

750GT™

owner's guide



LIMITED TWO-YEAR WARRANTY

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

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TRADEMARK NOTICE

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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), Nitrogen Bar Graph (U.S. Patent no. 4,882,687), 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 750GT 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 750GT dive computer model is based upon the latest research and experiment in decompression theory. **Still, using the 750GT, 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.

FCC ID: MH8A

FCC Compliance:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Interference Statement:

This equipment has been tested and found to comply with the limits for an Intentional Radiator, a Class B Digital Device, pursuant to Part 15 of FCC Rules, Title 47 of the Code of Federal Regulations. These limits are designed to provide reasonable protection against harmful interference in a commercial or residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- a. Reorient or relocate the receiving antenna.
- b. Increase the separation between the equipment and the affected receiver.
- c. Connect the equipment and the affected receiver to power outlets on separate circuits.
- d. Consult the dealer or an experienced radio/TV technician for help.

⚠ WARNING: Changes or modifications not expressly approved by AERIS could void the user's authority to operate the equipment.

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FEATURES and DISPLAYS

INTRODUCTION

Welcome to AERIS and thank you for choosing the 750GT!

Your new 750GT is a two component, hoseless, integrated system that consists of a computer Display Module and a radio frequency Transmitter that will be installed into a high pressure port of your regulator first stage.


The Transmitter sends tank pressure data to the Display Module via a low frequency signal. In addition to nitrogen and oxygen loading data, breathing gas consumption is calculated and displayed in graphic and alpha/numerical formats on the Display Module's screen.

The Display Module can also be used without the Transmitter as a stand alone, non-integrated computer, and will retain full use of all functions except those related to tank pressure.



Your 750GT presents the information that you need before, during, and after your air (or nitrox) dives using an intuitive combination of easy to read displays and unique identification icons. Tissue loading of nitrogen, accumulation of oxygen, ascent rate, breathing gas consumption rate, and breathing gas time remaining are presented as segmented bar graphs beside color coded reference indicators that bring quick focus to these important status displays.

As you progress through this instructional guide, you will become familiar with all of the unique functions and features available and see examples of the displays that you could expect to see in the various operational modes. Refer to the Glossary of terms in the back of this manual, and keep the waterproof Review Card handy during your dive trips. Although it will require an initial investment of time to become acquainted with the various icons and bar graphs, you'll soon agree that the 750GT is easy to understand and use. Remember that the rules you learned in your basic scuba certification course still apply to the diving you will do while using a dive computer - some will become even more important. 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.

 **NOTE:** Throughout this owner's guide reference is made to the term 'breathing gas'. The rationale being that the 750GT can be used for 'air' dives or 'nitrox' dives. For clarity these terms are defined as -

Breathing Gas - the gaseous mixture breathed during a dive.

Air - a breathing gas that contains approximately 21% oxygen and 79% nitrogen (nature's common nitrogen-oxygen mixture).

Nitrox - a nitrogen-oxygen breathing gas that contains a higher fraction of oxygen (22 to 50%) than air.



**Be a -
RESPONSIBLE DIVER
at all times.**

CONTROL BUTTONS

The 750GT is a unique dive computer with interactive controls that allow you to select various display options and access specific information when you choose to see it. The **Advance** (Left) and **Select** (Right) control buttons (Fig. 1) can be pressed repeatedly, or held in to scroll as you define settings or access different display modes.

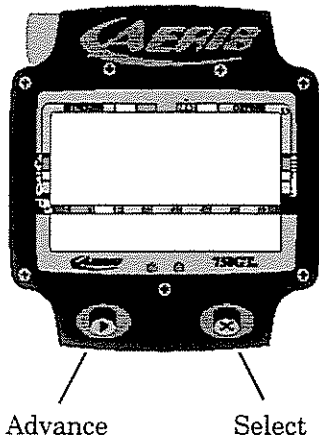


Fig. 1 - Control Buttons

On the surface, before diving, you can perform the following operations using the buttons:

- Activate the Display Module
- Select units of measure - English or Metric
- Select language for messages - English, Italian, German, Spanish, or French
- Set depth alarm
- Set gas pressure alarm
- Turn the audible alarm - on or off
- Turn the Alternate Dive Mode display - on or off
- Set the current date and time
- Set the display module/transmitter link code

While on the surface, you can access the following Modes with the buttons:

- **FO2** mode - to program the percentage of oxygen in the nitrox mix.
- **Plan** mode - to view no decompression limits and plan your next dive.
- **Log** mode - to view data from your 12 most recent dives.
- **History** mode - to view the total number of dives, maximum depth, etc.
- **Set** mode - to establish preferred selections.
- **External Access** mode - to download (copy) dive data from the 750GT to a PC log/profile program.

During Dive modes, the Advance (Left) button can be used to activate the display's backlight, and the Select (Right) button can be used to access an Alternate Dive mode that displays additional information including maximum depth, dive time and temperature.

INFORMATIONAL DISPLAYS

Operational modes and status information is visually represented numerically and/or graphically and can be understood at a glance with the aide of Universal Icons (Fig. 2) that identify and bring quick focus to the displays. Also, segmented bar graphs will show how close you are to critical limits. Refer to the LCD Key on page 22 for identification of icons, symbols and bar graphs.

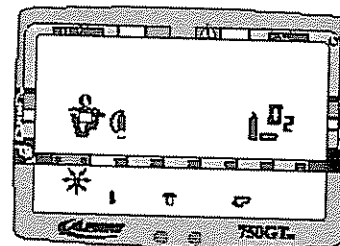


Fig. 2 - Universal Icons

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.

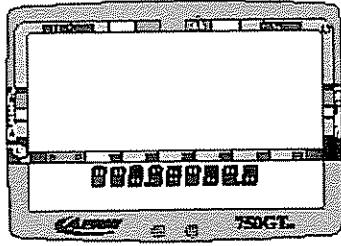


Fig. 3 - Messages

In critical situations, urgent messages appear in the lower screen and an audible alarm sounds to alert you to check this information. These concise, simple messages (Fig. 3), such as "TOO FAST" or "TOO DEEP" are displayed in the language that you choose during setup.

BAR GRAPHS

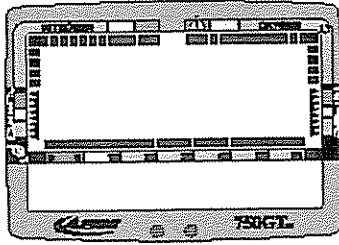


Fig. 4 - Bar Graphs

Five segmented bar graphs appear around the perimeter of the upper screen (Fig. 4). The green, yellow, and red color coded portions of the peripheral decal denote normal, caution, and danger zones, respectively. When underwater, you can quickly focus on the bar graphs to make sure that they are **in the green**. You can quickly verify that you're not getting too close to the no decompression limit or the oxygen tolerance limit, or ascending too fast, or consuming breathing gas too fast, or running low on breathing gas.

Nitrogen Bar Graph

The Nitrogen Bar Graph represents nitrogen loading, showing your relative no decompression or decompression status. As your depth and elapsed dive time increase, segments will add to the graph beginning in the lower left portion of

the screen. As you ascend to shallower depths, this bar graph will begin to recede, indicating that additional no decompression time is allowed for multilevel diving.

The Nitrogen Bar Graph (Fig. 5) 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 zone, a yellow Caution zone, and a red Decompression zone. The yellow Caution Zone (Fig. 5a) provides a visual representation of how close you are to the no decompression limit, allowing you to make a decision regarding safety stop duration or necessity. 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.

The Nitrogen Bar Graph assists you with managing decompression by filling a large red 'ceiling stop required' segment (Fig. 5b).



WARNING: AERIS advocates responsible diving practices consistent with your individual level of formal training and experience, and does not recommend decompression diving or diving below 130 feet (39 m).

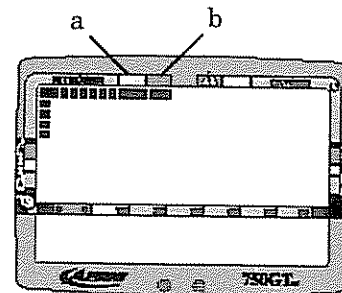


Fig. 5 - Nitrogen Bar Graph

Oxygen Accumulation (O2) Bar Graph



NOTE: Displays associated with oxygen and the O2 bar graph will only appear if FO2 has been set at a value other than 'Air'.

The Oxygen Accumulation (O2) Bar Graph (Fig. 6a) represents oxygen loading, your relative oxygen tolerance dosage (OTU), showing the maximum of either per dive allowable oxygen, or 24 hour period allowable oxygen. As your exposure (accumulation of oxygen) increases during the dive, segments will add to the graph around the upper right perimeter of the screen. As accumulation decreases, the bar graph will begin to recede, indicating that additional exposure (accumulation) is allowed for that dive, and that 24 hour period.

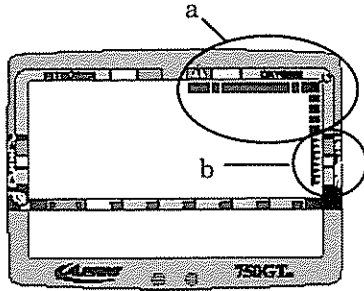


Fig. 6 - O2 Bar Graph & Ascent Rate Indicator

The O2 Bar Graph also assists you with managing high partial pressure of oxygen (PO2) by flashing the large red Danger zone segment as a warning when the level of PO2 exceeds the maximum allowed limit of 1.60 ATA . This is explained in detail in the Handling the Extremes section.

Ascent Rate Indicator

The Ascent Rate Indicator (Fig. 6b) is provided to help you avoid excessive ascent rates by providing a visual representation of ascent speed, rather than just showing that you are ascending too fast.

The 8 triangular segments of the bar graph, located beside green, yellow, and red reference zones, appear beginning from the bottom and may be considered an ascent rate speedometer. Green is a 'normal' rate, yellow is a 'caution' rate, and red is 'Too Fast'. The actual speeds that the segments represent are shown at the left.

When your ascent rate exceeds the maximum recommended rate of 60 feet (18 meters) per minute, the bar graph segments will enter the red zone and all displayed segments will flash once per second until your ascent speed is slowed. When this occurs, you should immediately slow your ascent.

The Ascent Rate Indicator has been granted U.S. Patent No. 5,156,055.

Breathing Gas Consumption Indicator

The Breathing Gas Consumption Indicator bar graph (Fig. 7) is a true biofeedback monitor that indicates your current breathing rate as compared to your personally established breathing parameters. The comparison is based upon an average rate established during the first 70 seconds of breathing that is sensed.

After the comparison, the bar graph will provide you with continuous visual indication of your breathing rate as it slows or increases.

Segments	= Ascent Speed
0	= 0 - 10 fpm (0 - 3 mpm)
1	= 11 - 20 fpm (3 - 6 mpm)
2	= 21 - 30 fpm (6 - 9 mpm)
3	= 31 - 40 fpm (9 - 12 mpm)
4	= 41 - 50 fpm (12 - 15 mpm)
5	= 51 - 60 fpm (15 - 18 mpm)
6	= 61 - 90 fpm (18 - 27 mpm)
7	= 91 - 120 fpm (27 - 36 mpm)
8	= >120 fpm (>36 mpm)

(when > 5, the segments flash)

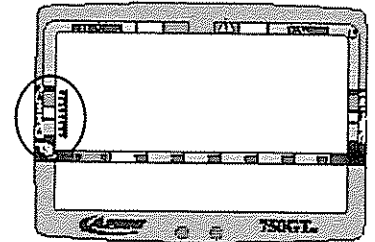


Fig. 7 - Breathing Gas Consumption Indicator

Breathing Gas Time Remaining Bar Graph

The Breathing Gas Time Remaining Bar Graph (Fig. 8) 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 breathing gas reserve. This calculation and display is based on your breathing gas consumption rate that is continually monitored, 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 or less, based on your pre selected Gas Alarm Set Point. The bar graph is more precise as time remaining decreases toward the red zone.

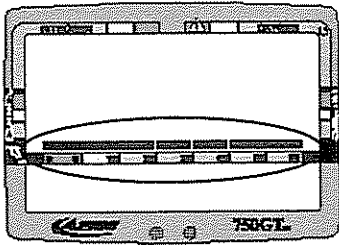


Fig. 8 - Breathing Gas Time Remaining Bar Graph

DIVE TIME REMAINING

One of the most important pieces of information on the 750GT is the patented Dive Time Remaining numeric display. To numerically display Dive Time Remaining, the 750GT constantly monitors three critical pieces of information; no decompression status, oxygen accumulation status, and rate of breathing gas consumption. The Dive Time Remaining display will indicate the time that is more critical for you at that particular moment (i.e.; whichever time is the least amount available of the three).

The time being displayed is identified by the No Decompression Dive Time icon, or Gas Time Remaining icon displayed to the left of the numeric display, or the O₂ symbol displayed to the right of the numeric display (Fig. 9).

Knowing that you have 45 minutes of no decompression time remaining is not as critical as knowing that you only have 40 minutes of breathing gas time remaining. Or, knowing that you have 40 minutes of breathing gas time remaining is not as critical as knowing that you only have 35 minutes of oxygen accumulation time remaining. The 750GT presents the dive time remaining that is considered to be of primary importance. This unique feature has been granted U.S. Patent No. 4,586,136.

Breathing Gas Time Remaining

Breathing Gas Time Remaining will appear as the numeric Dive Time Remaining display (Fig. 10a) only when it is less than No Decompression Time Remaining and Oxygen Accumulation Time Remaining. Breathing Gas Time Remaining of 60 minutes, or less, will be displayed continuously as the Gas Time Remaining Bar Graph (Fig. 10b) regardless of which time is being displayed as the numeric Dive Time Remaining. The bar graph represents only Breathing Gas Time information and it will be the only indication of breathing gas time remaining if you are in a decompression or violation mode.

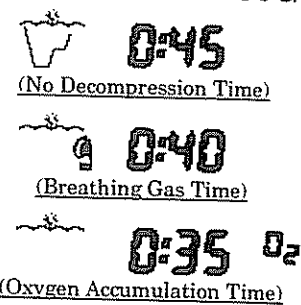


Fig. 9 - Dive Time Remaining

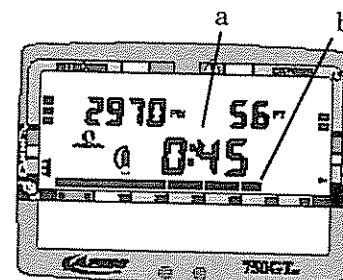


Fig. 10 - Breathing Gas Time Remaining

The 750GT calculates Breathing Gas Time Remaining using a patented algorithm that is based on a diver's individual breathing gas consumption rate and depth. Tank pressure is measured once each second, and an average rate of consumption is calculated over a 90 second period. This rate of consumption is then used in conjunction with a knowledge of the depth dependence to predict the breathing gas required for a safe ascent including any required decompression stops.

Breathing gas consumption and depth are continuously monitored, and Breathing Gas Time Remaining reflects any change in your circumstances. For example, when a buddy starts breathing from your octopus or you suddenly find yourself swimming against a strong current and begin breathing more rapidly, the 750GT will recognize this change and adjust your Breathing Gas Time Remaining accordingly.

Remember, the Breathing Gas Time Remaining is the time you can remain at the present depth and still surface with the tank pressure reserve (Gas Alarm Set Point) that you set during setup. When Gas Time Remaining indicates zero, you should immediately initiate a controlled ascent. However, there is no reason to panic, the 750GT has allowed for the breathing gas necessary for a safe ascent including any emergency decompression stops.



No Decompression Dive Time Remaining

No Decompression Dive Time Remaining 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 twelve 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 of the twelve is closest to this maximum level is the controlling compartment for that depth. Its resulting value will be displayed numerically (Fig. 11a) along with the No Decompression Dive icon and graphically as the Nitrogen Bar Graph (Fig. 11b).

As you ascend from depth following a dive that has approached the no decompression limit, the Nitrogen Bar Graph will diminish 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 the 750GT offers. See the Reference section for more information pertaining to tissue tracking.

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 and now uses the findings in the Recreational Dive Planner™ distributed by PADI.

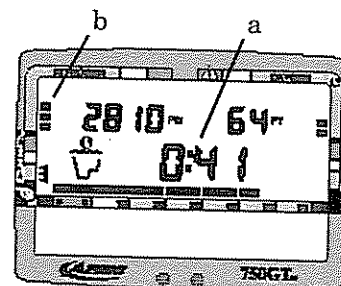


Fig. 11 - No Decompression Dive Time Remaining

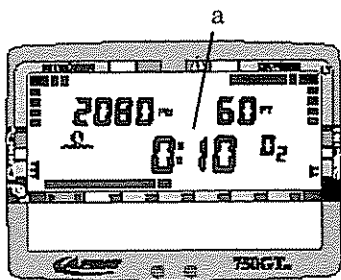


Fig. 12 - Oxygen Accumulation Time Remaining

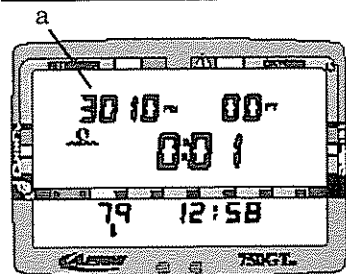


Fig. 13 - Cylinder Pressure

Oxygen Accumulation Time Remaining

Oxygen accumulation (exposure) during a dive, or 24 hour period, appears graphically as the O₂ Bar Graph. As time remaining before reaching the oxygen exposure limit decreases, segments are added to the O₂ bar graph. When the amount of time remaining before reaching the oxygen limit becomes less than the No Decompression Dive Time Remaining or Breathing Gas Time Remaining, calculations for the dive will be controlled by oxygen. Oxygen Time Remaining will then appear as the main numeric time display (Fig. 12a) as signified by the O₂ symbol appearing to the right of the display.

As oxygen accumulation continues to increase, the O₂ bar graph will enter the yellow Caution Zone. High O₂ Mode is explained in detail in the Handling the Extremes section.

ALPHA/NUMERIC DISPLAYS

Cylinder Pressure Display

The Cylinder Pressure display (Fig. 13a) indicates how much breathing gas is in your cylinder, up to 5000 PSI (352 BAR) to nearest 10 PSI (.5 BAR). The value of pressure will be displayed during all dive modes when the Display Module is linked to the Transmitter and within the operating range. Linking is explained in more detail in the Pre Dive and Dive Mode section.

Depth Displays

During a dive, the **Current Depth** display (Fig. 14a) indicates depths from 0 to 330 feet (99.5 meters) in 1 foot (.5 meter) increments.

The value of Current Depth will be displayed during all dive modes unless you descend deeper than 330 feet (99.5 meters), at which point the display will show three dashes (- - -) to indicate that you have gone 'out of range'. This is described in detail in the Handling the Extremes section.

A second depth display (Fig. 14b) indicates the **Maximum Depth** reached during that dive. If the Alternate Mode is turned 'off', the display will appear when the Select/Right button is pressed. More critical information such as a message will override it.

In the event that you descend deeper than 330 feet (99.5 meters), this display will only show three dashes (- - -) as the Maximum Depth for the remainder of that dive, and as the Max Depth in the Dive Log for that dive. This is described in detail in the Handling the Extremes section.

During a Decompression Dive, the required **Ceiling Stop Depth** appears (Fig. 15a). The display toggles with the message CEILING once every 15 seconds. This is described in detail in the Handling the Extremes section.

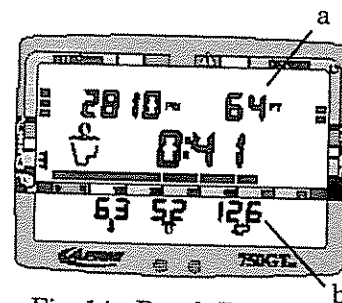


Fig. 14 - Depth Displays

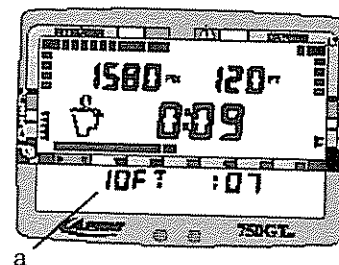


Fig. 15 - Stop Depth

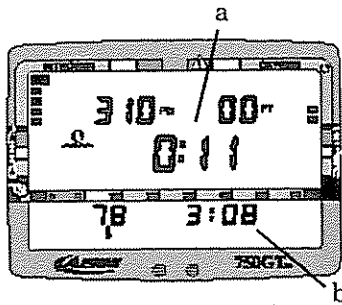


Fig. 16 - Time Displays

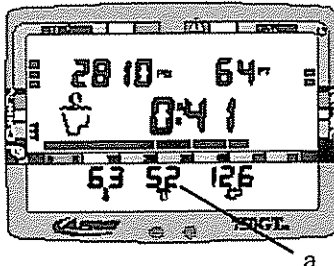


Fig. 17 - Time Displays
(Alternate Mode On)

Time Displays

The **Main Time display** (Fig. 16a) has larger digits than the other numerical displays. Depending on the operating mode that the 750GT is in at the time, the display indicates Elapsed Surface Time, theoretical Dive Time Available, Dive Time Remaining, or Total Ascent Time required.

A **second Time display** indicates Elapsed Dive Time, Decompression Stop Time required, Time of Day (Fig. 16b), or Time to Fly.

Each display is described in detail in subsequent sections of this owner's guide.

Most of the time displays are shown in hour:minute format (i.e. 1:02 represents one hour and two minutes, not 102 minutes!). The colon that separates hours and minutes blinks once per second when the display is indicating real time such as elapsed Surface Time. Dive Time Available, No Decompression Dive Time Remaining, Total Ascent Time required, or Time to Fly are calculated projections of time and use a solid (non-blinking) colon to indicate that they are counting down, rather than counting up.

Elapsed Dive Time (Fig. 17a) appears when the Alternate Mode is turned ON (described on page 33). If the Alternate Mode is turned OFF, Elapsed Dive Time can be displayed during a dive by depressing the Select/Right button.

Ambient Temperature Display

When the Alternate Mode is turned ON, ambient **Temperature** is displayed continuously during a dive (Fig. 18a). If the Alternate Mode has been turned OFF, Temperature can be displayed by depressing the Select/Right button.



NOTE: More critical information such as Ceiling Stop Depth required or a Message will override the display.

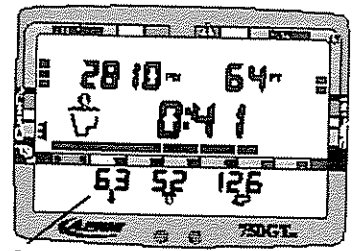
AUDIBLE ALARM

When the Audible feature is set ON (described on page 38), the 750GT alerts you to check the Message, bar graphs, and numeric displays when you are approaching dangerous situations. There are four Audible Alarms.

Potential Danger – One Double Beep

During situations that may pose potential danger, one Double Beep is emitted from the 750GT. These situations include:

- Entry into decompression.
- Breathing Gas Dive Time Remaining decreasing to 5 minutes.
- Partial pressure of oxygen (PO₂) equal to or greater than 1.40 ATA.



a Fig. 18 - Temperature



(Potential Danger)

Immediate Danger – continuous One Beep per Second

When the 750GT senses immediate danger to you, it emits One Beep per Second until the situation is corrected. These situations include:



(Immediate Danger)

- Descending deeper than the Depth Alarm Setting.
- Continuous interruption of signal link of more than 60 seconds.
- Ascending to a depth shallower than a required stop depth.
- Ascent rate that exceeds 60 ft./min (18 m/min).
- Gas Time Remaining equals required Decompression time.
- Gas Time Remaining equals zero (0:00).
- Partial pressure of oxygen (PO₂) equal to or greater than 1.60 ATA.
- Oxygen accumulation greater than the allowed per dive or 24 hour limit.

Permanent Violations – Single Long Beep

If you enter a Delayed or Immediate Violation Mode, a Single Long Beep will be emitted. This will occur if one of these Violation rules are broken:



(Violation)

- Depth is shallower than the required stop depth for more than 5 minutes.
- Required Decompression exceeds a 60 FT/ 18 M ceiling.

Transition – Short Beep

To indicate that a command has been accepted, the 750GT will emit a Short Beep whenever you use the control buttons, and immediately following activation and the Diagnostic Mode.

WARNING MESSAGES

The Message display (Fig. 19) provides a visual explanation of what is occurring when the Audible Alarm sounds, working in conjunction with the Depth and Gas Alarm Set Points, as well as Decompression and Violation Modes, and the Ascent Rate Indicator. Messages, such as TOO FAST, TOO DEEP, GAS ALARM, and VIOLATION, flash on the display in the language that you set. This is described in detail in the Handling the Extremes section. A language cross reference is provided in the back of this manual for your convenience.

BACKLIGHT FEATURE

In addition to using a high contrast LCD for easy readability in low light conditions, the 750GT backlight feature evenly and easily illuminates the full display. On night dives, in caves, or during any other low light situation, you can illuminate the display when you wish to with the touch of a button.

BEEP

(Transition)

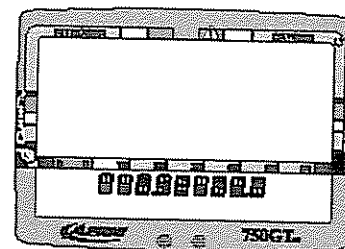


Fig. 19 - Warning Messages

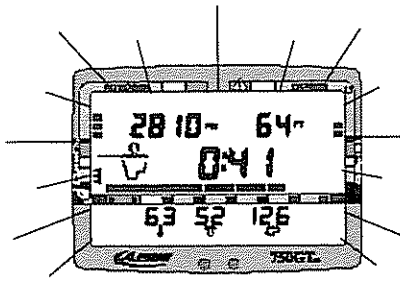


Fig. 20 - Backlight

Upon activation the backlight will illuminate the display while the unit performs its diagnostic check. To activate the backlight during the Dive mode, simply press the Advance/Left control button (Fig. 20). The backlight will remain illuminated as long as the button is depressed, plus 10 seconds after being released (for a maximum of 15 seconds).

AERIS recommends that you always carry primary and backup dive lights when conducting dives that could include low light situations.

OPERATING TEMPERATURE

The 750GT will operate in almost any temperature diving environment in the world (Fig. 21) between 32 and 140°F (0 and 60°C). At extremely low temperatures, the LCD may become sluggish, but this will not affect its accuracy. If stored or transported in extremely low temperature areas (below freezing), you should warm the module and its batteries with body heat before diving.

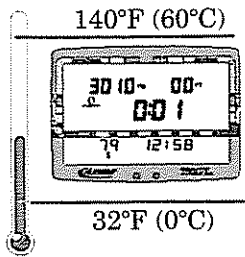




Fig. 21 - Operating Temperature Range

Even though the 750GT will operate in this wide range of temperatures, **it is possible to damage the electronics if left exposed to direct sunlight, or in a hot confined space (like a car trunk).** After the dive, cover the Display Module and **keep it out of the sun.** If inadvertently left in the direct sunlight for a long period, the LCD display may become totally black. If this occurs, immediately immerse the Display Module in water. The display should recover its normal appearance after a few minutes.

 **NOTE:** Damage from excess heat, or cold, is not covered by the 750GT two year limited warranty.

SHARING THE 750GT

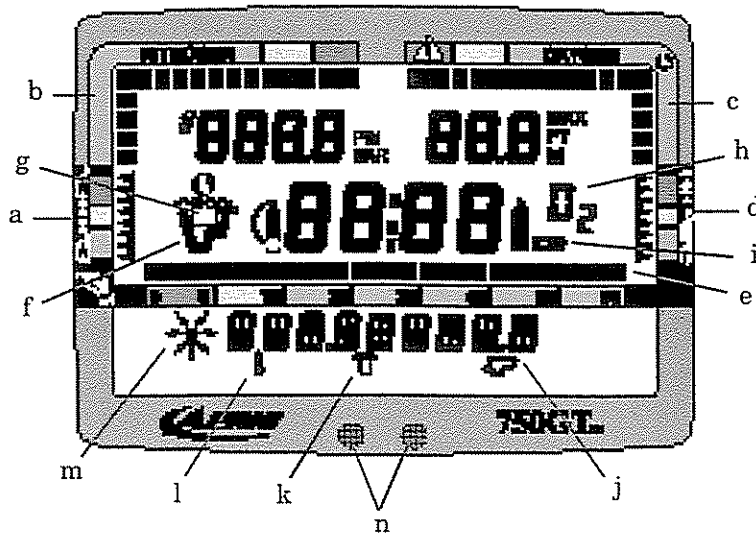
 **WARNING:** Never participate in sharing or swapping of a dive computer. Doing so may result in injury or death.

The 750GT provides information based upon a diver's personal dive profile, and therefore **must not be "shared" between divers**. You should never, under any circumstances, swap your computer with another unit between dives, or share your computer with another diver underwater.

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 thus swapping dive computers could lead to inaccurate and potentially dangerous predictions of decompression and oxygen accumulation status. This rule applies to the use of all dive computers, but is especially important when using the 750GT, due to the personal information it provides.



**Be a -
RESPONSIBLE DIVER
at all times.**



Key:

- a - Gas Consumption Indicator
- b - Nitrogen Bar Graph
- c - O2 Bar Graph
- d - Ascent Rate Indicator
- e - Gas Time Remaining Bar Graph
- f - Operating mode icon (detail A)
- g - Log mode icon
- h - Oxygen mode symbol
- i - Low Battery icon (detail B)
- j - Maximum Depth icon
- k - Elapsed Dive Time icon
- l - Temperature icon
- m - Transmitter Link icon
- n - PC Interface sensors

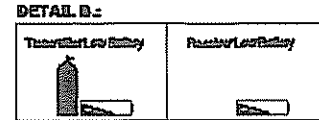
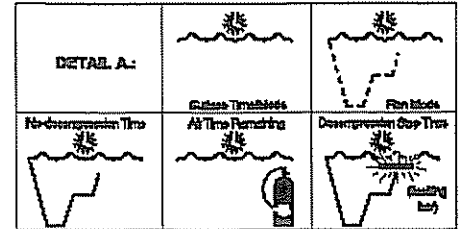


Fig. 22 - LCD Key

ACTIVATION and SETUP

MAKING THE 750GT PERSONAL

Before you dive with the 750GT for the first time, you will need to become acquainted with its interactive features, and select your personal display settings using the Control Buttons and Mode Menu.

The Transmitter must first be installed into a high pressure port of your regulator first stage, facing to one side (Fig. 23). AERIS strongly recommends that installation be performed by an Authorized AERIS Dealer at the time of purchase. Instructions for this procedure are provided on page 99.

△ NOTE: The 750GT transmitter is compatible with most first stages, but cannot be guaranteed to fit certain models. Check with your Authorized AERIS Dealer to verify compatibility with your regulator first stage.

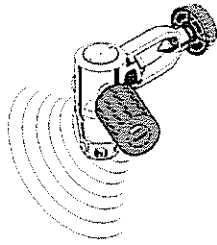


Fig. 23 - Positioning of Transmitter/First Stage

For the Display Module to receive a tank pressure signal from the Transmitter, the two devices must first be 'Linked'. The serial number of the Transmitter must be entered as the 'Link' code in the Display Module. If the Display Module and Transmitter were packaged and shipped from the factory as a complete system, the code of the Transmitter has already been entered as the 'Link' code in the Display Module.

If the two units have been purchased separately by you or your Authorized AERIS Dealer, it will be necessary to set the Link code in the Display Module so that a tank pressure signal can be received. If the Display Module has been purchased as a stand alone computer without the Transmitter, it has been pre-set at the factory as a non-linked unit, but can easily be reset at any time to 'Link' with a Transmitter code (serial number) using the Control Buttons.

SET:LINK is described on page 39.

ACTIVATING THE DISPLAY

Before activating the Display Module, the regulator containing the Transmitter must be connected to a full tank and pressurized by slowly opening the tank valve. Tank pressure of 50 psi (3.5 BAR), or greater, is required for the Transmitter to activate. Position the Display Module within 3 feet (1 meter) of, and parallel to, the Transmitter (Fig. 24) and hold it in this location during activation.



WARNING: Never activate the 750GT underwater. This may result in inaccurate depth and no-decompression time displays. If activated deeper than 4 feet (1 meter) underwater a message "TOO DEEP" will appear and the unit will shut off.

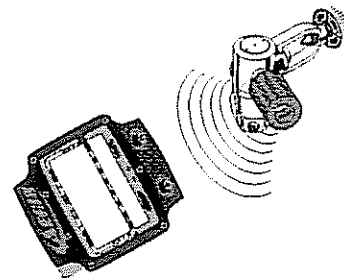


Fig. 24 - Positioning During Activation

To activate the Display Module

- press the Select/Right button once and release.

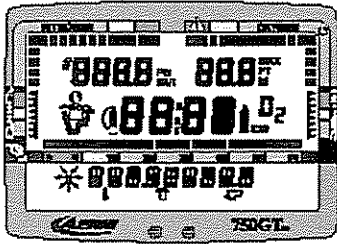


Fig. 25 - Diagnostics in Progress

The 750GT will immediately enter Diagnostic Mode, displaying all "8's", followed by "dashes", and then a countdown from 9 to 0 (Fig. 25). The Message SELF - TEST will appear and the backlight will illuminate the display throughout the diagnostic check. A single beep will be emitted to indicate successful completion of the operation.

While conducting diagnostics, the 750GT checks its display functions, coded frequency link to the Transmitter, and battery voltage to ensure that everything is working correctly.

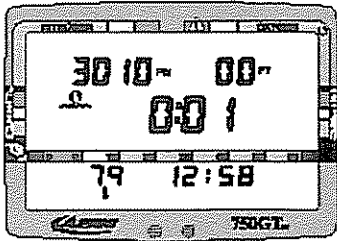


Fig. 26 - Diagnostics Successful

If the Display Module is already set to the Transmitter's link code, the Link icon will disappear from the screen and tank pressure will be displayed numerically (Fig. 26).

It will also check the ambient barometric pressure, and calibrate its present depth as zero. At elevations of 2,000 ft. (610 m) or higher, it will recalibrate itself to measure depth in 'feet of fresh water' instead of 'feet of sea water'.

During the diagnostic mode, battery voltage level of both the Display Module and the Transmitter are measured to determine if sufficient voltage is available to maintain operation for one day of diving. If there is not enough battery voltage in the Display Module, it will deactivate itself or would not have activated at all. If there is not sufficient voltage in the Transmitter, the Link icon and a tank pressure of "00" PSI (BAR) will flash on display (Fig. 27). This could also indicate one of the following conditions:

- The Transmitter was not pressurized prior to activation of the Display Module.
- The Display Module was not positioned in close proximity to the Transmitter during activation, or not correctly positioned parallel to it.
- The Display Module is not linked to the same coded frequency as the Transmitter.

In the latter case, it will be necessary to follow the prescribed linking procedure outlined on page 39 to set the Display Module to the Link code that matches that of the Transmitter's serial number, or to set a specific link code that will allow the Display Module to function as a stand alone unit.

If the Display Module was out of the range of the Transmitter while in Surface Mode, tank pressure reappears and the Link icon disappears within 5 seconds after the Display Module is returned to its correct proximity to the Transmitter.

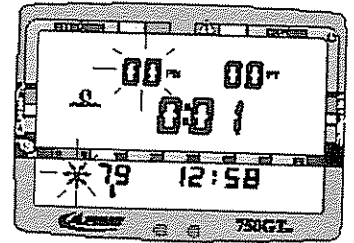


Fig. 27 - Unsuccessful Link

Low Battery conditions and battery power conservation are described in more detail in the Care and Maintenance section.



WARNING: If either or both of the Low Battery icons remain on display following diagnostics, AERIS strongly recommends that you DO NOT dive until the batteries are replaced. See the battery replacement procedure on page 96.

If no dive is made within 2 hours after initial activation, the Display Module will automatically deactivate to conserve its battery power. Check your Display Module before entering the water to verify that it is functioning and doesn't need reactivation.

To save its battery power while on the surface, the Display Module will stop searching for a Transmitter signal after 10 minutes. The signal Link can be restored by depressing the Select/Right button on the Display Module. It will also be restored automatically upon descent on a dive.



Be a -
RESPONSIBLE DIVER
at all times.



WARNING: During activation and diagnostics, if any display or message varies from the information presented here, return the 750GT to your AERIS Dealer for inspection.

Surface Mode (Fig. 28), identified by the Surface Time icon, immediately follows Diagnostic Mode after initial activation, or after the linking procedure has been performed. It also appears after a dive when you ascend shallower than 3 feet (1 meter). Information displayed includes Tank Pressure, Depth (00 FT), Surface Time with flashing colon, Temperature, and Time of Day with colon flashing.

MODE MENU SYSTEM

The Mode Menu system allows you to set the various display options that will make the 750GT your personal computer. The Advance/Left button is used to move through the Mode Menu and change each setting, and the Select/Right button is used to select (enter) the mode or setting that is currently on the screen. A brief glossary and hierarchy of the menu system is as follows:

Mode - Each mode provides a different display of information, or access to a submenu or setting. Some modes, such as Dive Mode and Surface Mode, are entered into automatically after activation. Others, such as the FO2 Mode, Plan Mode and Alternate Dive Mode, are accessed using the Control Buttons, when you want to view specific information.

Menu - The main menu allows interactive access from the Surface Mode to various other modes used while on the surface.

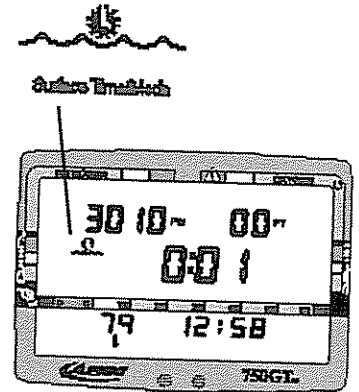


Fig. 28 - Surface Mode

Settings - These are display options (settings) that are determined by you before going diving. For example, with 'alarms' you can set the depth and tank pressure values at which you want to be alerted when you are going too deep or running low on breathing gas.

Mode Menu Sequence

- Surface
- FO2
- Plan
- Log
- History
- Set
- External Access

Settings Sequence

- Time
- Date
- Alternate
- Unit
- Alarms
- Link
- Language



NOTE: If the 750GT is left unattended for five minutes while in the Mode Menu, it will automatically revert to Surface Mode.

ENTERING SETTINGS



Before going diving, enter the general settings to be used for each of your dives. These include - Time, Date, Alternate Display, Units of Measure, Depth Alarm, Gas (tank pressure) Alarm, Link code, and Language.

△ NOTE: FO2 is a 'pre dive' setting that must be entered prior to each nitrox dive. Setting FO2 value for the breathing gas being used is described beginning on page 46.

Set Time

Your 750GT has been factory set for 12:00 AM. To change to the current Time, follow this procedure, beginning in Surface Mode:

1. Press the Advance/Left button 5 times to advance to the Set Mode. MODE:SET will appear, with SET flashing (Fig. 29). If you accidentally pass the Set Mode, you will need to press the Advance/Left button repeatedly until MODE:SET reappears.
2. Press the Select/Right button once to select (enter) the Set Mode. SET:TIME will appear, with TIME flashing (Fig. 30).
3. Press the Select/Right button once to select (enter) the Time setting. Time of day will appear, with the first digit flashing (Fig. 31).
4. To set the time, press the Advance/Left button to change that digit until it matches that of the current time, and press the Select/Right button to save the digit shown and move on to the next.
5. Press the Advance/Left button to toggle between AM or PM, and press the Select/Right button to save the one displayed.



Fig. 29 - Set Mode



Fig. 30 - Set Time

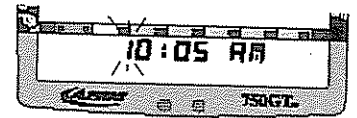


Fig. 31 - Set Time of Day

After the time has been set, SET:DATE will appear with DATE flashing. To set the date, continue with step 4 of the following Set Date procedure, or to return to the Surface Mode press the Advance/Left button 6 times.

Set Date

Your unit has been factory set for JAN 1 99. To change to the current Date, follow this procedure, beginning with step 1 if in Surface Mode; or beginning with step 4, if you just set the Time:



Fig. 32 - Set Date



Fig. 33 - Set Month

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 2 times to advance to the Date setting. SET:DATE will appear, with DATE flashing (Fig. 32).
4. Press the Select/Right button to select the Date setting. The date will appear, with the Month flashing (Fig. 33).
5. To set the Date, press the Advance/Left button to change the Month, and press the Select/Right button to save it. Repeat for the Day and Year.

After the year has been set, SET: ALT will appear, with ALT flashing. To set the Alternate display continue with step 4 of the following Set Alternate Display procedure, or to return to the Surface Mode press the Advance/Left button 5 times.

Set Alternate Display

Your unit has been factory set so the values of Temperature, Elapsed Dive Time, and Maximum Depth will be displayed continuously during the Dive Mode. You can turn this Alternate display OFF and have them appear only when you depress the Select/Right button during the dive. To turn the Alternate Display OFF, begin with step 1 if in the Surface Mode, or begin with step 4 if you just set the Date:

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 3 times to advance to the Alternate setting. SET: ALT will appear with ALT flashing (Fig. 34).
4. Press the Select/Right button to select the Alternate Display setting. ALT: ON will appear with ON flashing (Fig. 35).
5. Press the Advance/Left button to toggle between ON and Off, and press the Select/Right button to select the one displayed.

After the Alternate display has been set, SET:UNITS will appear with UNITS flashing. To set the Units of Measure continue with step 4 of the following Set Units of Measure procedure, or to return to the Surface Mode press the Advance/Left button 4 times.



Fig. 34 - Set Alt



Fig. 35 - Alt On/Off

Set Units of Measure

You can choose between Imperial (PSI and Feet) and Metric (BAR and Meters) units of measure. Your unit has been factory set for FT and PSI. To change to metric units of measure, follow this procedure, beginning with step 1 if in the Surface Mode, or beginning with step 4 if you just set the Alternate Display:



Fig. 36 - Set Units

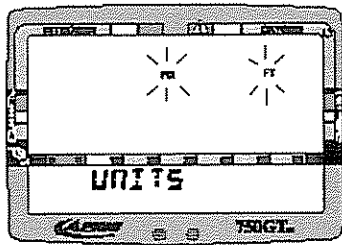


Fig. 37 - Units

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 4 times to advance to the Unit setting. SET:UNIT will appear, with UNIT flashing (Fig. 36).
4. Press the Select/Right button to select the Unit setting. PSI and FT will appear, flashing (Fig. 37).
5. Press the Advance/Left button to toggle between Imperial and Metric units, and press the Select/Right button to accept the one displayed.

After the Units have been set, SET:ALRM will appear with ALRM flashing. To set the alarm values continue with step 4 of the Set Gas and Depth Alarm procedure beginning on page 40, or to return to the Surface Mode press the Advance/Left button 3 times.

BREATHING GAS AND DEPTH ALARM SETTINGS

After planning each dive according to the no-decompression dive times shown to be available in the Planning Sequence, AERIS strongly recommends that you utilize one of the greatest safety features the 750GT offers - the Gas and Depth Alarm settings.

While the 750GT uses the Audible Alarm, Messages, and Bar Graphs to automatically alert you whenever you enter a potentially dangerous situation, the Alarm settings allow you to preset more conservative limits to better avoid these situations.

Depth Alarm Setting

The Depth Alarm will alert you whenever you reach or exceed the maximum depth value that you have chosen. If you set the Depth Alarm for a depth that is deeper than the no-decompression limits for that dive, you will first be alerted by other built-in alarms before the Depth Alarm is activated.

When the Depth Alarm is activated by reaching or exceeding your preset maximum depth, the audible alarm will sound once per second, while the Message TOO DEEP (Fig. 38) flashes until you ascend above the alarm value set. The Depth Alarm value may be set for depths ranging from 30-320 feet (9-97.5 meters) in 10 foot (3 and 3.5 meter) increments.

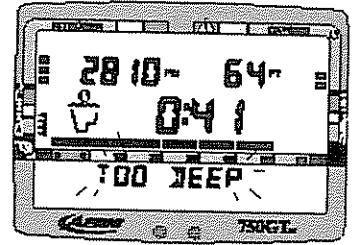


Fig. 38 - Too Deep Message
(60 FT Set Point)

The setting that you choose for the Depth Alarm does not change the displayed limits of no-decompression dive time remaining.

Breathing Gas Alarm Setting

The Breathing Gas Alarm is an alert that indicates you are approaching a critical Breathing Gas Time Remaining. The Breathing Gas Alarm Setting refers to the tank pressure reserve that you choose to surface with. It can be set for tank pressures ranging from 300 to 1000 psi (21 to 70 bar).

You will recall that Breathing Gas Time Remaining is the time that you can remain at your present depth and, following a safe ascent, still surface with a prescribed breathing gas reserve (identified here as the Breathing Gas Alarm Setting).

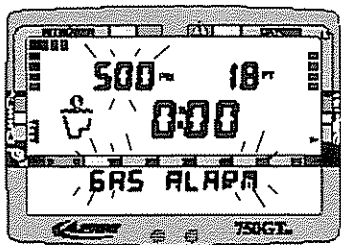


Fig. 39 - Gas Alarm

When Breathing Gas Time Remaining reaches 5 minutes, the Gas Alarm will emit a double beep as a preliminary warning. If your Breathing Gas Time Remaining decreases to zero, the tank pressure display and Message GAS ALARM flash (Fig. 39) until you ascend to a depth of 5 feet (1.5 meters).

While an immediate safe ascent is called for if the Breathing Gas Time Remaining decreases to zero, there is no reason to panic. The 750GT has allowed for the breathing gas you will consume during a safe ascent, including decompression stops if they are required, and still provide the reserve you chose.

Set Depth, Breathing Gas, and Audible Alarms

Your 750GT alarms have been factory set for 320 FT and 300 PSI, and the Audible Alarm set for ON. These settings will be retained unless you alter them.



WARNING: Turning off the Audible Alarm disables an important tool that can help you avoid decompression diving or low breathing gas emergencies. Although possible, AERIS does not recommend the disablement of the Audible Alarm.

Underwater photographers may find that the alarm frightens off marine life at a close distance, and will therefore want to turn it off temporarily before they begin a dive involving that activity. When the Audible Alarm is turned off, the 750GT will otherwise continue to display information according to the values that have been entered for the Alarm settings.

To set your desired Depth and Breathing Gas Alarm values, or turn the Audible Alarm OFF, begin with step 1 if in the Surface Mode, or begin with step 4 if you just set Units of Measure:

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 5 times to advance to the Alarm setting. SET:ALRM will appear, with ALRM flashing (Fig. 40).



Fig. 40 - Set Alarm

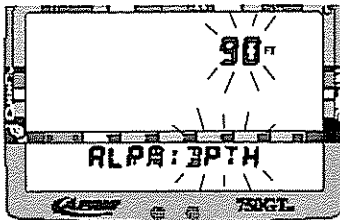


Fig. 41 - Depth Alarm

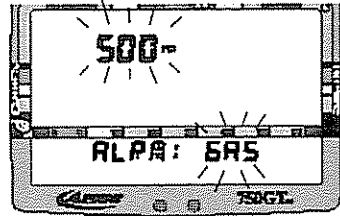


Fig. 42 - Gas Alarm



Fig. 43 - Alarm On

4. Press the Select/Right button to select the Alarm setting. The current Depth Alarm Set Point value will appear, flashing (Fig. 41).
5. Press the Advance/Left button repeatedly to change the Depth Alarm Set Point value to the depth you choose, and press the Select/Right button to accept (save) that setting. The current Breathing Gas Alarm Set Point value will appear, flashing (Fig. 42).
6. Press the Advance/Left button repeatedly to change the Breathing Gas Alarm Set Point value to the pressure you choose, and press the Select/Right button to save that setting. ALARM:ON will appear, with ON flashing (Fig. 43).
7. Press the Advance/Left button to toggle between ON and OFF, and press the Select/Right button to accept the one displayed.

After the Alarm values have been set, SET:LINK will appear with LINK flashing. To set the Transmitter Link code, continue with step 4 of the following LINKING procedure, or to return to the Surface Mode press the Advance/Left button 2 times.

LINKING PROCEDURE

Your 750GT Display Module has been factory set with the Transmitter's serial number, or at serial number 999999 if no Transmitter was purchased. If the 750GT linked automatically immediately following activation, there is no need to perform the Linking procedure.

If the Link icon and pressure value of 00 PSI (00 BAR) remained flashing on the screen after diagnostics, the Linking procedure must be performed before the Display Module can receive tank pressure data from the Transmitter.

The Linking procedure may also need to be performed in the event that your 750GT Display Module or Transmitter has received factory service, and is returned to you with a different Linking code.

You may also choose to “unlink” your Display Module from the Transmitter to use the Display Module as a stand alone computer, without its pressure integrated features, or to link it to a Transmitter that has been purchased separately at a time in the future.

To set the Display Module with the link code (serial number of the Transmitter), begin with step 1 of the following procedure if in the Surface Mode, or begin with step 4 if you just set the Alarms:

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 6 times to advance to the LINK setting. SET:LINK will appear, with LINK flashing (Fig. 44).
4. Press the Select/Right button to select the Link Mode (Fig. 45).



Fig. 44 - Set Link



Fig. 45 - Link Mode

5. Compare the 6 digit serial number code shown on the display to the first 6 digits of the serial number embossed on the Transmitter.
 - a. If the numbers are the same, press the Select/Right button 6 times to accept (save) the code number shown. DO NOT press the Advance/Left button, this will change the code to an incorrect number.
 - b. If the numbers are not the same, press the Advance/Left button to change the first digit of the code as required, then press the Select/Right button to save that digit. Repeat until all 6 digits are set correctly.

If you would like to set the Display Module to function as a stand alone, non pressure integrated computer, use the control buttons as described above to set the code as **999999** (Fig. 46).

After the Link code has been set, SET:LANG will appear with LANG flashing. To set your preferred Language continue with step 4 of the following Set Language procedure, or to return to the Surface Mode press the Advance/Left button once.



Fig. 46 - Stand Alone

Set Language

Warning Messages and information in the Mode Menu system are displayed in the language that you choose - English, Italian, German, Spanish, or French. **It is very important that you do not accidentally change this setting to a language that you do not understand.**

Your unit has been factory set for English. To change the language, begin with step 1 if in the Surface Mode, or begin with step 4 if you just set the Link code:

1. Press the Advance/Left button 5 times to advance to the Set Mode.
2. Press the Select/Right button once to select the Set Mode.
3. Press the Advance/Left button 7 times to advance to the Language setting. SET:LANG will appear, with LANG flashing (Fig. 47).
4. Press the Select/Right button to select the Language setting. The default setting ENGLISH will appear, flashing (Fig. 48).
5. Press the Advance/Left button to scroll through the Language setting options until you arrive at the one you prefer.
6. Be careful to ensure that the language selection flashing is the one that you prefer before you press the Select/Right button.
7. Press the Select/Right button to save the Language chosen and return to the Surface Mode.



Fig. 47 - Set Language



Fig. 48 - Language

Language Correction Procedure

If you accidentally selected a language that you do not prefer or understand, you may find it very confusing to navigate further in the Mode Menu or understand the Messages (Fig. 49).

To correct the language, it is recommended that you wait 5 minutes to allow the Display Module to default to the Surface Mode, then carefully perform the following procedure:

1. Press the Advance/Left button 5 times to arrive at the Set Mode.
2. Press the Select/Right button once to enter Set Mode.
3. Press the Advance/Left button 7 times to arrive at the Language submenu.
4. Press the Select/Right button once to select the Language submenu.
5. Press the Advance/Left button as needed until your preferred language appears.
6. Press the Select/Right button to save the language chosen and return to the Surface Mode.

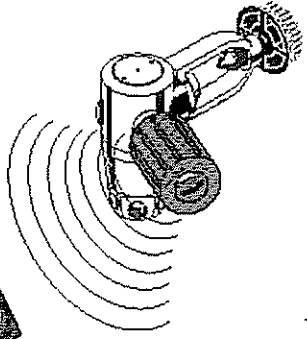
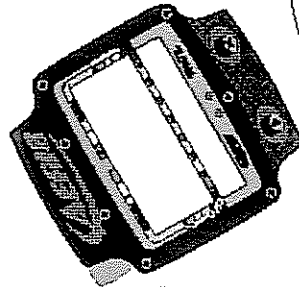


Fig. 49 - Language
(Set: Link - German)

PRE DIVE and DIVE MODES

Poor reception distance.
(Greater than 3 feet)

Poor
reception



or
eption
a.

**Best
reception
zone.**

POSITIONING OF THE DISPLAY MODULE

The Transmitter emits a low frequency signal that radiates outward in a semi-circular pattern that is parallel to the length dimension of the Transmitter. A coiled antenna inside the Display Module receives the signal when it is positioned within a zone parallel to, or at a 45 degree angle to, the Transmitter as shown on page 44. The Display Module cannot effectively receive the signal when it is held out to the sides of the Transmitter, or held at distances greater than 6 feet (2 meters) in front of the Transmitter. Best reception is achieved when the Display Module is within 3 feet (1 meter) of the Transmitter.

When installed into a high pressure port of your first stage regulator, the Transmitter must be positioned so that it faces horizontally outward from the tank valve.

LINK INTERRUPTION UNDERWATER

During a dive, you may at times move the Display Module out of the signal pattern resulting in a temporary interruption of the link signal.

An interruption greater than 15 seconds will cause the Link icon and tank pressure display to flash (Fig. 50). Also, an audible alarm will sound once per second until the link is restored. The link will be restored within 4 seconds after the Display Module is moved back into its correct position.

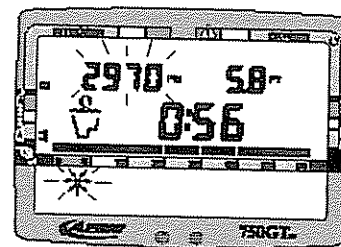


Fig. 50 - Underwater Link Interruption

An interruption may also occur while the Display Module is within 3 to 4 feet (1 meter) of a running dive propulsion vehicle. The link will be restored within 4 seconds after the vehicle motor is shut off or when the Display Module is moved out of this area.

When using a photo strobe, temporary link interruption may occur shortly after the strobe flashes. The link will be restored in 4 seconds.



WARNING: During the period of link interruption, the Display Module will temporarily lose transmitted pressure related functions and displays. These will be regained 4 seconds after the link is restored.

OPERATIONAL MODES

The 750GT can be used either as an Air computer or a Nitrox computer. After activation, the Display Module will operate as an Air computer without displaying information associated with oxygen calculations, unless the percentage of oxygen (FO2) is 'set' for a numerical value of 21 to 50 %.



WARNING: The percentage of oxygen (FO2) in the nitrox mix being used must be set 'before each nitrox dive.'



FO2 MODE**FO2 Set for Air**

If you are using 'Air' as your breathing gas, you can verify that 'Air' is the FO2 value by performing the following procedure beginning in the Surface Mode:

1. Press the Advance/Left button once to enter the Mode Menu. MODE:FO2 will appear, with FO2 flashing (Fig. 51).
2. Press the Select/Right button once to select the FO2 Mode. FO2 Air will appear, with Air flashing (Fig. 52).
3. Press the Select/Right once to accept Air as the setting. MODE:PLAN will appear with PLAN flashing.
4. Press the Advance/Left button 5 times to return to the Surface Mode.

When set with an FO2 value of 'Air', the 750GT will perform calculations the same as if FO2 were set for 21% oxygen, internally accounting for oxygen loading for any subsequent Nitrox dives.

Oxygen related displays, warnings, and the O2 bar graph will not appear on the LCD display when FO2 is set for 'Air' (Fig. 53). To have them appear during an Air dive, set the FO2 value at 21%.



Fig. 51 - FO2 Mode

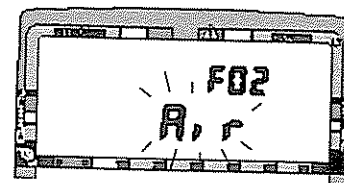


Fig. 52 - Air Setting

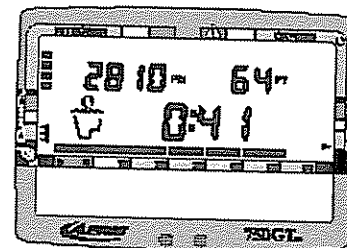


Fig. 53 - Dive Mode (Air)

Setting FO2 for a Nitrox Dive

You can program the 750GT for nitrogen-oxygen (nitrox) mixtures of 21% to 50% oxygen (O₂) before each nitrox dive. If FO₂ is set at a value of 21%, the unit will remain set as a '21% nitrox computer' for subsequent nitrox dives until FO₂ is set to a higher value, or the Display Module automatically turns off. Once FO₂ is set to a value 'greater than 21%' to match the nitrox mix being used for that nitrox dive, the FO₂ value displayed during the FO₂ Mode that is accessible 10 minutes after that dive will be 50%, the default value (Fig. 54).

FO₂ must be reset for each repetitive nitrox dive, or the value will automatically default to 50 and the dives will be calculated based on 50% O₂ for oxygen calculations and 21% O₂ (79% nitrogen) for nitrogen calculations. Once a dive is made with the 750GT set as a nitrox computer (FO₂ set for a numerical value), the unit 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.

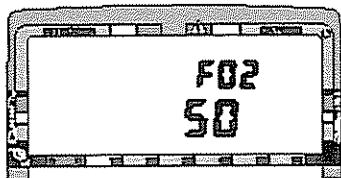


Fig. 54 - FO₂ Default
(after nitrox dive)



WARNING: The 750GT will default to an FO₂ value of 50 (%) after a 10 minute surface interval following a nitrox dive. Therefore, the following procedure must be performed prior to descent on each and every nitrox dive, even if the percentage of oxygen in the nitrox mixtures used remains the same.

To set (enter) a numerical value for the percentage of oxygen (FO2) in your nitrox mix, perform the following procedure beginning in the Surface Mode:

1. Press the Advance/Left button once to enter the Mode Menu. MODE:FO2 will appear with FO2 flashing.
2. Press the Select/Right button once to select the FO2 Mode. If a previous dive was made that day with the unit set for Air, FO2 and Air will appear, with Air flashing. If a previous dive was made with the unit set for a numerical value of FO2, FO2 and 50 will appear, with 50 flashing.
3. Press and hold the Advance/Left button, or press it repeatedly, until the proper value of FO2 appears (Fig. 55). The percentage displayed will advance 1 (%) per second from 21 to 50 (%), then display 'Air' again.
4. Once the proper value of FO2 is displayed, press the Select/Right once to save the value shown as the setting for that dive. MODE:PLAN will appear with PLAN flashing.
5. Press the Advance/Left button 5 times to return to the Surface Mode.

PLAN MODE

AERIS strongly recommends that you access the Plan Mode prior to every dive to review the Planning Sequence that will 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 Planning Sequence will indicate for you the 'adjusted' no decompression

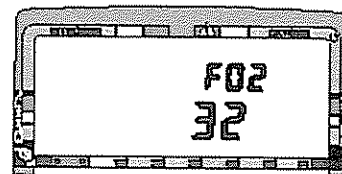


Fig. 55 - Setting FO2



Fig. 56 - Plan Mode

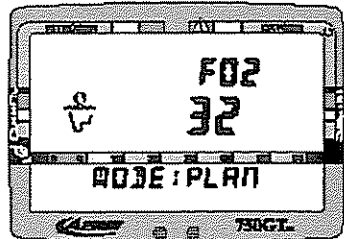


Fig. 57 - FO2 Value Set

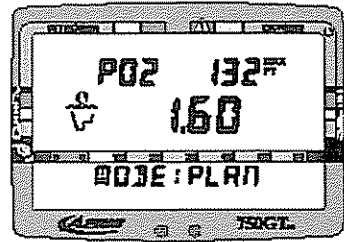


Fig. 58 - Max Allowed Depth

dive times that are available to you for your next dive, based on any residual nitrogen or oxygen accumulation (whichever is in control) following your last dive and surface interval.



WARNING: The Planning Sequence predicts only no decompression times for subsequent dives. Depending on cylinder size, breathing gas consumption, and oxygen accumulation, you may have *less time available* than indicated because of breathing gas quantity or other limitations.

To access the Plan Mode, perform the following beginning in the Surface Mode

1. Press the Advance/Left button two times. MODE:PLAN will appear, with PLAN flashing (Fig. 56).
2. Press the Select/Right button once to enter the Plan Mode.

If FO2 was set for a numerical value, FO2 and the value set will appear as the first screen (Fig. 57), followed by a screen showing the maximum depth that can be achieved for an oxygen partial pressure (PO2) of 1.60 ATA for that FO2 (Fig. 58).

If FO2 was set for 'Air', the PO2 screen will not appear and the 750GT will begin to scroll through the Planning Sequence.

The 750GT scrolls through the Planning Sequence displaying a sequence of depths from 30 to 160 feet (9 to 48 meters) in 10 foot (3 meter) increments. With each depth display, you will see either 'predicted' no decompression limits based upon your previous dive profiles (if calculated to be nitrogen controlled), or 'predicted' oxygen tolerance limits based upon either a single dive oxygen dose or your 24 hour accumulation of oxygen (if calculated to be oxygen controlled).

Information displayed includes Previous Dive #, Depth, Dive Time available at that depth which includes descent time at a rate of 120 feet (36 meters) per minute, Plan Mode icon, and the message MODE:PLAN.

No decompression times are only displayed for depths where there is at least 3 minutes of dive time available at that depth, taking into account a descent rate of 120 feet (36 meters) per minute. Depths greater than the maximum depth that can be achieved with a partial pressure of oxygen (PO₂) of 1.60 ATA will not be displayed.

After scrolling once through depth and dive times available, the 750GT will automatically return to the Surface Mode. Plan Mode can be accessed and the sequence repeated as often as you choose. If you wish to interrupt the Planning Sequence to return to the Surface Mode, you may do so at any time by pressing either control button.



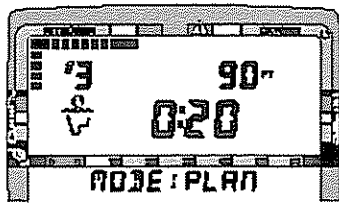


Fig. 59 - Nitrogen Controlled

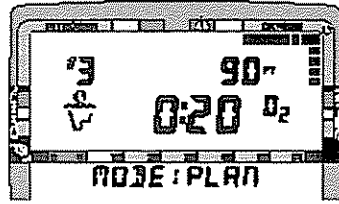


Fig. 60 - Oxygen Controlled

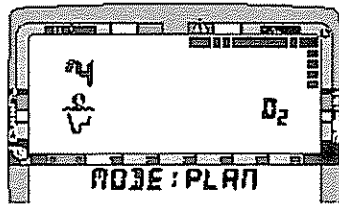


Fig. 61 - Max Daily O2
Limit Exceeded

Prior to a Repetitive Nitrox Dive

If the segments of the Nitrogen Bar Graph are displayed during the Planning Sequence (Fig 59), that next dive is calculated to be controlled by nitrogen loading.

If the segments of the O2 bar graph are displayed Planning Sequence (Fig. 60), that next dive is calculated to be controlled by oxygen loading.

The 750GT will store oxygen accumulation for up to 10 dives conducted during a 24 hour period. In the event that 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 (Fig. 61). Depth and Time displays 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).



WARNING: The 750GT must be manually activated and be in an operating mode prior to start of a dive. The unit will not activate automatically by immersion in water. Also, FO2 must be set prior to commencing each nitrox dive.

NO DECOMPRESSION DIVE MODE

After it has been manually activated and completed its diagnostic checks, the 750GT will enter the No Decompression Dive Mode when you descend deeper than 5 feet (1.5 meters). No Decompression Dive Mode (Fig. 62) can be recognized by the No Decompression Dive Mode icon (Fig. 62a). Also displayed are Tank Pressure, Current Depth, and the applicable bar graphs.

If you set the Alternate display option 'ON' during setup, the values of Temperature, Elapsed Dive Time, and Maximum Depth will be displayed continuously in the lower screen (Fig. 62), unless overridden by more critical information. If you set the Alternate display option 'OFF' (Fig. 63), the values can be viewed by depressing the Select/Right button. Time of Day will appear briefly when the button is released.

To activate the backlight during a dive, press the Advance/Left button. The display will be illuminated as long as the button is depressed plus 10 seconds after it is released (for a maximum illumination time of 15 seconds).

As your depth and/or elapsed dive time increase, the Nitrogen Bar Graph will fill with segments (green toward red) to represent the absorption of nitrogen; and if FO2 was set for a value other than 'Air', the O2 bar graph will fill with segments (green toward red) to represent oxygen accumulation for that dive, or 24 hour period, whichever is greater.

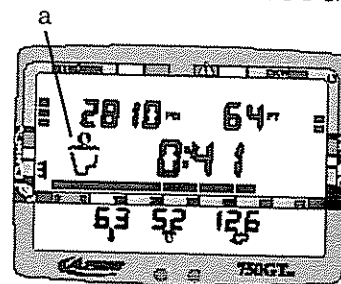


Fig. 62 - No Decompression Dive Mode (Alternate ON)

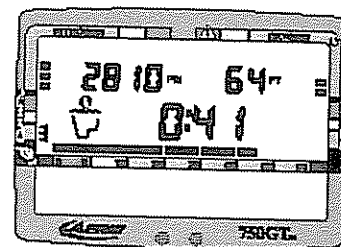


Fig. 63 - Alternate OFF

The Gas Time Remaining bar graph will recede from green toward red as breathing gas time remaining decreases from 60 to 0 minutes. Segments of the Breathing Gas Consumption and Ascent Rate Indicator bar graphs fill (and recede) as their respective rates increase (and decrease) throughout the dive.



WARNING: Every effort should be made to keep all of the bar graphs *in the green* throughout your dives to reduce your risk of exposure to decompression sickness and oxygen toxicity.

DECOMPRESSION DIVE MODE

The 750GT provides information that will help you avoid, or if necessary, manage emergency decompression.

The Decompression Dive Mode activates when the No Decompression Limits are exceeded and the Nitrogen Bar Graph enters the red decompression zone (Fig. 64).

Decompression Dive Mode is described on page 74.

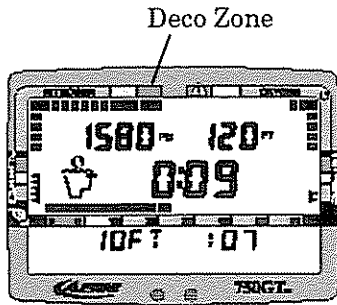


Fig. 64 - Decompression Dive Mode

VIOLATION MODES

The 750GT enters Violation Modes when it is unable to predict an ascent procedure.

Violation Modes are described beginning on page 76.

GAUGE MODE

If the 750GT enters Gauge Mode (a permanent violation), it will not display information relating to nitrogen or oxygen loading for the remainder of that dive or for subsequent dives conducted during the 24 hour period after surfacing.

Gauge Mode is described on page 80.

ASCENDING TO THE SURFACE

While ascending to shallower depths, the segments that have filled up the Nitrogen Bar Graph will begin to recede (Fig. 65), offering a graphic representation of your multilevel diving capability. **A safety stop made between 15-20 feet (5-6.5 meters) is strongly recommended as a standard procedure before completing your ascent.**

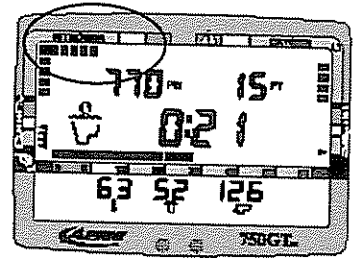


Fig. 65 - Nitrogen Bar Graph Receding

If you inadvertently entered Decompression Mode, you must not complete your ascent until the Nitrogen Bar Graph is at least inside the yellow Caution Zone.

You should make every effort to complete all of your ascents with the Nitrogen Bar Graph inside of the green zone.

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

Ascending Too Fast

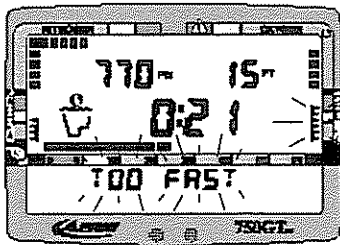



Fig. 66 - Ascent 'Too Fast'


The Ascent Rate Indicator shows how fast you are ascending. When you exceed the maximum recommended ascent rate of 60 feet (18 meters) per minute, the bar graph will enter the red (Too Fast) zone (Fig. 66), and you will be alerted by the segments flashing. You will also be alerted by an Audible Alarm (1 beep per second), and the Message TOO FAST will appear flashing. The warnings will stop when your ascent rate is slowed.

ALTITUDE DIVING

The mathematical model within the 750GT accounts for the reduced No Decompression dive time available at higher elevations based on NOAA (National Oceanic and Atmospheric Administration) guidelines. When diving in high altitude lakes or rivers from 2,000 to 14,000 feet (610 to 4,268 meters), the 750GT will adjust automatically, providing corrected depth and reduced No Decompression and Oxygen Exposure times.

 **WARNING: If activated above 14,000 feet (4,268 meters), the Message TOO HIGH will appear and the unit will shut off.**

When above 2,000 feet (610 meters), depth calibration is automatically changed to read in 'feet of freshwater' rather than 'feet of seawater'.

 **WARNING: Until it has shut itself off, you must not use the 750GT at a different altitude than the altitude where it was originally activated. Doing so will result in an error equal to the difference in barometric pressure, and possibly a false dive mode with erroneous data.**

More about altitude diving is presented on page 103.



**Be a -
RESPONSIBLE DIVER
at all times.**

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POST DIVE MODES

POST DIVE SURFACE MODE

When you ascend to 3 feet (1 meter) or shallower, the 750GT will enter Surface Mode (Fig. 67) and begin counting your surface interval.

TRANSITION PERIOD

The first 10 minutes is, in affect, a Transition Period during which time:

- The main time display starts counting Surface Interval (colon flashing).
- The Surface Mode icon will appear (flashing).
- The Nitrogen Bar Graph will indicate current nitrogen loading.
- The O2 bar graph will indicate current oxygen loading, if the dive was a nitrox dive (FO2 set for a numerical value).
- Temperature and Time of Day will also be displayed.

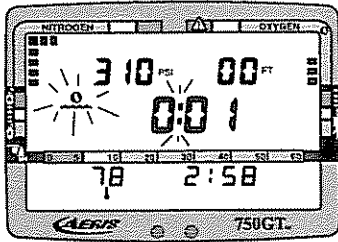


Fig. 67 - Transition Period

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 Elapsed Dive Time. During the 10 minute Transition Period, the Log Mode is accessible in the Mode Menu and will display that dive's data, however, the data will not be stored in the unit's memory until the 10 minute period on the surface is completed. No other modes are accessible in the Mode Menu during the 10 minute Transition Period.

Once 10 minutes have elapsed, the Surface Mode icon and Surface Interval time display colon will stop flashing (Fig. 68) indicating that the dive and transition period are completed, and a subsequent descent will be considered a new dive. Other information will continue to be displayed as previously described and you will have full access to the Mode Menu.

FO2 MODE

If the 750GT was set for FO2 of 'Air' or 21% prior to the dive, it will stay set for 'Air' or 21%, respectively, unless you reset it to a higher numeric value prior to the next dive. If it was set for a numeric value of FO2 greater than 21% (22 to 50 %) prior to the dive, the FO2 value displayed after the dive will default to 50 % (Fig. 69) and subsequent dives will be calculated based on 50% oxygen for oxygen calculations and 21% oxygen (79% nitrogen) for nitrogen calculations, unless you set FO2 for another value.

To set FO2, refer to instructions on page 49.

Remember!! You must set the FO2 to match the specific nitrox mix for each nitrox dive, even if the percentage of oxygen in the mix is the same as the previous.

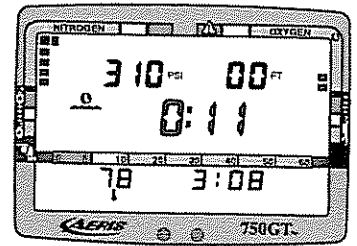


Fig. 68 - Surface Mode (> 10 min)

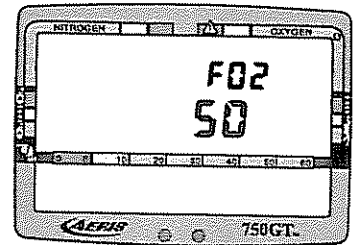


Fig. 69 - FO2 Default

PLAN MODE

When you access the Plan Mode after a dive -

- MODE:PLAN will appear

When you enter the Plan Mode after a dive -

- The FO2 screen will appear displaying the FO2 set point value that you entered for the next dive.
- The PO2 screen will then appear indicating the maximum depth allowed for the FO2 set point and your 24 hour oxygen accumulation (dose).
- The Time to Fly screen (described on page 63) will then appear.
- The Planning Sequence will then begin.

The Planning Sequence will show 'adjusted' no decompression limits based on residual nitrogen calculated to be remaining from previous dives. Calculated dive times and the maximum allowed depth displayed will increase as the real time surface interval increases after completion of a dive.



The Planning Sequence will only scroll to the maximum depth allowed by the nitrogen or oxygen limit, whichever is in control. The respective bar graph will be displayed to indicate which is in control.

To access the Plan Mode, refer to instructions on page 50.

Time to Fly

As you should be aware from your own training, the longer you wait to fly (or travel to higher elevations) after diving, the more you will reduce your exposure to decompression sickness.

The Time To Fly counter begins counting down 10 minutes after the last dive has ended to assist you with deciding when enough surface time has elapsed to fly. It appears prior to the Planning Sequence when you access the Plan Mode, and shows the word 'FLY' with a countdown (Fig. 70) that starts at 23:50 (hr:min) and counts down to 12:00 (hr:min).

Twelve hours after the last dive, the Surface Mode will disappear from the screen, and the Fly Mode will be displayed continuously, with the final 12 hour countdown from 11:59 to 0:00.

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.

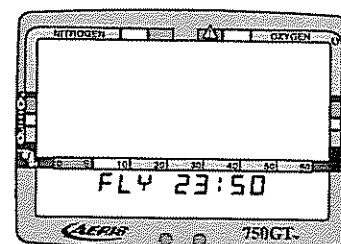


Fig. 70 - Time to Fly
(first 12 hours)

DIVE LOG MODE

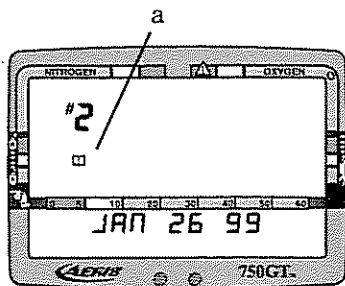


Fig. 71 - Log Mode Icon

Dive Log Mode, identified by the Dive Log icon (Fig. 71a), can be accessed using the Mode Menu while on the surface. Information from your 12 latest dives is stored in the Log for viewing, giving you the opportunity to record data in your log book before it is eventually overwritten by subsequent data. After 12 dives are accumulated, each subsequent dive will overwrite the oldest dive that exists in the log, i.e. the 750GT will add the most recent dive while deleting the oldest. Dive Log information will be retained when batteries are removed from the Display Module.

Dives are displayed in a reverse sequence that starts with the dive most recently conducted back to the oldest of the 12 dives stored. Thus, your most recent dive will always be the first shown in the sequence.

To eliminate confusion, each dive is separately 'stamped' (identified) with the date on which it was made and the time of day that the dive started.



Fig. 72 - Dive Log Mode

Each dive has four log screens that display date, time, nitrogen related data, and oxygen related data, respectively. To access the Dive Log Mode, follow this procedure, beginning in Surface Mode:

1. Press the Advance/Left button 3 times to advance to the Log Mode. MODE:LOG will appear with LOG flashing (Fig. 72).

2. Press the Select/Right button once to select (enter) the Log Mode. If you accidentally pass Log Mode, press the Select/Right button repeatedly until MODE:LOG appears.
3. The first screen to appear (Fig. 73) will display the most recent dive recorded, identified by the Log Mode icon, the dive Number and dive Date.
4. To bypass the dive currently being displayed to view an older dive, press the Select/Right button until the desired dive is displayed, identified by the dive number and date of the dive.
5. Press the Advance/Left button once more to display the Time of Day (Fig. 74) when the dive started.
6. Press the Advance/Left button once more to view the information associated with nitrogen (Fig. 75). Displayed will be: Log Mode icon, dive Number, Surface Time between that dive and the one previous to it, lowest water Temperature during the dive, Elapsed Dive Time, and Maximum Depth.

If the dive shown in the log display was the only one of the day, Surface Time will represent the time between initial activation and the beginning of the first dive. Also shown will be the tissue nitrogen loading at the time you surfaced from the dive (Nitrogen Bar Graph), the maximum rate of breathing gas consumption (Gas Consumption Indicator), and the maximum rate of ascent at any time during the dive (Ascent Rate Indicator).

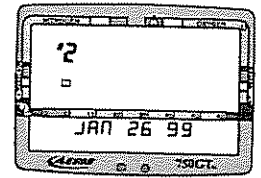


Fig. 73 - Log (first screen)

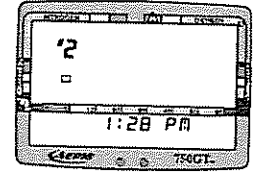


Fig. 74 - Log (second screen)

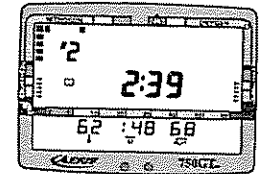


Fig. 75 - Log (third screen)

7. Press the Advance/Left button once more to view the information associated with oxygen (Fig. 76). Displayed will be: Log Mode icon, dive Number, FO2 symbol and the value that FO2 was set at for the dive. If FO2 was set for a value other than 'Air', the PO2 symbol and value of the maximum partial pressure of oxygen attained during the dive will also be displayed. Also shown will be the oxygen loading (O2 bar graph) at the time you surfaced from the dive (maximum for that dive or 24 hour period, whichever was greater at the time). The O2 bar graph will also display the segment that represents the maximum level of oxygen exposure (dose) that you achieved during that dive.
8. Press either button to advance to the first screen (Date) of the next dive in the Log's reverse sequence.

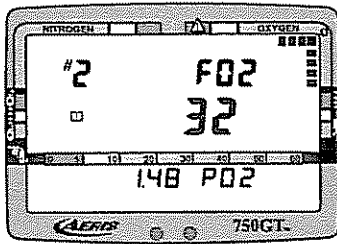


Fig. 76 - Log (fourth screen)

To exit the Log Mode, press the Select/Right button repeatedly to advance through all recorded dives and return to the Surface Mode.

HISTORY MODE

The History Mode offers a convenient summary of your 750GT computer since it was originally purchased, or last received factory service. Information provided on three sequential screens includes total number of all dives, total number of decompression dives, total elapsed dive time in hours, deepest maximum depth, and total number of violation dives.

To access the information provided in History Mode, follow this procedure, beginning in the Surface Mode:

1. Press the Advance/Left button 4 times to advance to the History Mode. MODE:HIST will appear, with HIST flashing (Fig. 77).
2. Press the Select/Right button once to select (enter) the History Mode. The first screen (Fig. 78) will show the No Decompression icon, total number of dives, total elapsed dive time, and maximum depth.
3. Press the Advance/Left button once to view the second screen (Fig. 79) that shows the Decompression Dive icon and the total number of Decompression dives. Total elapsed dive time and maximum depth will remain on display.
4. Press the Advance/Left button once more to view the third and final screen (Fig. 80) that shows the Dive Mode icon and the total number of dives during which the 750GT entered a Violation Mode.
5. Press either button to return to the Surface Mode.



Fig. 77 - History Mode

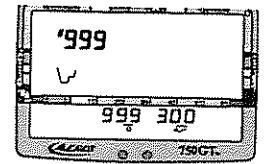


Fig. 78 - History (first screen)

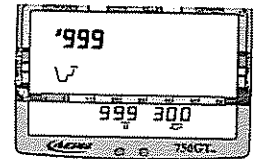


Fig. 79 - History (second screen)

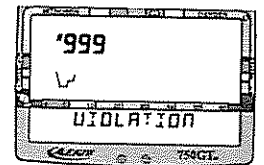


Fig. 80 - History (third screen)

EXTERNAL ACCESS MODE (EACC)

Using special infrared linking hardware and a unique PC software program, data from your dives can be downloaded (copied) from your 750GT into an IBM compatible PC program running on a Windows® 95 or Windows® 98 operating system. Instructions for performing the interface and download are provided with the hardware and software package that is available separately from your Authorized AERIS Dealer. Ask for Dive Downloader for 750GT.



Fig. 81 - External Access Mode

The software program provides dive profile data, and nitrogen and oxygen loading information that was sampled throughout the dives downloaded.

Once you have acquired your Downloader package, to access the External Access Mode, follow this procedure, beginning in the Surface Mode:

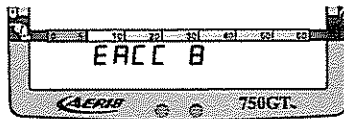


Fig. 82 - EACC Countdown

1. Press the Advance/Left button 6 times to advance to the External Access Mode. MODE:EACC will appear, with EACC flashing (Fig. 81).
2. If you are going to download information, follow the procedures described in the Dive Downloader User's Manual.
3. If you are not going to download information, press the Advance/Left button once to return to the Surface Mode. If you press the Select/Right button once, the letters EACC will appear with a countdown from '8' to '0' (Fig. 82). After counting down to '0', the 750GT will revert to the Surface Mode.

HANDLING THE EXTREMES

EMERGENCY DECOMPRESSION

There are few legitimate excuses for making unplanned Decompression dives, and the consequences of this type of diving can be severe. Decompression diving requires special training and support. **The 750GT is intended for use by recreational divers not engaged in intentional decompression diving. Decompression features are provided only for emergency situations.** By entering decompression, you automatically impose a "ceiling" above you which you cannot immediately ascend beyond, denying you free access to the surface.



Professional military and commercial divers plan ahead for this situation by ensuring that they have complete surface support, including a redundant breathing gas supply for emergencies. They also navigate very carefully throughout their dive to ensure that they begin and complete their ascent while maintaining contact with a rope or a line to the surface. This is necessary for making a well controlled ascent. **The 750GT is not intended for use by military or commercial divers.**

By making an unplanned Decompression dive without the necessary **preparation and training**, you will have placed yourself in an unnecessarily dangerous situation. Consider also, that one mistake can quickly be compounded by several others.

The 750GT is a sophisticated instrument designed with capabilities that go beyond the range of recreational diving with compressed air. **It should not be considered, however, that these built-in capabilities provide any implied approval or consent from AERIS for individuals to exceed the defined limits of recreational dive profiles, as agreed on by all internationally recognized training agencies.**

The 750GT is designed to help you by providing a complete representation of how close you are to entering decompression. In the event that you do inadvertently enter decompression, the red zone of the Nitrogen Bar Graph (Fig. 83a), the 750GT can provide you with limited information to help you ascend to the surface, if you follow the instructions given in this section.

⚠ WARNING: Existing data for making planned decompression dives is extremely limited, and virtually nonexistent for repetitive decompression diving. You must therefore avoid decompression diving and allow a surface interval of at least 24 hours before reentering the water in the event a dive requiring emergency decompression is made.

If you're not careful, it is possible to enter decompression rapidly, whether at deep depths or during repetitive dives.

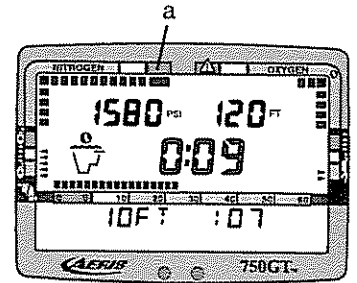


Fig. 83 - Decompression Mode

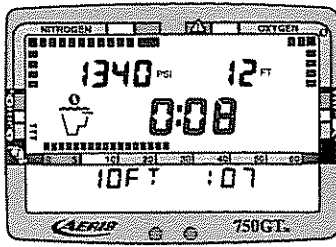


Fig. 84 - Decompression Stop

Upon entering decompression, you must immediately change the focus of your dive to getting safely back to the surface. Upon seeing the Nitrogen Bar Graph enter the red Decompression zone, you should immediately begin a safe controlled ascent, 60 feet (18 meters) per minute or slower, to a depth slightly deeper than or equal to the required ceiling Stop Depth (Fig. 84).

If you continue the dive at a depth more than a few feet (1 meter) deeper than the required ceiling Stop Depth, your exposure to decompression sickness will increase, and you will risk entering a violation mode and losing the information needed to ascend properly.

GAS TIME REMAINING DURING DECOMPRESSION

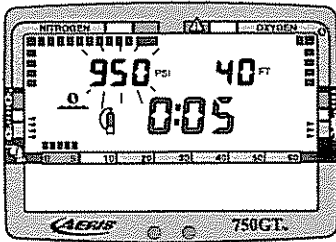


Fig. 85 - Gas Time Remaining (5 minutes)

Breathing Gas Time Remaining will fluctuate throughout your dive, decreasing as you dive deeper or breath heavier, and increasing as you ascend to shallower depths or relax your breathing efforts. **Once you enter Decompression Mode, you will need to refer to the Gas Time Remaining bar graph for Breathing Gas Dive Time Remaining information.**

When Breathing Gas Time Remaining decreases to 5 minutes, the Tank Pressure numerals will flash (Fig. 85) and a Double Beep will sound. This means that only 5 minutes remain before your breathing gas supply will be reduced to the minimum level necessary to perform the required decompression stops and still provide a tank pressure *reserve* upon surfacing.

When the Breathing Gas Time Remaining decreases to zero minutes, the Audible Alarm will continuously beep once per second (Fig. 86), signaling the need for an immediate safe ascent to your first decompression stop. However, there is no need to panic. The 750GT has allowed for the breathing gas you will consume during a safe ascent including the required decompression stops and still provide the surfacing tank pressure reserve you chose (entered) during setup, e.g. 500 psi.

CAUTION ZONE (NITROGEN BAR GRAPH)

Your dive training taught you not to get too close to the No Decompression limits. The yellow Caution Zone of the Nitrogen Bar Graph (Fig. 87a) offers you a convenient way to consistently monitor how close you are coming to the No Decompression limit. **AERIS suggests always leaving the water with the Nitrogen Bar Graph in the green No Decompression zone.**

⚠ WARNING: Exiting the water with the Nitrogen Bar Graph in the red Decompression zone greatly increases the risk of decompression sickness, and may result in injury or death.

Body metabolism varies from person to person, and even from day to day. If you are feeling less than 100%, or you are in less than perfect physical shape, **use the yellow Caution Zone as a visual reference to place a wider margin of protection between you and the No Decompression limit.**

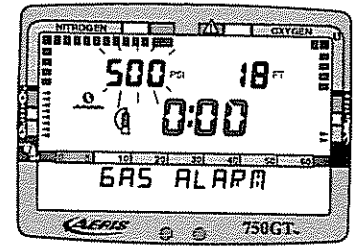


Fig. 86 - Gas Time Remaining (zero minutes)

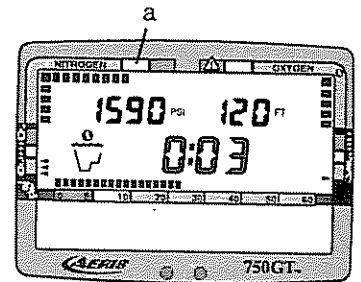


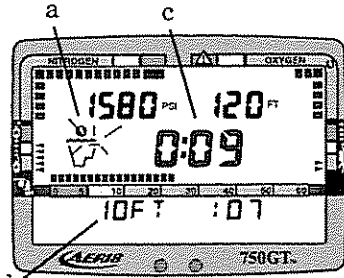
Fig. 87 - Caution Zone (Nitrogen Bar Graph)

DECOMPRESSION DIVE MODE

The 750GT will help you to avoid and manage decompression.



WARNING: AERIS recommends the application of responsible diving practices and does not recommend decompression diving, or diving deeper than 130 feet (39 meters), as these practices will greatly increase your risk of decompression sickness.



b
Fig. 88 - Decompression Mode

Decompression Dive Mode, identified by the flashing bar of the Decompression Dive icon (Fig. 88a), activates when the theoretical no decompression dive/depth limits are exceeded causing the Nitrogen Bar Graph to pass the yellow Caution zone and enter the red Decompression zone. The Audible Alarm will emit a double beep to alert you.

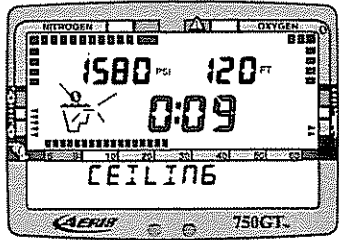


Fig. 89 - Alternate Message

Information displayed includes required ceiling Stop Depth and Time (Fig. 88b), Tank Pressure, Current Depth, and Total Ascent Time (Fig. 88c) that includes stop times required at all ceilings and vertical ascent time calculated at 60 feet (18 meters) per minute. Other bar graphs will continue to represent their respective information.

The Message CEILING alternates with required Stop Depth and Time (Fig. 89).

The amount of decompression credit time that you receive is dependent on depth, with slightly less credit given the deeper you are. **Still, you must never ascend shallower than your decompression ceiling. Doing so will greatly increase your risk of decompression sickness,** and place the 750GT into a Conditional Violation Mode described later. When coping with surge and swells, it may be difficult to stay at an exact depth. You should stay slightly deeper (Fig. 90a) than the required stop depth indicated (Fig. 90b) until the next shallower stop depth appears. Then, you can ascend to, but not shallower than, that indicated ceiling stop depth.

Once you have performed the required decompression, the 750GT will switch to the No Decompression Dive Mode, allowing additional time underwater. Though more time is theoretically available, it is strongly recommended that you spend the remainder of the dive continuing to decompress at, or slightly deeper than, 10 feet (3 meters). This will let the Nitrogen Bar Graph recede further into the yellow Caution zone or green No Decompression zone, helping you reduce your tissue nitrogen loading as much as possible.



WARNING: If you exceed certain limits, the 750GT will not be able to tell you how to get safely back to the surface. These situations will make the 750GT enter Violation Modes and must be avoided at all costs. They exceed tested limits and can result in loss of some 750GT functions for 24 hours after the dive in which a violation occurred.

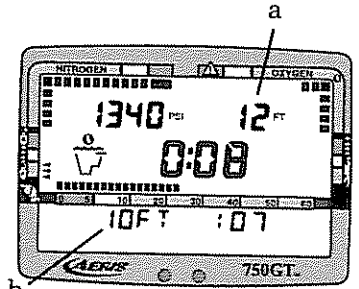


Fig. 90 - Managing a Stop

VIOULATION MODES

The Violation Modes that the 750GT can enter, depending on the situation, are termed Conditional, Delayed, and Immediate. Gauge Mode and Permanent Violation Mode are continuations of these Violation Modes. It is important to understand each different Violation Mode and how to carry out emergency procedures in the event you enter one.

CONDITIONAL VIOLATION MODE

The 750GT will alert you to the possibility of losing decompression management abilities by entering the Conditional Violation Mode. If properly handled, the Conditional Violation Mode can assist you in getting back to the surface and allow continued use of the 750GT. The situation that will force the 750GT to enter a Conditional Violation Mode is: **Ascent to a Depth Shallower (Fig. 91a) than the Required Decompression Ceiling.**

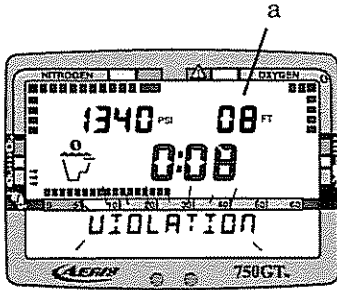


Fig. 91 - Conditional Violation (above ceiling)

A momentary rise above the ceiling, such as with a surge or swell, could cause this to happen. Therefore you should stay slightly deeper than the exact ceiling Stop Depth, watching the 750GT closely when managing decompression. The Audible Alarm will beep once per second and the Messages CEILING and VIOLATION will alternately appear until you descend below the required decompression ceiling Stop Depth.

If you descend below the required decompression ceiling before 5 minutes have elapsed, the 750GT will continue to function as if no violation had occurred. In this case, no off-gassing credit will be given, and for each minute above the ceiling $1\frac{1}{2}$ minutes of penalty time is added to decompression stop time.

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 and the Nitrogen Bar Graph will recede into the Caution zone and revert to the No Decompression Dive Mode.

If you stay above (shallower than) the required ceiling Stop Depth for more than 5 minutes, the Nitrogen Bar Graph segments will flash and the Delayed Violation Mode will be entered.

DELAYED VIOLATION MODE

Three conditions will cause the 750GT to enter the Delayed Violation Mode:

1. You remain above the required Decompression Ceiling Stop Depth for more than 5 minutes (Fig. 92).

The Audible Alarm will beep once per second and the Messages CEILING and VIOLATION will alternately appear until you descend below the required ceil-

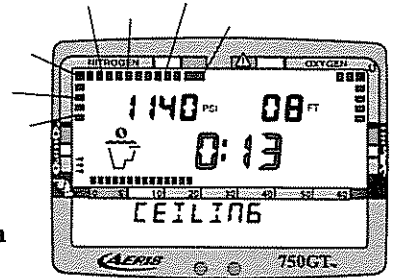


Fig. 92 - Delayed Violation (above ceiling >5min)

ing Stop Depth. You would then need to follow the Stop Depths and Times toward the surface as the Nitrogen Bar Graph recedes into the Caution zone.

2. Your necessary decompression requires a ceiling Stop Depth between 60 feet (18 meters) and 70 feet (21 meters).

In this situation the Audible Alarm will emit One Long Beep, the Nitrogen Bar Graph will flash, and the Messages EXCEEDED and CEILING alternately flash (Fig. 93) four times. Total Ascent Time needed to get back to the surface will still be displayed numerically in the Main Time display.

To get back to the surface, you must safely ascend to just deeper than 60 feet (18 meters) staying as close to 60 feet (18 meters) as possible without causing the Messages to flash. After waiting until the required ceiling Stop Depth display indicates 50 FT/15 M, you can ascend to, but no shallower than 50 feet (15 meters) and continue decompressing. As the required ceiling Stop Depth display indicates 40 FT/12 M, 30 FT/9 M, 20 FT/6 M, and then 10 FT/3 M, you can ascend to, but no shallower than the required ceiling Stop Depth indicated.

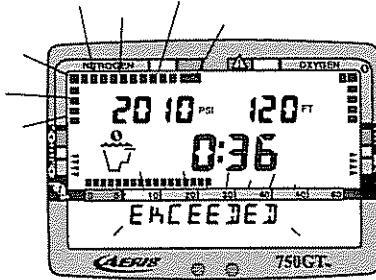


Fig. 93 - Delayed Violation (>60 FT ceiling required)

After Total Ascent Time reaches zero and the Nitrogen Bar Graph recedes into the yellow Caution zone, you can surface. **To add a greater margin of protection, AERIS recommends that you wait until the segments of the Nitrogen Bar Graph are well within the green No Decompression zone, unless a low Tank Pressure condition requires you to surface.**

3. You descend deeper than 330 feet (99.5 meters).

NOTE: AERIS reminds you that expanded capabilities of the 750GT are provided as safety features to assist you with emergency situations.

Upon descending deeper than 330 feet (99.5 meters), the Nitrogen Bar Graph will flash and the Current Depth and Maximum Depth displays will only indicate 3 dashes (Fig. 94) until ascent is made to a depth shallower than 330 feet (99.5 meters), at which time the Current Depth display will be restored. Max Depth will continue to display 3 dashes. Exceeding the maximum operating depth is described on page 81.

Five minutes after reaching the surface from a dive in which a Delayed Violation occurred, the 750GT will enter an Immediate Violation Mode and revert to Gauge Mode for 24 hours.

IMMEDIATE VIOLATION MODE

WARNING: Immediate Violation Mode is entered when a situation totally exceeds the 750GT's capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the 750GT design, and a 750GT should not be used for the dives.

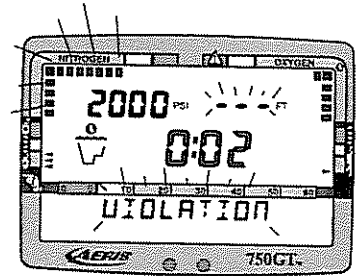


Fig. 94 - Delayed Violation (>330 ft / 99.5 m)

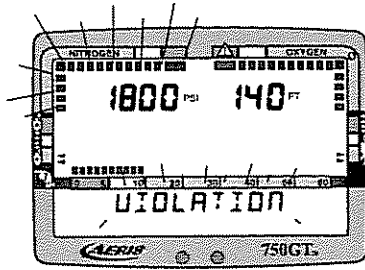


Fig. 95 - Immediate Violation

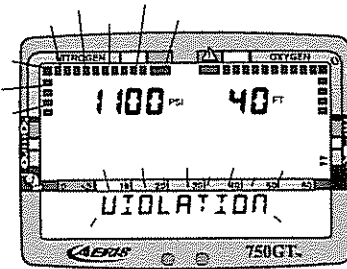


Fig. 96 - Gauge Mode (underwater)

Immediate Violation Mode occurs when a **Decompression Stop Depth much greater than 60 feet (18 meters) is required**. This situation would be preceded by entering the Delayed Violation Mode previously described.

The 750GT cannot accurately 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 greater than a 60 foot (18 meter) decompression Stop Depth.

If a ceiling *much greater* than 60 feet (18 meters) is required, an Immediate Violation Mode (Fig. 95) will be entered, and you will be alerted by a single long beep of the Audible Alarm. This situation would be preceded by the Delayed Violation Mode. The 750GT would then operate with limited functions (Current Depth, Maximum Depth, and Elapsed Dive Time) in Gauge Mode during the remainder of that dive and for 24 hours after surfacing.

GAUGE MODE

Underwater, the Gauge Mode is a continuation of the Immediate Violation Mode that turns the 750GT into a Digital Instrument without any decompression or oxygen monitoring functions (Fig. 96). The Nitrogen Bar Graph and the Message VIOLATION flash. The numeric Dive Time Remaining will be absent from the screen. The Alternate Dive Mode may still be accessed underwater by pressing the Select/Right button.


After surfacing, the Nitrogen and O2 Bar Graphs continue to flash while Surface Mode is displayed (Fig. 97). Gauge Mode does not provide the FO2, Plan, or Time to Fly features. When Plan Mode is accessed 10 minutes after the dive, a countdown Timer appears with a "triple dash" display (Fig. 98). The Timer is to inform you of the time remaining before normal 750GT operation can resume with full features and functions.

PERMANENT VIOLATION

Entering the Immediate Violation Mode, then Gauge Mode, will result in loss of all 750GT decompression and oxygen monitoring functions for 24 hours after that dive. This condition is considered a Permanent Violation.

EXCEEDING MAXIMUM OPERATING DEPTH

Although the 750GT will withstand the pressures found at 330 feet (99.5 meters), the depth that you can still use all of its features could be much shallower.

 **WARNING:** The maximum recommended sport diving depth limit is 130 feet (39 meters). Any deeper dive should be avoided. Special training, equipment, and support are necessary for this type of diving.

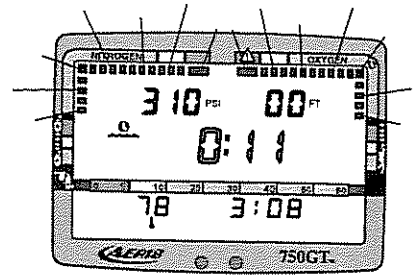


Fig. 97 - Gauge Mode
(on surface)

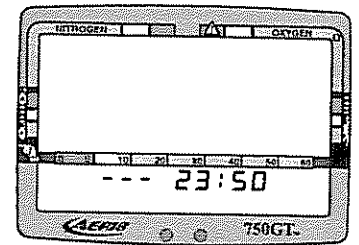


Fig. 98 - Countdown Timer
(10 min after surfacing)

The maximum depth the 750GT will display all of its features is 330 feet (99.5 meters). Upon exceeding a depth of 330 feet (99.5 meters), the Nitrogen Bar Graph will flash, and Current Depth and Max Depth displays will only indicate and flash three dashes (- - -) signifying that you are 'Out of Range'. Also, the Message VIOLATION will appear alternating with the lower screen displays (Fig. 99). The numeric display for Current Depth will reappear when you ascend shallower than 330 feet (99.5 meters). You will also enter the Delayed Violation Mode previously described. For the remainder of that dive, and in the Log for that dive, only three dashes will be displayed as the value for Maximum Depth.

OXYGEN EXPOSURE

There are few legitimate excuses for exceeding the maximum limits for exposure to oxygen, and the consequences of CNS (Central Nervous System) oxygen toxicity can be severe, resulting in Grand Mal convulsions and drowning. Diving with enriched nitrogen-oxygen (nitrox) mixtures requires special training and certification.

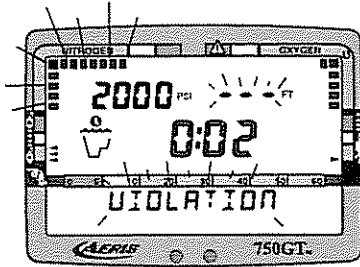


Fig. 99 - Out of Range
(>330 ft / 99.5 m)



WARNING: The oxygen features of the 750GT are intended for use only by recreational divers trained for nitrox diving by an instructor certified by a recognized training agency to teach diving with nitrox. The 750GT is not intended for use by military or commercial divers.

By making a nitrox dive without the necessary **training, preparation, and equipment**, you will have placed yourself in an unnecessarily dangerous situation. The 750GT is a sophisticated instrument designed with capabilities that go beyond the range of recreational diving with compressed air. **It should not be considered, however, that these built-in capabilities provide any implied approval or consent from A- for individuals to exceed the defined limits of oxygen exposure, as agreed on by all internationally recognized nitrox training agencies. Nitrox diving should therefore be strictly controlled.**

PARTIAL PRESSURE OF OXYGEN

As depth increases during the dive, the partial pressure of oxygen increases. As you approach the depth limit for the FO₂ value set before that dive, the 750GT will alert you and display the PO₂ level while you reduce oxygen partial pressure according to your training.

High PO₂ Dive Mode

The 750GT enters the High PO₂ Dive Mode when partial pressure of oxygen becomes equal to or greater than 1.40 ATA. The Audible Alarm will emit a double beep, and the PO₂ value and the symbol 'PO₂' will appear in the lower portion of the display (Fig. 100). They will remain on display until partial pressure of oxygen decreases below a value of 1.40 ATA.

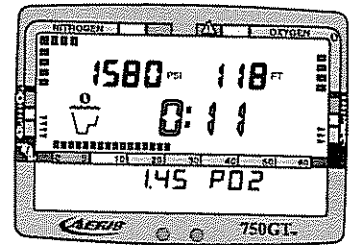


Fig. 100 - High PO₂ Mode
(1.40 ATA)

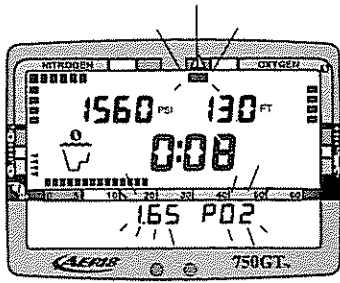


Fig. 101 - High PO2 Mode
(1.60 BAR)

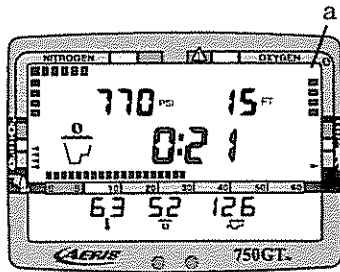


Fig. 102 - O2 Bar Graph

If partial pressure of oxygen continues to increase, the value of PO2 displayed will increase from 1.40 toward a value of 5.00 ATA in increments of '.01' ATA. When PO2 reaches the maximum limit of 1.60 ATA, the Audible Alarm continuously emits one beep per second, and the large red segment of the O2 Bar Graph, the PO2 value, and PO2 symbol will flash continuously as a warning (Fig. 101) until the level of PO2 decreases below 1.60 ATA.

In the event that you enter High PO2 Dive Mode, you must immediately focus on reducing the partial pressure of oxygen by slowly ascending to a shallower depth at a safe rate in accordance with your nitrox training. **If you continue the dive at your current depth, or descend deeper, your exposure to CNS oxygen toxicity will increase.**

OXYGEN ACCUMULATION

It is also important that you understand that conducting repetitive dives using enriched nitrogen-oxygen (nitrox) mixtures can lead to oxygen buildup, reducing oxygen tolerance while increasing the risk of pulmonary oxygen toxicity. The O2 Bar Graph (Fig. 102a) provides a visual representation of oxygen accumulation for either that dive or 24 hour period, whichever is greater.

AERIS strongly recommends that you avoid exceeding oxygen exposure limits, and reminds you that nitrox diving requires special training and understanding of the effects of oxygen toxicity.

⚠ WARNING: In the event that you exceed the maximum per dive allowable oxygen exposure (dose), it is recommended that you allow a surface interval of at least 2 hours before reentering the water. If you exceed the maximum 24 hour period allowable oxygen exposure (dose), you must allow a surface interval of at least 24 hours before reentering the water.

HIGH OXYGEN ACCUMULATION

Your nitrox dive training taught you not to get too close to the oxygen tolerance limits. The O₂ Bar Graph provides you with a convenient graphic representation of your oxygen accumulation, displaying either oxygen accumulated during that dive or during your repetitive dives conducted during that 24 hour period, whichever of the two is greater at that time.

As your accumulation increases, segments will add to the O₂ Bar Graph. When it enters the yellow Caution zone, the Audible Alarm will emit a double beep as a warning (Fig. 103). If accumulation exceeds the limit of oxygen tolerance (Oxygen Dive Time Remaining is 0:00), the Audible Alarm will emit a continuous one beep per second, and the O₂ Bar Graph will enter the red Danger zone and the full bar graph will flash as a warning (Fig. 104).

You must then immediately focus on making a safe controlled ascent to the surface to prevent further exposure.

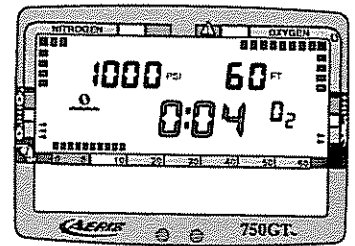


Fig. 103 - High Oxygen Accumulation (warning)

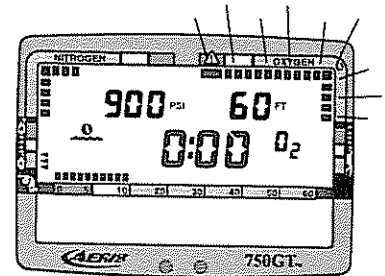


Fig. 104 - High Oxygen Accumulation (alarm)

As your accumulation (dose) decreases during your surface interval, the O2 Bar Graph will gradually recede into the yellow Caution and green Normal zones. AERIS suggests always keeping the O2 Bar Graph **in the green zone**.



WARNING: DO NOT allow the O2 Bar Graph to enter the red (Danger) zone. Doing so greatly increases the risk of CNS oxygen toxicity, and may result in serious injury or death.

VIOLATION
GAS ALARM
EXCEEDED CEILING
TOO FAST
TOO DEEP

Body metabolism varies from person to person, and even from day to day. If you are feeling less than 100%, or you are in less than perfect physical shape, **use the Caution zone as a visual reference to place a wider margin of protection between you and the limits of oxygen tolerance.**

WARNING MESSAGES

When diving beyond the normal limits of recreational sport diving, it is possible that you will violate more than one condition at a time, such as exceeding the maximum recommended ascent rate, ascending above a required ceiling Stop Depth, or exceeding the maximum allowed partial pressure of oxygen. In these situations, the Message that appears will reflect the *most important warning for that time*, allowing more critical warnings to override others of lesser importance (Fig. 105). Example: The message TOO FAST will override the message TOO DEEP due to the severity of a rapid ascent rate.

Fig. 105 - Message Hierarchy

UNEXPECTED LOSS OF DISPLAYED INFORMATION

While No Decompression diving, if you find that any major piece of equipment is not functioning correctly, you must abort the dive immediately and surface slowly in a controlled manner.

If your 750GT stops working for any reason, it is important that you have anticipated this possibility and are prepared for it. **This is an important reason to avoid pushing the no decompression and oxygen tolerance limits, and a critical reason to avoid entering decompression.** Regardless of your diving habits, AERIS advises you to dive with additional backup instrumentation that can provide the data necessary to properly surface if and when your primary instruments fail.

As with any other piece of equipment, unforeseen things can happen. By preparing ahead of time, you can spare yourself a great deal of frustration and disappointment.

If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your 750GT, an analog or digital backup system or use of standard air (or nitrox) tables is highly recommended.



A FINAL WORD OF CAUTION

Although the 750GT represents the latest in user friendly dive computer technology, it cannot force you to understand how to use it. Before diving with the 750GT, be sure you thoroughly understand its functions and displays. Contact your local Authorized AERIS Dealer if you have a question. Above all remember, technology is not a replacement for training, experience, and common sense!

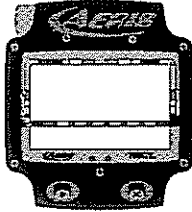
Be a Responsible Diver at all times !!



**CARE
and
MAINTENANCE**

CARE AND CLEANING

The 750GT is a sensitive electronic instrument. Although it has been designed to withstand the rigors of diving, it still must be handled carefully to protect it from shock, excessive heat, chemical attack, and tampering.



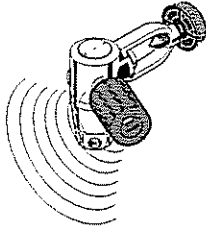
The housing is made of an impact resistant resin that is extremely shock resistant but is susceptible to chemical attack and scratches. If the transparent face becomes scratched, AERIS can replace it, although small scratches will naturally disappear underwater.



CAUTION: Never spray aerosols of any kind on, or near, the 750GT. The propellants may chemically attack the plastic.

BEFORE THE DIVE

Be careful not to place the 750GT in an unsupervised, unprotected location where it might be damaged. Dive computers, and dive trips, can be quickly ruined due to carelessly tossed weight belts or cylinders. Keep your Display Module and Transmitter protected from undue shock.



AFTER THE DIVE

Soak and rinse the Display Module in fresh water following each dive, and check the low pressure sensor guard cap to ensure that it is free of any debris or obstructions. For the Transmitter, soak and rinse the regulator in fresh water following each dive as you normally would, according to the proper maintenance procedures prescribed for that model. If possible, use lukewarm water to dissolve any salt crystals. Salt deposits can also be dissolved using a slightly acidic vinegar/water bath. After removal from a fresh water bath, place the 750GT under gently running water and towel dry before storing. Transport your 750GT cool, dry, and protected.




WARNING: Never, under any circumstances, poke any object through any slots or holes of the Display Module. Doing so may damage the depth sensor, possibly resulting in erroneous depth and/or dive time remaining displays.

ANNUAL INSPECTIONS AND SERVICE


Your 750GT 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 your 750GT is working properly. A convenient service record is provided in the rear of this owner's guide. This should be signed by the service technician after each annual inspection or factory service. The cost 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 750GT'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 750GT depth sensor if it is not pressure tested properly. Please take heed of the following warning:

 **WARNING: Never pressure test the 750GT Display Module in an air environment. Doing so may damage the depth sensor; possibly resulting in erroneous depth or time readings.**

HOW TO OBTAIN SERVICE

Take your 750GT to an Authorized AERIS Dealer.

 **NOTE: The Transmitter and Display Module must be returned together, regardless of the reported problem or symptom.**



To return your 750GT to AERIS:

- Remove the Transmitter from the regulator.
- Package the Display Module and Transmitter together, using a cushioning material to keep them isolated from each other.
- Authorized AERIS Dealers should use an AERIS Product Return Form.
- 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 from your Authorized AERIS Dealer.
- Send prepaid and insured to the nearest AERIS service facility.
- If you have any questions regarding 750GT service, call AERIS Customer Service at (510) 346-0010, 8 to 5 PST, or E-MAIL: info@diveaeris.com.



NOTE: Previous dive Log and History data will be erased whenever your 750GT receives factory service.

BATTERY LIFE

The 750GT battery consumption rate varies throughout periods of operation, which begin upon activation and continue for 24 hours after surfacing from a dive. The Transmitter and Display Module consume power any time batteries are installed in them, even in standby when pressure to the Transmitter is purged and the Display Module has shut down.



The exact number of dives, or hours of operation, that you will obtain with a set of batteries is subject to variables such as, the number of dives conducted during an operational period, the manufacturer, model and age of batteries actually used, the amount of time batteries remain in the Transmitter and Display Module during periods of inactivity, and the frequency and duration of backlight use.



NOTE: Tests and calculations indicate that the number of dives that you can obtain from a set of batteries will vary. Approximately 100 dives could be conducted with the recommended batteries. This is still considered to be substantial given the convenience of the user replaceable feature.

Due to the convenience of the user replaceable battery feature, AERIS recommends that batteries be removed during extended periods of inactivity expected to exceed one week, during air travel that is not conducted during repetitive dive surface intervals, and during storage.



NOTE: The disposable batteries supplied with the 750GT dive computer are not covered by the limited 2 year warranty.

LOW BATTERY CONDITION

While in Surface Mode, Low Battery Icons appear on display to alert you of the need for a battery change for either the Transmitter (Fig. 106a) or Display Module (Fig. 107a).

If a Low Battery condition occurs while in a dive mode, the icons will not appear until you surface and the 750GT reverts to Surface Mode. There will be sufficient battery power (reserve) to complete the dive with full functions and features. Remaining battery life may also be shortened by a sudden change in temperature.

AERIS strongly advises that you replace the batteries and DO NOT attempt to dive with the 750GT when either battery icon remains on display, and that you replace the batteries of the Transmitter and Display Module with new prior to any multi-day dive trip.



WARNING: Adjusted No Decompression Limits (nitrogen and oxygen calculations) will be erased when the Display Module batteries are replaced between repetitive dives. Also, date and time settings will have to be reset.

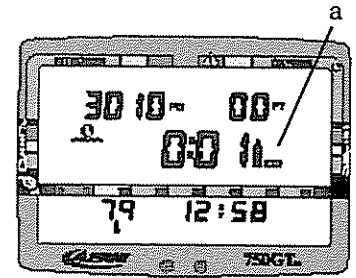


Fig. 106 - Low Battery (Transmitter)

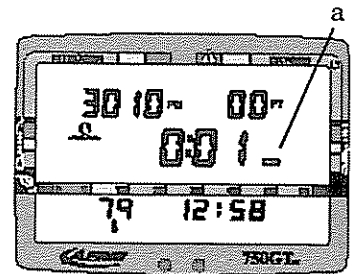


Fig. 107 - Low Battery (Display Module)

BATTERY REPLACEMENT

Whenever replacing the batteries of the Display Module, it is recommended that you also replace the batteries of the Transmitter, and vice-versa.



WARNING: Damage due to improper battery replacement is not covered by the 750GT limited 2 year warranty. Follow directions precisely.

- Apply a coin (not a screwdriver) to the recessed slot of the battery cap, and turn the cap out counterclockwise to remove it from the housing.
Note: 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.
- Remove the battery from the cap using care not to lose the spring located behind the battery. Closely examine the spring and contact area inside the battery compartment for any signs of corrosion indicating entrance of moisture into the unit. If found, return your 750GT to an Authorized AERIS Dealer, and DO NOT use it until it has received service.
- To remove the o-ring, press the sides with your fingertips to cause it to protrude slightly from the groove of the cap and lift it over the head of the cap. DO NOT use tools to remove.



- Closely check the threads of the battery cap and the housing for any signs of damage that might impair proper threading. If found, return your 750GT to your Authorized AERIS Dealer, and DO NOT attempt to use until it has received factory service.
- To replace the o-ring, lightly lubricate it with silicon grease and stretch it slightly to work it down over the head of the cap (Fig. 108), DO NOT roll it over the threads. Ensure that it is evenly seated inside the groove above the threads.
- Insert the spring into the cap with the large end first (small end facing out), and insert the battery into the housing (Fig. 109). For the Transmitter, the positive (+) end of the battery goes into the housing first with the negative (-) end toward the cap. For the Display Module, the negative (-) end of the battery goes into the housing first with the positive (+) end toward the cap.
- Carefully insert the battery cap into the housing and turn clockwise by hand until snug. To ensure correct threading and overcome spring pressure apply slight inward pressure as you begin turning the cap. Apply a coin to the recessed slot and tighten until secure.
- Activate the Display Module and watch carefully as it performs a full diagnostic and battery check, and signal link with the Transmitter.
- Examine the LCD display to ensure it is consistently clear and sharp in contrast throughout the screen.

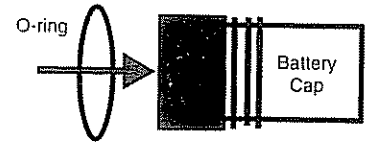
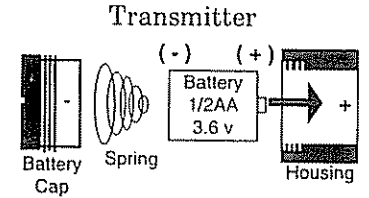
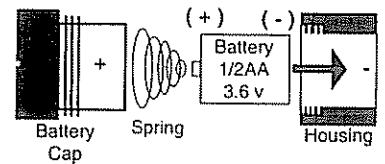


Fig. 108 - O-ring Installation




Transmitter



Display Module

Fig. 109 - Battery Installation

FLOODED BATTERY COMPARTMENT


 **NOTE: For any cause of flooding other than a bad o-ring, return the complete 750GT for factory service.**

If moisture is found in the battery compartment, it is best to have your 750GT inspected and cleaned by an Authorized AERIS Dealer.

To perform a repair in the field:

- Remove the battery and discard, **DO NOT** attempt to reuse.
- Check the o-ring for damage (nicks, cuts, divots, etc.). If found, discard and replace with new.
- Before replacing the o-ring and batteries, flush the battery compartment with a solution of 50% white vinegar and 50% water. Rinse with fresh water, and allow to dry overnight or blow dry with a hair dryer (set at 'no heat') Prior to installing the spring and battery, ensure that no moisture is present around the retaining ring located inside the base of the compartment.



 **NOTE: The retainer ring cannot be removed or replaced by the user.**

TRANSMITTER INSTALLATION INSTRUCTIONS

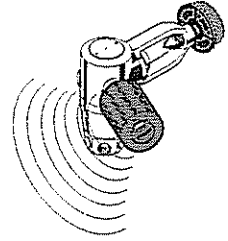
As an integrated unit, the 750GT requires attachment of its Radio Frequency (R/F) Transmitter unit to your regulator first stage.



CAUTION: Installing the Transmitter improperly to your regulator first stage may damage the Transmitter, regulator, or both. AERIS strongly recommends that installation be performed by an Authorized AERIS Dealer.

To install the Transmitter on your regulator first stage:

- Remove your current pressure gauge high pressure hose, or high pressure port plug from the regulator first stage port marked "HP" with the proper wrench or hex key.
- Very lightly lubricate the o-ring and threads of the Transmitter fitting with a halocarbon based lubricant such as Christo-Lube MCG111 (provided in the AERIS battery kit).
- Thread the Transmitter clockwise by hand into the regulator HP port and tighten until secure with a 5/8" open-end wrench.
- Attach the regulator first stage to a full SCUBA cylinder.
- Open the cylinder valve slowly, listening for gas escaping around the fitting. If gas is leaking, take the complete regulator system to an Authorized AERIS Dealer for inspection and repair.





TRANSMITTER COMPATIBILITY WITH NITROX

All AERIS 750GT Transmitters can be used with compressed air and/or nitrogen-oxygen (Nitrox) breathing gas mixtures in which the percentage of oxygen (O₂) in the Nitrox mixture does not exceed 50 (%). However, use with Nitrox (up to 50%) requires that the Transmitter end fitting be Oxygen Cleaned and fitted with Nitrox compatible parts (i.e., o-ring and lubricant) by an authorized AERIS Dealer Nitrox Service Technician.

Transmitters that have been specifically prepared for Oxygen Service by the AERIS factory, as identified to be Oxygen Clean and Oxygen Compatible by a special tag affixed to it, can be used with any nitrogen-oxygen (Nitrox) breathing gas mixture to a maximum of 100 (%) Oxygen.

If a Transmitter prepared by the AERIS factory, and certified and tagged for Oxygen Service, is subsequently used with compressed air, it cannot then be used with nitrogen-oxygen (Nitrox) breathing gas mixtures in which the percentage of oxygen (O₂) in the Nitrox will be greater than 50 (%).

Only the AERIS factory can prepare AERIS 750GT Transmitters for use with nitrogen-oxygen (Nitrox) breathing gas mixtures in which the percentage of oxygen (O₂) in the Nitrox will be greater than 50 (%).

REFERENCE

MORE ABOUT FLYING AFTER DIVING

In 1990 the Undersea and Hyperbaric Medical Society (UHMS) published a set of guidelines aimed at minimizing the possibility of decompression sickness due to flying too soon after diving. The UHMS suggests* divers using standard air cylinders and exhibiting no symptoms of decompression sickness wait 24 hours after their last dive to fly in aircraft with cabin pressures up to 8,000 feet (2,440 meters).

* excerpted from "The UHMS Flying After Diving Workshop"

The two exceptions to this recommendation are:

- If a diver had less than 2 hours total accumulated dive time in the last 48 hours, then a 12 hour surface interval before flying is recommended.
- Following any dive that required a decompression stop, flying should be delayed for at least 24 hours, and if possible, for 48 hours.




Since the 1990 UHMS guidelines were introduced, data from the Diver's Alert Network (DAN) was introduced that resulted in DAN's position** that "A minimum surface interval of only 12 hours would be required in order to be reasonably assured a diver will remain symptom free upon ascent to altitude in a commercial jet airliner (altitude up to 8,000 feet/2,440 meters). Divers who plan to make daily, multiple dives for several days, or make dives that require decompression stops, should take special precautions and wait for an extended surface interval beyond 12 hours before flight".

** excerpted from "DAN's Current Position on Recreational Flying After Diving"

Both the UHMS and DAN agree that "There can never be a flying after diving rule that is guaranteed to prevent decompression sickness completely. Rather, there can be a guideline that represents the best estimate for a conservative . . . surface interval for the vast majority of divers. There will always be an occasional diver whose physiological makeup or special diving circumstances will result in the bends".

To reduce the risk of developing decompression sickness after a single no decompression dive, current guidelines suggest waiting 12 hours prior to exposure to atmospheric pressures equivalent to 1,000 feet (330 meters) above sea level, or greater. When repetitive dives are conducted during the same day, or period of days, it is suggested that the interval be increased to a minimum of 24 hours. Note that land travel to higher elevations after diving must also be considered as an exposure to altitude.

MORE ABOUT ALTITUDE DIVING

 **WARNING:** Diving at high altitude requires special knowledge of the variations imposed upon divers, their activities, and their equipment by the decrease in atmospheric pressures. AERIS recommends completion of a specialized Altitude training course by a recognized training agency prior to diving in high altitude lakes or rivers.

**DECOMPRESSION
RULES
ARE NOT MEANT
TO BE BENT**



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 750GT automatically compensates for decreased ambient pressure when activated at high altitudes up to 14,000 feet (4,267 meters). Its program contains a high altitude algorithm that reduces no decompression and oxygen exposure limits to add a larger zone of caution.

Whenever the 750GT is manually activated at altitudes higher than 2,000 feet (610 meters), it will automatically recalibrate itself to measure depth in feet of fresh water rather than feet of sea water. Therefore, when returning to lower altitudes, diving should not be conducted until the 750GT automatically clears of any residual nitrogen and oxygen loading and resets to operate at the new altitude.



WARNING: Altitude compensation provided by the 750GT takes place when the unit is activated. DO NOT dive at any different altitude until the 750GT shuts off. It will automatically recalibrate when reactivated at the new altitude.

MORE ABOUT NITROX DIVING

⚠ WARNING: Diving with enriched nitrogen-oxygen (nitrox) mixtures requires special knowledge of the variations imposed upon divers, their activities, and their equipment by the increased percentage of oxygen. AERIS recommends completion of a specialized Nitrox training course by a recognized training agency prior to diving with any enriched nitrogen-oxygen (nitrox) mixtures.

Both central nervous system (CNS) oxygen toxicity and pulmonary oxygen toxicity were taken into consideration when the current maximum limits (Fig. 110) for exposure to oxygen were published by NOAA in the October 1991 NOAA Diving Manual. Although CNS oxygen toxicity is considered the primary constraint for higher levels of PO₂, there are circumstances in which pulmonary oxygen toxicity can limit exposures.

CNS oxygen toxicity is not considered likely at PO₂ levels below 1.30 ATA. It is however related to the diver's work level. Performing strenuous tasks could cause the symptoms of oxygen poisoning to occur at PO₂ levels lower than they normally would appear during casual recreational diving.

PO ₂ (ATA)	Maximum Exposure Time	
	Per Dive (Min)	Per 24hr (Min)
0.60	720	720
0.70	570	570
0.80	450	450
0.90	360	360
1.00	300	300
1.10	240	270
1.20	210	240
1.30	180	210
1.40	150	180
1.50	120	180
1.60	45	150

Fig. 110 - Oxygen
Exposure Limits

The nitrox features of the 750GT are intended for use only by recreational divers trained for nitrox diving by an instructor certified by a recognized training agency to teach diving with nitrox.



WARNING: In the event that you exceed the maximum limit of per dive allowable oxygen exposure, it is recommended that you allow a surface interval of at least 2 hours before reentering the water. If you exceed the maximum limit of 24 hour period allowable oxygen exposure, you should allow a surface interval of at least 24 hours before reentering the water.

MULTIPLE TISSUE TRACKING

The 750GT tracks twelve tissue compartments with halftimes ranging from 5 to 480 minutes. The Nitrogen Bar Graph always displays the controlling compartment that is the only one important at that time. Think of the Nitrogen Bar Graph as twelve separate transparent displays laid on top of one another (Fig. 111). The tissue compartment that has filled up fastest is the only one the viewer can see from the top.



At any particular point, one tissue compartment may be absorbing nitrogen, while another that was previously higher may be off-gassing. Figure 112 illustrates the point at which one compartment "hands over" control to another compartment at a different depth. This feature of the Decompression Model is

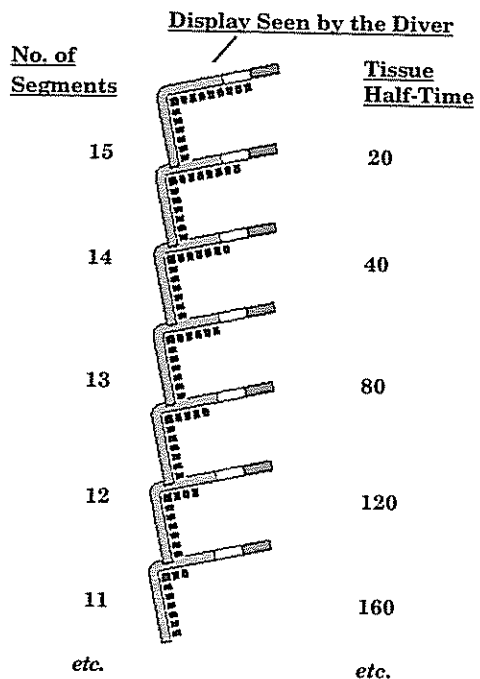


Fig. 111 - Nitrogen Bar Graph

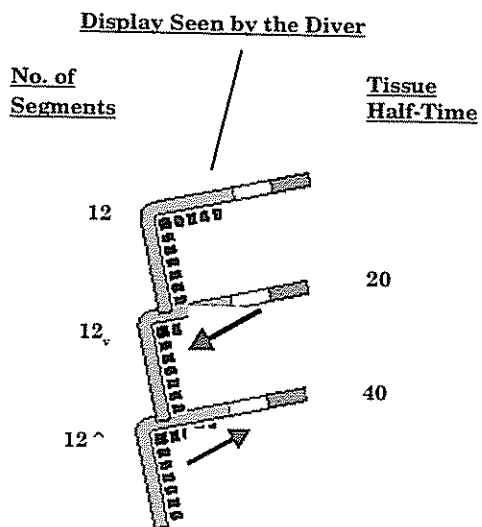


Fig. 112 - Control Hand-Over

Depth feet (meters)	750GT NDL-mins. Eng (Metric)	U.S. Navy NDL -mins.
30 (9)	260 (283)	---
35	---	310
40 (12)	137 (144)	200
50 (15)	80 (84)	100
60 (18)	57 (58)	60
70 (21)	40 (41)	50
80 (24)	30 (31)	40
90 (27)	24 (26)	30
100 (30)	19 (20)	25
110 (33)	16 (16)	20
120 (36)	13 (13)	15
130 (39)	10 (11)	10
140 (42)	9 (9)	10
150 (45)	8 (8)	5
160 (48)	7 (7)	5
170 (51)	* *	5
180 (54)	* *	5
190 (57)	* *	5

[* The 750GT will not scroll past 160 feet (48 meters), or when projected bottom /descent time is less than one minute.]

Fig. 113 - No Decompression Limits

the basis of multilevel diving, one of the most important contributions the 750GT offers you. Take advantage of this feature and make all of your dives multilevel dives.

NO DECOMPRESSION LIMITS

Note how the No Decompression Limits for the 750GT are contrasted with the U.S. Navy limits (Fig. 113). For most depths, the 750GT provides somewhat less no decompression times than the U.S. Navy Tables. However, while the no decompression limits may be less, you will receive greatly increased allowable bottom times as you take advantage of the multilevel dive capabilities offered by the 750GT. Notice also that the 750GT Planning Sequence does not scroll past 160 feet (48 meters).

REPETITIVE DECOMPRESSION DIVING

The decompression model used by the 750GT is based on the no decompression multilevel repetitive dive schedules successfully tested by Dr. Ray Rogers and Dr. Michael Powell. These tests did not include repetitive dives deeper than 90 feet (27 meters) or decompression dives.

Due to the present unavailability of statistical data, 750GT decompression predictions are based on U.S. Navy theory. Therefore, pay special attention to the following warnings.



WARNING: AERIS advocates responsible diving practices and does not recommend decompression diving, or diving below 130 feet (39 meters). The decompression capabilities of the 750GT are intended strictly for emergency use. Decompression diving is inherently hazardous and greatly increases your risk of decompression sickness - even when performed according to the computer's calculations. In the event that you must make an emergency decompression dive, you must not make another dive for at least 24 hours.



WARNING: Using the 750GT, just as using the U.S. Navy (or other) No Decompression Tables, is no guarantee of avoiding decompression sickness, i.e. "the bends."

CONCLUSION

The 750GT is an informational tool whose entire worth depends on understanding all of its features and functions, and using it correctly. Learn how to use it and use it wisely. Thank you for being a responsible diver!!



**Be a -
RESPONSIBLE DIVER
at all times.**

SPECIFICATIONS

NO DECOMPRESSION MODEL

Basis:

- Modified Haldanean Algorithm
- 12 tissue compartments

Data Base:

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

Performance:

- Tissue compartment halftimes (in 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:

- Decompression ceilings at 10, 20, 30, 40, 50, & 60 feet
(3, 6, 9, 12, 15, & 18 meters)

Altitude Algorithm:

- Based on NOAA tables

Oxygen Tolerance Limits:

- Based on NOAA tables

OPERATIONAL MODES

Modes:

- Activation/Diagnostic
- Surface
- FO2 Set
- PO2 Max Depth
- Plan
- Log
- History
- Set -
 - Time (hour, minute, am/pm)
 - Date (month, day, year)
 - Alternate Display (on/off)
 - Unit (imperial / metric)
 - Alarm (depth, air, on/off)
 - Link (serial no.)
 - Language (English, Italian, German, Spanish, French)
- EACC (External Access)
- No Decompression Dive
- Alternate No Decompression Dive
- Decompression Dive
- Temperature & Backlight
- Violation (conditional, delayed, & immediate)
- High PO2 Level
- High Oxygen Accumulation
- Gauge
- Time to Fly

SPECIFICATIONS (continued)

DISPLAY RANGE/RESOLUTION

Numeric Displays:

	<u>Range:</u>	<u>Resolution:</u>
• Dive Number	0 - 9	1
• Depth	0 - 330 ft (0 - 99.5 m)	1 ft (.5 m)
• Maximum Depth	330 ft (99.5 m)	1 ft (.5 m)
• FO2 Set Point	21 - 50 %	1 %
• PO2 Value	1.40 - 5.00 ATA	.01 ATA
• Gas Time Remaining	0 - 9 hr. 59 min.	1 minute
• No Decompression Time	0 - 9 hr. 59 min.	1 minute
• Decompression Time	0 - 9 hr. 59 min.	1 minute
• Elapsed Dive Time	0 - 99 min.	1 minute
• Surface Time	0 - 11 hr. 59 min.	1 minute
• Dive Log Surface Interval	0 - 11 hr. 59 min.	1 minute
• Time to Fly	23 hr. 50 min. - 0* (* starting 10 min. after the dive)	1 minute
• Cylinder Pressure	0 - 8190 psi (0 - 564 BAR)	10 psi (.5 BAR)

GRAPHIC DIVER INTERFACE

Nitrogen Bar Graph

	<u>segments</u>
No Decompression zone (green)	12
No Deco Caution zone (yellow)	3
Decompression Warning zone (red)	1

Oxygen Accumulation (O2) Bar Graph

	<u>segments</u>
Normal zone (green)	12
Caution zone (yellow)	3
Danger zone (red)	1

Breathing Gas Time Remaining Bar Graph

	<u>segments</u>
Normal zone (green)	28
Caution zone (yellow)	2
Danger zone (red)	5

Ascent Rate Indicator

	<u>segments</u>	<u>feet/min.</u>	<u>meters/min.</u>
Normal zone (green)	none	0 - 10	0 - 3
	1	11 - 20	3 - 6
	2	21 - 30	6 - 9
	3	31 - 40	9 - 12
Caution zone (yellow)	4	41 - 50	12 - 15
	5	51 - 60	15 - 18
Too Fast zone (red flashing)	6	61 - 90	18 - 27
	7	91 - 120	27 - 36
	8	>120	>36

Breathing Gas Consumption Indicator

	<u>segments</u>
Normal zone (green)	3
Caution zone (yellow)	2
High zone (red)	3

SPECIFICATIONS (continued)

Special Displays

- | | |
|------------------------------|---------------------------------|
| • Audible Alarm Access | <u>Occurrence</u> |
| • Diagnostic Display | On demand |
| • Out of Range | Activation |
| • Gauge Mode Countdown Timer | >330 feet (>99.5 meters) |
| | 12 - 24 hours (after violation) |

OPERATIONAL PERFORMANCE

Function

- | | |
|---------------------|-------------------|
| • Depth | <u>Accuracy</u> |
| • Cylinder Pressure | ±1% of full scale |
| • Timers | ±1% of full scale |
| | 1 second per day |

Dive Counter

- Displays Dives #1 - #9 then recycles to #1 (continues to #9)
- Resets to Dive #1, upon diving (after 12 hour surface time)

Dive Log Mode

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

Altitude

- Operational from sea level to 14,000 feet (4,267 meters) elevation
- Recalibration of depth readings from 'feet of sea water' to 'feet of fresh water' when higher than 2,000 feet (610 meters) elevation

Power (Display and Transmitter)

- | | |
|-------------------|---|
| • Battery | Each - 1 - 3.6 v, 1/2AA, TADIRAN® Lithium Model TL-2150 |
| • Shelf life | Up to 10 years |
| • Replacement | User replaceable (annual recommended) |
| • Life expectancy | 100 dives, or 1 year, whichever comes first |

NOTE: Battery life is maximized when batteries are removed from the 750GT Transmitter and Display Module during long periods of inactivity.

Activation:

- Display Module - manual push button
- Transmitter - gas pressure
- Cannot be activated by water immersion
- Cannot be activated deeper than 4 feet (1.5 m)
- Cannot be activated at elevations higher than 14,000 feet (4,267 m)
- Needed before first dive, and after a 12 hour surface interval.
- Automatically shuts unit off if dive is made within 120 minutes after initial activation. Reactivation required.
- Cannot be shut off manually.

RESPONSIBLE COMPUTER DIVING

Since the advent of dive computers, it is a common mistake to assume that the old traditional rules of diving no longer apply, but the truth is just the opposite. Before you dive using your 750GT, keep these basic rules in mind:

- **Plan each dive, and dive your plan** - Your computer was not designed to make decisions for you, only to provide you with the information you need to make responsible decisions for yourself. This begins with a dive plan that will help you avoid a low air or decompression situation.
- **Do not plan any dive that exceeds your training or experience level.**
- **Inspect your computer before every dive** - If it shows any signs of damage or abnormal function, DO NOT dive with it until it has received factory service.
- **Make your deepest dive first** - When making repetitive dives, it is imperative to ensure that each consecutive dive is shallower than the one before. This will allow your body's slower tissues to continue out-gassing nitrogen.
- **Make the deepest part of your dive first, and gradually work your way to the surface using a "staircase" profile** - The ability to perform multilevel diving is one of the most important contributions of a dive computer, and you should take advantage of it. It will increase your bottom time and at the same time decrease your risk of decompression sickness.
- **Ascend slowly by following an ascent line whenever possible, or by ascending diagonally toward the surface** - Watch the Ascent Rate Indicator closely while you ascend, and keep it **in the green** zone as much as possible.
- **Make a safety stop at 15-20 feet (4.5-6 m) at the end of every dive** - A safety stop of as little as 5 minutes has been shown to have a dramatic effect on the bubble formation in divers. **It's important. Don't forget it.**

LANGUAGE CROSS REFERENCE

ENGLISH

MODE:FO2
MODE:PLAN
MODE:LOG
MODE:HIST
MODE:SET
SET:TIME
SET:DATE
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC

ITALIANO

MODO:FO2
MODO:PIAN
MODO:LOG
MODO:DATI
MODO:REG
REG:ORA
REG:DATA
GEN
FEB
MAR
APR
MAG
GIU
LUG
AGO
SET
OTT
NOV
DIC

DEUTSCH

MODE:FO2
MODE:PLAN
MODE:LOG
MODE:DATA
MODE:SET
SET:ZEIT
SET:DATM
JAN
FEB
MAR
APR
MAI
JUN
JUL
AUG
SEP
OKT
NOV
DEZ

ESPAÑOL

MODO:FO2
MODO:PLAN
MODO:BTC
MODO:HIST
MODO:LST
LST:TIEM
LST:DIA
ENE
FEB
MAR
ABR
MAY
JUN
JUL
AGO
SEP
OCT
NOV
DIC

FRANCAIS

MODE:FO2
MODE:PLAN
MODE:MEM
MODE:HIST
MODE:REG
REG:HEURE
REG:DATE
JAN
FEV
MAR
AVR
MAI
JUIN
JUIL
AOU
SEP
OCT
NOV
DEC

LANGUAGE CROSS REFERENCE (continued)

<u>ENGLISH</u>	<u>ITALIANO</u>	<u>DEUTSCH</u>	<u>ESPANOL</u>	<u>FRANCAIS</u>
SET:ALT	REG:ALT	SET:ALT	LST:ALT	REG:ALT
ALT:ON	ALT:ON	ALT:AN	ALT:ON	ALT:OUI
ALT:OFF	ALT:OFF	ALT:AUS	ALT:OFF	ALT:NON
SET:UNIT	REG:UNIT	SET:EINH	LST:UNID	REG:UNIT
UNITS	UNITA'	EINHEITEN	UNIDADES	UNITES
SET:ALRM	REG:ALRM	SET:ALRM	LST:ALRM	REG:ALRM
ALRM:DPTH	ALRM:PROF	ALRM:TIEF	ALRM:PRFN	ALRM:PROF
ALRM:GAS	ALRM:GAS	ALRM:LUF	ALRM:GAS	ALRM:GAS
ALRM:ON	ALRM:ON	ALRM:AN	ALRM:ON	ALRM:OUI
ALRM:OFF	ALRM:OFF	ALRM:AUS	ALRM:OFF	ALRM:NON
SET:LINK	REG:COLL	SET:KUPP	LST:CONX	LIAISON
SN 999999	SN 999999	SN 999999	SN 999999	NS 999999
SET:LANG	REG:LING	SET:SPRA	LST:LENG	REG:LANG
ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH
ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO
DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH
ESPANOL	ESPANOL	ESPANOL	ESPANOL	ESPANOL
FRANCAIS	FRANCAIS	FRANCAIS	FRANCAIS	FRANCAIS
MODE:EACC	MODO:ACCE	MODE:AUZU	MODO:ACCE	MODE:ORDI
EACC 8	ACCE 8	AUZU 8	ACCE 8	ORDI 8

LANGUAGE CROSS REFERENCE (continued)

ENGLISH

CEILING
10 FT
3 M
SELF-TEST
GAS ALARM
TOO HIGH
TOO FAST
TOO DEEP
VIOLATION
EXCEEDED
FLY

ITALIANO

TAPPA A
10 PIE
3 MET
TEST
GAS ALARM
QUOTA ECC
RALLENTAR
FONDO ECC
VIOLAZ
ECCEDUTO
VOL

DEUTSCH

MIN-TIEFE
10 FT
3 MET
EIGENTEST
LUFTALARM
ZU HOCH
ZU SCHNEL
ZU TIEF
VERSTOSS
VERSTOSS
FLY

ESPAÑOL

MAX NIVEL
10 PIE
3 MET
AUTO EXAM
GAS ALARM
DEM ALTO
DEM RAPID
DEM PRFND
VIOLACION
EXCEDIDO
VLR

FRANCAIS

PALIER
10 PIE
3 MET
AUTO-TEST
GAS ALARM
ALTITUDE
VITREMONT
PROFOND
VIOLATION
VIOLATION
VOL



GLOSSARY

The following are diving terms to become familiar with. Some apply specifically to the 750GT.

- Air Dive** - A dive conducted using air (approximately 21% oxygen & 79% nitrogen) as the breathing gas.
- Algorithm** - A step-by-step mathematical formula designed to accomplish a particular result (i.e. Dive Time Remaining in the 750GT).
- Altitude Dive** - A dive made at an elevation above sea level (2,000+ ft. / 610+ m.) where a different set of no decompression tables is used.
- Ascent Rate Indicator** - A display that shows ascent rate as a bar graph alongside a color-coded indicator.
- Breathing Gas Time Remaining** - A graphic display of remaining dive time based on a calculation of cylinder pressure, and the diver's breathing rate and depth.
- Ascent Rate** - The speed that a diver ascends toward the surface.
- Audible Alarm** - A computer emitted tone that alerts the diver to potential danger.
- Breathing Gas Consumption Indicator** - A graphic display of breathing gas consumption rate.
- Caution Zone** - The yellow sections of the Bar Graphs that give a visual warning of a diver's proximity to limits.
- Ceiling** - See decompression ceiling.
- Clean Dive** - A dive preceded by 24 hours of no diving activity.
- CNS** - Abbreviation for the Central Nervous System of the body.
- Competitive Dive** - A dive conducted for profit or prize.
- Compartment** - A term applied to the hypothetical modeling of nitrogen absorption in the tissues (more accurate than the term "tissue" because dive computer models have no direct relation to human tissues).
- DCS** - Abbreviation for decompression sickness, i.e., "the bends".

GLOSSARY (continued)

DECO - Abbreviation for Decompression.

Decompression Ceiling - The shallowest depth a diver may reach upon ascent without risking decompression sickness.

Decompression Stop - The depth(s) at which a diver must pause during ascent to allow absorbed nitrogen to escape naturally from the tissues.

Depth Sensor - an electro-mechanical device that converts water pressure into an electrical signal, that is converted to a visual depth display.

Diagnostic Mode - The first display seen on dive computers after initial activation during which time a self-check for internal faults is performed.

Display - A visual readout of information.

Dive Log Mode - A computer display of previous dive information.

Dive Time Remaining - A display of the time before a diver must surface based on no-decompression status, oxygen accumulation status, or tank pressure.

Elapsed Dive Time - The total time spent underwater during a dive between 5 feet (1.5 meters) on initial descent to 3 feet (1 meter) on final ascent.

FO₂ - The fraction (percent / 100) of oxygen (O₂) in the breathing gas mixture.

Icon - a small pictorial representation of an operational mode

Integrated Dive Computer - A dive computer that monitors and displays cylinder pressure in addition to no decompression information.

LCD - Abbreviation for liquid crystal display, an easily viewed low voltage display usually found on dive computers

Maximum Depth - The deepest depth attained during a dive.

GLOSSARY (continued)

- Message** - An alpha/numeric display that provides various warnings and messages to the diver to better clarify on-screen information and audible alarm signals.
- Mode** - A specific set of functions in a dive computer.
- Multiplexing Display** - A display on an instrument that alternates to show different information relating to separate events.
- Multi-level Dive** - A type of dive profile where the diver spends various times at different depths (opposite of a "Square Wave" dive profile).
- Nitrogen Bar Graph** - A graphic display of simulated nitrogen absorption on AERIS dive computers.
- Nitrox** - A nitrogen-oxygen breathing gas mixture that contains a higher fraction of oxygen than air.
- Nitrox Dive** - A dive conducted using nitrox (22 to 50 % O₂) as the breathing gas.
- No Deco** - Abbreviation for No Decompression.
- No Deco Time Remaining** - The amount of dive time remaining based on no-decompression status.
- No Decompression** - Any part of a dive where the diver can surface without requiring a decompression stop.
- O₂ Bar Graph** - A visual representation of oxygen accumulation on a dive computer display.
- OTU** - Abbreviation for oxygen tolerance unit. A Hamilton's Repex method term for oxygen dose.
- Out of Range** - The point at which a dive computer can no longer supply correct dive information.
- Oxygen Tolerance** - Dose or exposure to the physiological affects of elevated levels of oxygen.
- Oxygen Toxicity** - The adverse physiological affects of exposure to elevated levels of oxygen.
- Partial Pressure** - The proportion of the total pressure contributed by a single gas in a mixture of gases.
- PO₂** - Partial pressure of oxygen. The proportion of total pressure of a gas mixture contributed by oxygen.

GLOSSARY (continued)

Plan Sequence - A display of available dive times at 10 foot (3 meter) intervals from 30 to 160 feet (9 to 48 meters) used when dive planning.

Pressure Sensor - an electro-mechanical device that converts cylinder pressure into an electrical signal that the 750GT converts into cylinder pressure and air time remaining displays.

Repetitive Dive - Any dive that takes place within 12 hours of a previous dive.

Safety Stop - A depth at which a diver may choose, but is not required, to pause during ascent to allow absorbed nitrogen to escape naturally from the tissues.

Square Wave Dive - A type of dive profile where the entire dive is spent at one depth between descent and ascent.

Tissue - See Compartment.

Tissue Compartment - See Compartment.

Transducer - An electro-mechanical device in a dive computer that acts as a depth or pressure sensor.

Transition Period - The first 10 minutes of surface time after ascending above 3 feet (1 meter) from a dive.



