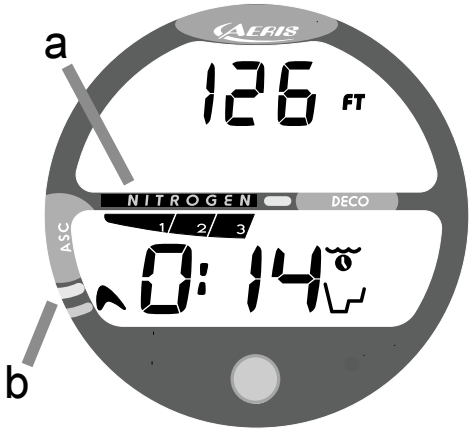


Fig. 22 - NiBG & VARI

DIVE MODE BAR GRAPHS

As your depth and elapsed dive time increase, the **Nitrogen Bar Graph (NiBG)** will fill with segments (gray toward red) to represent the absorption of nitrogen (Fig. 22a). While ascending to shallower depths, the segments that have filled the Bar Graph will begin to recede, offering a graphic representation of your multi-level diving capability.

The **Variable Ascent Rate Indicator (VARI)** shows how fast you are Ascending (Fig. 22b). When you exceed an Ascent Rate of 60 fpm (18 mpm) if deeper than 60 feet (18 meters), or 30 fpm (9 mpm) if at or shallower than 60 feet (18 meters), it will enter the red (Too Fast) zone and all segments will flash (Fig. 23) until your Ascent Rate is slowed.

CONTROL OF DISPLAYS

During dive modes, multiple displays of information are available. You can change from one display to another as often as desired by momentarily (< 2 seconds) pressing and releasing the Button.

During No Decompression conditions, you can choose how much information is displayed at a given time. The Main Display chosen will remain on the screen until you press the Button to change to another Main Display.

Fig. 23 - Ascent Too Fast

During conditions in which cautionary type information is displayed (e.g., Decompression, etc.), there is one Main (Default) Display of important information relevant to the specific condition.

- You can then access Alternate Displays, that will automatically revert to the Main Display after 3 seconds.

NO DECOMPRESSION DIVE MODE

The XR1 will enter the No Decompression Dive Mode when you descend to 5 feet (1.5 meters).

No Decompression - Main Display 1 (Fig. 24)

Information includes Current Depth (and FT or M icon), Dive Time Remaining (and wave/clock/profile Mode icon), and applicable Bar Graphs.

- press and release the Button to change to Main Display 2.

No Decompression - Main Display 2 (Fig. 25)

Information includes Current Depth (and FT or M icon), Maximum Depth for that dive (and MAX icon), Elapsed Dive Time (and wave/clock icon), Dive Time Remaining (and wave/clock/profile Mode icon), and applicable Bar Graphs.

- press and release the Button to change to Main Display 3.

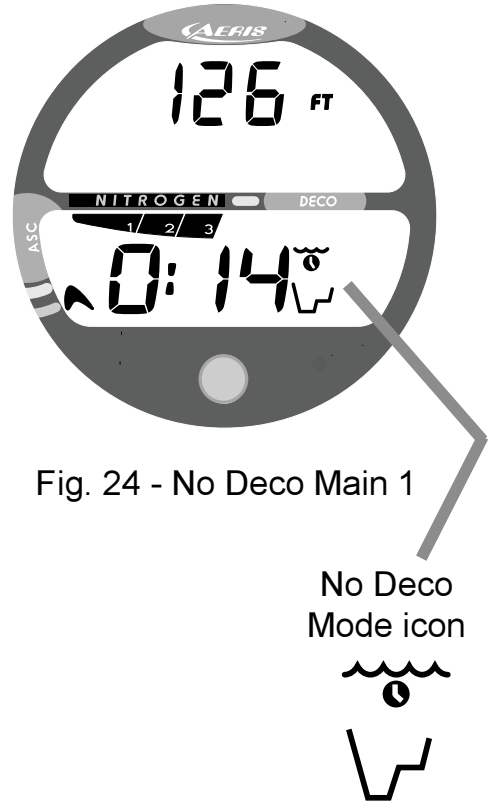


Fig. 24 - No Deco Main 1

Fig. 25 - No Deco Main 2

Fig. 26 - No Deco Main 3

No Decompression - Main Display 3 (Fig. 26)

Information includes Current Depth (and FT or M icon), Temperature (and degree icon with graphic F or C), Time of Day (and clock icon), Dive Time Remaining (and wave/clock/profile Mode icon), and applicable Bar Graphs.

- Press and release the Button to view Main Display 1.

No Deco - SAFETY STOP (Fig. 27)

Upon ascending to 20 feet (6 meters) on any No Decompression dive in which Depth exceeded 30 feet (9 meters), 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).

Information includes Current Depth (and FT or M icon), Stop Depth as 15 (FT) or 4.5 (M), Stop Bar icon, Countdown Timer (and clock icon), Dive Time Remaining (and wave/clock/profile Mode icon), and applicable Bar Graphs.

The Safety Stop will be displayed until the countdown times out, or you descend below 30 feet (10 meters), or you surface.

There is no Penalty if you surface prior to completing the Safety Stop.

Fig. 27 - No Deco
Safety Stop

DECOMPRESSION DIVE MODE

The XR1 is designed to help you by providing a representation of how close you are to entering decompression. Decompression Dive Mode activates when theoretical No Decompression time/ depth limits are exceeded.

Upon entering Decompression Mode, you should begin a safe controlled Ascent to a Depth slightly deeper than, or equal to, the Required Ceiling Stop Depth indicated (Fig. 28a) and Decompress for the Stop Time indicated (Fig. 28b).

- The UP Arrow and Stop Bar will flash if you are more than 10 feet (3 meters) deeper than the Required Ceiling Depth.
- Once within 10 feet (3 meters) of, and below, the Required Ceiling Depth, both Arrows and the Stop Bar appear solid.

Deco - Main Display

The amount of decompression **Credit time** that you receive is dependent on Depth, with slightly less Credit given the deeper you are below the Stop Depth required.

You should stay slightly deeper 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.

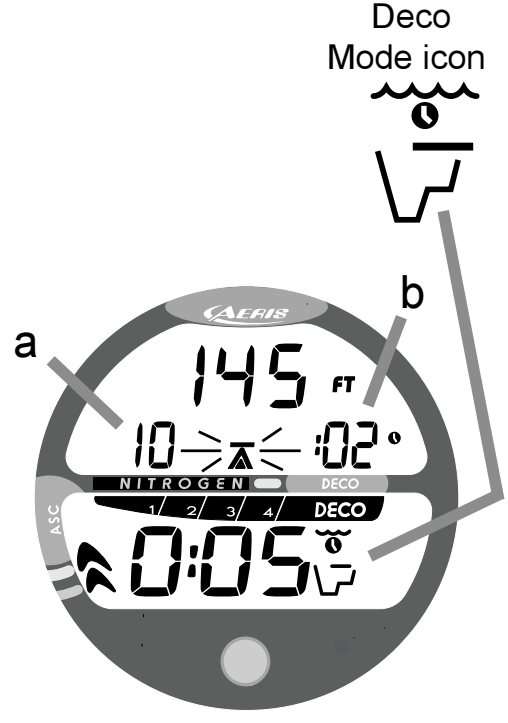


Fig. 28 - Entry into Deco

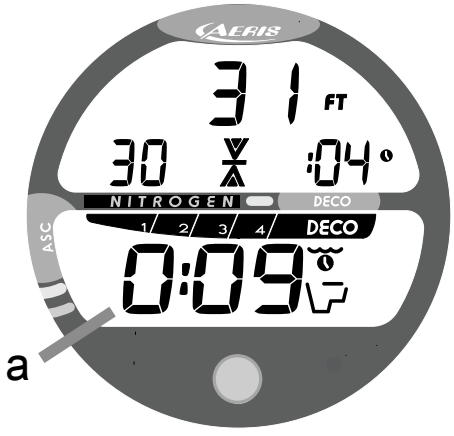


Fig. 29 - Deco Main

DECO Stop Main (Default) Display information includes (Fig. 29) - Current Depth (and FT or M icon), Required Ceiling Stop Depth and Time (and clock icon), Total Ascent Time (and wave/clock/deco bar/profile Mode icon), and applicable Bar Graphs.

Total Ascent Time (Fig. 29a) includes Stop Times required at all Ceilings and vertical Ascent Time calculated at 60 feet (18 meters) per minute below 60 feet (18 meters) and 30 feet (9 meters) per minute at and above 60 feet (18 meters).

To view Alternate Displays of information during Deco situations, momentarily (< 2 seconds) press and release the button -

- 1 time to view Alternate Display 1
- 2 times to view Alternate Display 2

Alternate Displays will revert to the Main Display after 3 seconds.

Fig. 30 - Deco Alternate 1

DECO Stop Alternate Display 1 (Fig. 30)

Information includes - Current Depth (and FT or M icon), Max Depth for that dive (and MAX icon), Elapsed Dive Time (and wave/clock icon), Total Ascent Time (and wave/clock/deco bar/profile Mode icon), and applicable bar graphs.

- Press and release the Button to view Alternate Display 2.

DECO Stop Alternate Display 2 (Fig. 31)

Information includes - Current Depth (and FT or M icon), Temperature (and degree icon with F or C graphic, Time of Day (and clock icon), Total Ascent Time (and wave/clock/deco bar/profile Mode icon), and applicable Bar Graphs.

- Press the Button to return to the Main Display.

Fig. 31 - Deco Alternate 2

VIOLATION MODES

Violation Modes that the XR1 can enter are termed Conditional, Delayed, and Immediate. Permanent Violation Mode and Violation Gauge Mode are continuations of these.

- While in Violation Modes, Alternate Displays similar to those described for Deco Mode can be accessed using the Button. They will revert to the Main Display after 3 seconds.

Conditional Violation Mode

The XR1 will enter a Conditional Violation Mode **if you Ascend to a depth shallower (Fig. 32a) than the Required Decompression Ceiling** Stop Depth displayed (Fig. 32b).

The Down Arrow, Stop Bar, and the Total Ascent Time display will flash until you descend below the Required Stop Depth. Also displayed will be Current Depth and applicable Bar Graphs.

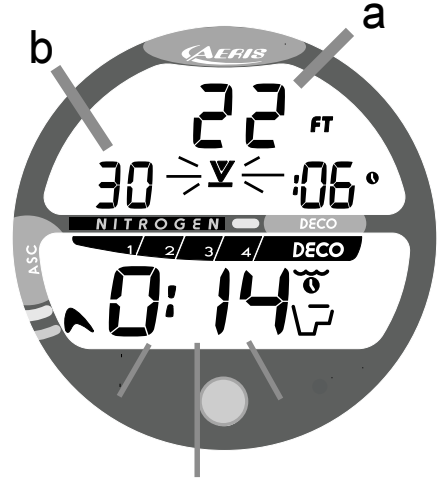


Fig. 32 - Conditional Violation

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

The added Penalty (decompression) Time will then 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, then the Nitrogen Bar Graph will recede into the yellow Caution Zone and operation will revert to the No Decompression Dive Mode.

Delayed Violation 1

If you remain above the Required Ceiling Stop Depth for 'more than 5 minutes', the full Nitrogen Bar Graph and Total Ascent Time display will flash (Fig. 33) until you descend below the Required Stop Depth. This is a continuation of Conditional Violation.

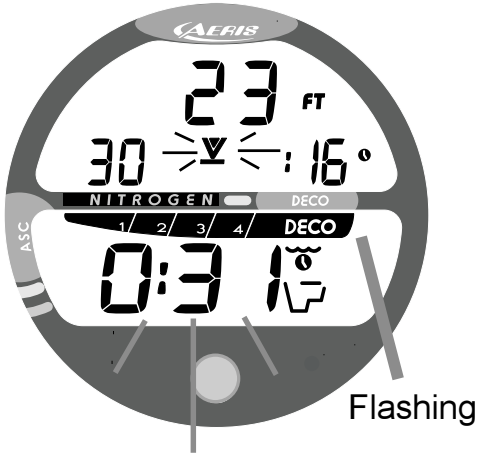


Fig. 33 - Delay Violation 1

Delayed Violation 2

The XR1 cannot calculate decompression times for Stop Depths much greater than 60 FT (18 M) and offers no indication of how much time spent underwater would result in the need for a greater Stop Depth.

If your Decompression obligation requires a Stop Depth 'between' 60 feet (18 meters) and 70 feet (21 meters), the full Nitrogen Bar Graph will flash (Fig. 34). Total Ascent Time will be displayed.

You must Ascend to just deeper than, staying as close as possible to, 60 FT (18 M) without causing Total Ascent Time to flash.

When the Required Stop Depth indicates 50 FT (15 M), etc., you can ascend to those depths and continue decompressing.

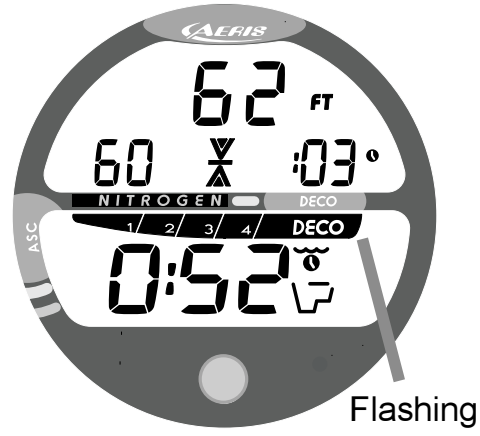


Fig. 34 - Delay Violation 2

Delayed Violation 3

If you descend deeper than 330 feet/99.5 meters, or 399 feet/120 meters when operating in Digital Gauge Mode, the Up Arrow will be displayed, the accumulated Nitrogen Bar Graph segments will flash, and the Current Depth and Max Depth displays will only indicate 3 dashes (- - -) (Fig. 35).

Upon ascending above 330 feet/99.5 meters, or 399 feet/120 meters when operating in Digital Gauge Mode, 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 also only indicate 3 dashes (- - -) as the Max Depth achieved.

Fig. 35 - Delay Violation 3

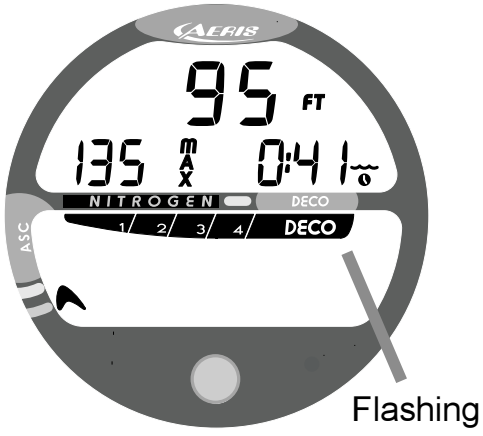


Fig. 36 - Violation Gauge Mode (underwater Main)

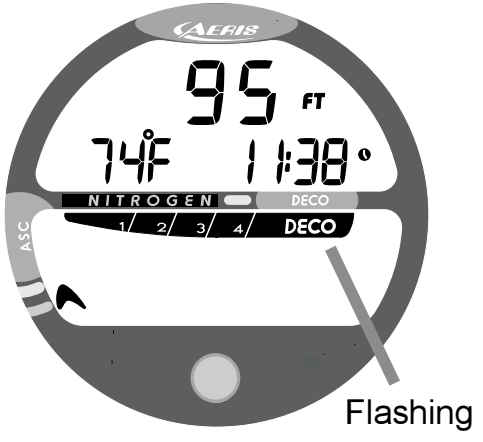


Fig. 37 - Violation Gauge Mode (underwater Alternate)

Immediate Violation and Violation Gauge Mode

During a Dive, if a Stop Depth greater than 70 FT (21 M) is required, an **Immediate Violation Mode** will be entered.

This situation would be preceded by entering Delayed Violation 2, previously described.

The XR1 would then operate with limited functions in **Violation Gauge Mode** during the remainder of that dive and for 24 hours after surfacing.

Violation Gauge Mode turns the XR1 into a digital instrument without any decompression functions.

Only Current Depth, Max Depth, Elapsed Dive Time, and the Variable Ascent Rate Indicator will be displayed (Fig. 33). The full Nitrogen Bar Graph will flash as a warning of this condition.

Temperature and Time of Day can be viewed as an Alternate Display (Fig. 37) when the button is pressed.

The XR1 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, **Violation Gauge Mode** displays the Dive Number, Temperature, Time of Day, Surface Interval, and the full Nitrogen Bar Graph flashing (Fig. 38). It does not provide the Dive Planner or the Time to Fly feature.

The **countdown timer** that appears with a single dash during the Surface Sequence (Fig. 39) is only provided to inform you of the time remaining before Normal operation can resume with full dive computer features and functions.

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

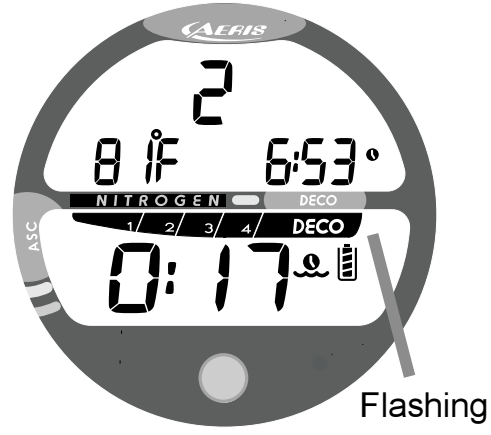


Fig. 38 - Violation Gauge Mode (on surface)

Fig. 39 - Violation Gauge Mode (Countdown to Normal)

Fig. 40 - Digital Gauge Dive Main

Fig. 40 - Digital Gauge Dive Alternate

USER SELECTED DIGITAL GAUGE MODE

When Digital Gauge Mode is set for ON, the XR1 will operate as a Digital Depth Gauge/Timer without performing nitrogen calculations.

While in this mode, the range of the Current and Maximum Depth displays are extended to 399 feet (120 meters) to accommodate activities involving diving with advanced breathing gas mixtures or free diving beyond the normal depth limit of the unit.

There is a Main Display providing Current Depth, Max depth, and Elapsed Dive Time (Fig. 40).

Temperature and Time of Day can be viewed for 3 seconds as an Alternate Display (Fig. 41) when the button is pressed and released.

WARNING: Prior to diving with the XR1, you must also read and understand the AERIS Dive Computer Safety & Reference Manual, Doc. No. 12-7203, which provides Important Warnings and Safety Recommendations as well as general product information.

POST DIVE MODES

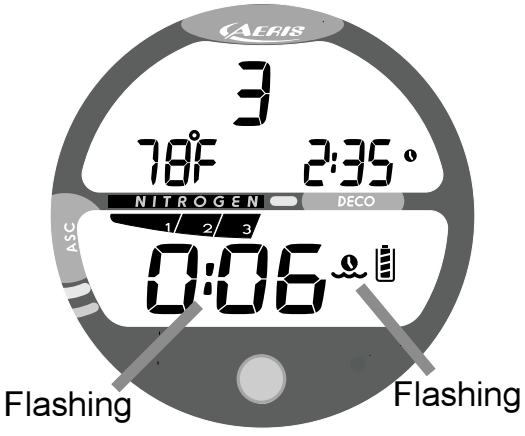


Fig. 41 - Transition Period

POST DIVE SURFACE MODE

When you ascend to 3 feet (1 meter) or shallower, the unit 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. 41):

- Number of that dive (during that activation period)
- Temperature (and icon)
- Time of Day (and icon)
- Surface Interval time (colon flashing) and icon (flashing)
- Nitrogen Bar Graph (indicating current nitrogen loading)

During the Transition Period, Log Mode can be accessed. No other modes (e.g., Fly, Plan, Set) are displayed or accessible.

Fig. 42 - Log Preview

To view that dive's Log -

- Press the Button to view the Preview screen (Fig. 42).
- Press the Button again to view the Data screen
- Press the Button again to return to Surface Mode.
- The unit will revert to Surface Mode after 2 minutes if the button is not pressed.

Refer to page 42 for a full description of the Log Mode displays.

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. Time spent at the surface will not be added as Dive Time.

Fig. 43 - Time to Fly

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 the Surface Sequence, scrolling through Surface Mode > Time to Fly > Time to Desaturate > Dive Planner. You will have full access to Log Mode and Set Mode.

Time to Fly/Desaturate

The Time to Fly and Desat Timers begin counting down 10 minutes after surfacing from a dive (after the Transition Period).

The FLY countdown (Fig. 43) always begins at 23:50 (hr:min) and the Desat countdown (Fig. 44) at 23:50 (maximum).

Fig. 44 - Time to Desaturate

Fig. 45 - Countdown
(after a Violation dive)

If a Violation occurred during the dive a single dash (-) will appear instead of the letters FLY (Fig. 45). DeSat time will not be displayed.

The Time to Fly counter is provided to assist you with deciding when enough surface time has elapsed to fly (or travel to higher elevations).

- After a surface interval of 12 hours, you may choose to fly (or travel to higher elevations), provided that your dive profile(s) did not enter decompression.
- If your diving involved decompression or a repetitive, multi day profile, it is strongly recommended that you wait a full 24 hours after your last dive to add a greater degree of protection.

Fig. 46 - Adjusted NDLs

Dive Planner

After a dive, the Dive Planner provides 'adjusted' No Decompression Limits (Fig. 46) based on residual nitrogen calculated to be remaining from that dive and previous dives in the same series.

Log Mode

The XR1 will store up to 12 dives in its Log for viewing.

Each dive has 2 Log screens. The first is the Preview (identifier) and the second displays that Dive's Data.

Once the Log is full (12 dives), each subsequent dive will then overwrite the oldest dive stored in the Log. It is therefore suggested that you transfer the Log's data to your log book at the end of each day of diving.

Log data will not be lost when the battery is removed/replaced, however, factory service and calibration will delete the data.

The first dive conducted each time the unit is Activated will be #1, therefore there may be multiple #1 dives in the Log.

Dives are displayed in a reverse sequence that starts with the dive most recently recorded, back to the oldest one stored. The most recent dive will always be the first shown in the sequence.

To access Log Mode -

- Press and release the Button momentarily (< 2 seconds) while the unit is scrolling through the Surface Sequence.
- The Preview screen (Dive Identifier) of the most recent dive conducted will appear displaying (Fig. 47) -
  - Dive Number (for that activation period) and # icon
  - Log Mode icon
  - Date of the Dive (Month.Day or Day.Month if metric)
  - Time of Day (that the dive started) and clock icon

- Press and release the Button (< 2 sec) to view the Data Screen.

Fig. 47 - Log Preview

Dive Data (the second Log screen) includes (Fig. 42) -

- Maximum Depth - reached during the dive (and MAX and FT or M icons)
- Log Mode icon
- Temperature - minimum during the dive (and degree icon with graphic F or C)
- Surface Interval - prior to that dive (and clock/wave icon)
- Elapsed Dive Time (and wave/clock icon)
- Variable Ascent Rate Indicator - showing the maximum Ascent Rate maintained for 4 consecutive seconds during the dive.
- Nitrogen 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 during the dive will appear flashing.

To access the Preview screen of the previous dive's Log, press and release the Button momentarily (< 2 sec).

To return to the Surface Sequence at any time while in Log Mode, press the Button for 2 seconds.

The unit will automatically revert to the Surface Sequence after 2 minutes if the Button is not pressed to view another Log Screen.

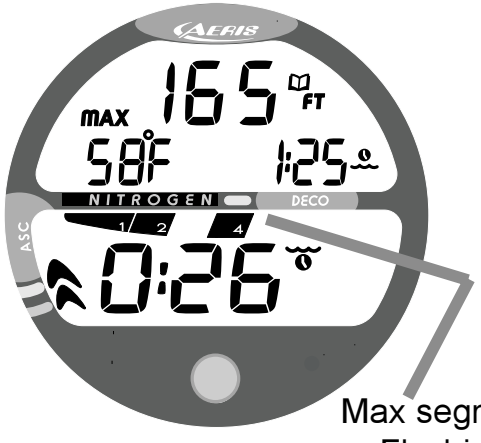


Fig. 48 - Log (Dive Data)

AFTER THE FIRST 2 HOURS

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

If the Wet Activation Contacts are wet, the graphic H2O will appear on the displays (Figs. 49/50).

To access other modes or enter settings -

- Press the Button to reactivate the Surface Sequence.
- The unit will again revert to the Time to Fly/Desaturate countdowns after 2 hours, if the Button is not pressed.

The unit will shutdown when the Fly countdown reaches :00. If the Wet Activation Contacts are wet, the unit will reactivate and scroll through the Surface Sequence for another 2 hours then shutdown again.

Fig. 49 - Time to Fly
(activation contacts wet)

Fig. 50 - Time to Desaturrate
(activation contacts wet)

RESET FEATURE

The XR1 is configured with a RESET feature that allows data to be cleared, including Nitrogen calculations and Log Mode entries.

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

Reset Procedure

- While the Surface Sequence is scrolling, press and release the button to access the Log Mode's first Preview screen.
- Press and release the button again to access the Data screen.
- Press the button for more than 4 seconds while the Data screen is displayed to access the Reset screen. The graphics **CLR** and **iD** appear with the Key Code 0101, the first 2 digits flashing (Fig. 51).
- If necessary to change the first 2 digits, press and release the button repeatedly to advance to the correct number.
- Press the button for 2 seconds to save the first digits and advance to the second digits, flashing.
- If necessary to change the second 2 digits, press and release the button repeatedly to advance to the correct number.
- Once the proper Key Code **0101** has been entered, pressing the button for 2 seconds will shut down the unit (i.e., resetting it). If an incorrect Key Code number has been entered, the unit will revert to the Surface Sequence, resuming previous operation(s).

Fig. 51 - Reset (Clear)

WARNING: Prior to diving with the XR1, you must also read and understand the AERIS Dive Computer Safety & Reference Manual, Doc. No. 12-7203, which provides Important Warnings and Safety Recommendations as well as general product information.

GENERAL

CARE AND CLEANING

Protect your XR1 from shock, excessive temperatures, chemical attack, and tampering. Protect the Lens against scratches with an Lens Guard/Protector. Small scratches will naturally disappear underwater.

⚠ CAUTION: Never spray aerosols of any kind on, or near, the instrument. The propellants may chemically attack the plastic.

- Soak and rinse the XR1 in fresh water at the end of each day of diving, and check to ensure that the areas around the Depth Sensor (Fig. 52a), PC Interface Data Port (Fig. 52b), 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.

⚠ WARNING: Never force any object through any slots or holes of the Housing. Doing so may damage the depth sensor, possibly resulting in erroneous depth and/or dive time remaining displays.

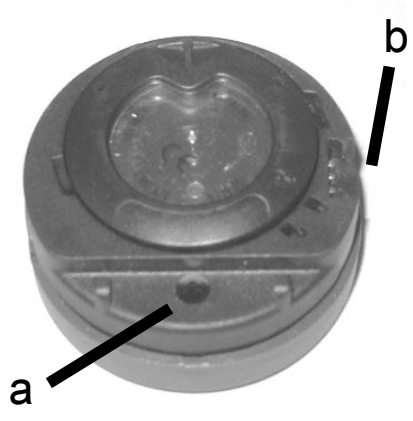


Fig. 52 - Case Back

WARNING: If a Low Battery Condition is indicated prior to a dive, DO NOT attempt to dive with the XR1 until the Battery is replaced.

INSPECTIONS AND SERVICE

Your XR1 should be **inspected annually** by an Authorized AERIS 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).

AERIS 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.

WARNING: If you are in doubt about the accuracy of your XR 1's Depth readings, DO NOT attempt to dive with it until it has been inspected by AERIS Customer Service.

It is possible to damage the Depth Sensor of the XR1 if it is not pressure tested properly. Ensure that the Dealer adheres to the following warning.

WARNING: Ensure that the XR1 is never pressure tested in an air environment. Doing so may damage the depth sensor, possibly resulting in erroneous depth or time readings.

To Obtain Service

Take you XR1 to an Authorized AERIS Dealer or send it to the nearest AERIS Regional Distributor Facility.

To return your XR1 to AERIS:

- 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 AERIS Regional Service Facility, or to AERIS.
- Non-warranty service must also be prepaid (call for an estimate). COD is not accepted.
- If you have any questions regarding service, call AERIS Customer Service at (510) 346-0010, 8 to 5 PST, or E-mail them to info2@diveaeris.com.

⚠ **CAUTION: The procedure that follows must be closely adhered to. Damage due to improper Battery replacement is not covered by the limited 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.

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).

Battery Hatch Removal

- Locate the Battery Compartment on the back of the Module.
- While applying steady inward pressure on the center of the Battery Hatch, rotate the Hatch Retaining Ring 10 degrees clockwise by pressing against the upper tab of the Retaining Ring with a small blade screwdriver (Fig. 53).
- Lift the Hatch Ring up and away from the Housing, or turn the Module over to allow the Ring to drop out into your hand.
- Remove the Battery Hatch.

WARNING: If damage, moisture, or corrosion is found, it is recommended that you return your XR1 to an Authorized AERIS Dealer, and DO NOT attempt to use it until it has received factory prescribed service.

NOTE: If the old Battery can be removed and the new one inserted within 8 seconds, nitrogen calculations and settings, will be retained for repetitive dives.

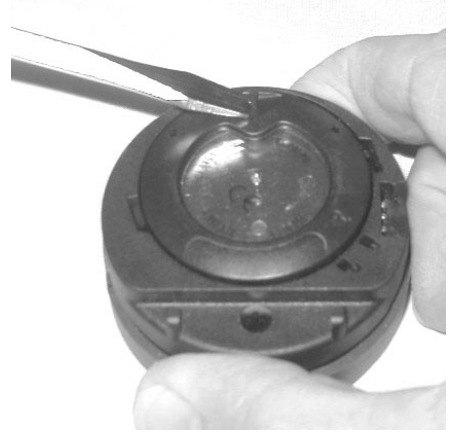


Fig. 53 - Retaining Ring

Battery Removal

- Remove the Retaining Bar located across the lower portion of the Battery (Fig. 54a).
- Remove the Hatch O-ring. DO NOT use tools
- Using care not to damage the Battery Contacts (Fig. 54b/c), slide the Battery up and out of the Battery Compartment.

⚠ CAUTION: Do not allow a metal object to short circuit the top of the Battery which is positive (+) to the negative (-) contact of the Battery Compartment.

- Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the Button, Lens, and Housing to ensure they are not cracked or damaged.
- If it is necessary to clean the Battery Compartment, flush 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').

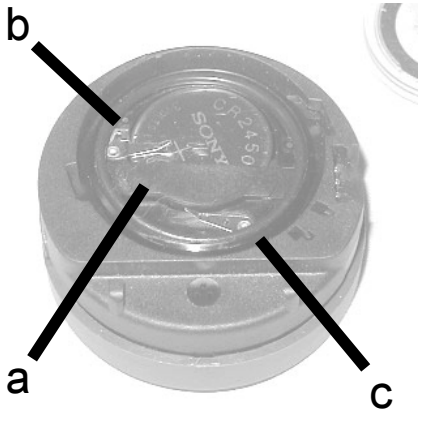


Fig. 54 - Hatch Removed

Battery Installation

- Slide a **new** 3 volt type CR2450 Lithium Battery, negative (-) side down into the Battery Cavity. Slide it in from the right side and ensure that it slides under the contact clip on the left rim of the cavity (Fig. 55).
- Orient the Retaining Bar across the lower portion of the Battery and carefully push it down into position (Fig. 56).

Fig. 55 - Inserting Battery

Battery Hatch and Hatch Retaining Ring Installation

- Replace the Hatch O-ring with a new one which 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 inner rim of the Battery Hatch (Fig. 57). Ensure that it is evenly seated.
- Slide the Hatch Retaining Ring, top portion first (small opening), onto your thumb.
- Carefully place the Battery Hatch (with O-ring) into position on the rim of the Battery Compartment, then press it evenly and completely down into place with your same thumb.
- Maintain the Battery Hatch securely in place and, using your other hand, slide the Retaining Ring down off your thumb and into position around the Battery Compartment.
- The tabs on the Retaining Ring fit down into the two slots located at the 2 and 8 o'clock positions.

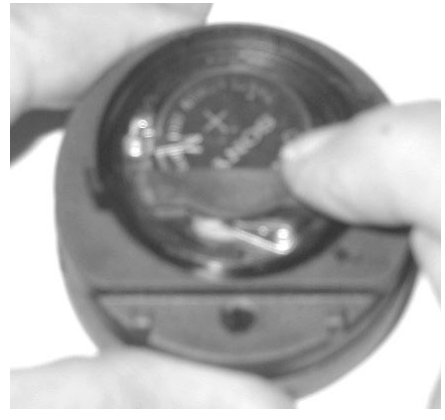


Fig. 56 -Inserting Retaining Bar

Fig. 57 -O-Ring Orientation

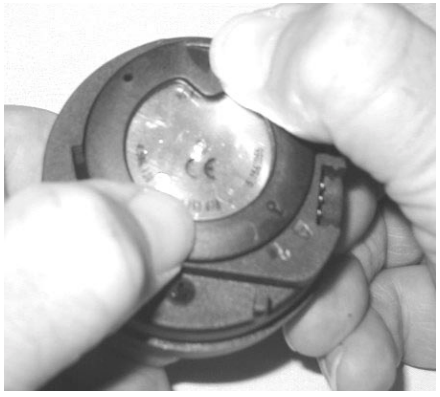


Fig. 58 -Engaging Retaining Ring

- Using your fingers, turn the Ring counter clockwise 5 degrees until the tabs engage (Fig. 58), then tighten it 5 more degrees by turning it counter clockwise with the aide of a small blade screwdriver (Fig. 59).
- While tightening the Retaining Ring, exert continuous inward pressure on it until it is secured in the proper position. A small symbol located on the Ring should be aligned with the Locked symbol located on the Housing (Fig. 59a)

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.

WARNING: If any portions of the display are missing or appear dim, or if a Low Battery condition is indicated, return your XR1 to an Authorized AERIS Dealer for a complete evaluation before attempting to use it.

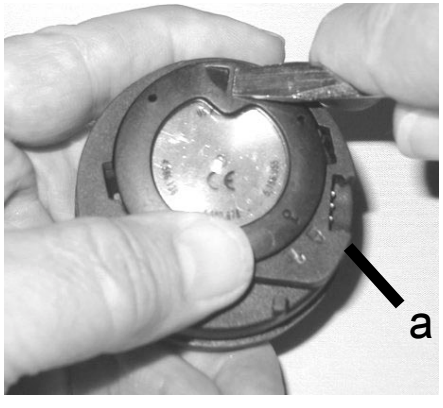


Fig. 59 -Retaining Ring Tightened

ALTITUDE SAMPLING/COMPENSATION

Atmospheric pressure decreases as altitude increases above sea level. Weather systems and ambient temperature also affect barometric pressures. Consequently, depth reading instruments that do not compensate for the decrease in pressure indicate depth readings shallower than the depth they are actually at.

The XR1 automatically compensates for decreased ambient pressure when activated at high altitudes up to 14,000 feet (4,270 meters). Its program contains a high altitude algorithm that reduces no decompression and oxygen exposure limits to add a larger zone of caution.

The XR1 senses ambient pressure when it is activated, every 15 minutes while it is activated, or every 30 minutes when it is not activated. At an Altitude of 2,000 feet (610 meters), it will automatically recalibrate itself to measure depth in feet of fresh water rather than feet of sea water. It will then readjust the no decompression and oxygen limits at additional intervals of 1,000 feet (305 meters). Therefore, when returning to lower Altitudes, diving should not be conducted until the unit automatically clears of any residual nitrogen and oxygen loading and resets to operate at the new lower Altitude.

⚠ **WARNING: The XR1 will not sense ambient pressures or provide Altitude compensation when it is wet. DO NOT dive at any different Altitude until the unit shuts off and is reactivated at the new Altitude. If the unit is activated at elevations higher than 14,000 feet (4,270 meters), it will perform a diagnostic check followed by immediate shutdown.**

ACCESSORIES (optional items available from your Authorized AERIS Dealer):

- Lens Guard - covers the lens face, prevents scratches
- Battery Kit - includes 1 Battery, 1 Battery Hatch O-ring, Silicone Grease

SPECIFICATIONS

CAN BE USED AS
- Air 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 (minutes) 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 feet
  (3, 6, 9, 12, 15, and 18 meters)

Altitude Algorithm:
- Based on NOAA tables

OPERATIONAL MODES (SURFACE)
- Activation/Diagnostic
- Serial Number
- Surface
- Dive Planner
- Time to Fly Countdown
- Time to Desaturate Countdown
- Dive Log (Preview, Data)
- Clear (Reset)
- Set Mode:
  - Units of Measure (Imperial / Metric)
  - Hour Format (12 / 24)
  - Time (Hour, Minute)
  - Date (Year, Month, Day)
  - Digital Gauge Mode (On / Off)
  - Wet Activation (On / Off)

OPERATIONAL MODES (DIVE)

No Decompression Dive:
- Main 1, 2, or 3
- Safety Stop

Digital Gauge Mode:
- Main, Alternate

Decompression Dive:
- Main, Alternate 1, Alternate 2

Violation - Conditional, Delayed, and Immediate/Gauge

SPECIFICATIONS (CONTINUED)

DISPLAY RANGE/RESOLUTION

Numeric Displays:	Range:	Resolution:
• Dive Number	0 to 12	1
• Depth	0 to 399 ft (120 m)	1 ft (.1 m /1 m > 99.9)
• Maximum Depth	399 ft (120 m)	1 ft (.1 m/1 m > 99.9)
• Dive 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 to 9:59 hr:min	1 minute
• Surface Time	0:00 to 9:59 hr:min* (* then 10 - to 23 - hr only)	1 minute
• Dive Log Surface Interval	0:00 to 23:59 hr:min	1 minute
• Time to Fly	23:50 to 0:00 hr:min* (* starting 10 min after the dive)	1 minute
• Time to Desaturate	23:50 maximum to 0:00 hr:min* (* starting 10 min. after the dive)	1 minute
• Temperature	0 to 99°F (-9 to 60°C)	1°

Special Displays:	Occurrence
• Diagnostic Display	After Manual Activation
• Out of Range (- - -)	>330/399 feet (>99.9/120 meters)
• Gauge Mode Countdown Timer	23:50 to 0:00 hr:min (after violation)

SPECIFICATIONS (CONTINUED)

BAR GRAPHS

Nitrogen Bar Graph:	segments
• No Decompression zone (Gray)	3
• No Deco Caution zone (Yellow)	1
• Decompression Warning 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 (Gray)	1	11 - 25	3.5 - 7.5	1	21 - 50	6.5 - 15
• Caution Zone (Yellow)	1	26 - 30	8 - 9	1	51 - 60	15.5 - 18
• Too Fast Zone (Red - flash)	1	> 30	> 9	1	> 60	> 18

OPERATIONAL PERFORMANCE

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

Dive Counter:
- Displays Dives #1 to 12, 0 if no dive made yet
- Resets to Dive #1, upon diving (new activation period)

Dive Log Mode:
- Stores 12 most recent dives in memory for viewing
- After 12 dives, adds 13th dive in memory and deletes the first oldest

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, CR2450, Lithium battery
• Shelf life	Up to 5 years
• Replacement	User replaceable (annual recommended)
• Life expectancy	100 dive hours (if 1 - 1 hour dive each activation period), 150 hours (if 3 - 1 hour dives)

Battery Indicator:

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

Activation:
- Manual - push button (recommended)
- Automatic - by immersion in water (if Wet Activation is 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 feet (1.2 meters), if the Wet 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.

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).

INSPECTION / SERVICE RECORD

Serial & Rev Number _____

Date of purchase _____

Purchased from _____

Below to be filled in by an Authorized AERIS Dealer:

Date	Service Performed	Dealer / Technician

AERIS
2002 Davis Street
San Leandro, CA 94577
Tel: 510/346-0010
Fax: 510/346-0015
Web site: http://www.diveaeris.com
E-mail: info2@diveaeris.com

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