



i550
Dive Computer Owner's Manual

NOTICES

LIMITED TWO-YEAR WARRANTY

For warranty details and to register your product, refer to www.aqualung.com.

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Vista, CA USA 92081

TRADEMARK, TRADE NAME, AND SERVICE MARK NOTICE

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PATENT NOTICE





U.S. Patents have been issued to protect the following design features: GTR/Air Time Remaining (U.S. Patent no. 4,586,136 and 6,543,444) and Data Sensing and Processing Device (U.S. Patent no. 4,882,678). Set N2 Bar Graph Alarm (NIBG Alarm) and other patents pending. User Setable Display (U.S. Patent no. 5,845,235) is owned by Suunto Oy (Finland).

DECOMPRESSION MODEL

The program within the i550 simulates the absorption of inert gases 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 i550 dive computer model is based upon the latest research and experiments in decompression theory. Still, using this dive computer, just as using any 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.

DANGERS, WARNINGS, CAUTIONS, AND NOTES

Pay attention to the following symbols when they appear throughout this document. They denote important information and tips.

-  **DANGERS:** are indicators of important information that if ignored **would** lead to severe injury or death.
-  **WARNINGS:** are indicators of important information that if ignored **could** lead to severe injury or death.
-  **CAUTIONS:** indicate information that will help you avoid faulty assembly, leading to an unsafe condition.
-  **NOTES:** indicate tips and advice that can inform of features, aid assembly, or prevent damage to the product.

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 manual thoroughly before using the i550.



WARNINGS:

- The i550 is intended for use by recreational divers who have successfully completed a internationally recognized course in scuba diving (for air use) and diving with enriched nitrogen-oxygen (nitrox) breathing gas mixtures (for nitrox use).
- 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 in diving with enriched nitrogen-oxygen mixtures (nitrox) before using the i550 for nitrox diving.
- It is NOT for use by military and commercial divers.
- 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 manual completely before diving with the i550.
- 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 Aqua Lung dealer before you utilize this product.
- If your i550 stops working for any reason while operating, it is important that you have anticipated this possibility and are prepared for it. This is an important reason for not pushing the tables, oxygen exposure limits, or entering decompression without proper training. If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your i550, a backup instrument system is highly recommended.
- 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.
- Remember that technology is no substitute for common sense. The dive computer only provides the person using it with data, not the knowledge to use it. Remember also that the dive computer does not actually measure and test the composition of your body tissue and blood. Using an Aqua Lung dive computer, just as using any other Decompression Tables, is no guarantee of avoiding decompression sickness. 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.
- Diving at high altitude requires special knowledge of the variations imposed upon divers, their activities, and their equipment by the decrease in atmospheric pressures. Aqua Lung recommends completion of a specialized altitude training course by a recognized training agency prior to diving in high altitude lakes or rivers.
- Repetitive dives in a series should only be conducted at the same altitude as that of the first dive of that series. Repetitive dives made at a different altitude will result in an error equal to the difference in barometric pressure, and possibly a false dive mode with erroneous data.
- If the i550 is activated at an elevation higher than 4,270 m (14,000 ft), it will immediately shutdown.
- Decompression diving or diving deeper than 39 m (130 ft) will greatly increase your risk of decompression sickness. This should only be attempted by those properly trained and certified in decompression diving. It is important to completely understand the features, functions, and specifically the limitations of the i550. Based on this the diver must decide if the i550 is suitable for the dive activities and dive profiles being planned.
- Using an i550 is no guarantee of avoiding decompression sickness.
- The i550 enters Violation Mode when a situation exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the i550's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i550.
- If you exceed certain limits, the i550 will not be able to help you get safely back to the surface. These situations exceed tested limits and can result in loss of some functions for 24 hours after the dive in which a violation occurred.

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GETTING STARTED

BASICS

Welcome to your new i550. The i550 is an easy to use dive computer utilizing a two button interface. Divers may choose between either Dive or Gauge Mode. Though the i550 is easy to use, you will get the most out of your new i550 if you take some time to familiarize yourself with its displays and operation. Information has been organized into easy to follow sections to aid you in learning all you need to know. There is also a glossary at the end of this guide for any terms that may sound unfamiliar.

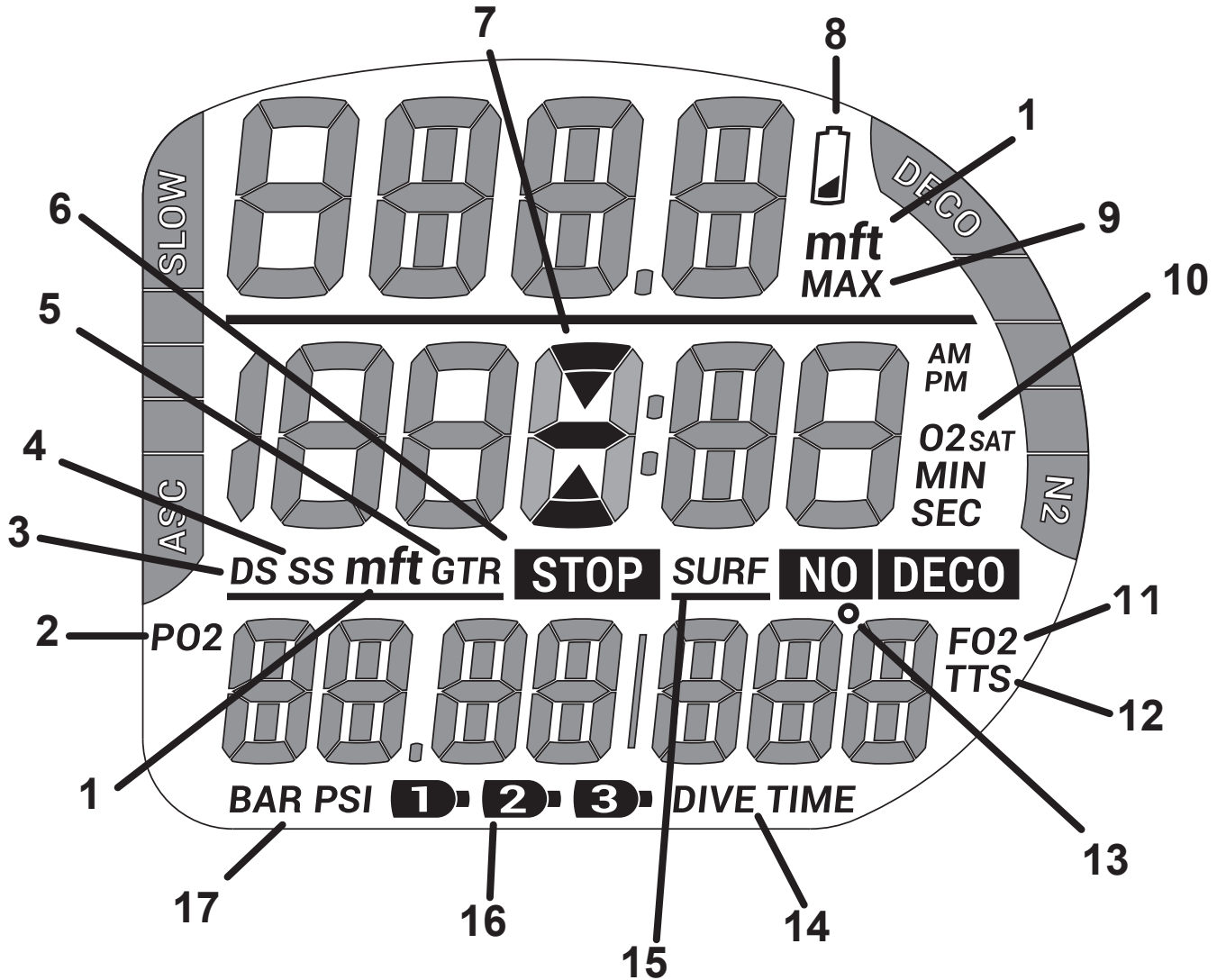
ACTIVATION

To activate the i550, press and release either button. The i550 will also turn on if its metal contacts become wet and you descend greater than 1.5 m (5 ft) for 5 seconds. The H2O ACT (water activation) feature may be disabled if that is your preference. Disabling the H2O ACT feature is described in the Dive Surface Mode chapter, p. 24.

- Upon activation the unit will enter a Diagnostic Mode. The i550 checks the display and voltage at this time to ensure that everything is within tolerance.
- It will also check ambient barometric pressure, and calibrate present depth as 0 m (ft). When at 916 m (3001 ft), or higher, it will adjust depth for the higher altitude.
- After the Diagnostic check, the i550 will display the surface screen in Dive Mode.

NOTE: The i550 has no off button or command. If no buttons are pressed or dives made within 2 hours, the unit will shut itself off. However, the i550 will stay on for a 24 hour period after the dive, counting down FLY (time to fly) and SAT (desaturation time) if a dive has been made.

DISPLAY ICONS



1	Depth ID (units)
2	Partial Pressure of Oxygen
3	Deep Stop
4	Safety Stop
5	Gas Time Remaining
6	Decompression Stop Triggered
7	Descend, Ascend, or Stop
8	Low Battery
9	Value is Maximum



10	Oxygen Saturation
11	Fraction of Oxygen
12	Time To Surface
13	Temperature
14	Dive Time or Dive #
15	Surface Time
16	Gas #
17	Value is Pressure





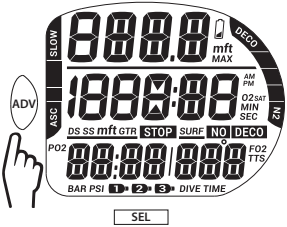

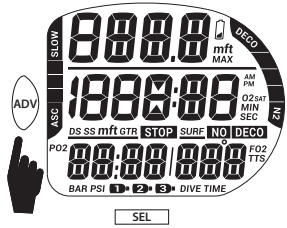

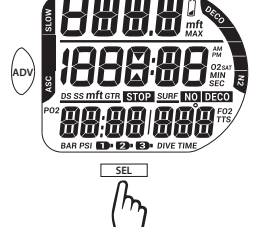

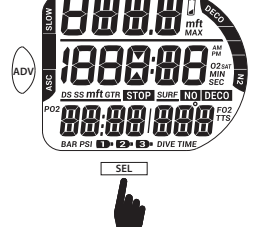

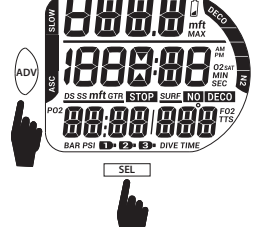


BUTTONS

The i550 utilizes 2 control buttons called the ADV (Advance) and SEL (Select) buttons. They allow you to select mode options and access specific information. They are also used to enter settings, activate the backlight, and acknowledge the audible alarm. Throughout this manual they will be referred to as the ADV and SEL buttons.

Pressing different combinations of these buttons will navigate through different menus and options of the i550. The symbols in the table below will illustrate how to proceed through the menus.

SYMBOL	MEANING
	<p>PRESS BUTTON LESS THAN 2 SECONDS</p>
	<p>HOLD BUTTON GREATER THAN 2 SECONDS</p>

BUTTON FUNCTIONS

ACTION	BUTTON	FUNCTION
<p>Press Any Button</p>	 <p>or</p> 	<ul style="list-style-type: none"> to activate the i550
		<ul style="list-style-type: none"> to access Alt screens to advance or step through menus to toggle or change setpoints to activate the backlight
		<ul style="list-style-type: none"> to scroll quickly, changing setpoints to scroll quickly through menu lead-in screens (selections)
		<ul style="list-style-type: none"> to select, access, step forward through selections, or save a setting to activate the backlight during a dive
		<ul style="list-style-type: none"> to activate the backlight on the surface
	 <p>+</p> 	<ul style="list-style-type: none"> to exit a menu directly to the main screen

DIVE FEATURES

DTR (DIVE TIME REMAINING)

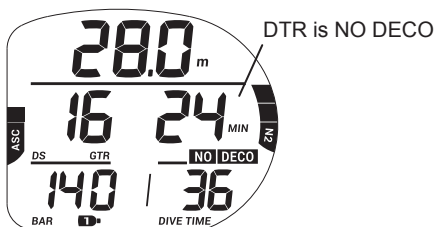
The i550 constantly monitors No Decompression status and O2 Accumulation, and will display whichever time is the least amount available as DTR on the No Decompression Dive Main screen. The time being displayed will be identified by the NO DECO or O2 MIN icons.

NO DECOMPRESSION

No Decompression is the maximum amount of time that you can stay at your present depth before entering Decompression. It is calculated based on the amount of nitrogen absorbed by hypothetical tissue compartments. The rates each of these compartments absorb and release nitrogen is mathematically modeled and compared against a maximum allowable nitrogen level.

Whichever compartment is closest to this maximum level is the controlling compartment for that depth. Its resulting value (NO DECO) will be displayed as DTR. It will also be displayed graphically as the N2 Bar Graph, see Bar Graphs below.

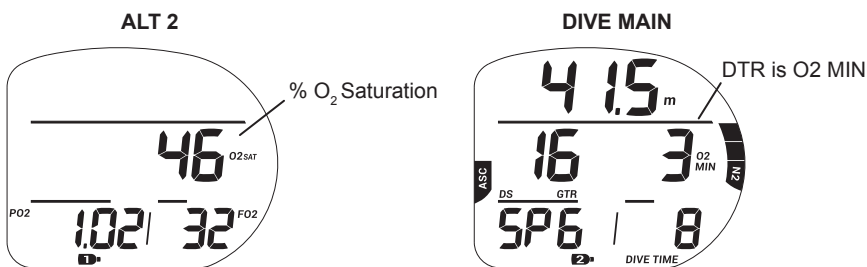
As you ascend, the N2 Bar Graph segments will recede as control shifts to slower compartments. This is a feature of the decompression model that is the basis for multilevel diving, one of the most important advantages that Aqua Lung dive computers offer.



O2 MIN (OXYGEN TIME REMAINING)

When set for nitrox operation, O2 SAT (Oxygen Saturation) during a dive is displayed on an ALT screen as a percentage of allowed saturation identified by the O2 SAT icon. The limit for O2 SAT (100%) is set at 300 OTU (Oxygen Tolerance Units) per dive or 24 hour period. See the chart at the back of this manual for specific times and allowances. O2 SAT and O2 MIN values are inversely related; as the O2 SAT value increases the O2 MIN value decreases.

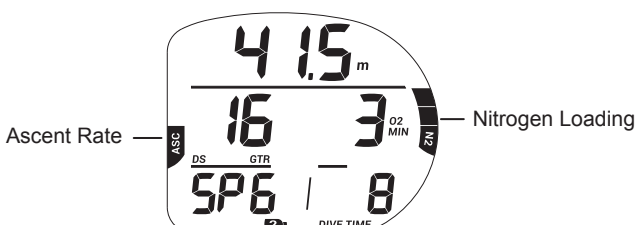
When the O2 MIN value becomes less than the No Decompression calculations for the dive, DTR (Dive Time Remaining) will be controlled by O2 SAT and the O2 MIN value will be displayed as the DTR on the Dive Main screen, identified by the O2 MIN icon.



BAR GRAPHS

The i550 features two specific bar graphs.

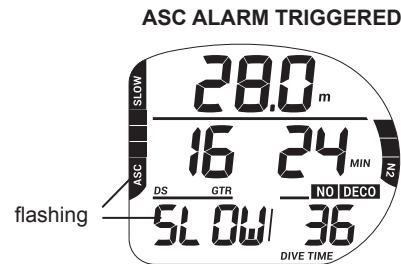
1. The one on the left represents ascent rate. It is referred to as ASC Bar Graph.
2. The one on the right represents nitrogen loading. It is referred to as the N2 Bar Graph.



ASC BAR GRAPH

The ASC Bar Graph provides a visual representation of ascent speed (i.e., an ascent speedometer). When the ascent is faster than the recommended 9 mpm (30 fpm), all segments will flash and the air pressure will temporarily be replaced with the message SLOW.

# OF SEGMENTS	ASCENT RATE, MPM (FPM)
0	0 - 3 (0 - 10)
1	3.1 - 4.5 (11 - 15)
2	4.6 - 6 (16 - 20)
3	6.1 - 7.5 (21 - 25)
4	7.6 - 9 (26 - 30)
5	> 9 (> 30)



N2 BAR GRAPH

The N2 Bar Graph represents your relative No Decompression or Decompression status. The first four segments represent No Decompression status and the fifth indicates a Decompression condition. As your Depth and Elapsed Dive Time increase segments are added. As you ascend segments recede, indicating that additional No Deco (decompression) time is available. The i550 monitors twelve different nitrogen compartments simultaneously and the N2 Bar Graph displays the one that is in control of your dive at any given time.

ALGORITHM

The i550 utilizes the PZ+ to calculate nitrogen tissue loading. Performance is based on Bühlmann ZHL-16C algorithm model. To create even greater margins of safety with respect to decompression, a Conservative Factor as well as No Decompression Deep and Safety Stops can be included for No Decompression dives.

CF (CONSERVATIVE FACTOR)

When the CF is set to On, the dive time remaining, No Deco/O2 MIN, which are based on the algorithm and used for N2/O2 calculations and displays relating to Plan Mode, will be reduced to the values available at the altitude level that is 915 m (3,000 ft) higher than the actual altitude at activation. Refer to the charts in the back of this manual for dive times.

DS (DEEP STOP)

When the DS selection is set to ON, it will trigger after descending deeper than 24 m (80 ft). The i550 then calculates (continually updating) a Stop Depth equal to $\frac{1}{2}$ the Max Depth.

NOTE: The DS feature only works in DIVE Mode while within No Decompression times.

- > While 3 m (10 ft) deeper than the calculated DS, you will be able to access a DS Preview screen that will display the current calculated Deep Stop Depth/Time.
- > Upon initial ascent to within 3 m (10 ft) below the calculated Stop Depth, a DS screen displaying a Stop Depth at $\frac{1}{2}$ the Max Depth will appear with a countdown timer beginning at 2 min and counting down to 0. If you descend 3 m (10 ft) below, or ascend 3 m (10 ft) above, the calculated Stop Depth for 10 seconds during the countdown, the No Decompression Main will replace the DS Main display and the DS feature will be disabled for the remainder of that dive. There is no Penalty if the DS is ignored.
- > In the event that you enter Decompression, exceed 57 m (190 ft), or a High O2 SAT (Oxygen Saturation) condition, $\geq 80\%$, occurs, the DS will be disabled for the remainder of that dive.
- > The DS is disabled during a High PO₂ Alarm condition, \geq set point.

SS (SAFETY STOP)

Upon ascent to within 1.5 m (5 ft) deeper than the SS depth set for 1 second on a No Decompression dive in which Depth exceeded 9 m (30 ft) for 1 second, a beep will sound and a SS at the depth set will appear on the Dive Main display with a countdown beginning at the SS time set and counting down to 0 min.

- > If the SS was set for OFF, the display will not appear.
- > In the event that you descend 3 m (10 ft) deeper than the Stop Depth for 10 seconds during the countdown, or the countdown reaches 0, the No Decompression Main screen will replace the SS Main screen which will reappear upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth set for 1 second.
- > In the event that you enter Decompression during the dive, complete the Decompression obligation, then descend below 9 m (30 ft); the SS Main will appear again upon ascent to within 1.5 m (5 ft) deeper than the SS depth set for 1 second.
- > If the diver ascends to within 0.91 m (3 ft) from the surface for 10 seconds, the SS is to be canceled.
- > There is no penalty if you surface prior to completing the SS or choose to ignore it.

LOW BATTERY WHILE ON THE SURFACE

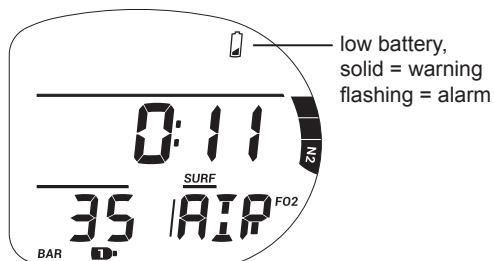
Warning Level

- The i550 functions continue but the backlight is disabled.
- The Battery icon appears solid.

Alarm Level

- All operations cease.
- The Battery icon flashes for 5 seconds then the unit shuts off.

⚠ WARNING: Change the battery before diving if your i550 indicates the Battery Low Warning or Alarm.



LOW BATTERY DURING A DIVE

Warning Level

- The i550 functions continue but the backlight is disabled.
- The battery icon appears solid upon entry into Surface Mode.

Alarm Level

- The i550 functions continue but the backlight is disabled.
- The Battery icon appears flashing. 5 seconds after entering Surface Mode the i550 will shut down.

AUDIBLE ALARM

While operating in Dive or Gauge mode, the audible alarm will emit 1 beep per second for 10 seconds when alarms strike, unless it is set OFF. During that time, the audible alarm can be acknowledged and silenced by pressing the SEL button. An LED Warning Light, on the front of the housing, is synchronized with and flashes as the audible alarm sounds. It will turn off when the alarm is silenced. The audible and LED alarm will not be active if the audible alarm is set to OFF (Set AL Menu setting).

Situations that will activate the Dive/Gauge 10 second Alarm include -

*** Items activate only in Dive mode.*

- Descent deeper than the Depth Alarm set point selected.
- Dive Time Remaining at the set point selected**.
- Elapsed Dive Time at the set point selected.
- PO₂ at the set point selected**.
- High O₂ of 300 OTU (100%)**.
- N2 Bar Graph at the set point selected**.
- Ascent rate exceeds 9 MPM (30 FPM) for 8 seconds or more.
- Entry into Decompression Mode (Deco)**.
- Conditional Violation (above a required Decompression Stop Depth for less than 5 minutes)**.
- Delayed Violation (above a required Decompression Stop Depth for more than 5 minutes)**.
- Delayed Violation (a Decompression Stop Depth greater than 18 M/60 FT is required)**.
- Delayed Violation (Max Operating Depth of 100 m/330 ft is exceeded in Dive or 120 m/399 ft in Gauge mode).

A single short beep (which cannot be disabled) sounds when -

- After 10 minutes on the surface after the Violation dive.

During the following Dive mode situations, the 10 second continuous tone will be followed by a 5 second steady beep that will not turn off when acknowledged -

- Ascent above a Decompression Stop for more than 5 minutes.
- Decompression requires a Stop Depth deeper than 18 m (60 ft) or deeper.
- On the Surface during a Conditional Violation.

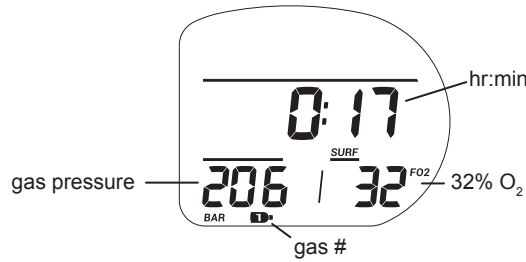


DIVE SURFACE MODE



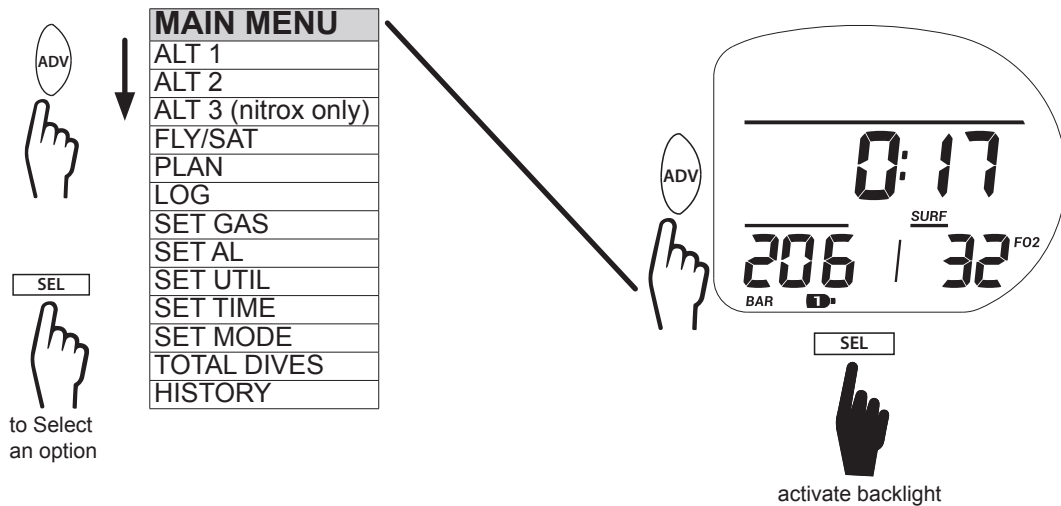
ON THE SURFACE BEFORE A DIVE

The Dive Main screen will display the SURF (Surface) time, the selected FO₂ of the breathing gas, and the current pressure. The SURF time displayed is the time since activation or the surface interval after a dive.



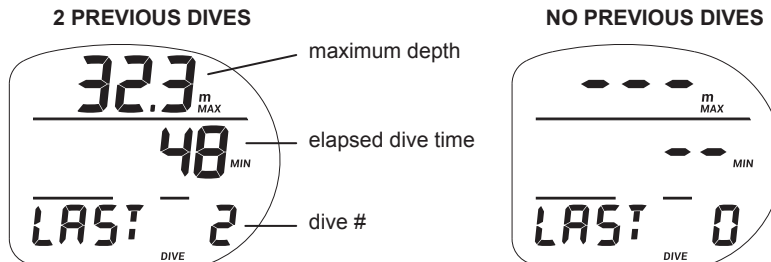
DIVE SURF MAIN MENU

To view i550 logs, change settings, or switch modes you must navigate through the Surf Main Menu. Enter the menu by pressing the ADV button. When you reach the end of the menu the i550 will return to the Dive Surface Main screen. You may hold the ADV button to scroll quickly through the selections. Some screens simply display data, whereas the other screens are lead-ins to sub menus and settings. Press the SEL button to choose menus or options from the Main Menu when available. All Main Menu screens and options will be discussed in the order they appear in the menu below.



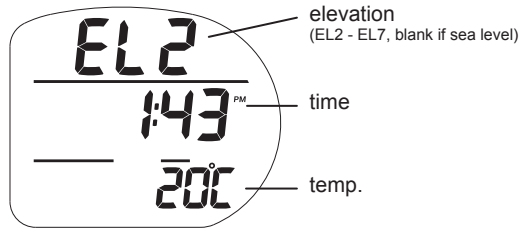
ALT 1 (LAST)

The ALT 1 screen displays essential data from the last dive. If there has been no dive within the current activation cycle, the dive number will display zero and dashes for the max depth and elapsed dive time will be displayed.



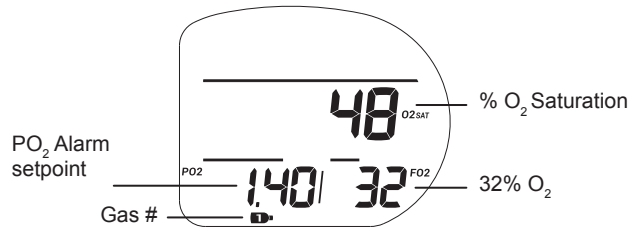
ALT 2

The ALT 2 screen displays current elevation readings, time of day, and temperature.



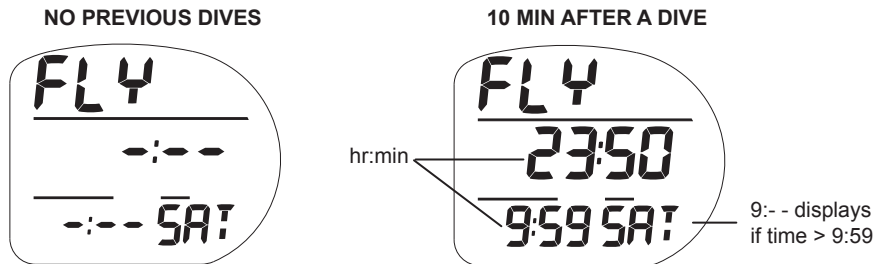
ALT 3

The ALT 3 screen displays only after a nitrox dive. It displays the current oxygen saturation level, programmed PO₂ Alarm setpoint, gas number, and the current gas mix.



FLY/SAT (DESAT)

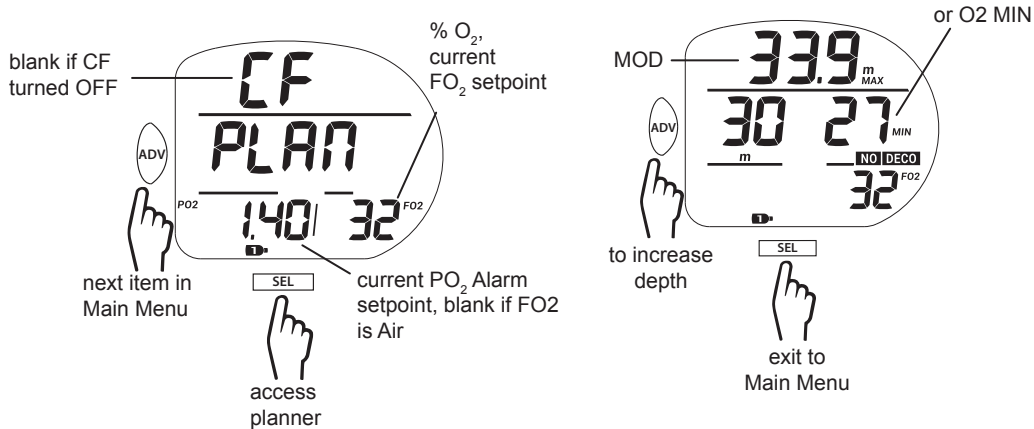
The FLY/SAT screen displays the Time to Fly and the SAT (desaturation) countdown. The Time to Fly countdown shall begin counting from 23:50 to 0:00 (hr:min), 10 minutes after surfacing from a dive. The SAT (Desat) counter shall provide calculated time for Tissue Desatuation at sea level taking into consideration the CF (Conservative Factor) if it was set on. It shall begin counting down 10 minutes after surfacing from DIVE mode dives. It will count down from a maximum of 23 to 10 (hr only), then 9:59 to 0:00 (hr:min). When the SAT countdown reaches 0:00 (hr:min), which will generally occur prior to the FLY countdown reaching 0:00 (hr:min), the SAT time is to remain on the screen as 0:00 until the FLY counter shuts the i550 off, 24 hours after the last dive.



PLAN

Pressing the SEL button while viewing the PLAN Lead-in screen accesses the dive planner mode. This mode calculates dive depth and time limits. To do so, it accounts for any residual nitrogen, oxygen, surface intervals, the programmed gas mix, and PO₂ alarm setting. Either NO DECO (Decompression) MIN or O₂ MIN limits are displayed, depending on whether nitrogen or oxygen levels will be the limiting factor. The time limit will display as 1-99 minutes, all times greater than 99 display as 99.

NOTE: Depths exceeding the MOD (Maximum Operating Depth), if nitrox, or that have less than 1 minute allowed dive time will not be displayed.

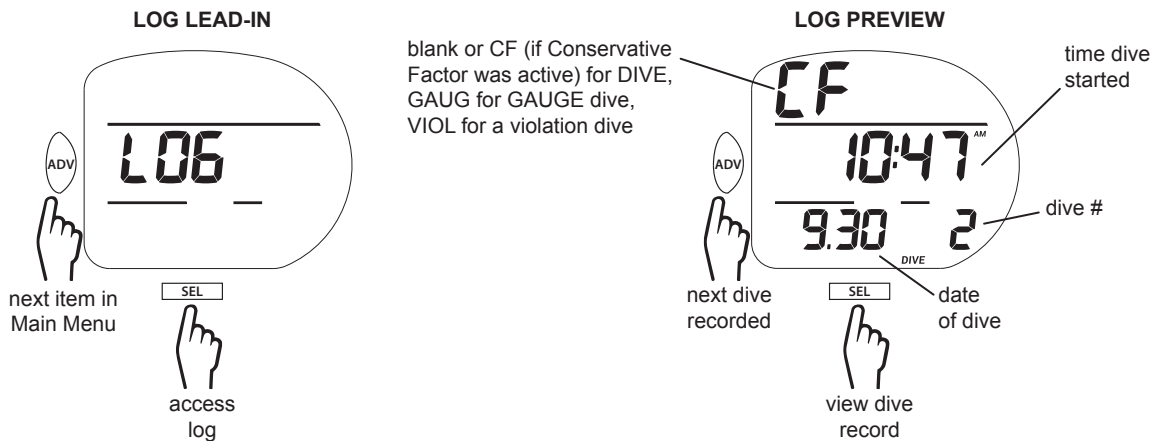


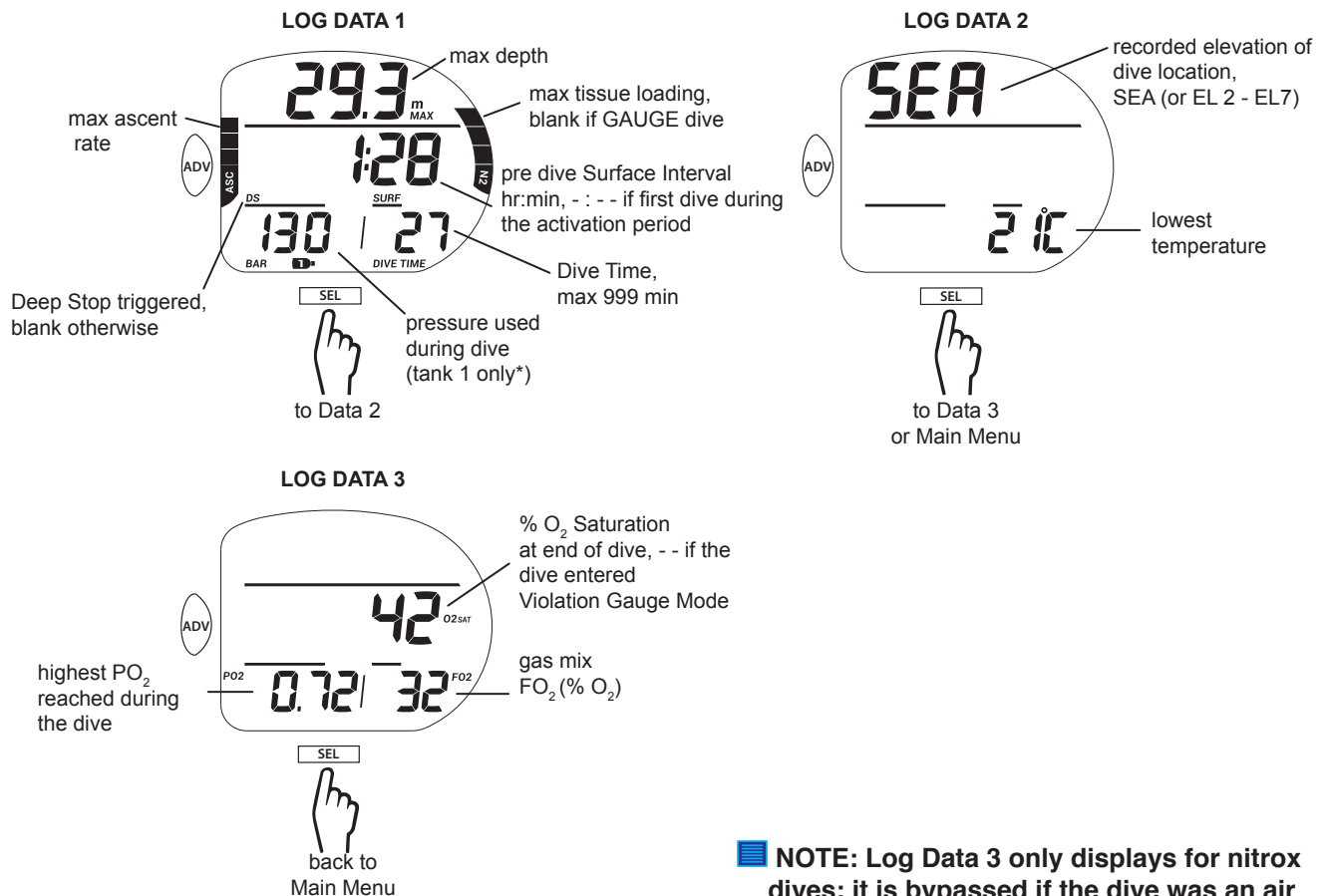
LOG

Pressing the SEL button while viewing the LOG Lead-in screen accesses the dive log. The log stores Information from the latest 24 DIVE and/or GAUGE mode dives for viewing.

- > If no dives are recorded, the message NONE YET 0 DIVE will be displayed in the log.
- > After exceeding 24 dives, the most recent dive is stored while the oldest is deleted.
- > Dives are numbered from 1 to 24 starting each time a dive is activated in either Dive (or Gauge) mode. After the post dive 24 hour period has elapsed and the unit shuts off, the first dive of the next activation period will be recorded as dive #1.
- > In the event that dive time (min) exceeds 999 min, the data at the 999 interval is recorded in the Log upon surfacing of the unit.

NOTE: New data will automatically overwrite the oldest data in memory when the memory becomes full. If you do not remember to log or download your dives, they will be lost when the memory overwrites. See the PC Download section of this manual for instructions on downloading dives.





NOTE: Log Data 3 only displays for nitrox dives; it is bypassed if the dive was an air dive.

*The i550 is not compatible with Aqua Lung Transmitters. It can only monitor and record the onboard, tank 1, gas pressure.

SET GAS

Within this submenu you can change the three available gas mixes from air to any nitrox mix between 21 - 100 FO₂ (% O₂). Nitrox mixes are displayed with their corresponding MOD (Maximum Operating Depth) and the current PO₂ Alarm setting for the selected gas. Default settings are FO₂ AIR with no PO₂ alarm value for Gas 1, and OFF for Gas 2 and 3. Settings revert to the defaults when 24 hours elapse without conducting a dive. If you set a nitrox mix value for any gas the PO₂ alarm value will default to 1.40 until changed. Additionally, the i550 allows for each gas (1 - 3) to have individual PO₂ alarm settings.

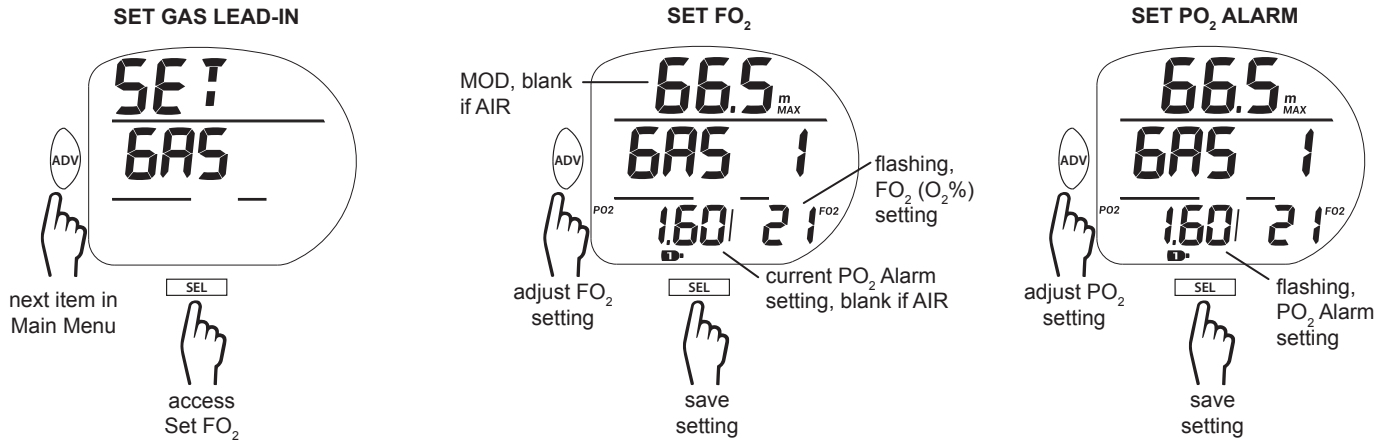
NOTE: Once any Gas is set for Nitrox, any other Gas set for AIR will automatically be set to 21%. The AIR option will not be displayed as an FO₂ setting until 24 hours elapse after the last dive.

NOTE: When FO₂ is set for AIR, oxygen related data (such as PO₂, % O₂) will not be displayed at any time during the dive, on the surface, or in Plan Mode. Though these oxygen values will be tracked internally for use in any subsequent nitrox dives.

NOTE: Gas 1 cannot be set to OFF.

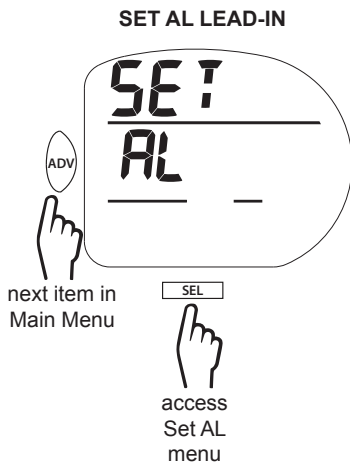
NOTE: When Gas 2 or 3 are the active gas the message SPG (Submersible Pressure Gauge) will be displayed on the Main screen in place of gas pressure.

NOTE: Only Set Gas 1 is shown here. Set Gas 2 and 3 work the same as Set Gas 1.



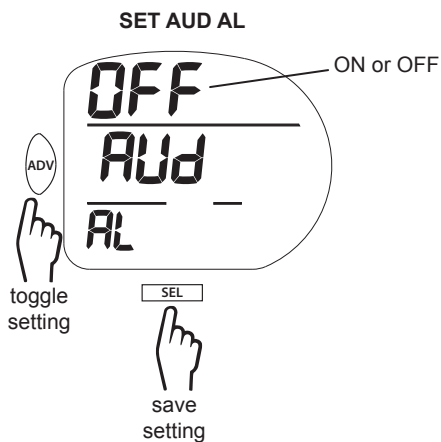
SET AL (ALARMS)

Pressing the SEL button while viewing the Set AL Lead-in screen accesses the Set AL Sub Menu. Within this menu you can customize the following five alarm settings.



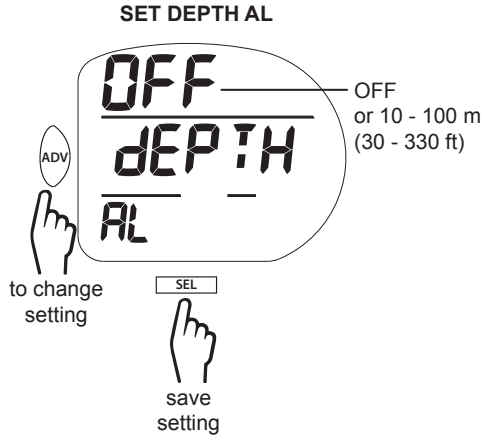
1. AUd AL (Audible Alarms)

The Audible Alarm feature allows you to set audible alarms ON or OFF.



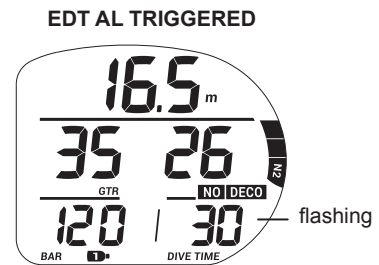
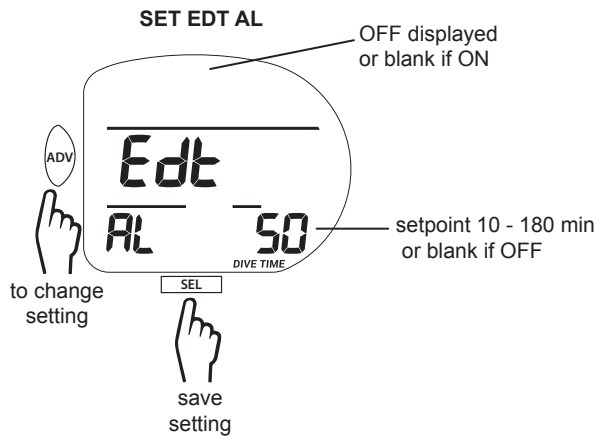
2. dEPTH AL (Audible Alarms)

The Depth Alarm feature allows you to set a maximum depth alarm.



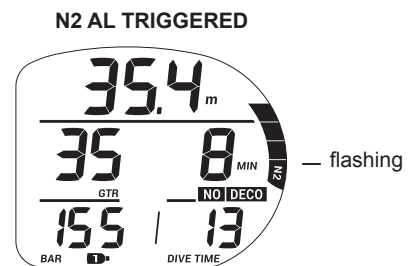
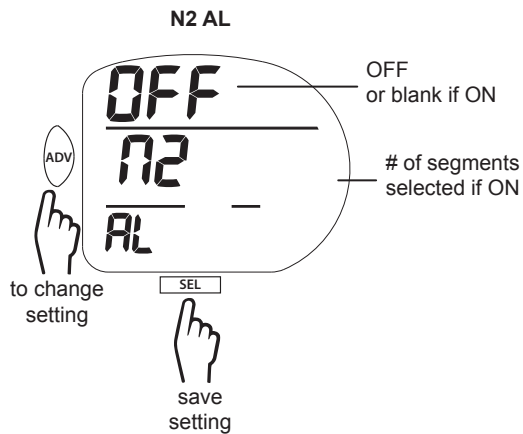
3. Edt AL (Elapsed Dive Time Alarm)

This feature allows you to set an alarm to go off at a predetermined amount of dive time.



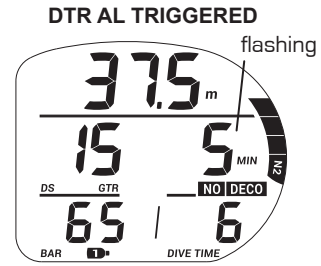
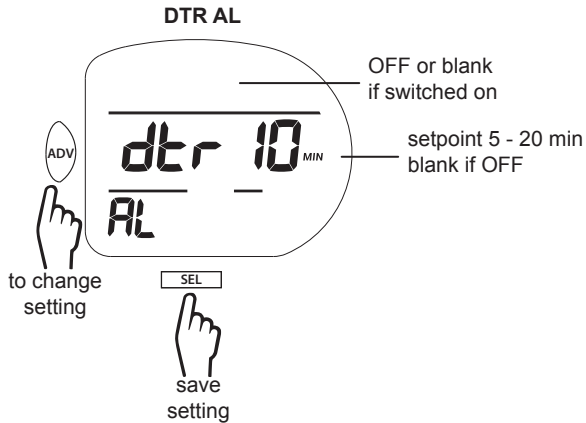
4. N2 AL (Nitrogen Alarm)

This feature allows you to set an alarm to go off at a predetermined number of N2 bar graph segments.



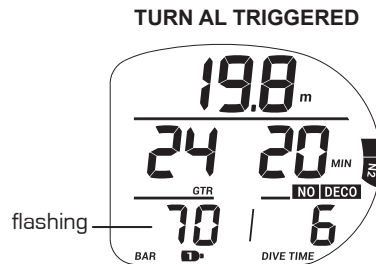
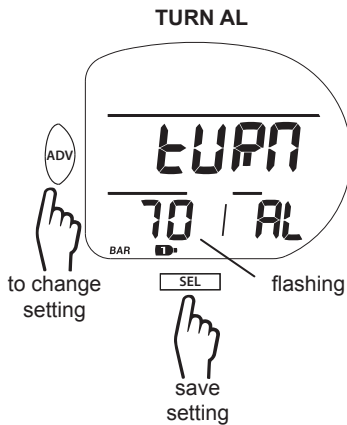
5. dtr AL (Dive Time Remaining Alarm)

This feature allows you to set an alarm to go off with a designated reserve of dive time remaining.



6. TURN AL (Turn Pressure Alarm)

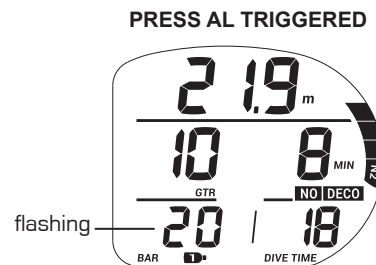
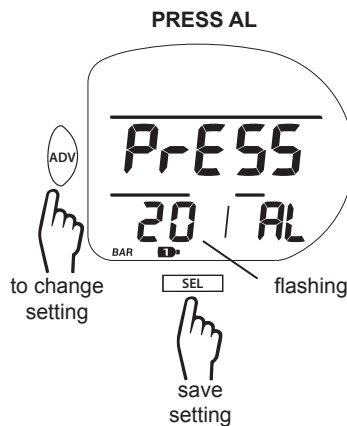
This feature allows you to set an alarm to go off at a designated turn pressure. You may choose OFF or 70 to 205 BAR (1000 to 3000 PSI) in increments of 5 BAR (250 PSI).



7. PRESS AL (Pressure Alarm)

This feature allows you to set an alarm for when you reach a designated end pressure. You may choose from from 20 to 105 BAR (300 to 1500 PSI) in increments of 5 BAR (100 PSI).

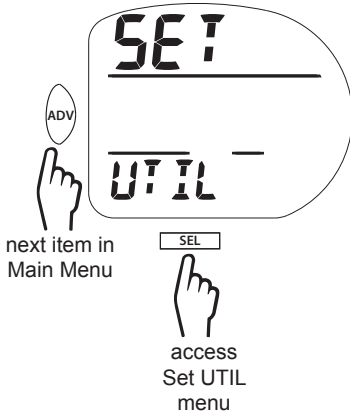
NOTE: The Pressure Alarm only considers the gas 1 when diving with multiple gases.



SET UTIL (UTILITIES)

Pressing the SEL button while viewing the Set UTIL Lead-in screen accesses the Set UTIL Sub Menu. Within this menu you can customize the following eight operational functions.

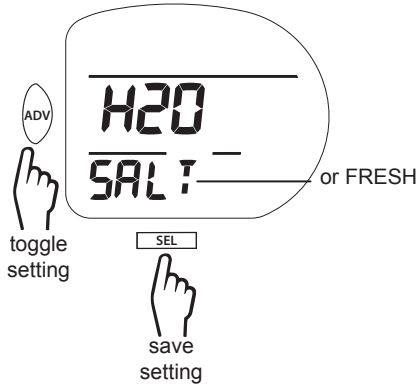
SET UTIL LEAD-IN



1. H2O TYPE (Water Type)

The H2O Type feature allows you to set SALT or FRESH water environment for accurate depth calculations.

SET H2O TYPE

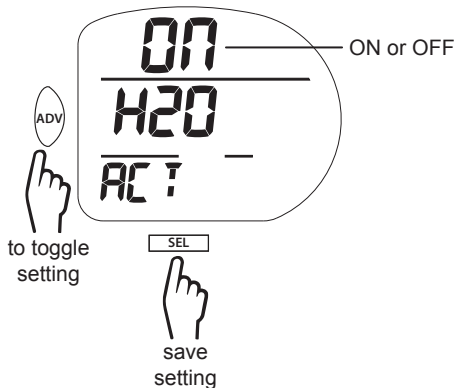


2. H2O ACT (Water Activation)

The H2O ACT feature allows you to turn OFF water contact activation.

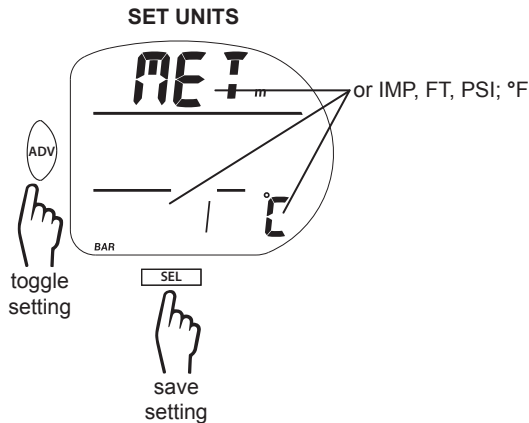
⚠ WARNING: With H2O ACT turned OFF, you **MUST** remember to manually activate the i550 before any dive.

SET H2O ACT



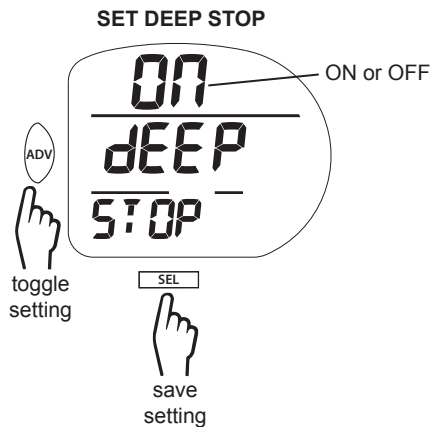
3. UNITS (IMP/MET)

The Units feature allows you to select whether MET (metric) or IMP (imperial) units of measure will be displayed.



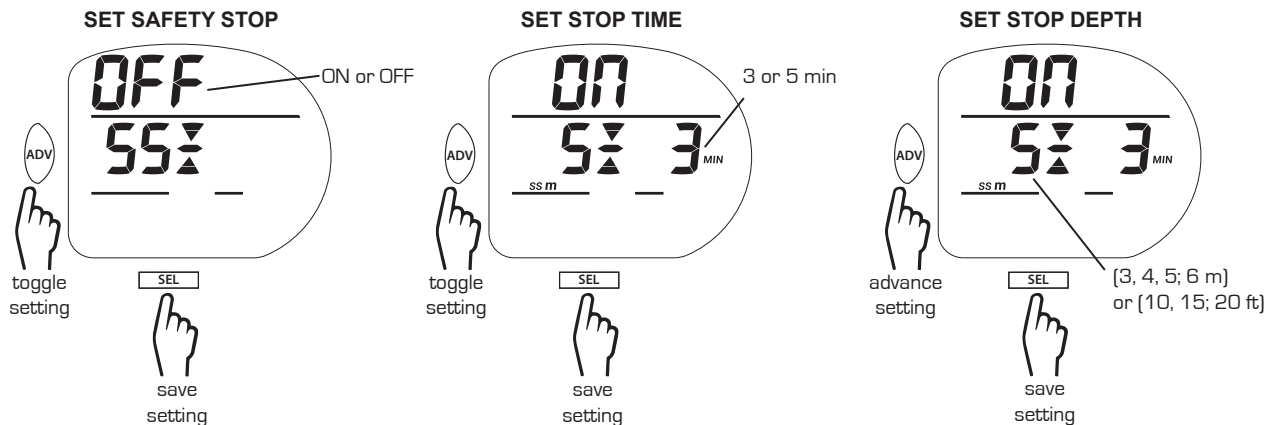
4. dEEP STOP

The Deep Stop feature can be set ON or OFF.



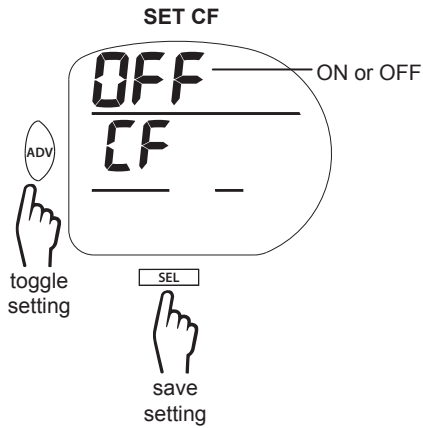
5. SS (SAFETY STOP)

The Safety Stop feature can be set ON or OFF. If ON is selected, you may choose from an available 3 or 5 min Safety Stop at depths of 3, 4, 5, or 6 m (10, 15, or 20 ft).



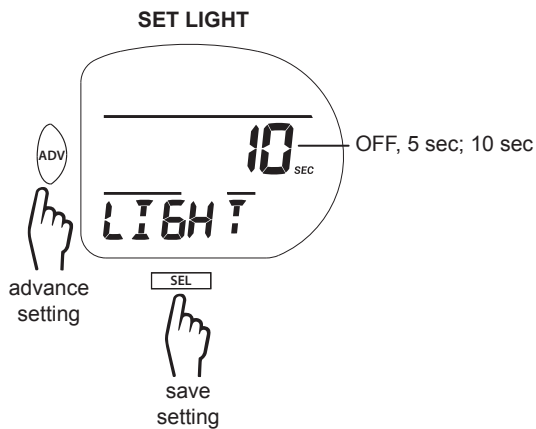
6. CF (Conservative Factor)

The CF feature can be set ON or OFF.



7. LIGHT (BACKLIGHT) DURATION

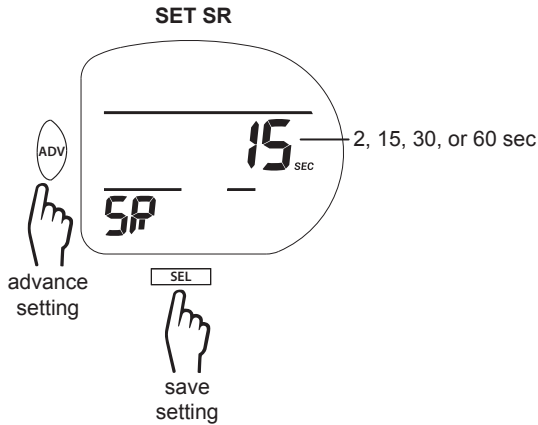
This setting is the duration the backlight stays on after releasing the buttons. The options are OFF, 5 sec, or 10 sec.



8. SR (SAMPLE RATE)

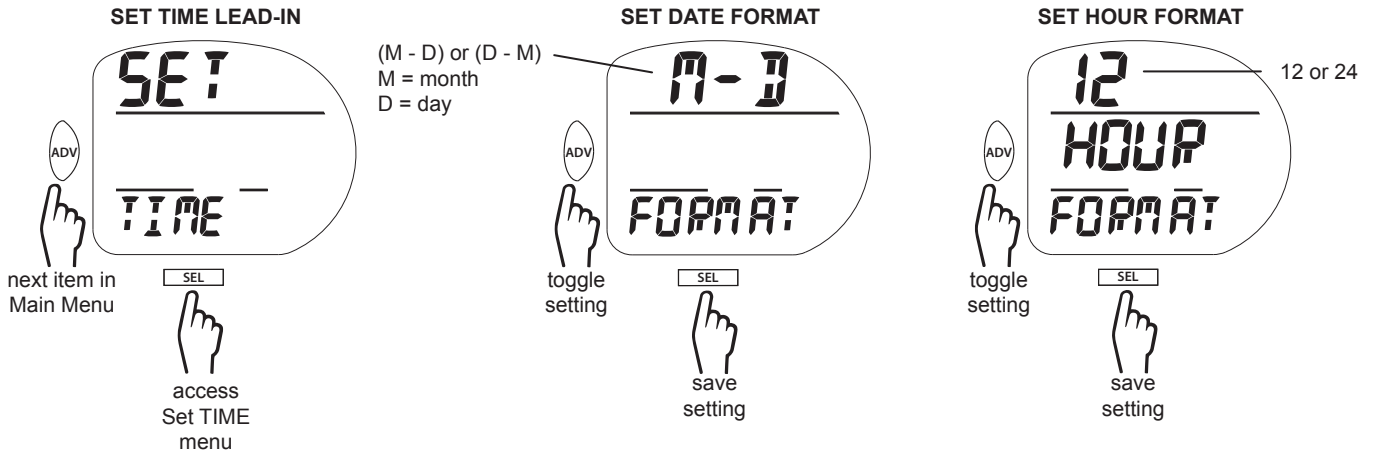
The Sample Rate controls how frequently the i550 stores a data snapshot for PC Download during a dive. Setting options are 2, 15, 30, or 60 second intervals. Shorter intervals will provide a more precise record of your dives.

NOTE: New data will automatically overwrite the oldest data in memory when the memory becomes full. The i550 Log and PC Download data is stored separately in different partitions of the memory. The Log only stores a short summary of each dive. Alternately, the PC Download function stores much larger files for each dive. Depending on the chosen settings and dive durations, it is possible to see dives stored in the i550's onboard Log that have already been overwritten in the PC Download Partition. Choosing a longer Sample Rate interval will consume less memory per dive. Remember to download your dives more frequently if you are using a shorter Sample Rate interval.



SET TIME

Pressing the SEL button while viewing the Set TIME Lead-in screen accesses the Set TIME Sub Menu. Within this menu you can set the time formats, date, and time of day.



SET TIME

Choose and save the hours. Then repeat for minutes.

SET DATE

Choose and save the year. Then repeat for the month and day.

or D - M depending on selected format

SET MODE

Set Mode allows you to choose between diVE (standard recreational dive) or GAUGE modes of operation.

NOTE: The i550 will be locked in Gauge mode for 24 hours after surfacing from any Gauge or Violation Dive. Otherwise, you may switch modes freely while in either Surface Mode.

SET MODE LEAD-IN

SET MODE

Choose between diVE or GAUGE.

HISTORY

History is a summary of basic data recorded during all diVE and GAUGE dives.

TOTAL DIVES

0 - 9999

TOTAL HOURS

EXTREMES

deepest recorded dive

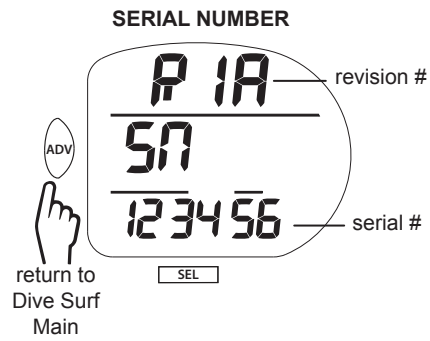
lowest recorded water temperature

highest altitude recorded for a dive

longest recorded dive

SN (SERIAL NUMBER)

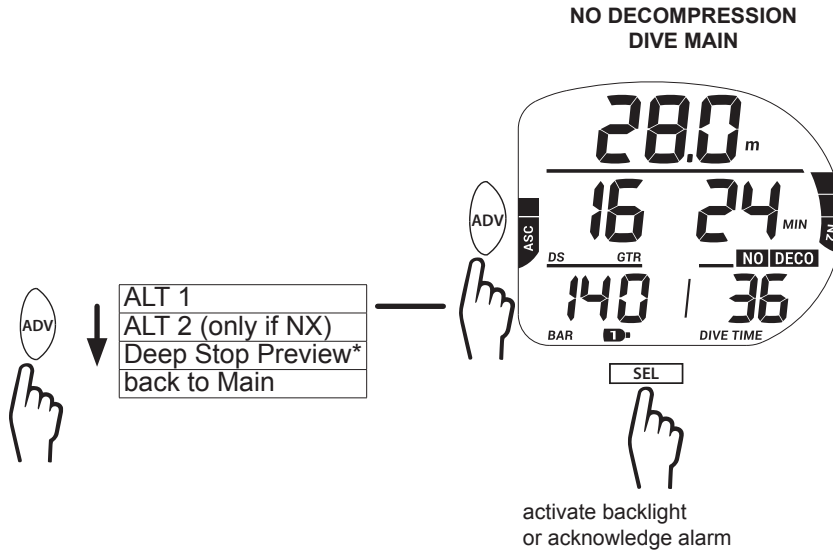
Information displayed on the Serial Number screen should be recorded and kept with your sales receipt; it will be required in the event that your i550 requires factory service.



DIVE OPERATION

INITIATING A DIVE

With the i550 activated, a dive will commence upon descending to 1.5 m (5 ft) for at least 5 seconds. Below is a diagram to help you navigate Dive Mode functions.

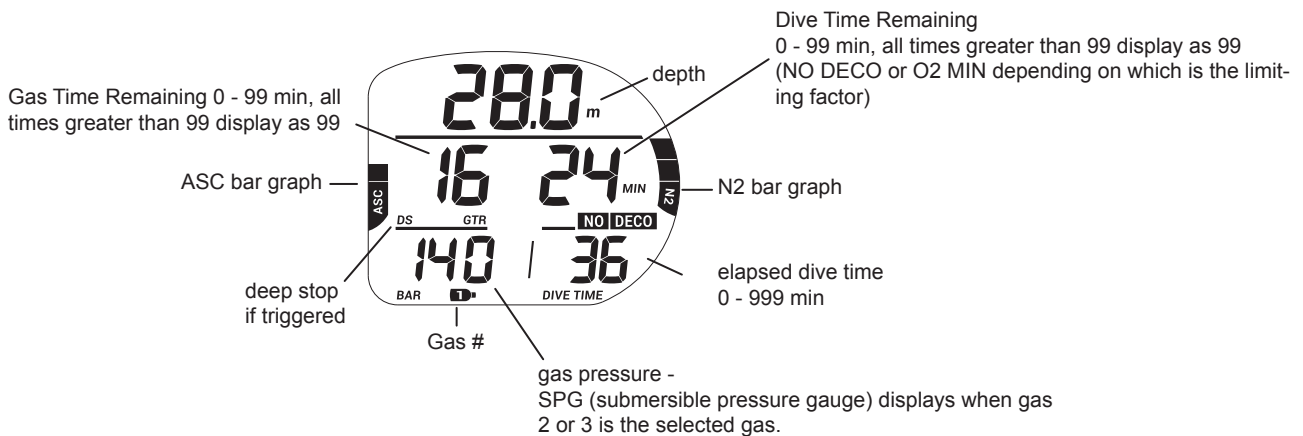


**Only available if Deep Stop is triggered and active*

NO DECOMPRESSION DIVE MAIN

From the Main screen you can see all critical dive parameters. During a dive an audible alarm may sound and the priority of information displayed may change. This is to indicate a safety recommendation, warning, or alarm. The following information in this chapter demonstrates and describes an uneventful dive, in terms of safety. Alarms are described in the Complications section of this chapter.

⚠ WARNING: Before diving with the i550 take time to familiarize yourself with both normal and alarm conditions of operation.



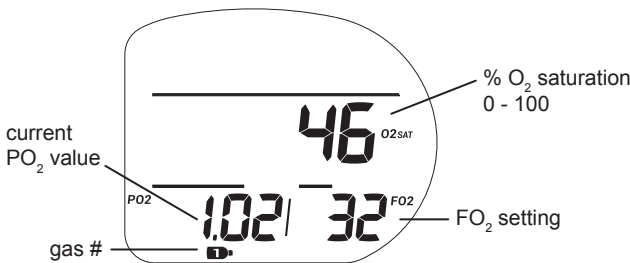
DIVE ALT 1

This screen tells you the maximum depth, current time of day, and ambient temperature.



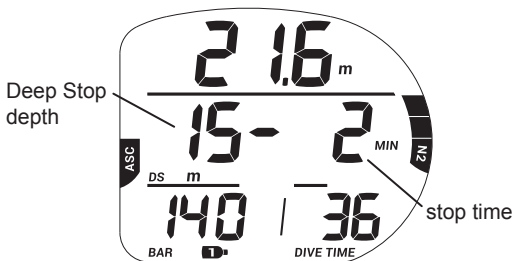
DIVE ALT 2

The ALT 2 screen displays information pertaining to nitrox; it is bypassed if the i550 is set for air.



DEEP STOP PREVIEW

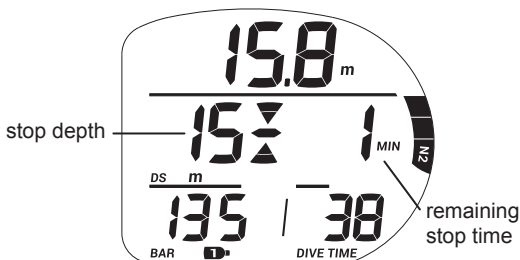
If Deep Stop was set to ON in the UTIL Menu, the Deep Stop preview screen is available after exceeding 24 m (80 ft) of depth. The Deep Stop is always at a depth half that of your maximum depth during the dive. This preview screen keeps track of that depth for you.



DEEP STOP MAIN

If triggered, the Deep Stop will activate upon ascending to within 3 m (10 ft) below the calculated Deep Stop depth. The stop time will be displayed and count down to 0 min as long as you stay within 3 m (10 ft) above or below the stop. While Deep Stop Main is displayed, you may access up to 3 ALT displays by pressing the ADV button to cycle through them. They are similar to the No Decompression Main, Dive ALT 1, and Dive ALT 2 displays, respectively. See Deep Stop in the Dive Features chapter for further details.

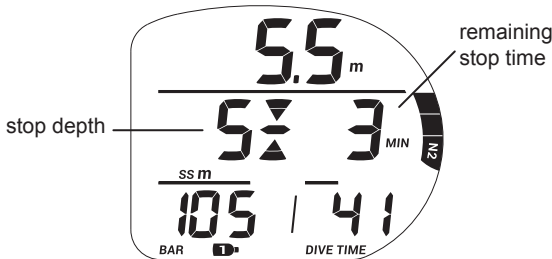
NOTE: The i550 does not penalize for a missed Deep Stop.



SAFETY STOP MAIN

If triggered, the Safety Stop will activate upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth on a No Decompression dive. The stop time will then countdown to 0 min. While Safety Stop Main is displayed, you may access up to 3 ALT displays by pressing the ADV button repeatedly. They are similar to the No Decompression Main, Dive ALT 1, and Dive ALT 2 displays, respectively. See Safety Stop in the Dive Features chapter for further details.

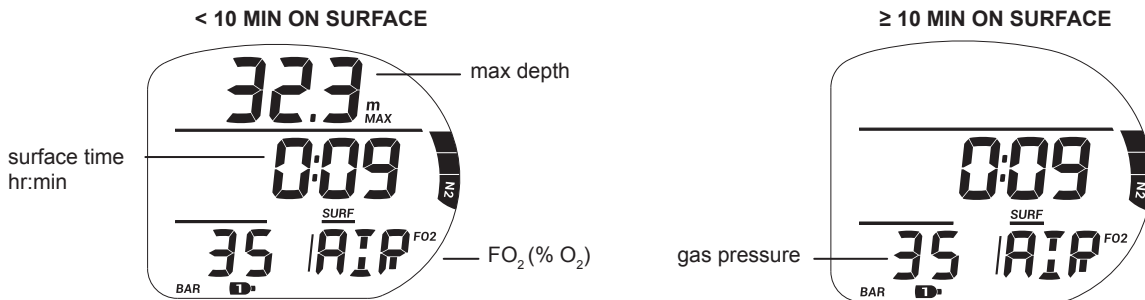
NOTE: The i550 does not penalize for a missed Safety Stop.



SURFACING

Upon ascending to 0.9 m (3 ft) the i550 transitions to Dive Surface mode. For the first 10 minutes after a dive the i550 will continue to display the maximum depth and elapsed dive time. Once the surface time reaches 10 minutes the i550 will display the standard Dive Surface screen.

NOTE: The i550 requires a 10 minute surface interval to record a subsequent dive as a separate dive in the Log. Otherwise, the dives will be combined and recorded as a single dive in the i550 memory.



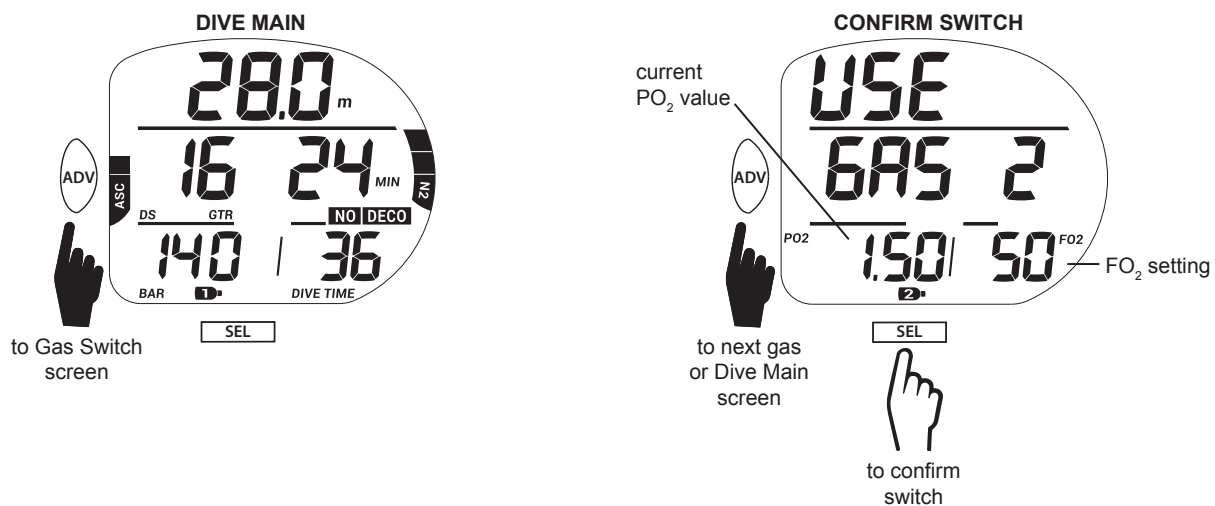
GAS SWITCHES

⚠ WARNINGS:

- Historically, many accidents and near misses have occurred by switching to the wrong gas at the wrong depth. **DO NOT** attempt gas switch decompression dives without proper education and training to do so from an internationally recognized training agency.
- Diving deeper than 39 m (130 ft), will greatly increase your risk of decompression sickness.
- Decompression diving is inherently hazardous and greatly increases your risk of decompression sickness, even when performed according to the dive computer's calculations.
- Using an i550 is no guarantee of avoiding decompression sickness.
- The i550 enters Violation Mode when a situation exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the i550's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i550.
- If you exceed certain limits, the i550 will not be able to help you get safely back to the surface. These situations exceed tested limits and can result in loss of some functions for 24 hours after the dive in which a violation occurred.

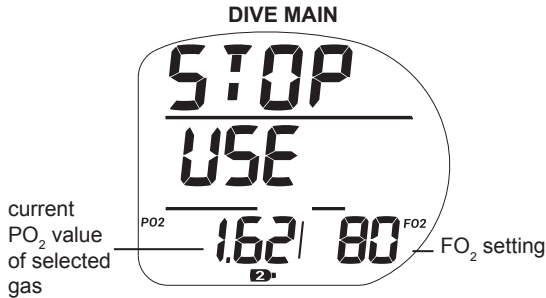
OVERVIEW

- All dives begin with GAS 1.
- The GAS default to # 1 after 10 minutes on the surface.
- Gas switches can only be made when a Dive Main screen is displayed and gases 2/3 are set on.
- Gases cannot be switched while on the surface.
- The Gas Switch Menu cannot be accessed during the sounding of alarms.
- If an alarm strikes while in the Gas Switch Menu, the switch operation is terminated (reverting to the Dive Main screen).



If the current PO₂ value is greater than 1.6, then a warning not to switch will display. The i550 will maintain the current gas without switching. The diver may override the i550 and force the gas switch by pressing the SELECT button during the DO NOT SWITCH TO message.

⚠ WARNING: Switching to gases with a PO₂ above 1.6 has a high risk of oxygen poisoning, convulsions, and drowning. Doing so should always be avoided. It is intended as a last resort option because of the likelihood of injury or drowning. Always dive within your training, experience, and skill level.



COMPLICATIONS

The preceding information has described stress free casual dive operations. Your new i550 is also designed to help you to the surface in less than ideal situations. The following is a description of these. Take some time to familiarize yourself with these operations before diving your i550.

DECOMPRESSION

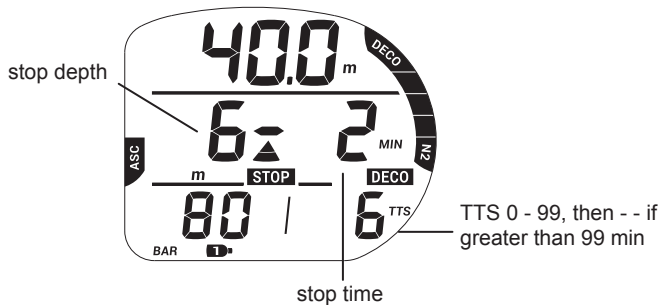
Decompression mode activates when theoretical No Decompression time and depth limits are exceeded. Upon entry into Decompression, the audible alarm will sound and the alarm LED will flash. The full N2 bar Graph and Up Arrow icon will flash until the audible alarm is silenced.

> Once within 3 m (10 ft) below the required Stop Depth (stop zone), the Full Stop icon (both Arrows with Stop Bar) will be displayed solid.

To fulfill your decompression obligation, you should make a safe controlled ascent to a depth slightly deeper than, or equal to, the required stop depth indicated and decompress for the stop time indicated. The amount of decompression credit time that you receive is dependent on Depth, with slightly less credit given the deeper you are below the Stop Depth indicated. You should stay slightly deeper than the required Stop Depth indicated until the next shallower Stop Depth appears. Then, you can slowly ascend to, but not shallower than that indicated Stop Depth.

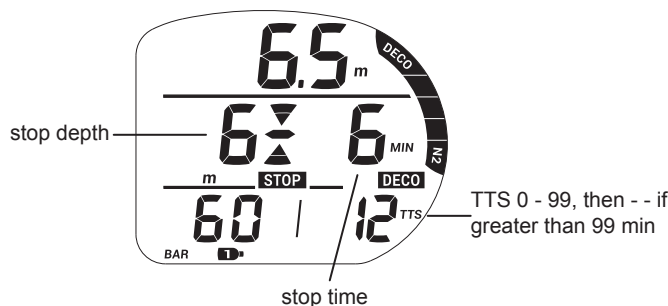
DECOMPRESSION ENTRY

Upon entry into decompression the audible alarm will sound and the alarm LED will flash until the audible alarm is silenced. The message UP, Up Arrow, and full N2 Bar Graph icons will flash. Additionally, the stop depth, stop time, and the TTS (Time To Surface) values will be displayed. TTS includes stop times at all required Decompression Stops plus vertical ascent time based on the max rate allowed.



DECOMPRESSION STOP MAIN

Decompression Stop Main will display upon ascending to within 3 m (10 ft) below the Decompression Stop depth. The STOP icon, the Full Stop icon (both Arrows with Stop Bar) will be displayed solid. While Decompression Stop Main is displayed, you may access up to 3 ALT displays by pressing the ADV button to cycle through them. They are similar to the No Decompression Main, Dive ALT 1, and Dive ALT 2 displays, respectively.

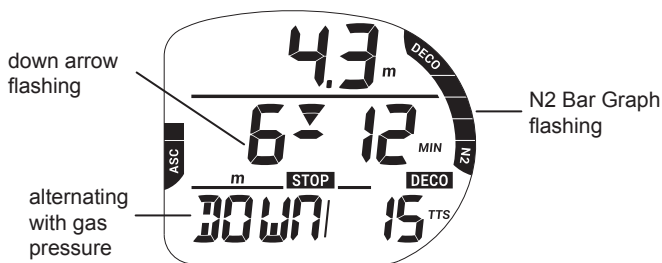


CV (CONDITIONAL VIOLATION)

Upon ascent above the required Decompression Stop depth, operation will enter CV during which no off gassing credit will be given.

The audible alarm will sound and the alarm LED will flash. Additionally, the full N2 Bar Graph and Down Arrow icon will flash. Meanwhile, the DOWN message will alternate with gas pressure until the audible alarm is silenced. Then the N2 Bar Graph will be solid.

- > The Down Arrow icon continues to flash until descending below the required Stop Depth (within stop zone), then the full Stop icon (Stop Bar with both Arrows) will be on solid.
- > If you descend deeper than the required Decompression Stop before 5 minutes elapse, Decompression operation will continue with no off gassing credit given for time above the Stop. Instead, for each minute above the Stop 1-½ minutes of penalty time will be added to required Stop Time.
- > 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. The N2 Bar Graph will recede into the No Decompression zone, and operation will revert to No Decompression mode.

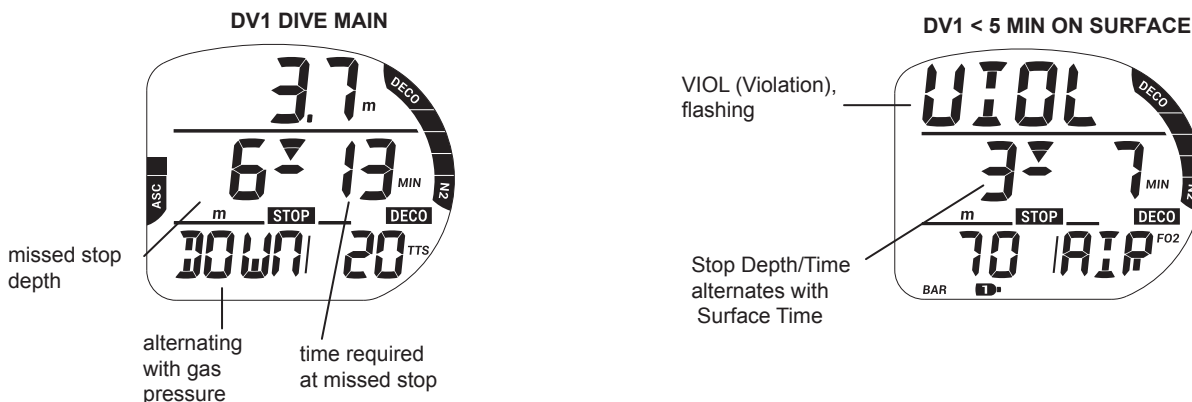


DV 1 (DELAYED VIOLATION 1)

If you remain shallower than a Decompression Stop Depth for more than 5 minutes, operation will enter DV1* which is a continuation of CV with penalty time still being added. Again, the audible alarm will sound and the full N2 Bar Graph will flash until it is silenced. ALT screens are accessed and appear similar to Decompression ALT screens.

**The difference is that 5 minutes after surfacing from the dive, operation will now enter Violation Gauge Mode.*

- > Down Arrow icon flashes and DOWN message continues to alternate with gas pressure until descent below the required Stop Depth, then the full Stop icon will be on solid.
- > If the DV1 status is ignored, the i550 will enter DV1 Surface mode for 5 minutes upon surfacing from the dive. VIOL (Violation) and Down Arrow icon will be flashing. After 5 minutes on the surface in DV1 mode, the unit will enter VGM (Violation Gauge Mode).



DV 2 (DELAYED VIOLATION 2)

If the calculated Decompression obligation requires a Stop Depth between 18 m (60 ft) and 21 m (70 ft), operation will enter DV2.

The audible alarm will sound and the alarm LED will flash. The full N2 Bar Graph will flash until the audible alarm is silenced.

- > Up Arrow icon flashes if 3 m (10 ft) deeper than the required Stop Depth.
- > Once within 3 m (10 ft) of and below the required Stop Depth, the Stop icon (both Arrows with Stop Bar) will be displayed solid.

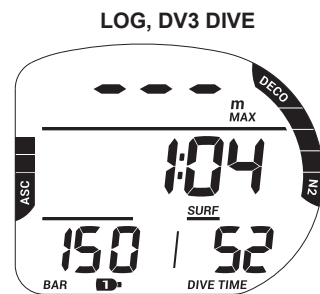
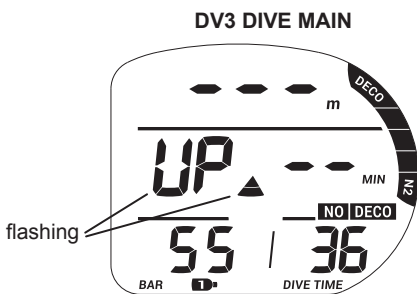


DV 3 (DELAYED VIOLATION 3)

If you descend deeper than the maximum functional depth*, the audible alarm will sound and the alarm LED will flash. Also, the Up Arrow icon, UP message will flash, and Current Depth/Max Depth/DTR will only indicate dashes signifying that you are too deep.

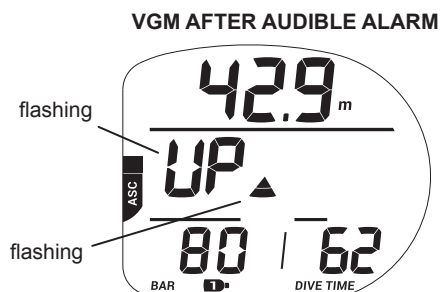
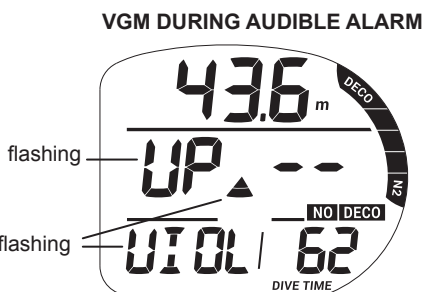
*The maximum functional depth {Dive Mode 100 M (330 FT), Gauge Mode 120 M (399 FT)} is the depth at which the i550 can properly perform calculations or provide accurate display information.

Upon ascending above the maximum functional depth, current depth will be restored. The Log for that dive will also display dashes for max depth.



VGM (VIOLATION GAUGE MODE) DURING A DIVE

During Dive mode dives, operation will enter VGM when Decompression requires a Stop Depth greater than 21 m (70 ft). Operation would then continue in VGM during the remainder of that dive and for 24 hours after surfacing. VGM turns the i550 into a digital instrument without any decompression or oxygen related calculations or displays. Upon activation of VGM, the audible alarm will sound and the alarm LED will flash. The graphic VIOL (violation) will temporarily replace the gas pressure and the Up Arrow icon will flash. After the audible alarm becomes silent, the NO DECO and N2 Bar Graph will be removed from the display and gas pressure will be restored.

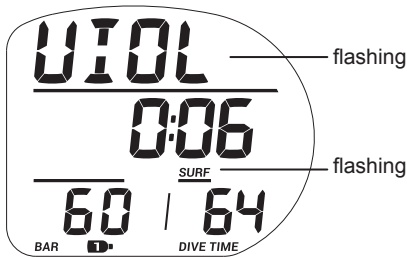


VGM (VIOLATION GAUGE MODE) ON THE SURFACE

Upon surfacing, the VGM Dive Main will remain on display for 10 minutes with Surface Interval time displayed with the SURF icon flashing. The graphic VIOL will also still be displayed flashing. Operation will also enter VGM 5 minutes after surfacing from a dive in which a Delayed Violation occurred.

- > A full 24 hour continuous surface interval must then be served before all functions are restored.
- > During that 24 hours, VGM does not allow access to the SET GAS, PLAN, and FLY/SAT (Desat) features/ screens.
- > The FLY countdown indicates time remaining before normal operation can resume with full features and functions.

VGM SURFACE < 10 MIN



VGM SURFACE > 10 MIN



HIGH PO₂

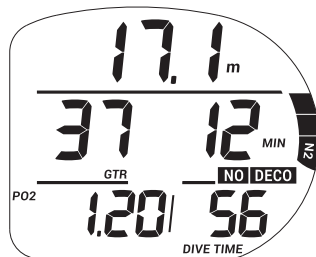
Warning >> at Alarm Set Point value minus .20

Alarm >> at Set Point value, except in Decompression then at 1.60 only

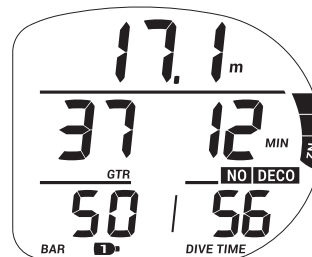
Warning

When PO₂ (partial pressure of oxygen) increases to the Warning level; the audible alarm sounds and the PO₂ value will flash (in place of gas pressure) until the audible alarm is silenced.

DURING AUDIBLE ALARM



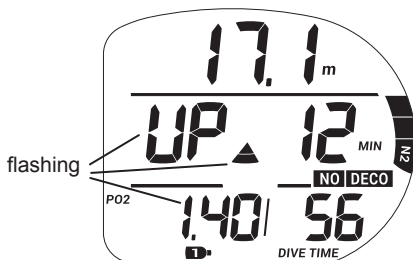
AFTER AUDIBLE ALARM



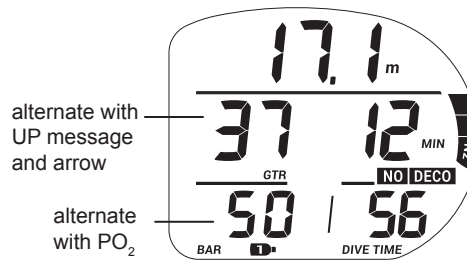
Alarm

If PO₂ continues to increase and reaches the alarm set point, the audible alarm sounds again. The PO₂ value, UP message, and Up Arrow icon will flash until PO₂ decreases below the alarm set point. After the audible alarm is silenced, the PO₂ will alternate with gas pressure.

DURING AUDIBLE ALARM



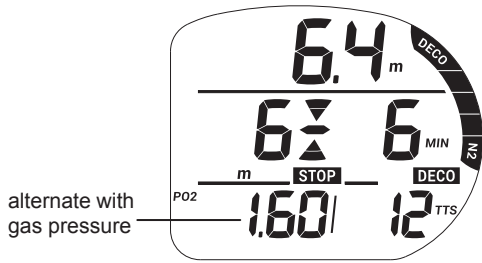
AFTER AUDIBLE ALARM



PO₂ During Decompression

The PO₂ alarm setting does not apply when in Decompression. If PO₂ reaches 1.60 while at a Decompression Stop, the PO₂ value (1.60) with icon will alternate with gas pressure.

*PO₂ on for 10 seconds, gas pressure on for 50 seconds until PO₂ decreases below 1.60, then PO₂ will not be displayed.



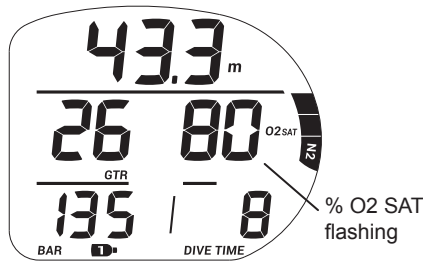
HIGH O₂ SAT (OXYGEN SATURATION)

Warning >> at 80 to 99% (240 OTU)

Alarm >> at 100% (300 OTU)

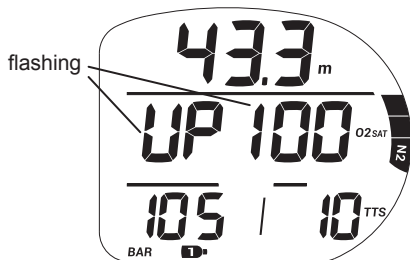
Warning

When O₂ reaches the Warning Level, the audible alarm sounds and the O₂ SAT (saturation) value will flash in place of the DTR. The DTR will be restored when the audible alarm is silenced.



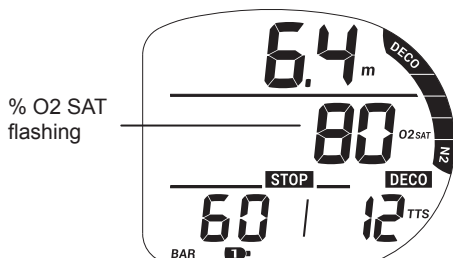
Alarm

If O₂ SAT reaches the Alarm level, the audible alarm sounds and the UP message and the O₂ SAT value will flash in place of DTR until surfacing.



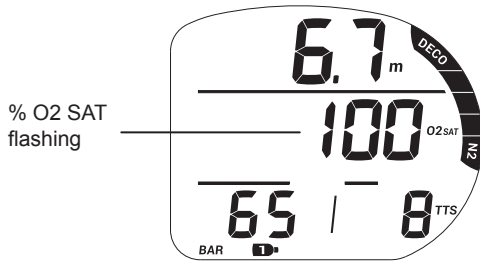
Warning During Decompression

When O₂ SAT reaches the Warning Level, the audible alarm sounds and the O₂ SAT value will temporarily flash in place of the Stop Depth and Stop Time. The STOP icon continues to display. When the audible alarm is silenced, the standard Decompression Dive screen is restored.



Alarm During Decompression

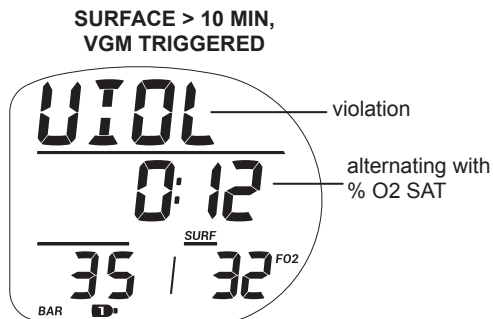
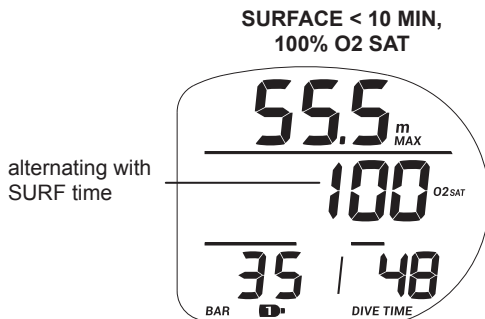
If O2 SAT reaches the Alarm level, the audible alarm sounds and the O2 SAT value will temporarily flash in place of the Stop Depth and Stop Time. Time When the audible alarm is silenced, the O2 SAT value will alternate with the Stop Depth Time.



Alarm On Surface

Upon surfacing, the Dive Main screen is displayed for 10 minutes with access to the Dive ALTs allowed.

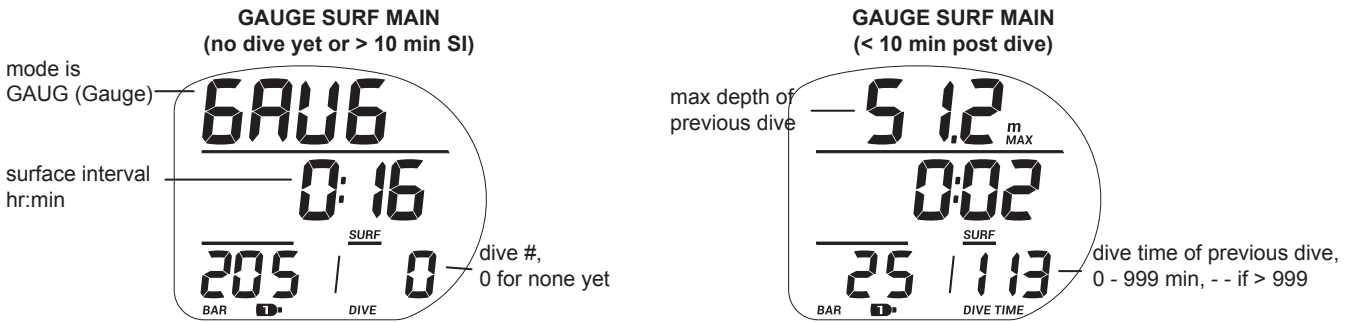
- If O2 SAT is 100%, the value will alternate with SURF time on the Main Screen until it is < 100%, then it will be replaced with SURF time.
- If you surface due to 100% O2 SAT without completing the Decompression obligation, the full N2 Bar Graph and O2 SAT value (100) will flash with O2 SAT icons for the first 10 minutes, then operation will enter VGM (Violation Gauge Mode).
- Access to Dive ALT screens is allowed during the first 10 minutes, then access to the Dive Surface Menu is allowed.



GAUGE MODE

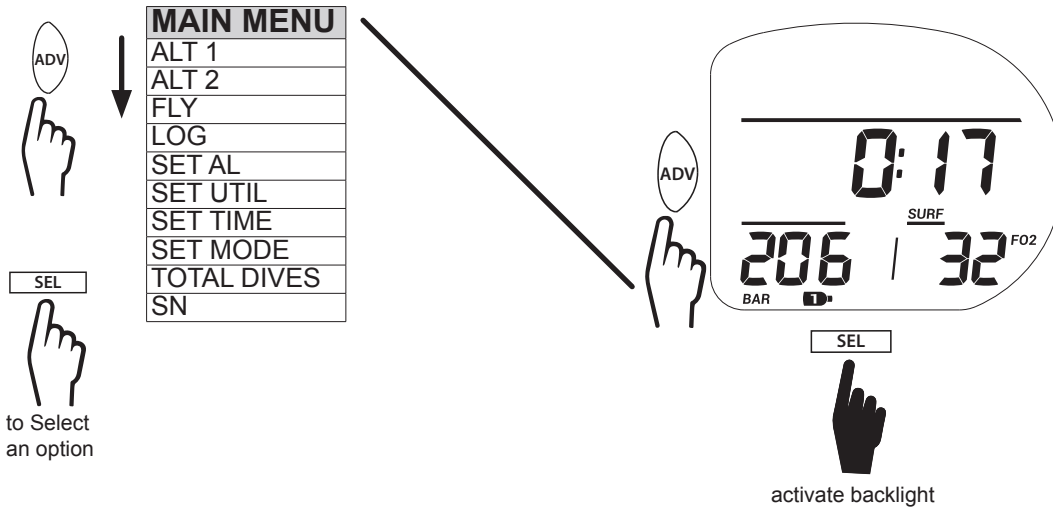
ON THE SURFACE BEFORE A DIVE

There are two Gauge Surface Main screens. The first screen displays when there have been no dives yet or the surface interval after a dive has been greater than 10 min. The second screen displays only during the first ten minutes after a dive.



GAUGE SURF MAIN MENU

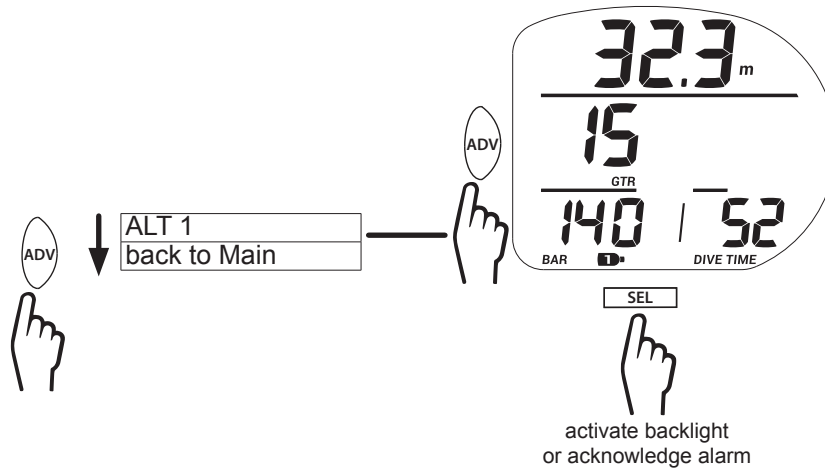
To view i550 logs, change settings, or switch modes you must navigate through the Surf Main Menu. Enter the menu by pressing the ADV button. When you reach the end of the menu the i550 will return to the Gauge Surface Main screen. You may hold the ADV button to scroll quickly through the selections. Some screens simply display data. While other screens are lead-ins to sub menus and settings. Press the SEL button to choose menus or options from the Main Menu when available.



NOTE: The Gauge Surface Main, ALT screens, and Menu options are similar to those described previously for Dive Mode. See the Dive Surface Mode chapter for further details.

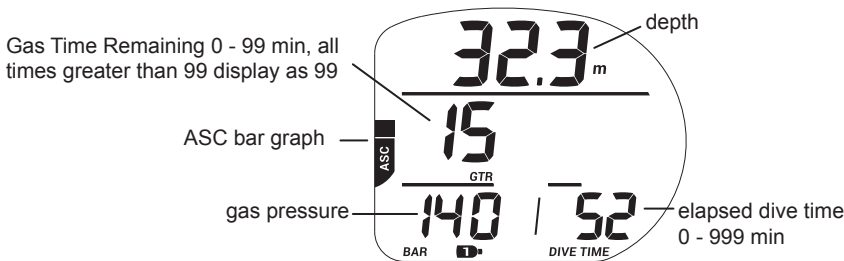
INITIATING A DIVE

With the i550 activated, a Gauge dive will commence upon descending to 1.5 m (5 ft) for at least 5 seconds. Below is a diagram to help you navigate Gauge Dive Mode functions.



GAUGE DIVE MAIN

The Gauge Dive Main provides basic information including depth, dive time, and ascent rate during the dive.



GAUGE DIVE ALT 1

This screen simply tells you the max depth of the dive, current time of day, and ambient temperature.

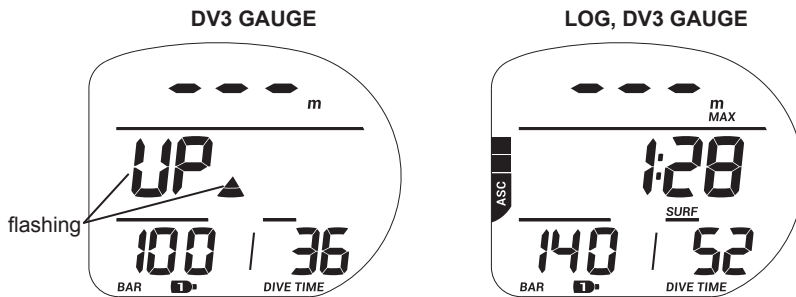


DV 3 (DELAYED VIOLATION 3)

If you descend deeper than the maximum functional depth*, the audible alarm will sound and the alarm LED will flash. Also, the Up Arrow icon, UP message will flash., and Current Depth will only indicate dashes signifying that you are Too Deep.

*The maximum functional depth {Dive Mode 100 M (330 FT), Gauge Mode 120 M (399 FT)} is the depth at which the i550 can properly perform calculations or provide accurate display information. Refer to the Specifications in the back.

Upon ascending above the maximum functional depth, current depth will be restored. The Log for that dive will display dashes for max depth.



NOTE: The Gauge Mode operation is similar to Dive Mode. Only features unique to Gauge Mode have been described in this section. See the previous Dive Operation section for further details on all the alarms and functions of the i550.

REFERENCE

PC INTERFACE

The i550 is configured with a Data Port located on the side of the module that enables it to be connected to a PC through a USB port using a special interface cable. The cable is either included or available as an optional accessory depending on the computer package purchased. The USB Driver required for the interface system is downloadable from www.aqualung.com.

The Settings Upload portion of the program can be used to set/change the Set AL group (Alarms), Set UTIL group (Utilities), and Set TIME group (Time/Date) using the same Interface System. The FO₂ and Mode settings must be entered using the i550 button controls.

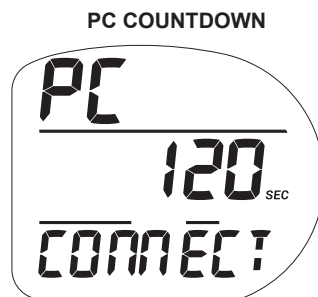
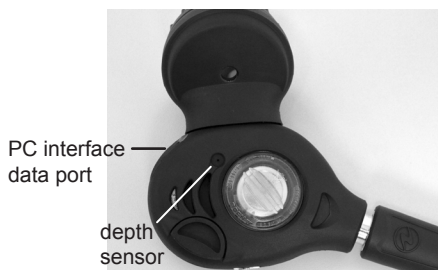
Information available for retrieval (download) from the i550 to the PC Download portion of the program includes items such as dive number, surface interval time, depth, dive time, start dates/time, lowest temperature, sampling rate, set points, N2 Bar Graph, and ASC Bar Graph.

The i550 checks for the presence of an interface device connection to the Data Port once every second* while in Surface Mode.

**Checks are not made if the H2O ACT (water activation) contacts are wet.*

Upon sensing an interface connection, the requesting device (PC) connects to the i550. It is then prepared for uploading settings or downloading data, which is initiated using the PC program. During the process there is a PC countdown (2 minutes) screen displayed on the i550.

Prior to attempting to download data from your i550 or upload settings to it, review the HELP section of the interface program. It is recommended to print those sections of HELP that you consider appropriate for your interface activities.



NOTE: The PC Countdown screen will not appear if the cable is attached upside down.

CARE AND CLEANING

Protect your i550 from shock, excessive temperatures, exposure to chemicals, and tampering. Protect the lens against scratches with an Instrument Lens Protector. Small scratches will naturally disappear underwater.

- Soak and rinse the i550 in fresh water at the end of each day of diving, and check to ensure that the areas around the Low Pressure (Depth) Sensor, PC Interface Data Port, and buttons are free of debris or obstructions.
- To dissolve salt crystals, use lukewarm water or a slightly acidic bath (50% white vinegar/50% fresh water). After removal from the bath, place the i550 under gently running fresh water. Towel dry before storing.
- Keep your i550 cool, dry, and protected during transport.

SERVICE

⚠ WARNING: At a minimum, annually check the altitude reading on the ALT 2 screen (p. 18) and Pre-Dive Planner (p. 19, 52) for accuracy. If your i550 is ever out of calibration (incorrect elevation reading, incorrect No Decompression Dive Times in the planner, or showing a depth reading at the surface) or displays an error code message (EEP, ALT, CAL, ERR, CSM, A-D), it must be serviced at the factory before use.

If required to return your i550 to Aqua Lung:

- Obtain an RA (Return Authorization) number by contacting <http://www.aqualung.com/us/support/contact-us> or (760) 597-5000
- Record all dive data in the Log and/or download the data stored in memory. All data will be erased during factory service.

- Package it using a protective cushioning material.
- Include a legible note stating the specific reason for return, your name, address, daytime phone number, serial number(s), and a copy of your original sales receipt and Warranty Registration.
- Send freight prepaid and insured using a traceable method.
- Non-warranty service must be prepaid. COD is not accepted.
- Additional information is available on the Aqua Lung web site www.AquaLung.com or on the local Aqua Lung web site that serves your global region.

⚠ CAUTION: The procedures that follow must be closely adhered to. Damage due to improper battery replacement is not covered by the i550's warranty.

BATTERY REPLACEMENT

■ NOTE: When the battery is removed, settings and calculations for repetitive dives are retained in the unit's memory while a new battery is installed.

The battery compartment should only be opened in a dry and clean environment with extreme care taken to prevent the entrance of moisture or dust. To prevent formation of moisture in the battery compartment, it is recommended that the battery be changed in an environment equivalent to the local outdoor temperature and humidity (e.g., do not change the battery in an air conditioned environment, then take it outside during a hot sunny day).

Battery Cover Removal

- Turn the module over to expose the battery cover.
- Unscrew the cover by turning counterclockwise (using a coin ONLY).
- Remove the battery cover.
- Remove the cover O-ring by hand, as shown. DO NOT use tools.



Battery Removal

- Carefully lift the battery out of the housing, as shown. DO NOT bend or damage the battery terminals.



Inspection

- Closely check all of the threads and sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the buttons, lens, battery cover, and housing to ensure they are not cracked or damaged.
- Check the metal contacts for any signs of stress or corrosion.

⚠ WARNING: If damage or corrosion is found, return your i550 to an authorized Aqua Lung dealer, and DO NOT attempt to use it until it has received factory prescribed service.

Battery Installation

- Place a new 3 volt type CR2450 lithium battery, (-) negative side down into the battery compartment.



Battery Cover Installation

- Lightly lubricate a new cover O-ring with silicone grease and install it on the O-ring groove of the battery cover. Ensure that it is evenly seated.

⚠ Caution: The O-ring must be a genuine Aqua Lung part that can be purchased from an authorized Aqua Lung dealer. Use of any other O-ring will void the warranty.

- Carefully install the battery cover turning it clockwise until secure (using a coin ONLY).



Inspection

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

⚠ WARNING: If there are any portions of the display missing or appearing dim, or if a low battery condition is indicated, return the unit to an authorized Aqua Lung dealer for a complete evaluation before attempting to use it.

ALTITUDE SENSING AND ADJUSTMENT

Altitude (i.e., ambient pressure) is measured upon activation and every 15 minutes until a dive is made.

- Measurements are only taken when the unit is dry.
- Two readings are taken, the second reading 5 seconds after the first. The readings must be within 30 cm (1 ft) of each other to record that ambient pressure as the current altitude.
- No adjustments are made during any time that the Wet Contacts are bridged.
- When diving in high altitude waters from 916 to 4,270 m (3,001 to 14,000 ft), the i550 automatically adjusts to these conditions providing corrected depth, and reduced NO DECO (decompression) and O₂ MIN (O₂ saturation) times at intervals of 305 m (1,000 ft).
- When the Conservative Factor is set ON, NDLs are calculated based upon the next higher 915 m (3,000 ft) altitude. At sea level, calculations are based upon an altitude of 6,000 feet. All adjustments for altitudes greater than 3,355 m (11,000 ft) are then made to allowable dive times for 4,270 m (14,000 ft).
- The i550 will not function as a dive computer above 4,270 m (14,000 ft).

QUICK DISCONNECT HOSE (OPTIONAL)

The optional Quick Disconnect allows for convenient removal and storage of your i550 console.

Quick Disconnect Hose Removal

- Push the hose fitting towards the i550 and turn counterclockwise $\frac{1}{4}$ turn. The hose will release from the console.

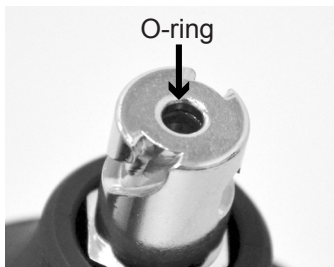


Quick Disconnect Hose Assembly

- Visually inspect the fittings and connection O-ring for damage, corrosion, or deterioration.

⚠ WARNING: If damage, corrosion, or deterioration is found, return your i550 to an authorized Aqua Lung dealer, and DO NOT attempt to use it until it has received factory prescribed service.

- Line up the Quick Disconnect Hose fitting with the male fitting on the i550 console.
- Then push the two fittings together while turning clockwise $\frac{1}{4}$ turn.



TECHNICAL DATA

NO DECOMPRESSION TIME LIMITS

PZ+ ALGORITHM >> NDLS (HR:MIN) AT ALTITUDE (METRIC)

Altitude (meters)	0 to 915	916 to 1220	1221 to 1525	1526 to 1830	1831 to 2135	2136 to 2440	2441 to 2745	2746 to 3050	3051 to 3355	3356 to 3660	3661 to 3965	3966 to 4270
Depth (M)												
9	3:37	2:41	2:31	2:23	2:16	2:10	2:04	1:59	1:54	1:50	1:43	1:37
12	1:55	1:27	1:21	1:15	1:12	1:08	1:05	1:03	1:00	0:58	0:55	0:54
15	1:08	0:55	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:36	0:34
18	0:50	0:39	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22
21	0:36	0:28	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16
24	0:27	0:20	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11
27	0:20	0:16	0:15	0:13	0:12	0:11	0:11	0:10	0:09	0:09	0:09	0:08
30	0:16	0:12	0:11	0:10	0:09	0:09	0:09	0:08	0:08	0:07	0:07	0:07
33	0:13	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07	0:06	0:06	0:06
36	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
39	0:09	0:07	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04
42	0:08	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04
45	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:04
48	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
51	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03
54	0:05	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03
57	0:05	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03

PZ+ ALGORITHM >> NDLS (HR:MIN) AT ALTITUDE (IMPERIAL)

Altitude (feet)	0 to 3000	3001 to 4000	4001 to 5000	5001 to 6000	6001 to 7000	7001 to 8000	8001 to 9000	9001 to 10000	10001 to 11000	11001 to 12000	12001 to 13000	13001 to 14000
Depth (FT)												
30	3:17	2:30	2:21	2:14	2:08	2:02	1:57	1:52	1:47	1:39	1:34	1:29
40	1:49	1:21	1:15	1:11	1:08	1:05	1:02	1:00	0:57	0:55	0:53	0:51
50	1:05	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:35	0:34	0:33
60	0:48	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22	0:21
70	0:35	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16	0:14
80	0:26	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11	0:10
90	0:19	0:15	0:14	0:13	0:12	0:11	0:10	0:10	0:09	0:09	0:08	0:08
100	0:16	0:11	0:10	0:10	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07
110	0:12	0:09	0:08	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05
120	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
130	0:08	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04
140	0:07	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04
150	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03
160	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
170	0:05	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03
180	0:05	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03
190	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:00

ALTITUDE LEVELS

DISPLAY	RANGE: FEET (METERS)
SEA	915 (0 to 3,000)
EL2	916 to 1,525 (3,001 to 5,000)
EL3	1,526 to 2,135 (5,001 to 7,000)
EL4	2,136 to 2,745 (7,001 to 9,000)
EL5	2,746 to 3,355 (9,001 to 11,000)
EL6	3,356 to 3,965 (11,001 to 13,000)
EL7	> 3,965 (13,000)

OXYGEN EXPOSURE LIMITS

(from NOAA Diving Manual)

PO ₂ (ATA)	MAX DURATION SINGLE EXPOSURE (MIN)	MAX TOTAL DURATION 24 HOUR DAY (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

SPECIFICATIONS

CAN BE USED AS

- Dive Computer (Air or Nitrox)
- Digital Depth Gauge/Timer

DIVE COMPUTER PERFORMANCE

- Bühlmann ZHL-16C based PZ+ algorithm
- Decompression in agreement with Bühlmann ZHL-16C
- No Decompression Deep Stops - Morroni, Bennett
- Decompression Deep Stops (not recommended) - Blatteau, Gerth, Gutvik
- Altitude - Buhlmann, IANTD, RDP (Cross)
- Altitude corrections and O2 limits based on NOAA tables

OPERATIONAL PERFORMANCE

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

Dive Counter:

- DIVE/GAUGE displays Dives #1 to 24 (0 if no dive made yet)
- Resets to Dive #1, upon diving (after 24 hours with no dives)

Dive Log Mode:

- Stores 24 most recent DIVE/GAUGE dives in memory for viewing
- After 24 dives, adds 25th dive in memory and deletes the oldest dive

Altitude:

- Operational from sea level to 4,270 m (14,000 ft) elevation
- Measures ambient pressure every 30 minutes when inactive, upon activation, every 15 minutes while activated.
- Does not measure ambient pressure when Wet.
- Compensates for Altitudes above sea level beginning at 916 m (3,001 ft) elevation and every 305 m (1,000 ft) higher.

Power:

- (1) 3 v, CR2450, Lithium battery (Panasonic or equivalent)
- Shelf life Up to 5 years (dependent on battery manufacturer)
- Replacement User (annual recommended)
- Use Life 100 dive hours if (1) 1 hour dives per dive day to 300 hours if (3) 1 hour dives per day

Battery Icon:

- Warning - icon on solid at 2.75 volts, Battery change recommended
- Alarm - icon on flashing at 2.50 volts, change the Battery

Activation:

- Manual - push button (recommended), required prior to dive if H2O ACT (activation) is set OFF.
- Automatic - by descent in water (if H2O ACT is set ON)
- Cannot be manually activated deeper than 1.2 M (4 FT), if H2O ACT is set OFF.
- Cannot operate at elevations higher than 4,270 m (14,000 ft)

Operating Temperature:

- Out of the water - between -6.6 and 60 °C (20 °F and 140 °F).
- In the water - between -2.2 and 35 °C (28 °F and 95 °F).

N2 Bar Graph

	<u>segments</u>
• No Decompression Normal Zone	1 to 3
• No Decompression Caution Zone	4
• Decompression Zone	5 (all)

ASC (Ascent) Rate

	<u>segments</u>	<u>MPM</u>	<u>FPM</u>
• Normal zone	0	0 - 3	0 - 10
• Normal zone	1	3.5 - 4.5	11 - 15
• Normal zone	2	5 - 6	16 - 20
• Normal zone	3	6.5 - 7.5	21 - 25
• Caution zone	4	8 - 9	26 - 30
• Too Fast zone (flashing)	5 (all)	> 9	> 30

NUMERIC DISPLAYS:

	<u>Range:</u>	<u>Resolution:</u>
• Dive Number	0 to 24	1
• Depth	0 to 120 M (400 FT)	.1/1 M (1 FT)
• FO ₂ Set Point	Air, 21 to 100 %	1 %
• PO ₂ Value	0.00 to 5.00 ATA	0.01 ATA
• Dive Time Remaining	0 to 99 min, display 99 if >99 min	1 minute
• Time To Surface	0 to 99 min, display - - if >99 min	1 minute
• No Decompression Deep Stop Time	2 to 0 min	1 minute
• No Decompression Safety Stop Time	5 to 0 min	1 minute
• Decompression Stop Time	0 to 999 min	1 minute
• DIVE/GAUGE Elapsed Dive Time	0 to 999 min	1 minute
• Surface Interval Time	0:00 to 23:59 hr:min	1 minute
• Time to Fly & Desaturate	23:50 to 0:00 hr:min*	1 minute
	<i>* starting 10 min after the dive</i>	
• Temperature	-18 to 60°C (0 to 99°F)	1°
• Time of Day	0:00 to 23:59 hr:min	1 minute
• Violation Countdown Timer	23:50 to 0:00 hr:min	1 minute

Max Functional Depth:

	<u>Limit:</u>
• DIVE	100 M (330 FT)
• GAUGE	120 M (399 FT)

ABBREVIATIONS/TERMS

ACT = Activation	MET = Metric
AL = Alarm	MFD = Maximum Functional Depth (equipment limits)
ALT = Alternate	MIN = Minutes (time)
ASC Bar Graph = Ascent Rate	MOD = Maximum Operating Depth
ATA = Standard Atmosphere (unit)	N2 = Nitrogen
AUD = Audible Alarm	N2 Bar Graph = Tissue Loading Bar Graph
BATT = Battery	NDL = No Decompression Limit
CF = Conservative	NO DECO = No Decompression DTR
CLR = Clear	O2 = Oxygen
DCS = Decompression Sickness	O2 MIN = Oxygen Time Remaining (DTR)
DECO = Decompression	O2 SAT = Oxygen Saturation
DS = Deep Stop	PC = Personal Computer (download)
DTR = Dive Time Remaining	PLAN = Dive Planner
EDT = Elapsed Dive Time	PO2 = Partial Pressure of O2 (ATA)
EL = Elevation (altitude)	SAFE = Safety (stop)
FLY = Time To Fly	SAT = Desaturation Time
FO2 = Fraction of Oxygen (%)	SEA = Sea Level
FT = Feet (depth)	SEC = Seconds (time)
GAU/GAUG/GAUGE = Digital Gauge Dive Mode	SLOW = Slow Down
GTR = Gas Time Remaining	SN = Serial Number
H2O = Water	SPG = Submersible Pressure Gauge
HIST = History	SR = Sample Rate
IMP = Imperial (measure)	SS = Safety Stop
LAST = Previous (dive)	SURF = Surface
M = Meters (depth)	TTS = Time To Surface
M-D (D-M) = Month - Day (Day - Month)	VIO/VIOL = Violation

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