SAVANT™

owner's guide

AERIS™
Distinguished by design

RESPONSIBLE COMPUTER DIVING

- **Always Plan Each Dive**
- **Always Limit Your Dive to the Level of Your Training and Experience**
- **Always Make Your Deepest Dive First**
- **Always Make The Deepest Part of Every Dive First**
- **Check Your Computer Often During the Dive**
- **Do A Safety Stop on Every Dive**
- **Allow Adequate Surface Interval Between Each Dive**
- **Allow Adequate Surface Interval Between Each Day of Diving (12 Hours or Until Your Computer Clears)**

Read And Understand This Owner's Guide Thoroughly <u>Before</u> Using the SAVANT.

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

⚠ WARNINGS:

- **The SAVANT is intended for use by recreational divers who have successfully completed a nationally recognized course in scuba diving, and diving with enriched nitrogen-oxygen (nitrox) mixtures.**
- **It is intended only for no decompression diving, NOT intentional decompression diving.**
- **It must not be used by untrained persons who may not have knowledge of the potential risks and hazards of scuba diving, and diving with enriched nitrogen-oxygen (nitrox) mixtures.**
- **You must obtain scuba certification, and certfication in diving with enriched nitrogen-oxygen (nitrox) mixtures before using the SAVANT if you have not already done so.**
- **It is NOT for use by military and commercial divers.**
- **It should NOT be utilized for any competitive, or repetitive square wave or decompression diving, as it is intended solely for recreational use and no decompression multilevel diving.**
- **As with all underwater life support equipment, improper use or misuse of this product can cause serious injury or death.**
- **Never participate in sharing or swapping of a dive computer.**
- **Conduct your dives in such a manner so as to insure that you continuously check the computer's proper function.**
- **Read and understand this owner's guide completely before diving with the SAVANT.**
- **If you do not fully understand how to use this dive computer, or if you have any questions, you should seek instruction in its use from your authorized AERIS dealer before you utilize this product.**

LIMITED TWO-YEAR WARRANTY
For details, refer to the Product Warranty Registration Card provided.

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510/569-3100

TRADEMARK NOTICE

PATENT NOTICE
U.S. Patents have been issued, or applied for, to protect the following design features:
Dive Time Remaining (U.S. Patent no. 4,586,136), Data Sensing and Processing Device (U.S. Patent no. 4,882,678), Nitrogen Bar Graph (U.S. Patent no. 4,882,687), and Ascent Rate Indicator (U.S. Patent no. 5,156,055).

DECOMPRESSION MODEL
The programs within the SAVANT 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 SAVANT dive computer model is based upon the latest research and experiments in decompression theory. **Still, using the SAVANT, 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.

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FEATURES and DISPLAYS

Welcome to AERIS and thank you for choosing the SAVANT!

Your SAVANT 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 identification icons. This instructional guide is intended to help you become familiar with the functions and features available and show you examples of displays that you could expect to see in the various operational modes. Relax and read through the complete owner's guide.

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.

Throughout this owner's guide reference is made to the term "breathing gas'. The rational being that the SAVANT can be used for 'air' dives or 'nitrox' dives. These terms are defined as -

<u>Breathing Gas</u> - the gaseous mixture breathed during a dive.
<u>Air</u> - a breathing gas that contains approximately 21% oxygen and 79% nitrogen (nature's common nitrogen-oxygen mixture).
<u>Nitrox</u> - a nitrogen-oxygen breathing gas that contains a higher fraction of oxygen (22 to 50%) than air.

The **control buttons** allow you to select display options and access specific information. The Upper is named **Advance** (1a) and the Lower **Select** (1b). They can be pressed repeatedly, or held in to scroll and continue as you set or access different display modes.

Each numeric and graphic display represents a unique piece of information. It is imperative that you understand the formats, ranges, and values of the information represented to avoid any possible misunderstanding that could result in error.

The **Nitrogen Bar Graph** (1c) represents tissue loading of nitrogen, showing your relative no decompression or decompression status. As your depth and elapsed dive time increase, segments will add to the graph, and as you ascend to shallower depths, the bar graph will begin to recede, indicating that additional no decompression time is allowed for multilevel diving.

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

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

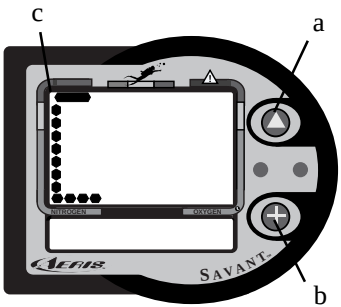


Fig. 1

Segments = Speed (rate)
0 = 0 - 20 fpm (0 - 6 mpm)
1 = 21 - 30 fpm (6.5 - 9 mpm)
2 = 31 - 40 fpm (9.5 - 12 mpm)
3 = 41 - 50 fpm (12.5 - 15 mpm)
4 = 51 - 60 fpm (15.5 - 18 mpm)
5 = 61+ fpm (18.5+ mpm)
(when 5, all will flash)

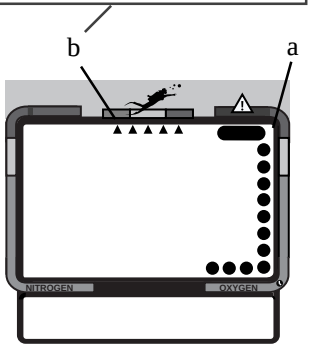


Fig. 2

The **Oxygen (O2) Bar Graph** (2a) represents oxygen loading, your relative oxygen tolerance dosage (OTU), showing the maximum of either per dive accumulated oxygen, or 24 hour period accumulated oxygen. As your accumulation increases during the dive, segments will add to the bar graph, and as loading decreases, it will begin to recede, indicating that additional exposure is allowed.

It also assists you with managing high partial pressure of oxygen (PO2) by flashing the large red segment as a warning when PO2 exceeds the maximum allowed limit of 1.60 ATA.

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 **Ascent Rate Indicator** (2b) is provided to help you avoid excessive ascent rates by providing a visual representation of ascent speed (i.e., an ascent speedometer). It has been granted U.S. Patent no. 5,156,055. Green is a 'normal' rate, yellow a 'caution' rate, and red is 'Too Fast'.

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

During a dive, the **Current Depth** display (3a), indicates depths from 0 to 330 feet (99.5 meters) in 1 foot (.5 meter) increments. A second depth display (Fig. 7b) indicates the **Maximum Depth** reached during that dive.

If you descend deeper than 330 feet (99.5 meters), the displays will show the letters (**oor**) to indicate that you have gone 'out of range'.

During a Decompression Dive, the required **Ceiling Stop Depth** replaces Maximum Depth (3b). Maximum Depth can then be viewed by depressing the Advance (Upper) control button.

The **Main Time** display (3c) indicates elapsed Surface Time, theoretical Dive Time Available, Dive Time Remaining, Total Ascent Time required, Time to Fly, or Time of Day, depending on the operating mode that the unit is in.

A **second time display** (3d) indicates Elapsed Dive Time, Decompression Stop Time required at a specific stop depth, or Time to Desaturate, depending on the operating mode that the unit is in.

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, Elapsed Dive Time, and Time of Day.

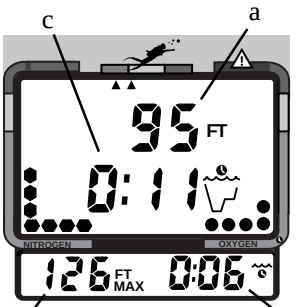


Fig. 3

Fig. 4

Dive Time Available, Dive Time Remaining, Decompression Stop Time, Total Ascent Time required, Time to Fly, and Time to Desaturate, are calculated projections of time and use a solid (non-blinking) colon to indicate that they are counting down, rather than up.

In the Surface mode, **Temperature** appears continuously (4a). During a dive, Temperature is displayed in place of Maximum Depth and Elapsed Dive Time when the Advance (Upper) control button is depressed, and for 3 seconds after it is released. Temperature is not displayed during the Decompression mode. If the Temperature exceeds a value of '99', two dashes (- -) will be displayed on the screen until the unit's temperature decreases to '99'.

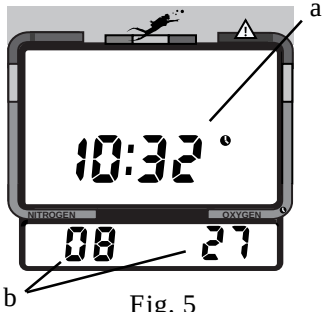


Fig. 5

In the Surface mode, **Time of Day** appears for 5 seconds (5a) together with the current **Date** (5b) when the Advance (Upper) button is depressed once. When Units of Measure are set for 'Imperial', the Month appears to the left of Day; and when set for Metric, the Month appears to the right of Day. Date and Time are not displayed when the unit is in a dive mode.

If the **Audible Alarm** is turned 'on' (a user setting), it will emit -

One Double Beep (Potential Danger)
- Enter Decompression Mode
- Partial pressure of oxygen equal to or greater than 1.40 ATA.

One Beep per Second (Immediate Danger)
- Ascent to a depth shallower than a required stop depth.
- Ascent rate that exceeds 60 ft/min (18 m/min).
- Partial pressure of oxygen equal to or greater than 1.60 ATA.
- Oxygen accumulation greater than the allowed per dive or 24 hour limit.

Single Long Beep (Permanent Violation)
- Depth was shallower than a required stop depth for more than 5 minutes.
- Required Decompression exceeds a 60 FT/ 18 M ceiling.
- Five minutes after a conditional violation on the surface.

Short Beep (To indicate that the unit is operating correctly.)
- Immediately following activation and the Diagnostic Mode.

The **backlight** illuminates the upper and lower screens.

To activate in the Surface mode or Time/Date mode, or while in a dive mode, press the Select (Lower) button. The screens will be illuminated for 5 seconds. Release and press again to activate as desired.

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

Be a -
RESPONSIBLE DIVER
at all times.

The SAVANT will operate in almost any **temperature** diving **environment** in the world between - 40 °F and 140 °F (- 10 and 60 °C). At extremely low temperatures, the LCD may become sluggish, but this will not affect it's accuracy. If stored or transported in extremely low temperature areas (below freezing), you should warm the module and its batteries with body heat before diving.

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

The SAVANT provides information based upon a diver's personal dive profile, and therefore **must not be "shared" between divers**. It is impossible for two divers to stay precisely together underwater, and your computer's dive **profile tracking of previous dives will be pertinent to you only**.

Nitrogen and oxygen loading of a second user may be significantly different and thus swapping dive computers could lead to inaccurate and potentially dangerous predictions of decompression and oxygen accumulation status.

This rule is especially important when using the SAVANT, due to the personal information it provides.

ACTIVATION and SETUP

WARNING: Never attempt to activate the SAVANT underwater. This may result in inaccurate depth and no-decompression time displays. If the unit is activated when deeper than 4 feet (1 meter) underwater, or at elevations higher than 14,000 feet (4,267 meters), it will perform a diagnostic check followed by immediate shutdown. Always check the display before entering the water to ensure that it is activated!!

To activate the unit, press the Select (Lower) button once and release. It will enter Diagnostic Mode (6), displaying all "8's", followed by "dashes", and a countdown from 9 to 0. The backlight will be on as it checks its display functions and battery voltage to ensure that everything is working correctly.

Fig. 6

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

If no dive is made within 2 hours after initial activation, the unit will automatically deactivate to conserve its battery power.

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

Surface Mode, identified by the Surface Time icon (7a), follows Diagnostic Mode after activation. Information includes Dive Number '0' (no dive made yet), Surface Time with flashing colon, and Temperature..

If battery voltage is low, the Battery icon will be on, flashing (8a) and the unit will shut off.

WARNING: If a Low Battery condition is indicated following diagnostics, AERIS strongly recommends that you DO NOT attempt to dive until the battery is replaced.

Before going diving, set the date/time, select audible alarm and FO2 default (on/off), units of measure, and dive profile resolution.

Setting the FO2 'value' for the nitrox mix being used is a 'pre dive' setting that must be entered before commencing your dives (see page 17).

WARNING: Date/time, FO2 default on/off, audible alarm on/off, the FO2 value entered, and dive profile resolution must be reset if the battery is replaced.

To access the Set Mode, press both buttons simultaneously and momentarily (less than 4 seconds) while in the Surface Mode.

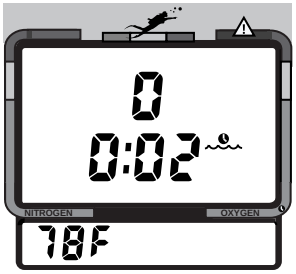


Fig. 7

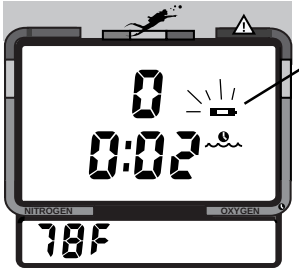


Fig. 8

Fig. 9

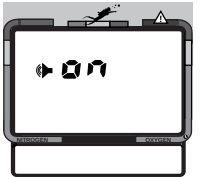


Fig. 10

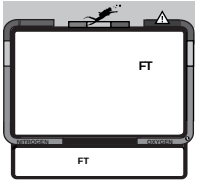


Fig. 11

The Advance (Upper) button is used to move to the available settings, and the Select (Lower) button is used to choose the desired setting. If no buttons are pressed within 2 minutes, the unit will revert to Surface Mode.

Set FO2 (50%) Default - on/off (9) - effect explained on pages 16 and 17.

- Factory set for Default 'On'. To turn the Default function 'Off':
- press both buttons simultaneously while in Surface Mode.
- press the Select (Lower) button to toggle between On and Off.
- press the Advance (Upper) button once to revert to Surface Mode.

Set Audible Alarm - on/off (10)

- Factory set for Alarm 'On'. To turn the Alarm function 'Off':
- press both buttons simultaneously while in Surface Mode.
- press the Advance (Upper) button 1 time to access the Alarm Mode.
- press the Select (Lower) button to toggle between On and Off.
- press the Advance (Upper) button once to revert to Surface Mode.

Set Units of Measure (11)

- Factory set for 'imperial'. To change to 'metric' (M and ℃):
- press both buttons simultaneously while in Surface Mode.
- press the Advance (Upper) button 2 times to access the Units Mode.
- press the Select (Lower) button to toggle between Imperial and Metric.
- press the Advance (Upper) button once to revert to Surface Mode.

Set Date/Time

- Factory set for January 1, 1997, 12:00 AM (midnight). To change:
- press both buttons simultaneously while in Surface Mode.
- press the Advance (Upper) button 4 times to access the Date/Time Mode. The DATE screen will appear (12) with the Year 'flashing'.

Hint: To bypass a display that is flashing, do not press the Select (Lower) button, instead press the Advance (Upper) button to view the next function.

- press and hold the Select (Lower) button until the correct year appears.
- press the Advance (Upper) button once. The Month flashes.
- press and hold the Select (Lower) button until the correct month appears.
- press the Advance (Upper) button once. The Day flashes.
- press and hold the Select (Lower) button until the correct day appears.
- press the Advance (Upper) button once.
  The TIME screen will appear (13) with the Hour 'flashing'.
- press and hold the Select (Lower) button until the correct hour appears.
- press the Advance (Upper) button once. The Minute flashes.
- press and hold the Select (Lower) button until the correct minute appears.
- press the Advance (Upper) button once to advance to the Profile Sampling Mode, or press it 2 times to revert to the Surface Mode.

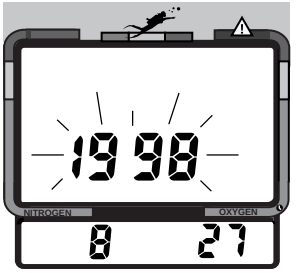


Fig. 12

Fig. 13

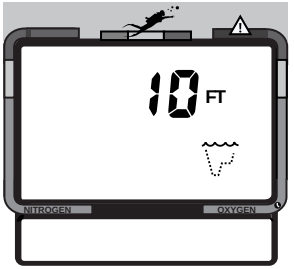


Fig. 14

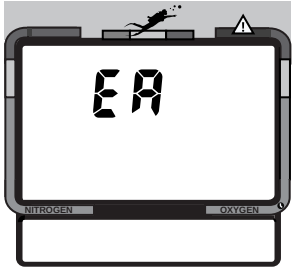


Fig. 15

Set Dive Profile Sampling Rate (14)

This setting allows you to select the rate that the unit samples data points for onboard storage and subsequent download to the Dive Downloader (DDA) PC software program. It does not affect the rate that data is sampled for 'display' during operation. Lower rates use more memory storage, so less dives can be stored (expect only 8 profiles for 2FT setting, yet 36 for 10 FT setting).

- Factory set for 10 FT (3 M). To change:
- after having set the Time as described previously, or - by pressing the Advance (Upper) control button 9 times while in the Surface Mode.
- press and hold the Select (Lower) button until the desired rate appears. (options: 2 FT/.5 M, 5 FT/1.5 M, 10 FT/3 M, 30 SEC, 60 SEC, 180 SEC)
- press the Advance (Upper) button once to revert to the Surface Mode.

External Access (EA) Mode (15) - refer to page 29 for instructions

Although this mode is within the sequence of settings, it does not have any set points or selections. It provides user access to the PC download feature described later. Also, the factory uses it to access diagnostic and calibration information.

PRE DIVE and DIVE MODES

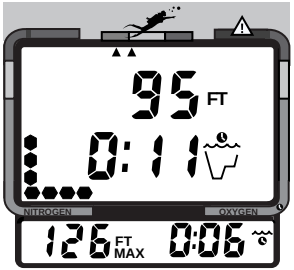


Fig. 16

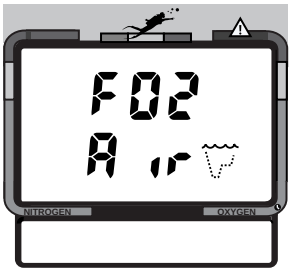


Fig. 17

WARNING: The percentage of oxygen (FO2) in the nitrox mix being used must be set 'before each' nitrox dive, unless the FO2 default feature has been turned 'off'.

The SAVANT can be used either as an Air computer or as a Nitrox computer. After activation, it will operate as an Air computer without displaying information associated with oxygen calculations, unless it is set for a percentage of oxygen (FO2) other than Air (numerical value between 21 and 50 %).

When set with an **FO2 value of 'Air',** the SAVANT will perform calculations the same as if FO2 were set for 21% oxygen, internally accounting for oxygen loading for any subsequent Nitrox dives. However, oxygen related displays, warnings, and the O2 bar graph will not appear on the display for that dive (16), or subsequent dives, unless FO2 is set for a numerical value (21 to 50 %). **To verify that 'Air' is the FO2 value setting**, press the Advance (Upper) button 2 times to access the FO2 screen (17).

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

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 appears 10 minutes after that dive will be -

- 50%, if the FO2 default is 'On' (18a), or -
- it will remain at the previous value set, if the FO2 default is turned 'Off'.

If the FO2 default is 'On', the FO2 value must be reset for each repetitive nitrox dive, or the value will automatically be 50 and the dives will be calculated based on 50% O2 for oxygen calculations and 21% O2 (79% nitrogen) for nitrogen calculations. If you surface for greater than 10 minutes during a dive and the FO2 default is 'On' , a subsequent descent will be considered a new dive and the FO2 value must be reentered.

Once a dive is made with the unit 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. However, you can set FO2 for 21% for use with air.

To set FO2 while in the Surface Mode:

- press the Advance (Upper) button 2 times.
- press and hold the Select (Lower) button to increase the FO2 value 1 (%) per second from 21 to 50 (%), then display 'Air' again.
- when the proper value of FO2 is displayed (19a), release the button.
- the **PO2** display that indicates the Maximum Depth that can be achieved with an oxygen partial pressure of 1.60 ATA for the FO2 value set will appear (19b). If FO2 is set for Air, the PO2 display will not appear.
- press the Advance (Upper) button to return to the Surface Mode.

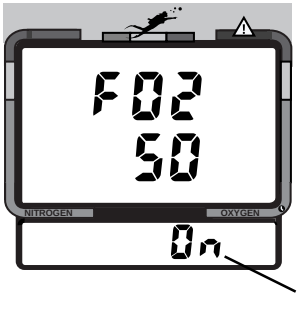


Fig. 18

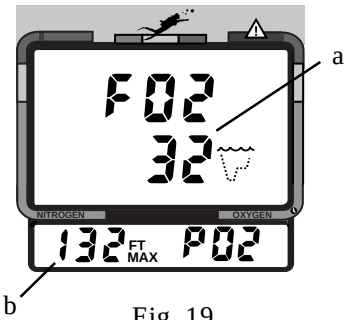


Fig. 19

AERIS strongly recommends that you review the Dive Planner prior to every dive to help you plan your dive as required to avoid exceeding no decompression or oxygen exposure limits. This is especially important for repetitive dives, when the Planner indicates no decompression bottom times (20a) that are available on your next dive, based on any residual nitrogen accumulation following your last dive and surface interval.

WARNING: The Dive Planner 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.

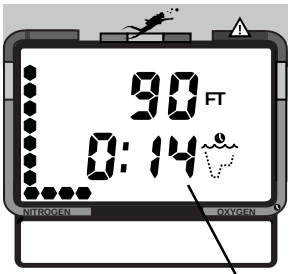


Fig. 20

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 exposure or your 24 hour accumulation of oxygen (if calculated to be oxygen controlled).

No decompression times are only displayed for depths where there is at least 3 minutes of dive time available at the 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 PO2 of 1.60 ATA will not be displayed.

To access the Dive Planner while in the Surface mode:

- press the Advance (Upper) button 3 times.
- press and hold the Select (Lower) button to view a sequence of depths from 30 to 160 feet (9 to 48 meters) in 10 foot (3 meter) increments, or -
- press and release the button repetitively to view the information one increment at a time.
- to revert to the Surface mode, press the Advance (Upper) button.

Fig. 21

If the Nitrogen Bar Graph is displayed (21), that next dive is calculated to be controlled by nitrogen loading. If the O2 bar graph and O2 symbol are displayed (22), it is calculated to be controlled by oxygen loading.

Fig. 22

The SAVANT will store oxygen accumulation for up to 12 dives conducted during a 24 hour period. If the maximum limit for oxygen loading has been exceeded for that day (24 hour period), all of the segments of the O2 bar graph will be displayed flashing (23). Depth/Time values will not appear until the O2 bar graph recedes into the green (normal) zone (i.e., your daily oxygen dosage decreases an amount equivalent to the amount accumulated during the latest dive completed).

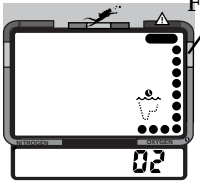


Fig. 23

WARNING: The SAVANT 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, <u>the FO2 setting must be verified prior to each nitrox dive.</u>

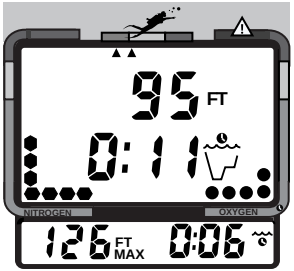


Fig. 24

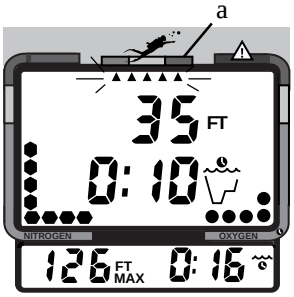


Fig. 25

Once activated, the SAVANT will enter the **No Decompression Dive Mode** (24) when you descend deeper than 5 feet (1.5 meters). Information includes Current Depth, Elapsed Dive Time (and icon), Dive Time Remaining (and Mode icon), Maximum Depth for that dive (and icon), and the bar graphs.

As your depth and elapsed dive time increase, the Nitrogen Bar Graph will fill with segments (green toward red) to represent nitrogen loading. While **ascending** to shallower depths, it will begin to recede, offering a graphic representation of your multilevel diving capability.

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

Segments of the Ascent Rate Indicator fill (and recede) as your ascent rate increases (and decreases) throughout the dive. When you exceed the **maximum recommended ascent rate of 60 feet per minute (18 meters per minute)**, it will enter the red (Too Fast) zone (25a) and you will be alerted by all segments of the bar graph flashing, and an audible alarm. The warnings will stop when your ascent rate is slowed.

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

To activate the backlight, press the Select (Lower) button. The displays will be illuminated for 5 seconds. Release and press again as desired.

To view Temperature (26a), press the Advance (Upper) button. It will replace Max Depth and Elapsed Dive Time for depression time plus 3 seconds.

A safety stop made between 15-20 feet (5-6.5 meters) is strongly recommended as a standard procedure before completing your ascent.

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.

WARNING: Inspect your SAVANT prior to every dive, checking for any signs of the entrance of moisture, damage to the button membranes, or damage to the LCD display. If these or other signs of damage are found, return the unit to an Authorized AERIS Dealer. DO NOT attempt to use it until it has received factory service.

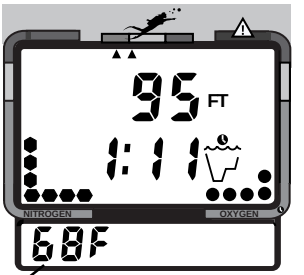


Fig. 26

SUMMARY OF ACCESS TO PRE DIVE AND DIVE MODES

To access a specific Pre Dive mode (no dive made) from the Surface Mode, press the button(s) as follows:

MODES	TO ACCESS	TO SET/VIEW
Backlight	Lower '1' time	
Time/Date	Upper '1' time	
FO2 set	Upper '2' times	Lower 'repetitively', or press and hold (to change)
Dive Planner	Upper'3' times	Lower 'repetitively', or press and hold (to change)
Log Mode	Upper '4' times	Lower 'repetitively', or press and hold (to change)
Set Mode	Both '1' time	See below
• FO2 Default (On/Off)	Upper '0' time	Lower '1' time (to change)
• Audible Alarm (On/Off)	Upper '1' time	Lower '1' time (to change)
• Units (Imperial/Metric)	Upper '2' times	Lower '1' time (to change)
• EA (external access)	Upper '3' times	refer to page 29
• Date (year,month,day)	Upper '4, 5, 6' times	Lower 'repetitively', or press and hold (to change)
• Time (hours, minutes)	Upper '7, 8' times	Lower 'repetitively', or press and hold (to change)
• Dive Profile Sampling	Upper '9' times	Lower 'repetitively', or press and hold (to change)

During the No Decompression Dive Mode, press the button(s) as follows:

MODES	TO ACCESS
Backlight	Lower '1' time
Temperature	Upper '1' time

POST DIVE MODES

When you ascend to 3 feet (1 meter) or shallower, the SAVANT will enter **Surface Mode** (27) and begin counting your surface interval (27a).

The first 10 minutes is, in affect, a **Transition Period**. Information includes Surface Mode icon (flashing), dive 'number', Surface Interval (colon flashing), Temperature, Nitrogen and O2 Bar Graphs. During the 10 minutes -

- **To activate the backlight**, press the Select (Lower) button.
- **To view the Date/Time** for 5 seconds, press the Advance (Upper) button.
- **To access the Log Mode**, press the Advance (Upper) button 2 times, or once while the Date/Time are being displayed.
  (That dive's data will be displayed, however, it will not be stored in the unit's memory until the 10 minute transition period is completed.)

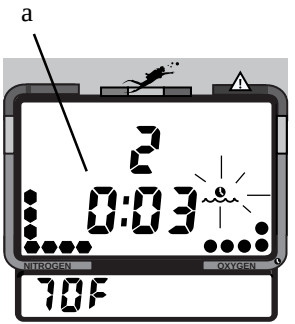


Fig. 27

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.

Once 10 minutes have elapsed, the **Surface Mode** icon and Surface Interval time display colon stop flashing indicating that the dive and transition period are completed, and a descent will be a new dive.

Remember!! You must ensure that the FO2 setting matches the specific nitrox mix being used for each nitrox dive.

To verify, or change, the FO2 setting (28) while in the Surface Mode:

- press the Advance (Upper) button 2 times.
- press the Select (Lower) button to change the setting.

If FO2 was set for a numerical value, the Maximum Depth that can be achieved with an oxygen partial pressure of 1.60 ATA for the FO2 value set will be displayed with the letters 'PO2' in the lower screen. If FO2 was set for Air', the PO2 screen will not appear.

Fig. 28

During the first 2 hours after a dive, the **Time to Fly and Desaturation countdowns** can be accessed by pressing the Advance (Upper) button 3 times while in the Surface Mode. If a violation occurred during the dive, Desaturation Time will not be displayed and a single dash (-) will appear instead of the letters FLY.

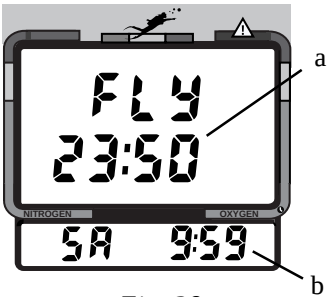


Fig. 29

The **Fly counter** (29a) is provided to assist you with deciding when enough surface time has elapsed to fly (or travel to higher elevations). The countdown starts 10 minutes after surfacing at 23:50 (hr:min) and counts down to 0:00.

The **Desaturation counter** (29b) provides calculated time for tissue desaturation (release of nitrogen loading) at sea level. The countdown starts

10 minutes after surfacing at 9:59 (hr:min) maximum and counts down to 0:00. If the time for desaturation is calculated to be greater than 9:59, the display will indicate 9:+ until it decreases to 9:59.

Two hours after the last dive, the Time to Fly and Desaturation countdowns will be displayed continuously, counting down to 0:00. Access to other modes is gained by pressing the Select (Lower) button to return to Surface Mode.

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.

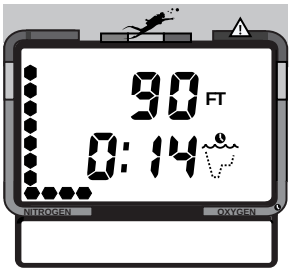


Fig. 30

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.

During the first 2 hours after a dive, after the 10 minute Transition Period, the **Dive Planner** can be accessed by pressing the Advance (Upper) button 4 times while in the Surface Mode, then pressing the Select (Right) button to view the sequence. The Planner shows 'adjusted' Limits (30) based on residual nitrogen and accumulated oxygen calculated to be remaining from the previous dives.

Two hours after the dive, while the Time to Fly and Desaturation countdowns are displayed continuously, access is gained by first pressing the Select (Lower) button to return to Surface Mode.

Information from your 12 latest dives is stored in the **Log** for viewing. After 12 dives are accumulated, each subsequent dive will overwrite the oldest dive in the log (i.e., the most recent dive deletes the oldest). Log information will not be lost when batteries are removed, but factory service will delete the logs.

Dives are displayed in a reverse sequence that starts with the dive most recently recorded back to the oldest of the 12 dives stored. Thus, your most recent dive will always be the first shown in the sequence. Each dive has three log screens - date/time started, Nitrogen data, and Oxygen data. If FO2 was set for 'Air' for that dive, the O2 screen will display 'FO2' and 'Air'.

To access the Dive Log Mode during the 10 minute Transition Period:

- press the Advance (Upper) button 2 times to view the Date/Time screen (31)
  - Log Mode icon
  - Date and Time of Day that the dive started.
  - Dive Number (1 through 9) - a function of real time, the first dive after midnight will be #1 for that calendar day. Example: If you do a night dive at 10pm (no other dive that day), then a repetitive night dive at 1am, 'both' dives will appear in the log as #1 (differentiated by the Date).

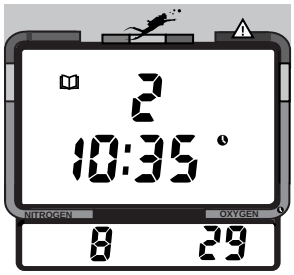


Fig. 31

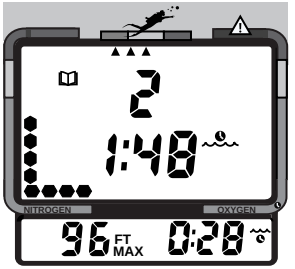


Fig. 32

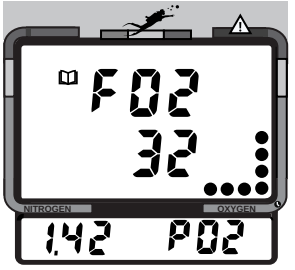


Fig. 33

• press the Select (Lower) button 1 time to view the **Nitrogen Log** (32)
- Log Mode icon
- Dive Number
- Maximum Depth reached (and icon)
- Elapsed Dive Time (and icon)
- Surface Interval prior to that dive (and icon)
- Ascent Rate Indicator - showing the maximum vertical speed
- Nitrogen Bar Graph - showing tissue nitrogen loading at the time you surfaced at the end of the dive.

• press the Select (Lower) button 1 time to view the **Oxygen Log** (33)
- Log Mode icon
- FO2 value - set for that dive (and 'FO2' symbol)
- Maximum PO2 level - reached during that dive (and 'PO2' symbol)
- O2 bar graph - showing oxygen loading at the end of the dive.

• press the Select (Lower) button repeatedly to proceed through the previous recorded dives.

During the first 2 hours after a dive, after the 10 minute Transition Period, the Dive Log can be accessed by pressing the Advance (Upper) button 5 times while in the Surface Mode.

Two hours after the dive, while the Time to Fly and Desaturation countdowns

are displayed continuously, access is gained by first pressing the Select (Lower) button to return to Surface Mode.

To exit Log Mode at any time press the Advance (Upper) button.

Using infrared linking hardware and a PC software program, dive data can be downloaded (copied) from your SAVANT into an IBM compatible PC program running on a Windows® 95 or 98 operating system. Instructions are provided with the download package that is available from your Authorized AERIS Dealer. Ask for Dive Downloader for AERIS (DDA). The software program provides dive profile data, and nitrogen and oxygen loading throughout the dive. To enter the **External Access Mode** while in the Surface Mode:

- press both control buttons simultaneously for less than 4 seconds.
- press the Advance (Upper) button 3 times. The letters EA appear (34).
- To revert to Surface mode, press the Advance (Upper) button 1 time, or -
- To initiate a download operation, press the Select (Lower) button 1 time.
- The letters EA begin flashing, and the download operation begins.
- As data is being downloaded to the PC, all segments of the LCD will be displayed.
- When downloading is complete, the unit will revert to the Surface Mode.

Prior to attempting to download data from your SAVANT, refer to the instructions provided in the User Manual that is incorporated into the CD rom of the Dive Downloader (DDA) package.

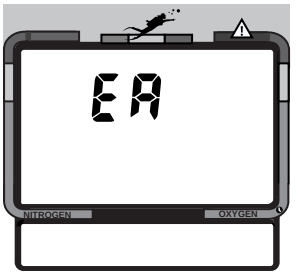


Fig. 34

SUMMARY OF ACCESS TO POST DIVE MODES

During the first 2 hours after a dive* (*after the 10 minute Transition Period has ended*), press the button(s) as follows:

MODES	TO ACCESS	TO SET/VIEW
Backlight	Lower '1' time	
Time/Date	Upper '1' time	
FO2 set	Upper '2' times	Lower (hold or repetitive)
Fly/Desaturate	Upper '3' times	
Dive Planner	Upper '4' times	Lower (hold or repetitive)
Log Mode	Upper '5' times	Lower (hold or repetitive)
Set Mode	Both '1' time	Refer to page 22 of this Guide
EA Mode	Both '1' time, Upper '3' times	Lower '1' time

*After the First 2 Hours, the unit will remain in Fly Mode. To access other Modes:

- press the Lower button to return to the Surface Mode, then press the buttons as indicated above.

HANDLING EXTREMES

The SAVANT 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. **The SAVANT is not intended for use by military or commercial divers.**

The SAVANT 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.**

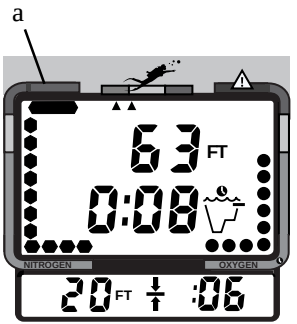


Fig. 35

Decompression diving should therefore be strictly avoided. The SAVANT 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**, as indicated by the large red segment of the Nitrogen Bar Graph (35a), the SAVANT can provide you with limited information to help you ascend to the surface.

Aeris strongly recommends that you avoid entering decompression, and reminds you that decompression diving requires special training.

The SAVANT cannot provide you with a backup breathing gas supply for emergencies or the ascent line you will need, and decompression diving greatly increases your risk of decompression sickness.

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.

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** indicated (36a) and decompress for the **stop time** indicated (36b).

Fig. 36

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 violation mode and losing the information needed to ascend properly.

Your dive training taught you not to get too close to the No Decompression

Limits. The **yellow Caution zone of the Nitrogen Bar Graph** (37a) offers you a convenient way to monitor how close you are to the No Decompression Limit. AERIS suggests always leaving the water with the Nitrogen Bar Graph **in the green** No Decompression zone.

WARNING: Never exit the water with the Nitrogen Bar Graph in the red Decompression zone. Doing so greatly increases the risk of decompression sickness, and may result in injury or death.

Body metabolism varies from person to person, and 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.**

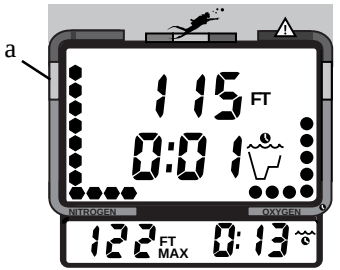


Fig. 37

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

Information provided during **Decompression Mode** includes Current Depth, Stop Depth and Time (and icon), and Total Ascent Time that includes stop times required at all ceilings and vertical ascent time calculated at 60 feet (18 meters) per minute. The ceiling bar of the Decompression Mode icon will flash

continuously (38a). The O2 bar graph and Ascent Rate Indicator will continue to represent their respective information.

By pressing the Advance (Upper) button, an **Alternate Display** will appear showing Maximum Depth (and icon) and Elapsed Dive Time (and icon) in the lower screen (39) for button depression time plus 3 seconds.

The amount of decompression credit time is dependent on depth, with slightly less credit given the deeper you are. **You must not ascend shallower than your decompression ceiling. Doing so will greatly increase your risk of decompression sickness**.

Once you have performed the required decompression, the SAVANT 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), helping you reduce your tissue nitrogen loading as much as possible.

WARNING: If you exceed certain limits, the SAVANT will not be able to tell you how to get safely back to the surface. These situations exceed tested limits and can result in loss of some of the unit's functions for 24 hours after the dive in which a violation occurred.

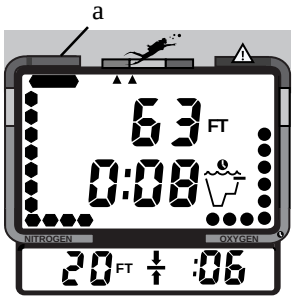


Fig. 38

Fig. 39

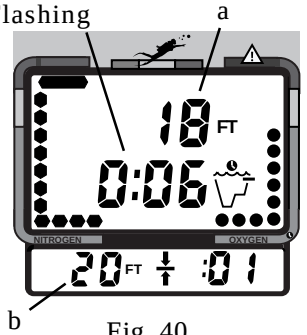


Fig. 40

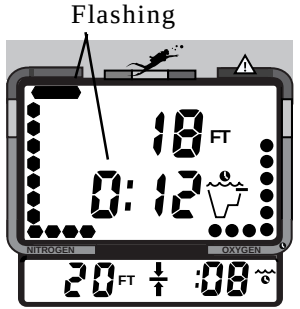


Fig. 41

The unit will enter the **Conditional Violation Mode** if you ascend shallower (40a) than the required decompression ceiling indicated (40b)**.** A momentary rise above the ceiling, such as with a surge or swell, could cause this to happen. The SAVANT will beep once per second and the Total Ascent Time display will flash until you descend below the required decompression ceiling stop depth.

If you descend below the required ceiling 'before 5 minutes have elapsed', $1^{1}/_{2}$ minutes of **penalty time** is added to decompression stop time for each minute above the ceiling. The added penalty decompression time will have to be 'worked off', before obtaining off-gassing credit. Once the penalty time is worked-off, and off-gassing credit begins, required decompression stop depths and time will decrease toward zero and the Nitrogen Bar Graph will recede into the yellow Caution zone reverting 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 unit will enter the **Delayed Violation Mode** (41).

Three conditions cause the SAVANT to enter the **Delayed Violation Mode**:

1. Remaining above the required Decompression Ceiling Stop Depth for more than 5 minutes (41).

2. Decompression requires a ceiling stop depth between 60 feet (18 meters) and 70 feet/21 meters (42).

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 Total Ascent Time (42a) to flash, until the ceiling stop depth indicates 50 FT/ 15 M.

3. Descending to deeper than 330 feet/99.5 meters (43).

NOTE: AERIS reminds you that the SAVANT is intended for no decompression diving at depths within 130 feet (39 meters). Expanded capabilities of the unit are provided as safety features to assist you with emergency situations.

Five minutes after reaching the surface from a dive in which a Delayed Violation occurred, the SAVANT will enter an **Immediate Violation Mode** and only operate in Gauge Mode for the next 24 hours.

WARNING: The SAVANT enters Immediate Violation Mode when a situation totally exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the unit's design. If you are following these dive profiles, AERIS advises you not use a SAVANT dive computer.

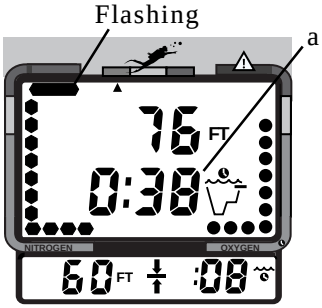


Fig. 42

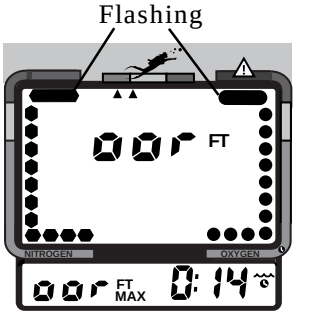


Fig. 43

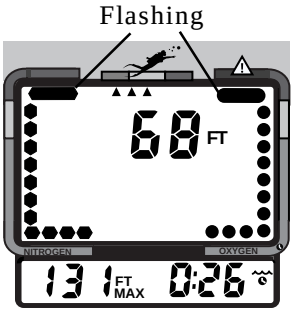


Fig. 44

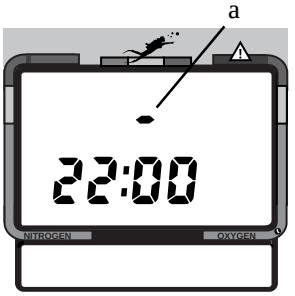


Fig. 45

Immediate Violation Mode occurs when a Decompression Stop depth *much greater than* 60FT (18M) is required. The unit will emit a Single Long Beep and then operate with limited functions (Current Depth, Max Depth, and Elapsed Dive Time) in Gauge Mode (44) during the remainder of that dive and for 24 hours after surfacing.

Underwater, the **Gauge Mode** is a continuation of the Immediate Violation Mode that turns the unit into a digital instrument without any decompression or oxygen monitoring functions. Dive Time Remaining will not be displayed and the Nitrogen and O2 Bar Graphs flash as a warning.

After surfacing, **Gauge Mode** does not provide the Dive Planner, Time to Fly, or Desaturation features. During the first 2 hours, Surface Mode will display the surface interval, dive number, and temperature as the bar graphs flash to indicate that a violation occurred. The countdown timer that appears when the Advance (Upper) button is depressed does not represent Time to Fly. It is only provided to inform you of the time remaining before normal operation can resume with full features and functions of the unit. Two hours after the dive, 22:00 will be displayed with a single dash (45a).

NOTE: The SAVANT will remain in Gauge Mode until a full 24 hour surface interval is served. If a dive is made within the 24 hour period, it will operate in Gauge Mode only for that dive and a full 24 hour surface interval will have to be served.

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

WARNING: AERIS does not advocate diving to depths below the maximum recommended sport diving depth limit of 130 feet (39 meters). Any deeper dive, the basis for which is purely theoretical, should be avoided. Special training, equipment, and support are necessary for this type of diving.

The **Maximum Depth** the unit will display all of its features is 330 feet (99.5 meters). Upon exceeding 330 feet (99.5 meters), the Nitrogen and O2 Bar Graphs will flash, and the Depth and Maximum Depth displays will only indicate the letters '**oor**' signifying that you are '**out of range**' (46). Current Depth will not reappear until you ascend shallower than 330 feet (99.5 meters). For the remainder of that dive, and in the log for that dive, only the letters 'oor' will be displayed as the value for Maximum Depth.

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 Gran Mal convulsions and drowning. Diving with enriched nitrogen-oxygen (nitrox) mixtures requires special training and certification.

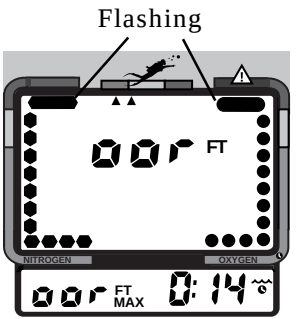


Fig. 46

WARNING: The oxygen features of the SAVANT 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.

By making a nitrox dive without the necessary **training, preparation, and equipment**, you will have placed yourself in an unnecessarily dangerous situation. The unit 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 oxygen exposure, as agreed on by all internationally recognized nitrox training agencies. Nitrox diving should therefore be strictly controlled.

Fig. 47

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

The unit enters the **High PO2 Dive Mode** when partial pressure of oxygen becomes equal to or greater than 1.40 ATA. The unit emits a double beep and the PO2 value and symbol 'PO2' appear in the lower screen (47). The PO2 dis-

play will remain on the screen until PO2 decreases below a 1.40 ATA.

When PO2 reaches the maximum allowed limit of 1.60 ATA, the unit emits 1 beep per second and the red segment of the O2 bar graph, PO2 value, and PO2 symbol flash as a warning (48) until PO2 decreases below 1.60 ATA. **If you continue the dive at your current depth, or descend deeper, your exposure to CNS oxygen toxicity will increase.**

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 provides a visual representation of **oxygen accumulation** for either that dive or 24 hour period, whichever is greater.

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 calculated accumulation of oxygen increases, the segments will fill the O2 Bar Graph. Upon entering the yellow Caution zone (Fig. 49a), the SAVANT emits a double beep as a warning. **Use the yellow Caution zone as a visual reference to place a wider margin of protection between you and the limits of oxygen exposure.**

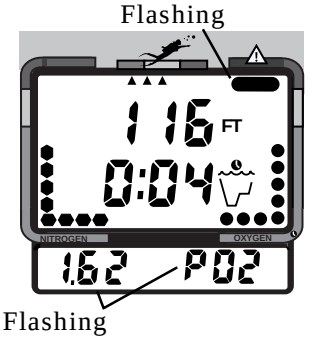


Fig. 48

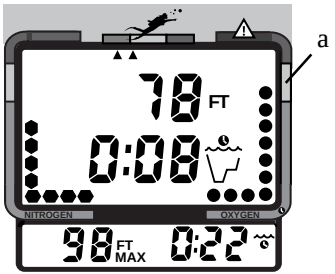


Fig. 49

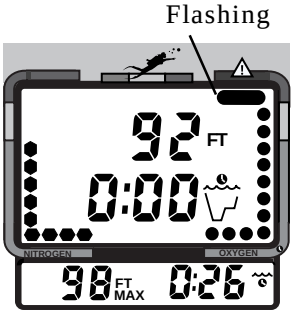


Fig. 50

If accumulation **exceeds the limit of oxygen tolerance** (Oxygen Dive Time Remaining is 0:00), the O2 Bar Graph will enter the red Danger zone and flash as a warning (50) and the SAVANT will emit one beep per second until it enters the Surface Mode. You must then focus on making a safe controlled ascent to the surface to prevent further exposure.

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.

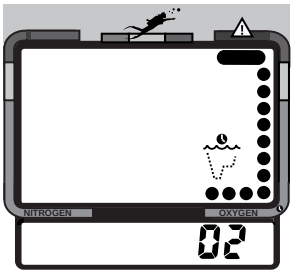


Fig. 51

During your surface interval, Plan Mode will only display the letters O2 (51), until your accumulation decreases and the O2 bar graph recedes into the yellow Caution zone. Always keep 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.

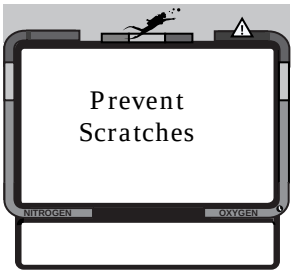
Aeris strongly recommends that you avoid exceeding oxygen exposure limits, and reminds you that nitrox diving requires special training and understanding of the effects of oxygen toxicity.

CARE and MAINTENANCE

The SAVANT is a sensitive electronic instrument. Although it has been designed to withstand the rigors of diving, it still must be handled carefully to protect 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.

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

If the transparent face becomes scratched, AERIS can replace it, although small scratches will naturally disappear underwater. For even more convenience and additional protection against scratches, place a transparent AERIS Instrument **Lens Protector** on the gauge faces.



Soak and rinse the unit in fresh water following each dive, and check the low pressure sensor guard cap to ensure it is free of debris or obstructions. To dissolve salt crystals, use lukewarm water or a slightly acidic vinegar/water bath. After removal from the bath, place the unit under gently running water and towel dry before storing. Transport your unit cool, dry, and protected.

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

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

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

To return your SAVANT to AERIS Customer Service:

- Take it to an Authorized AERIS Dealer, or -
- Package it using a protective cushioning material.
- Include a legible note stating specific reason for return, your name, address, daytime phone number, serial number, and a copy of your original sales receipt. (Authorized AERIS Dealers use a Product Return Form).
- Send prepaid and insured to the nearest AERIS service facility.
- If you have any questions regarding service, call AERIS Customer Service.

NOTE: Be sure to record all dives in your personal Log. Dive log data will be erased when it receives factory service.

AERIS Customer Service
14212 Doolittle Dr.
San Leandro, Ca. 94577

(510) 346-0010, 8 to 5 PST

Fax: (510) 346-0015

Website: HTTP://
WWW.diveaeris.com

E-mail: info@diveaeris.com

'Average' # Dives Each Period	Total # Dives To Expect
1	50
2	100
3	150

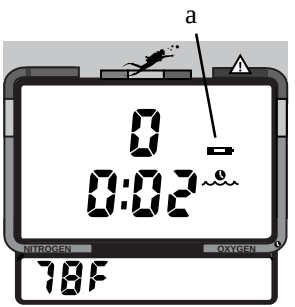


Fig. 52

The unit's **battery consumption** rate varies throughout periods of operation, that begin upon activation and continue for 24 hours after surfacing from a dive. The exact number of dives, or hours of operation, that you will obtain with a battery is subject to variables such as, the number of dives conducted during an operational period, the manufacturer, model and age of the batteries actually used, and use of the backlight.

Tests and calculations indicate that a new Tadiran® lithium battery will maintain unit operation for approximately 100 dives (2 dives each time the unit is activated), or one year, whichever comes first. You could expect less dives if only 1 dive is conducted each time the unit is activated, or more dives if 3 dives are conducted each time the unit is activated. Yearly replacement is recommended.

NOTE: The disposable battery supplied with the unit is not covered by the SAVANT's limited 2 year warranty.

During Surface Mode(s), voltage level is checked every 10 minutes. If a **low battery condition** is sensed, a Battery icon will appear to alert you (Fig. 52a). Upon decreasing to a voltage level that will not maintain proper unit operation, the icon will flash for 5 seconds followed by shut down of the unit.

If the condition is sensed prior to a dive or during the first 2 hours after surfacing, the icon will appear while Surface Mode is displayed. If the condition

is sensed while Fly Mode is being displayed continuously, starting 2 hours after surfacing, the icon will appear with the Fly countdown. If a **low battery condition** occurs during the dive, there will be sufficient voltage to maintain unit operation for the remainder of that dive and the icon will appear 10 minutes after surfacing from the dive.

AERIS strongly advises that you replace the battery and DO NOT attempt to dive with the SAVANT 'any time' the Low Battery icon appears on the display. Also, to avoid any inconvenience, that you install a new battery prior to any multi-day dive trip that will include a profile of numerous repetitive dives.

⚠ **WARNING: Nitrogen and Oxygen calculations will be erased when the batteries are replaced between repetitive dives. Also, date and time settings will have to be reset.**

⚠ **WARNING: The following procedure must be closely adhered to. Damage due to improper battery replacement is not covered by the product's limited 2 year warranty.**

To replace the battery, examine the case back to find the battery hatch (53):

- The battery compartment should only be opened in a dry and clean environment. Use care to prevent the entrance of moisture or dust.
- Remove the four screws that secure the battery hatch to the housing.

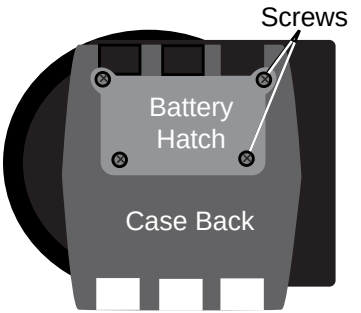


Fig. 53

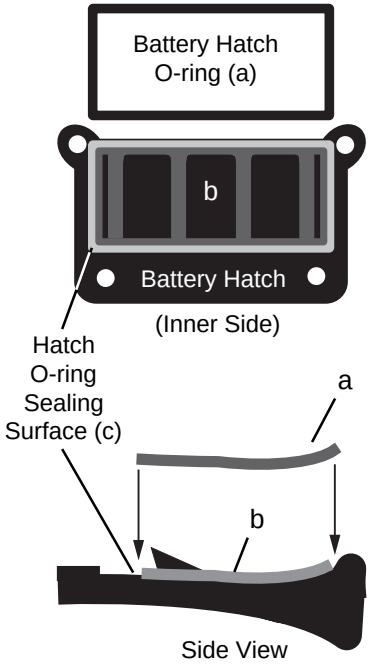


Fig. 54

- Lift the hatch up and out of the housing.
- Remove the battery and battery hatch o-ring. DO NOT use tools.
- O-ring replacement is highly recommended to ensure proper sealing.
- Closely check the battery hatch and the housing for any signs of damage that might impair proper sealing and for any signs of corrosion indicating entrance of moisture into the unit. If found, return your SAVANT to an Authorized AERIS Dealer, and DO NOT attempt to use it until it has received factory service.

WARNING: DO NOT attempt to remove any other component parts. Doing so may cause a dangerous malfunction of the SAVANT, resulting in possible injury or death. Indication of any form of tampering will void the warranty.

- To replace the battery hatch o-ring (54a), lightly lubricate it with silicon grease and place it around the raised portion (54b) located on the inner side of the battery hatch.

NOTE: Use only the o-ring provided. It is molded to match the contour of the battery hatch/compartment sealing surfaces (54c/55d). Use of any other o-ring will void the warranty.

- Ensure that the o-ring is properly aligned and evenly seated.

CAUTION: The o-ring must be aligned as indicated to prevent leakage and possible malfunction.

- Place the new 3.6 volt TADIRAN® 1/2AA lithium battery, model TL-2150, or equivalent, into the battery compartment ensuring proper orientation - positive (+) toward the clip (55e) and negative (-) toward the spring (55f).
- Carefully place the battery hatch with o-ring into position ensuring that the o-ring stays in place, is aligned, and seals properly.
- Secure the hatch with the four new screws - use 2 long (55g) ones at the top and 2 short (55h) ones at the bottom. The outer surface of the battery hatch should be flush with the outer surface of the housing. DO NOT overtighten, or attempt to use any other screws.

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

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

If you are conducting a repair in the field, proceed as follows:

- Inspect the lens and case to ensure they are not cracked or damaged.
- Inspect the button coverings to ensure they do not have cuts or holes.
- Remove and discard the battery and battery hatch o-ring.

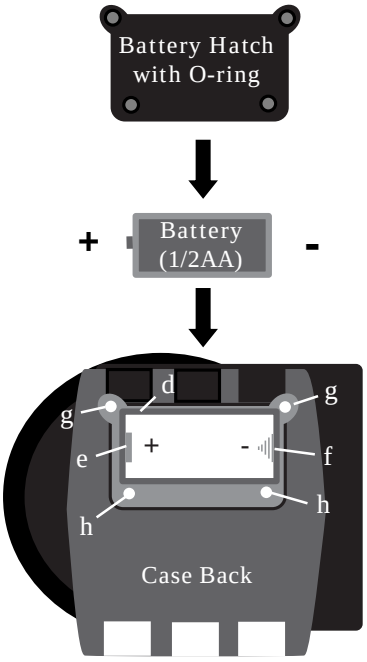


Fig. 55

- Check the battery hatch o-ring seating surfaces for damage (nicks, cuts, divots, etc.). If found, DO NOT use. Return the unit to AERIS.
- Flush the battery hatch and 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'). Ensure there is no moisture around the inside base of the battery compartment and hatch.
- Install the o-ring and battery as previously described.

- Activate the SAVANT and watch carefully as it performs a full diagnostic and battery check, and enters Surface Mode.
- Observe the LCD display to ensure it is consistently clear and sharp in contrast throughout the screen.
- If there are any portions of the display missing or appearing dim, return your SAVANT to an Authorized AERIS Dealer to receive factory service.

Care and maintenance is simple and easy, and with a small investment of your time you will keep your SAVANT in top condition for many years of diving enjoyment.

Be a RESPONSIBLE DIVER at all times !

REFERENCE

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).

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".

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".

* excerpted from "The UHMS Flying After Diving Workshop"
** excerpted from "DAN's Current Position on Recreational Flying After Diving".

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.**

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.

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 SAVANT 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 SAVANT 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 SAVANT automatically clears of any residual nitrogen and oxygen loading and resets to operate at the new altitude.

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

Both central nervous system (CNS) oxygen toxicity and pulmonary oxygen toxicity were taken into consideration when the current **maximum limits for exposure to oxygen** (Fig. 56) 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 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.

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.

The SAVANT 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. 57). The tissue compartment that has filled up fastest is the only one the viewer can see from the top.

PO2 (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. 56 - Oxygen Exposure Limits

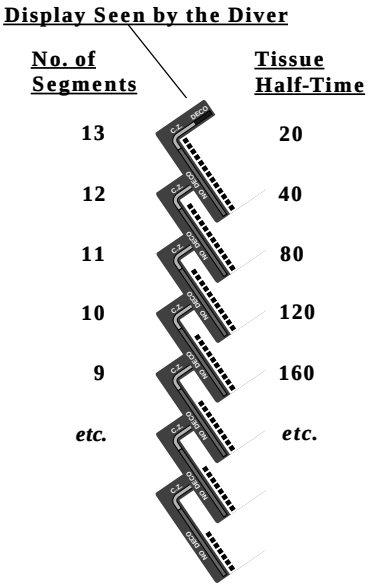


Fig. 57 - Nitrogen Bar Graph

At any particular point, one tissue compartment may be absorbing nitrogen, while another that was previously higher may be off-gassing. Figure 58 illustrates the point at which one **compartment** "hands over" **control** to another compartment at a different depth. This feature of the Decompression Model is the basis of multi-level diving, one of the most important contributions the SAVANT offers you. Take advantage of this feature and make all of your dives multilevel dives.

Note how the **No Decompression Limits** for the SAVANT are contrasted with the U.S. Navy limits (Fig. 59). For most depths, the SAVANT provides somewhat less no decompression times than the U.S. Navy Tables. However, while the No Decompression Limits may be less, you will receive increased allowable dive times as you take advantage of the multilevel dive capabilities offered by the SAVANT. Notice also that the Dive Planner does not scroll past 160 feet (48 meters).

The **decompression model** used by the SAVANT 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, SAVANT decompression predictions are based on U.S. Navy theory. Therefore, pay special attention to the following warnings.

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

The SAVANT 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. Be a responsible diver!**

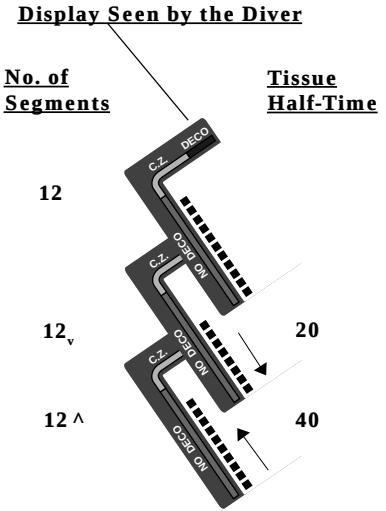


Fig. 58 - Control Hand-over

Depth feet (meters)	SAVANT 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 SAVANT will not scroll past 160 feet (48 meters), or when projected bottom /descent time is less than one minute.]

Fig. 59 - No Decompression Limits

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 stop 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

- Activation/Diagnostic
- Surface
- Date/Time
- FO2 Set Point
- Dive Planner
- Set -
  - FO2 Default (on/off)
  - Audible Alarm (on/off)
  - Unit (imperial / metric)
  - External Access (to download)
  - Date (year, month, day)
  - Time (hour, minutes)
  - Dive Profile Resolution
- No Decompression Dive
- Decompression Dive
- Alternate Decompression Dive
- Violation (conditional, delayed, & immediate)
- Gauge
- High PO2 Level
- High Oxygen Accumulation
- Temperature
- Dive Log (nitrogen & oxygen)
- Time to Fly and Desaturate

SPECIFICATIONS (continued)

DISPLAY RANGE/RESOLUTION

Numeric Displays:	Range:	Resolution:
• 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
• Dive Time Remaining	0 - 9 hr. 59 min.	1 minute
• Total Ascent Time	0 - 9 hr. 59 min.	1 minute
• Decompression Stop Time	0 - 99 min. (per stop depth)	1 minute
• Elapsed Dive Time	0 - 9 hr. 59 min.	1 minute
• Surface Time	0 - 23 hr. 59 min.	1 minute
• Dive Log Surface Interval	0 - 25 hr. 59 min.	1 minute
• Time to Fly	23 hr. 50 min. - 0* (* starting 10 min. after the dive)	1 minute
• Time to Desaturate	9 hr. 59 min. - 0* (* starting 10 min. after the dive)	1 minute

BAR GRAPHS

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

Oxygen (O2) Bar Graph:	segments
Normal zone (green)	9
Caution zone (yellow)	2
Danger zone (red)	1

Ascent Rate Indicator:

	segments	feet/min.	meters/min.
	0	0 - 20	0 - 6
Normal zone (green)	1	21 - 30	6.5 - 9
Caution zone (yellow)	2	31 - 40	9.5 - 12
	3	41 - 50	12.5 - 15
	4	51 - 60	15.5 - 18
Too Fast zone (red flashing)	5	61+	18.5+

Special Displays:	Occurrence
• Diagnostic Display	Activation
• Out of Range (oor)	>330 feet (>99.5 meters)
• Gauge Mode Countdown Timer	24-00 hours (after violation)

OPERATIONAL PERFORMANCE

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

Dive Counter:
- Displays Dives #1, 2, 3, 4, 5, 6, 7, 8, 9, 0 (continues #1 to #0)
- Displays #0 for dives #10, #20, #30, etc.
- Resets to Dive #1, upon diving (after midnight - new 'date')

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
- Each nitrox dive displays a Nitrogen and Oxygen Log screen

SPECIFICATIONS (continued)

OPERATIONAL PERFORMANCE (continued)

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

• Battery	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

Activation/Shutoff
- Manual (push button) - 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.
- Automatically shuts off if no dive is made within 120 minutes after initial activation. Manual reactivation required.
- Automatically shuts off 24 hours after last dive.
- Cannot be shut off manually.

Setting FO2
- Automatically set for 'Air' upon activation
- Remains set for Air unless an FO2 numerical value is set
- Nitrox set points from 21 to 50 %
- If set for 21%, remains set for 21% until changed
- If set for >21%, reverts to 50% 10 minutes after the dive (however, if the FO2 default setting is 'Off', the previous value set will be maintained).

ACCESSORIES

Optional items available from your Authorized AERIS Dealer:

- P/N 10.0023 Lens Protector (computer module) - adheres to lens face, prevents scratches
- P/N 10.0031 Dive Downloader (DDA) - PC download package (hardware & software)
- P/N 10.0041 Battery Kit - includes 1 battery, 1 battery hatch o-ring, 4 battery hatch screws, silicon grease

GLOSSARY

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 SAVANT).
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 - The speed that a diver ascends toward the surface.
Ascent Rate Indicator - A display on the SAVANT that shows ascent rate as a bar graph alongside a color–coded indicator.
Audible Alarm - A computer emitted tone that alerts the diver to potential danger.
Caution Zone - The yellow sections of the Nitrogen Bar Graph and O2 Bar Graph that gives a visual warning of a diver's proximity to respective decompression or oxygen tolerance 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".
DDA - Abbreviation for Dive Downloader AERIS.
DECO - Abbreviation for Decompression.
Decompression Ceiling - The shallowest depth a diver may reach upon ascent without risking decompression sickness.

GLOSSARY (continued)

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 Downloader - An AERIS name for a PC interface hardware/software package.
Dive Log Mode - A computer display of previous dive information.
Dive Planner - 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.
Dive Time Remaining - A display of the time before a diver must surface based on no-decompression status.
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
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.
Mode - A specific set of functions in a dive computer.
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.

GLOSSARY (continued)

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.
NOAA - Abbreviation for National Oceanic and Atmospheric Administration.
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 accumlation 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.
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.

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. 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 outgassing 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 Iindicator 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.**

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 SAVANT 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.

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

Although the SAVANT represents the latest in user friendly dive computer technology, it cannot force you to understand how to use it. Before diving with the SAVANT, 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 !

THE CODE OF THE RESPONSIBLE DIVER

AS A RESPONSIBLE DIVER I UNDERSTAND AND ASSUME THE RISKS I MAY ENCOUNTER WHILE DIVING.

RESPONSIBLE DIVING BEGINS WITH

- **DIVING WITHIN THE LIMITS OF MY ABILITY AND TRAINING**
- **EVALUATING THE CONDITIONS BEFORE EVERY DIVE AND MAKING SURE THEY FIT MY PERSONAL CAPABILITIES**
- **BEING FAMILIAR WITH AND CHECKING MY EQUIPMENT BEFORE AND DURING EVERY DIVE**
- **KNOWING MY BUDDY'S ABILITY LEVEL AS WELL AS MY OWN**
- **ACCEPTING THE RESPONSIBILITY FOR MY OWN SAFETY ON EVERY DIVE**

SERVICE RECORD

Serial Number _____

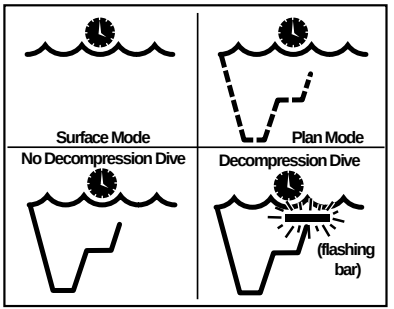
Date of purchase _____

Purchased from _____

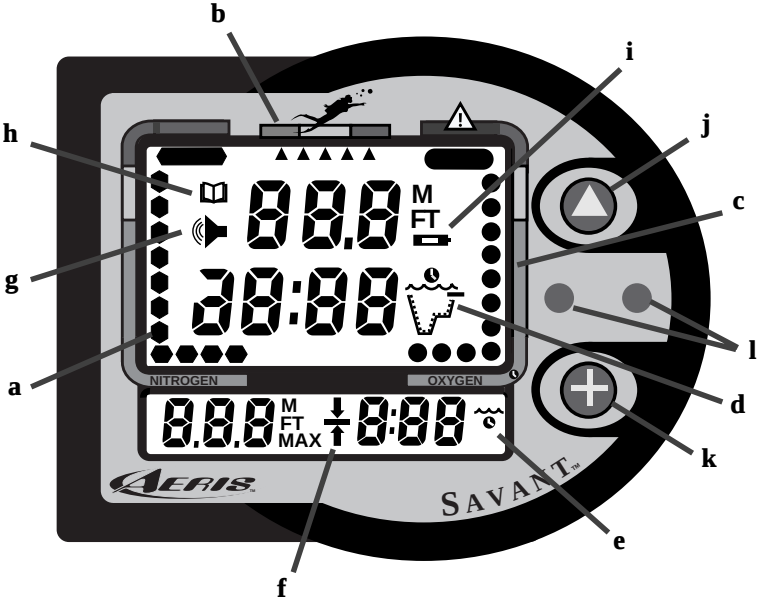
Below to be filled in by an Authorized AERIS Dealer:

Date	Service Performed	Dealer / Technician

a. Nitrogen Bar Graph
b. Ascent Rate Indicator
c. Oxygen (O2) Bar Graph
d. Icon - Operating Mode (detail A)
e. Icon - Elapsed Dive Time
f. Icon - Deco Stop Ceiling
g. Icon - Audible Alarm
h. Icon - Log Mode
i. Icon - Low Battery
j. Control Button - Advance
k. Control Button - Select
l. Interface Sensors



Detail 'A'
Operating Mode Icons



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