AQUA⦿LUNG®

i100

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

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PATENT NOTICE
U.S. Patents have been issued to protect the following design features: Data Sensing and Processing Device (U.S. Patent no. 4,882,678). Free dive mode calculating nitrogen loading (U.S. Patent no. 8,600,701). 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 i100 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 i100 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 (minimum of 12 Hours or until your computer clears).
• Read and understand this manual thoroughly before using the i100.

⚠ WARNINGS:

- The i100 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 i100 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 i100.
- 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 i100 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 i100, 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 i100 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 i100. Based on this the diver must decide if the i100 is suitable for the dive activities and dive profiles being planned.
- Using an i100 is no guarantee of avoiding decompression sickness.
- The i100 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 i100's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i100.
- If you exceed certain limits, the i100 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.

CONTENTS

GETTING STARTED

BASICS

Welcome to your new i100. The i100 is an easy to use dive computer utilizing a single button interface. Divers may choose between three modes of functionality consisting of Dive, Gauge, and Free Mode. Though the i100 is easy to use, you will get the most out of your new i100 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 i100, press and release the button. The i100 will also turn on if its metal contacts become wet. 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. 16.

- Upon activation The unit will enter a Diagnostic Mode. The i100 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 i100 will display the surface screen in Dive Mode.

🟦 **NOTE: The i100 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 i100 will stay on for a 24 hour period after a dive, counting down FLY (time to fly) and SAT (desaturation time) if a dive has been made.**

DISPLAY ICONS
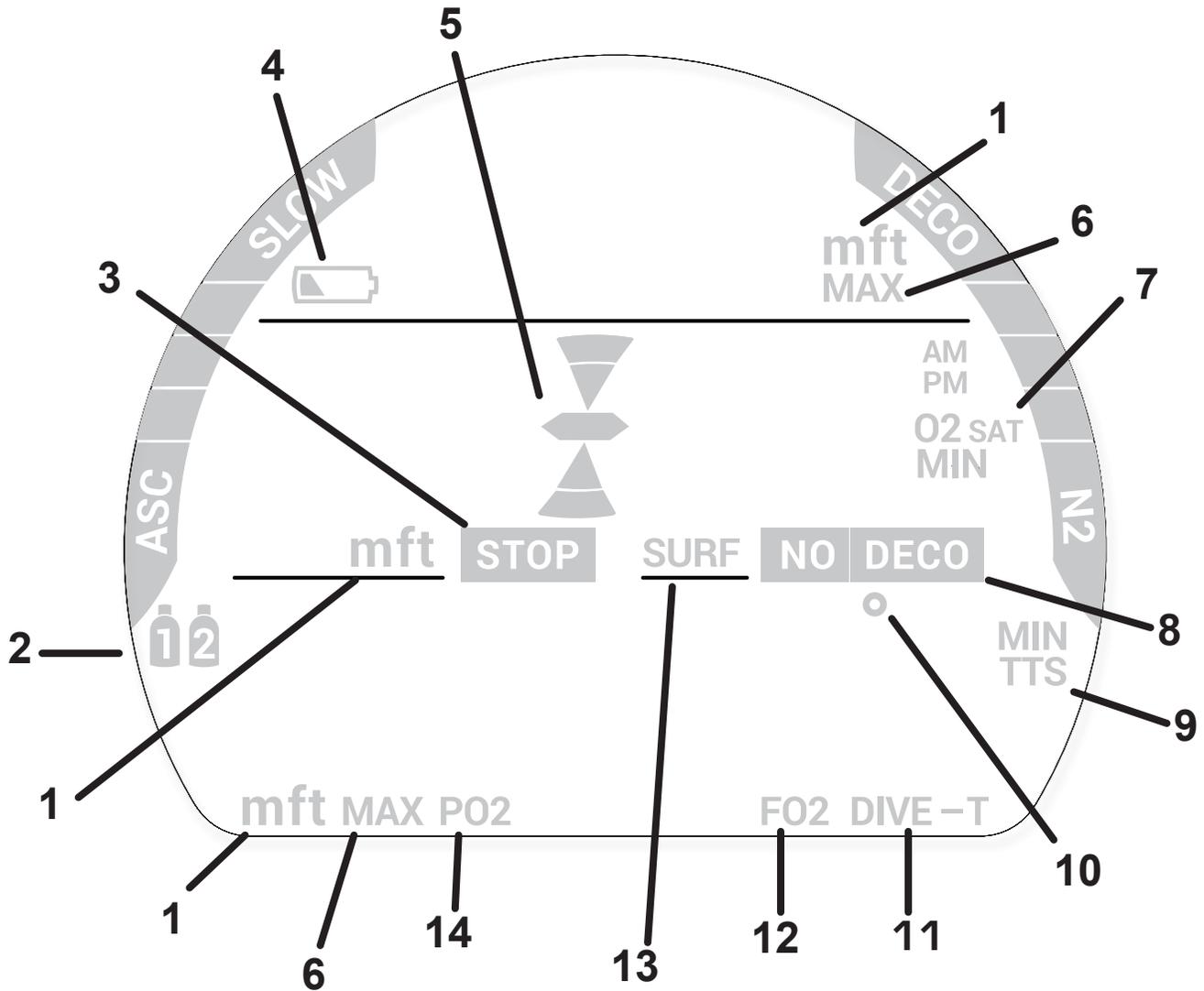
1	Depth ID (units)	8	Decompression (DECO) or No Decompression (NO DECO)
2	Gas #	9	Time To Surface
3	Stop Triggered (Safety, Deep, or Decompression if DECO icon is also displayed)	10	Temperature
		11	Dive Time (DIVE-T) or Dive # (DIVE)
4	Low Battery	12	Fraction of Oxygen
5	Descend, Ascend, or Stop	13	Surface Time
6	Value is Maximum	14	Partial Pressure of Oxygen
7	Oxygen Saturation		

CONTROL BUTTON

The i100 utilizes 1 control button. The button allows you to select mode options and access specific information. It is also used to enter settings, and acknowledge the audible alarm.

The symbols in the table below will illustrate how to proceed through the menus.

SYMBOL	MEANING
	PRESS BUTTON LESS THAN 2 SECONDS
	HOLD BUTTON GREATER THAN 2 SECONDS

BUTTON FUNCTIONS
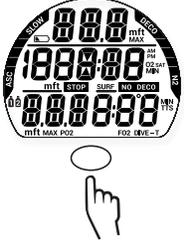
ACTION	FUNCTION
	• **to activate the i100** • **to access Alt screens** • **to advance or step through menus** • **to toggle or change setpoints**
	• **to select, access, save a setting, or exit certain screens** • **to access the main menu while in Surface Mode**

DIVE FEATURES

DTR (DIVE TIME REMAINING)

The i100 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 DECO

No Deco 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.

DTR is NO DECO

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.

ALT 3

% O2 Saturation

DIVE MAIN

DTR is O2 MIN
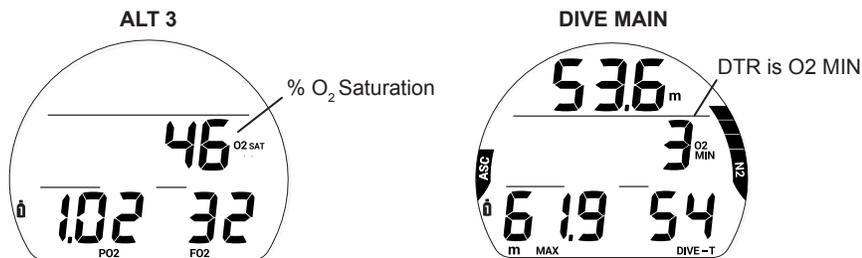
BAR GRAPHS

The i100 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.

Ascent Rate

Nitrogen Loading

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 and the message SLO (slow) flash until the ascent is slowed.

# 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)

ASC ALARM TRIGGERED

flashing
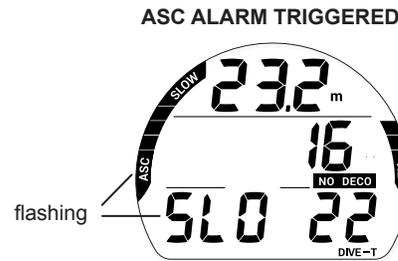
N2 BAR GRAPH

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 Decompression time is available. The i100 monitors multiple theoretical nitrogen compartments simultaneously and the N2 Bar Graph displays the one that is in control of your dive at any given time.

ALGORITHM

The i100 utilizes the Z+ algorithm to calculate nitrogen tissue loading. 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.

DEEP STOP

When the Deep Stop selection is set to ON, it will trigger after descending deeper than 24 m (80 ft). The i100 then calculates (continually updating) a Stop Depth equal to ½ the Max Depth.

📘 **NOTE: The Deep Stop feature only works in DIVE Mode while within No Decompression times.**

> While 3 m (10 ft) deeper than the calculated Deep Stop, you will be able to access a Deep Stop 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 Deep Stop screen displaying a Stop Depth at ½ the Max Depth will appear with a countdown timer beginning at 2:00 (min:sec) and counting down to 0:00. 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 Deep Stop Main display and the Deep Stop feature will be disabled for the remainder of that dive. There is no Penalty if the Deep Stop is ignored.

> In the event that you enter Decompression, exceed 57 m (190 ft), or a High O2 SAT (Oxygen Saturation) condition, ≥ 80%, occurs, the Deep Stop will be disabled for the remainder of that dive.

> The Deep Stop is disabled during a High PO_2 Alarm condition, ≥ set point.

SAFETY STOP

Upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop 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 Safety Stop at the depth set will appear on the Dive Main display with a countdown beginning at the Safety Stop time set and counting down to 0:00.

> If the Safety Stop 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 Safety Stop 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 Safety Stop Main will appear again upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop 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 Safety Stop or choose to ignore it.
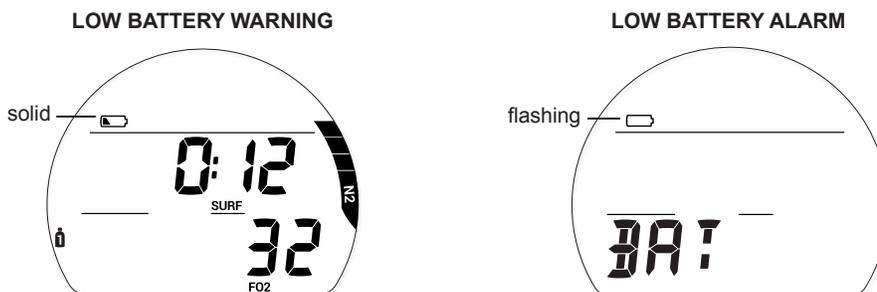

LOW BATTERY WHILE ON THE SURFACE

Warning Level
• The i100 functions continue.
• 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 i100 indicates the Battery Low Warning or Alarm.**

LOW BATTERY WARNING   LOW BATTERY ALARM

solid   flashing

LOW BATTERY DURING A DIVE
Warning Level
• The i100 functions continue.
• The battery icon appears solid upon entry into Surface Mode.

Alarm Level
• The i100 functions continue.
• The Battery icon appears flashing. 5 seconds after entering Surface Mode the i100 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 button. An LED Warning Light, on the lower end 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 Alarm Menu setting).

FREE Dive Mode has its own set of Alarms which emit 3 short beeps either 1 or 3 times which cannot be acknowledged or set off.

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.
• PO$_2$ at the set point selected**.
• High O$_2$ of 240 OTU (80%) and 300 OTU (100%)**.
• N2 Bar Graph at the set point selected**.
• Ascent rate exceeds 9 m (30 FPM) for 8 seconds or more.
• Entry into Decompression Mode (Deco)**.
• Conditional Violation (above a required Deco Stop Depth for less than 5 minutes)**.
• Delayed Violation 1 (above a required Deco Stop Depth for more than 5 minutes)**.
• Delayed Violation 2 (a Deco Stop Depth between 18 m/60 ft and 21 m/70 ft is required)**.
• Delayed Violation 3 (Max Operating Depth of 100 m/330 ft is exceeded in Dive or Free mode, 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.

3 short beeps (which cannot be disabled) sound when -
• FREE Dive Elapsed Dive Time Alarm (3 beeps every 30 seconds if set On).
• FREE Dive Depth Alarms 1, 2, 3 (set sequentially deeper) - each 3 beeps 3 times.
• FREE Dive N2 Bar Graph Alarm (Caution zone, 4 segments) - 3 beeps 3 times.
• Entry into Deco during a FREE Dive (Violation) - 3 beeps 3 times.
• Free Dive Mode Countdown Timer reaches 0:00 - 3 beeps 3 times.

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 Deco Stop for more than 5 minutes.
• Deco requires a Stop Depth deeper than 18 m (60 ft) or deeper.
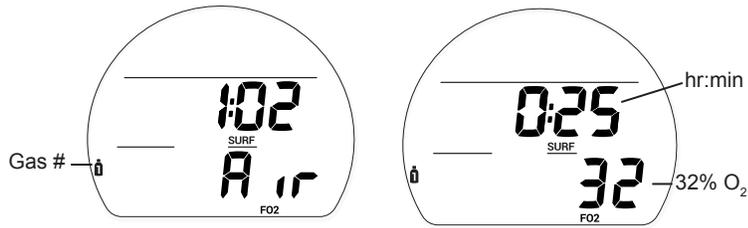• On the Surface during a Conditional Violation.
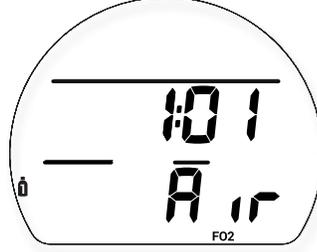
DIVE SURFACE MODE

ON THE SURFACE BEFORE A DIVE

The Dive Main screen will display the SURF (Surface) time and the selected FO_2 of the breathing gas. The SURF time displayed is the time since activation or the surface interval after a dive.

Gas # — **1:02** SURF **Air** FO2

0:25 SURF — hr:min **32** FO2 — 32% O_2

ALT SCREENS
ALT 1
ALT 2
ALT 3
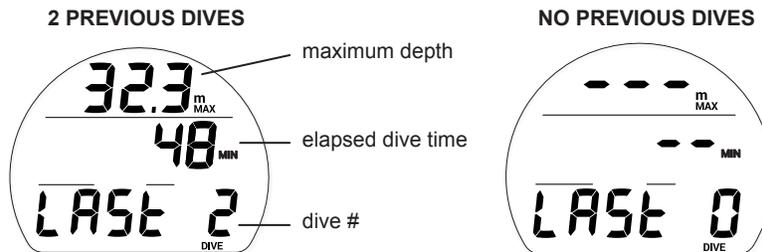(only if set to Nitrox)
FLY/SAT*

1:01 Air FO2

to access Main Menu

NOTE: If no button is pressed the i100 will revert to the Dive Surface Main screen after 5 seconds.

*bypassed if no previous dive

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.

2 PREVIOUS DIVES

32.3 m MAX — maximum depth
48 MIN — elapsed dive time
LAST 2 DIVE — dive #

NO PREVIOUS DIVES

- - - m MAX
- - MIN
LAST 0 DIVE

ALT 2

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

EL2 — elevation (EL2 - EL7, blank if sea level)
**10:38** AM — time
19°C — temp.
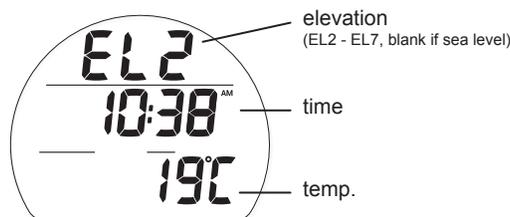
ALT 3

The ALT 3 screen displays only after a nitrox dive. It displays the current oxygen saturation level, the programmed PO_2 Alarm setpoint, and the current gas mix.
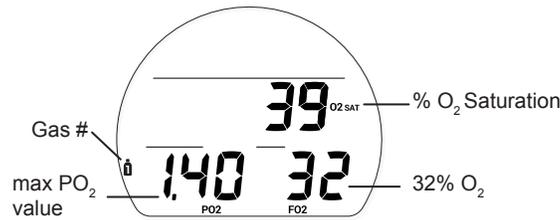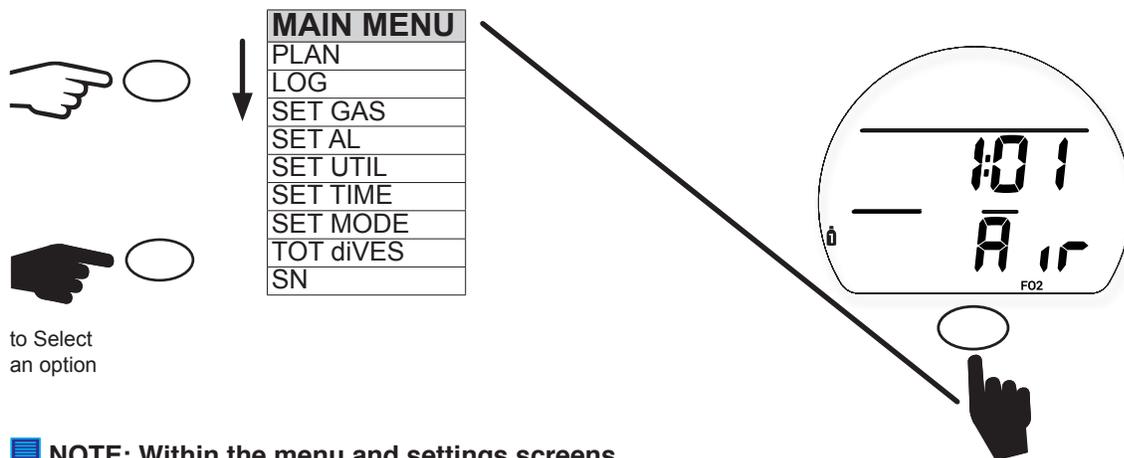

FLY/SAT (DESAT)

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 or FREE dives counting 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 i100 off, 24 hours after the last dive.
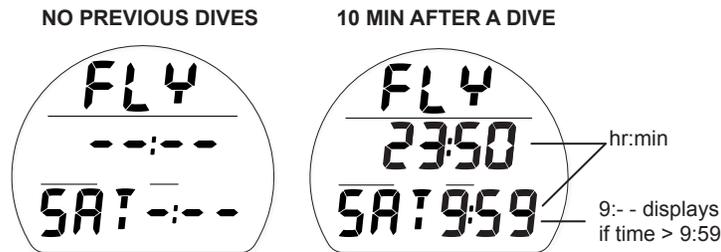
DIVE SURF MAIN MENU

To view i100 logs, change settings, or switch modes you must navigate through the Surf Main Menu. Enter the menu by holding the button for 2 seconds. When you reach the end of the menu the i100 will return to the Dive Surface Main screen. Some screens simply display data. While other screens are lead-ins to sub menus and settings. Hold the button for 2 seconds 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.

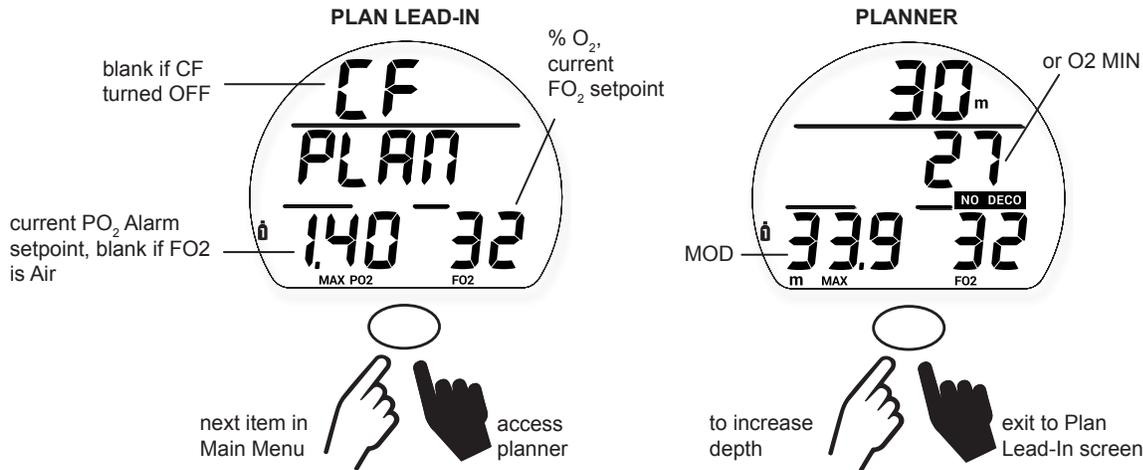**MAIN MENU**
- PLAN
- LOG
- SET GAS
- SET AL
- SET UTIL
- SET TIME
- SET MODE
- TOT diVES
- SN

to Select an option

NOTE: Within the menu and settings screens the i100 will revert to the Dive Surface Main screen after 30 seconds of inactivity.

PLAN

Holding the button for 2 seconds while viewing the PLAN Lead-in screen accesses the dive plan 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 PO_2 alarm setting. Either NO DECO or O_2 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.**

PLAN LEAD-IN

blank if CF turned OFF

% O_2, current FO_2 setpoint

current PO_2 Alarm setpoint, blank if FO2 is Air

CF PLAN 1.40 32

MAX PO2   FO2

next item in Main Menu   access planner

PLANNER

or O2 MIN

MOD

30 m 27 NO DECO 33.9 32

m MAX   FO2

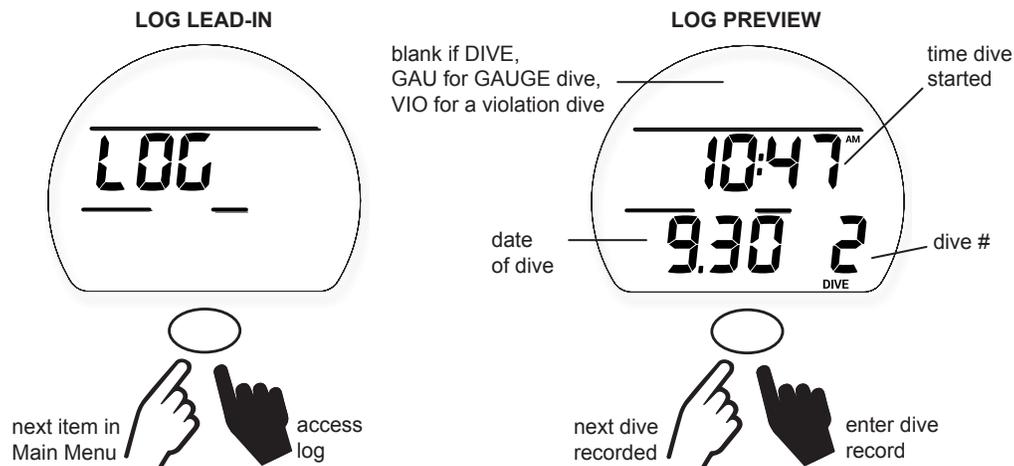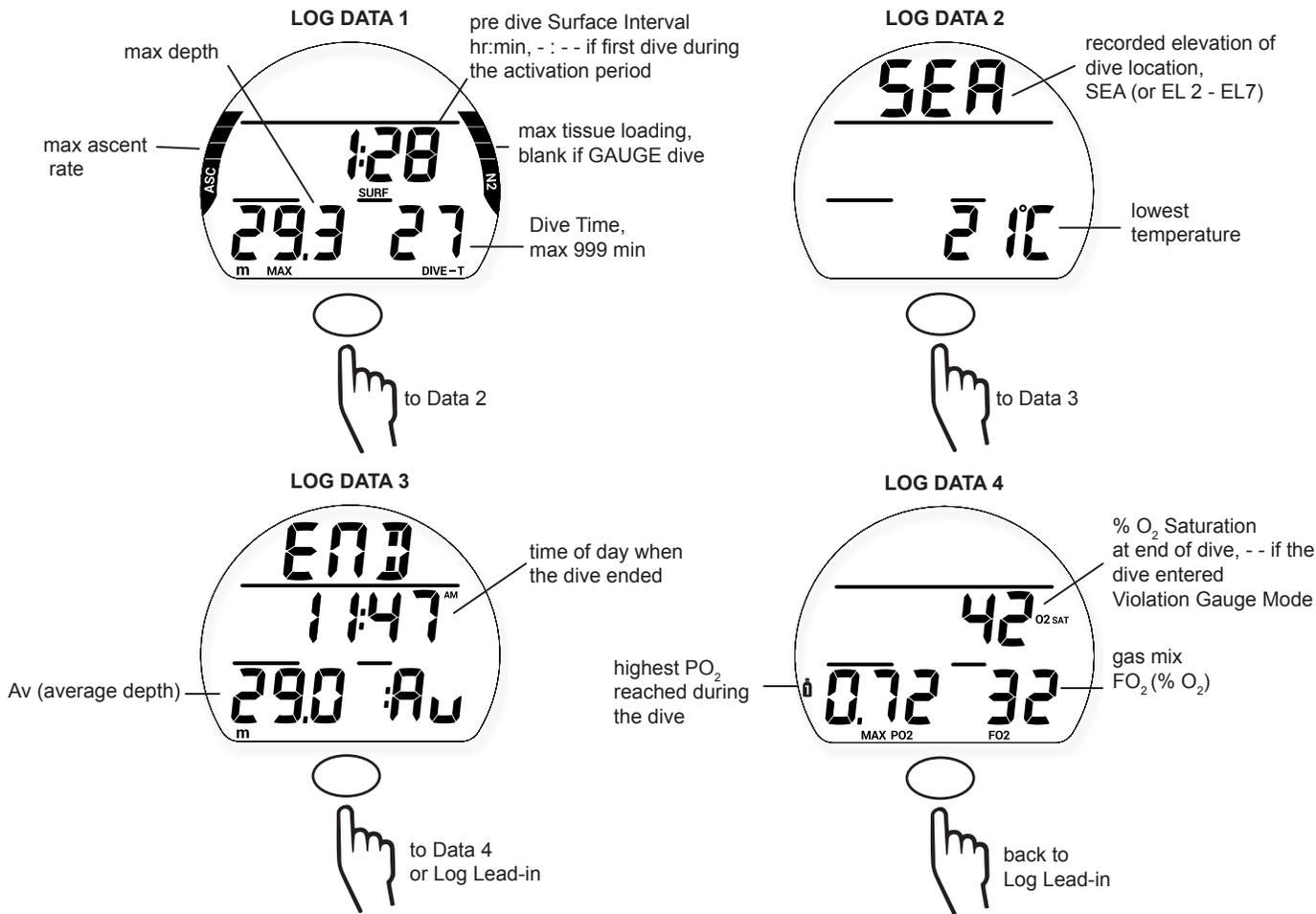to increase depth   exit to Plan Lead-In screen

LOG

Holding the button for 2 seconds 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 (DIVE 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. The i100 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. For this reason, it is normal to see dives stored in the i100's onboard Log that have already been overwritten in the PC Download Partition. 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.**
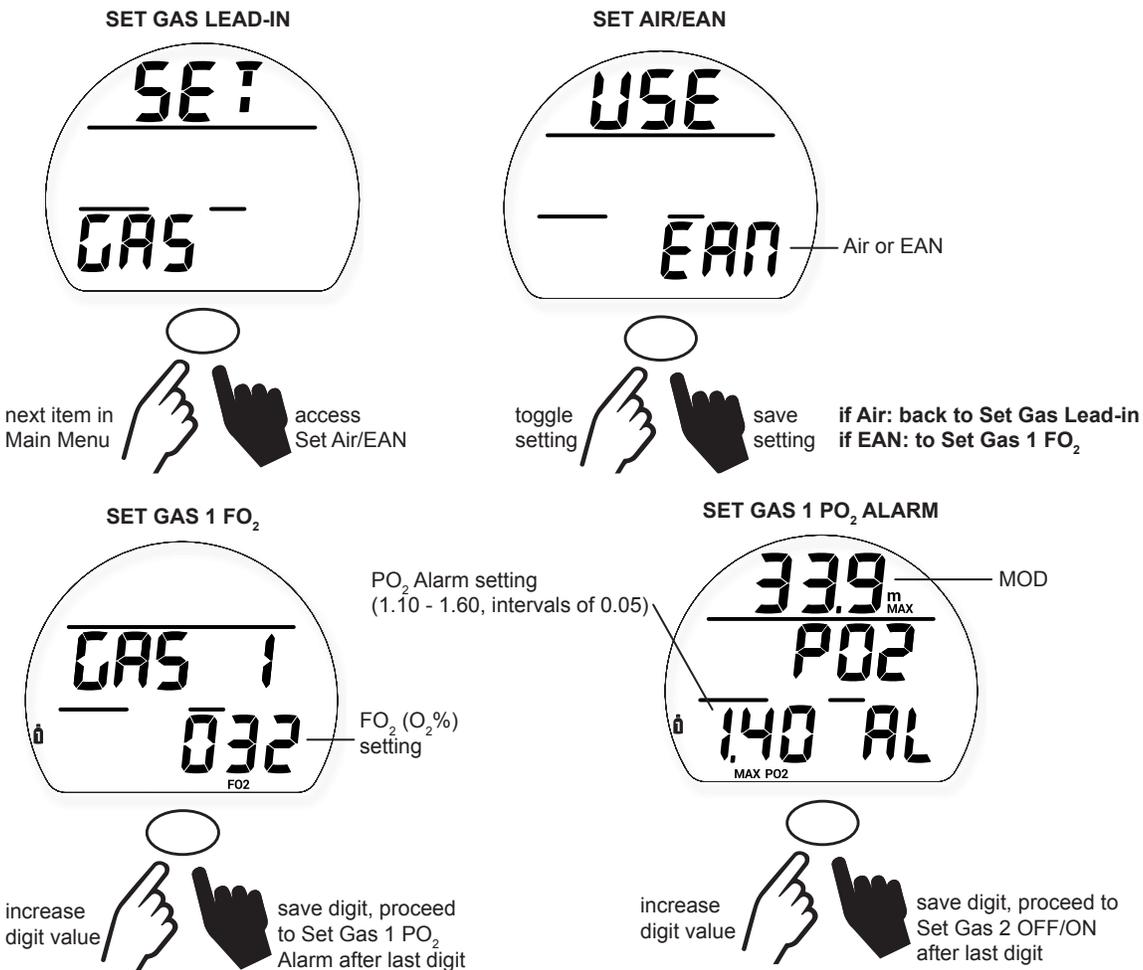
LOG LEAD-IN

LOG

next item in Main Menu   access log

LOG PREVIEW

blank if DIVE, GAU for GAUGE dive, VIO for a violation dive

time dive started

date of dive

dive #

10:47 AM 9.30 2 DIVE

next dive recorded   enter dive record

LOG DATA 1

max depth

max ascent rate

pre dive Surface Interval hr:min, - : - - if first dive during the activation period

max tissue loading, blank if GAUGE dive

1:28
SURF

29.3 27
m MAX   DIVE-T

Dive Time, max 999 min

to Data 2

LOG DATA 2

recorded elevation of dive location, SEA (or EL 2 - EL7)

SEA

21℃

lowest temperature

to Data 3

LOG DATA 3

time of day when the dive ended

END
11:47 AM

Av (average depth)

29.0 Av
m

to Data 4 or Log Lead-in

LOG DATA 4

% O$_2$ Saturation at end of dive, - - if the dive entered Violation Gauge Mode

42 O2 SAT

highest PO$_2$ reached during the dive

0.72 32
MAX PO2   FO2

gas mix FO$_2$ (% O$_2$)

back to Log Lead-in

NOTE: Log Data 4 only displays for nitrox dives; it is bypassed if the dive was an air dive.
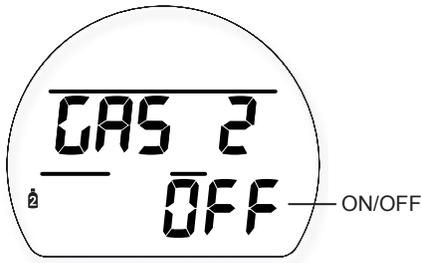
SET GAS

Holding the button for 2 seconds while viewing the Set Gas Lead-in screen accesses the Set Air/EAN (Enriched Air Nitrox) screen. Within this screen you can select whether to use Air or Nitrox gas mixes. If Air is selected, the i100 will return you to the Set Gas Lead-in screen in the menu. If EAN is selected, the i100 will allow you to choose a gas FO_2 (%O_2) between 21-100%, PO_2 Alarm settings, and whether to use 1 or 2 gases. Additionally, the i100 allows for each gas to have individual PO_2 alarm settings. Within the Set Gas PO_2 Alarm 1 and 2 screens the the current PO_2 Alarm setting and corresponding MOD (Maximum Operating Depth) are displayed.

NOTE: When FO_2 is set for AIR, oxygen related data (such as PO_2, %O_2, and O_2 Saturation) 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.

SET GAS LEAD-IN

SET
GAS

next item in Main Menu | access Set Air/EAN

SET AIR/EAN

USE
EAN — Air or EAN

toggle setting | save setting | **if Air: back to Set Gas Lead-in** **if EAN: to Set Gas 1 FO_2**

SET GAS 1 FO_2

GAS 1
032 — FO_2 (O_2%) setting
FO2

increase digit value | save digit, proceed to Set Gas 1 PO_2 Alarm after last digit

SET GAS 1 PO_2 ALARM

PO_2 Alarm setting (1.10 - 1.60, intervals of 0.05)

33.9 m MAX — MOD
PO2
1.40 AL
MAX PO2

increase digit value | save digit, proceed to Set Gas 2 OFF/ON after last digit

SET GAS 2 ON/OFF

$GAS\ 2$

OFF ——— ON/OFF

toggle setting / save setting

if ON: proceed to Set Gas 2 FO$_2$
If OFF: back to Set Gas Lead-in

SET GAS 2 FO$_2$

$GAS\ 2$

100 ——— FO$_2$ (O$_2$%) setting

FO2
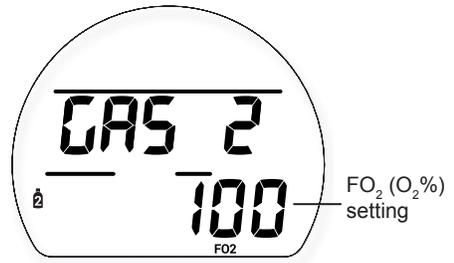
increase digit value / save digit, proceed to Set Gas 2 PO$_2$ Alarm after last digit

SET GAS 2 PO$_2$ ALARM

PO$_2$ Alarm setting (1.10 - 1.60, intervals of 0.05)

$6.0\ _m\ MAX$ ——— MOD

$PO2$

$1.60\ AL$

MAX PO2
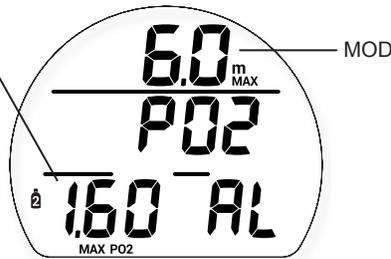
increase digit value / save digit, back to Set Gas Lead-in after last digit

SET AL (ALARMS)

Holding the 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.

SET ALARMS LEAD-IN

SET

$AL\ \_$
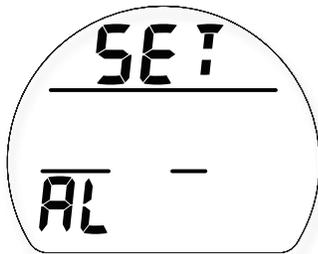
next item in Main Menu / access Set AL menu

1. AUd AL (Audible Alarms)

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

AUD ALARM LEAD-IN

OFF
AUd
AL

ON or OFF, solid

next item in Alarm Menu / access Set Audible Alarm

SET AUD ALARM
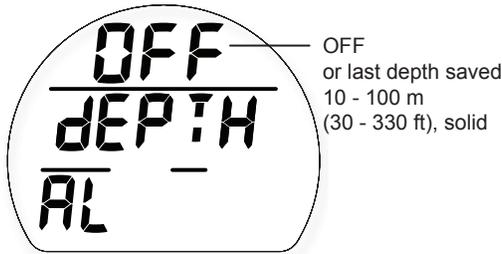
OFF
AUd
AL

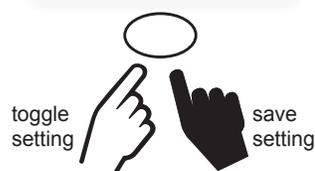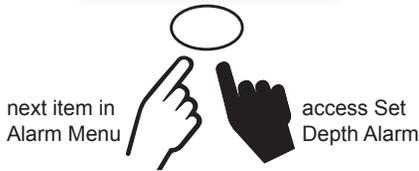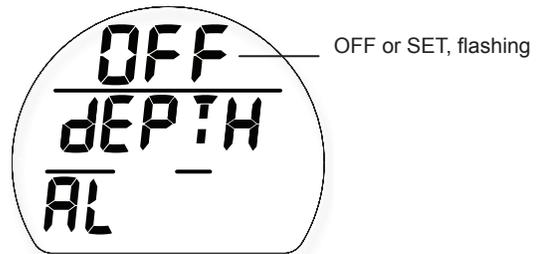ON or OFF, flashing

toggle setting / save setting
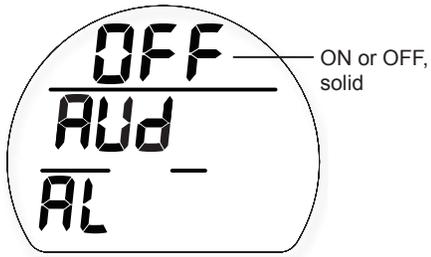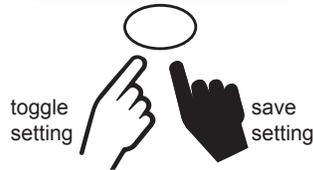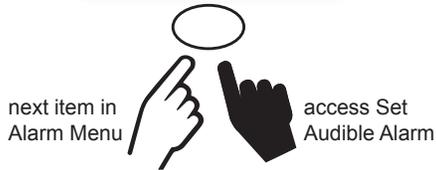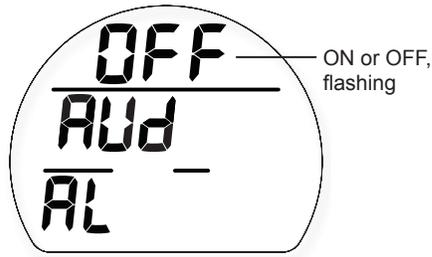
2. dEPTH AL (Depth Alarm)

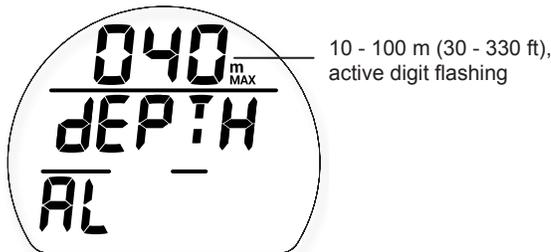The Depth Alarm feature allows you to set a maximum depth alarm.

DEPTH ALARM LEAD-IN

OFF
dEPTH
AL

OFF
or last depth saved
10 - 100 m
(30 - 330 ft), solid

next item in Alarm Menu / access Set Depth Alarm

SET DEPTH ALARM

OFF
dEPTH
AL

OFF or SET, flashing

toggle setting / save setting

if OFF: save and procede to EDT AL
if SET: proceed to Set Depth Value

SET DEPTH VALUE

040 m MAX
dEPTH
AL

10 - 100 m (30 - 330 ft),
active digit flashing

increase value / save digit, proceed to EDT Alarm after last digit

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.

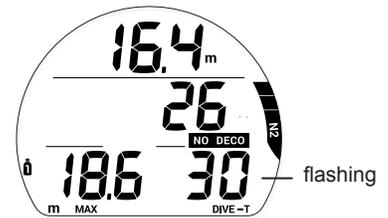**EDT ALARM LEAD-IN**

OFF
or blank if ON

blank if OFF or
setpoint 15 - 120 min

Next Item in
Alarm Menu

access Set
EDT Alarm

SET EDT ALARM

OFF or
setpoint 15 - 120 min
(in 15 min intervals)

to change
setting

save
setting

EDT ALARM TRIGGERED

flashing

4. N2 AL (Nitrogen Alarm)

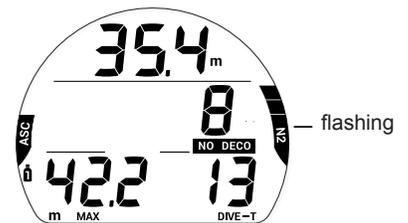This feature allows you to set an alarm to go off at a predetermined number of N2 bar graph segments.

N2 ALARM LEAD-IN

OFF, solid,
or blank if ON

Next Item in
Alarm Menu

access Set
N2 Alarm

SET N2 ALARM

# of segments
selected if ON
or OFF, flashing

ADV
to change
setting

SEL
save
setting

N2 ALARM TRIGGERED

flashing

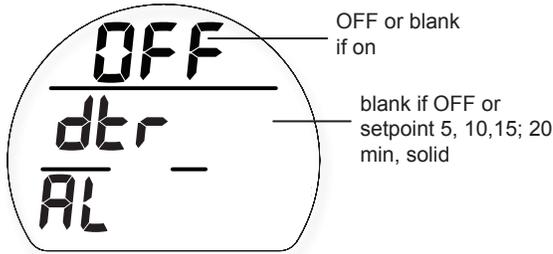### 5. dtr AL (Dive Time Remaining Alarm)

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

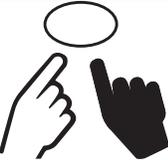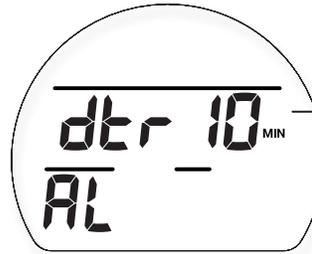**DTR ALARM LEAD-IN**

OFF or blank if on

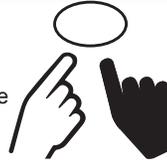*blank if OFF or setpoint 5, 10,15; 20 min, solid*

return to Set Alarm Lead-in
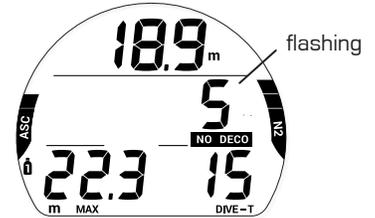
access Set DTR alarm

SET DTR ALARM

blank if OFF or setpoint 5, 10,15; 20 min, flashing

to change setting
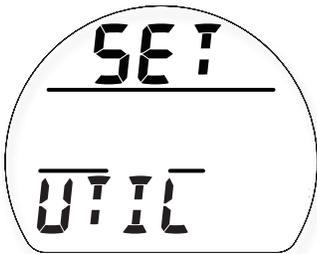
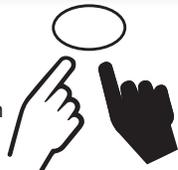save setting

DTR ALARM TRIGGERED

flashing

SET UTIL (UTILITIES)

Holding the button while viewing the Set UTIL Lead-in screen accesses the Set UTIL Sub Menu. Within this menu you can customize the following six operational functions.
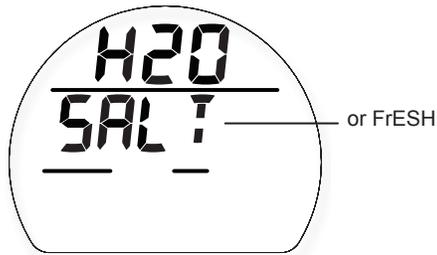
SET UTIL LEAD-IN
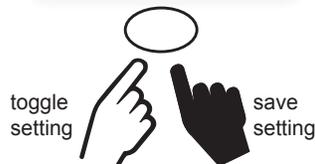
next item in Main Menu

access Set UTIL menu

1. H2O TYPE (Water Type)

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

H2O TYPE LEAD-IN

— or FrESH

next item in Utility Menu

access Set H2O Type

SET H2O TYPE
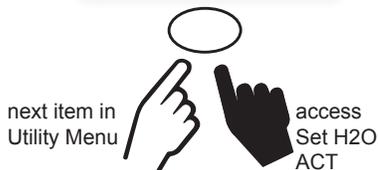

— or FrESH

toggle setting

save setting

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 i100 before any dive.**

H2O ACT LEAD-IN

— ON or OFF

next item in Utility Menu

access Set H2O ACT

SET H2O ACT

— ON or OFF

toggle setting

save setting
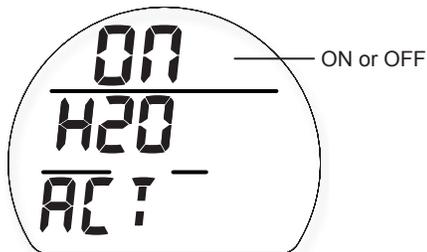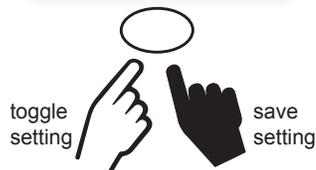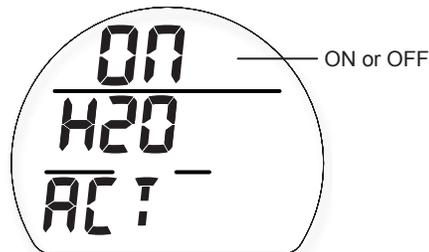
3. UNITS (IMP/MET)

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

UNITS LEAD-IN

next item in Utility Menu

access Set Units

SET UNITS

or FT, IMP; °F

toggle setting
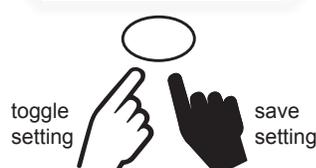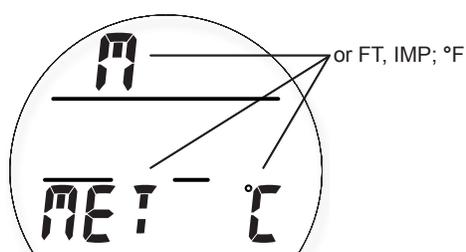
save setting

4. dEEP STOP

The Deep Stop feature can be set ON or OFF.

DEEP STOP LEAD-IN

ON
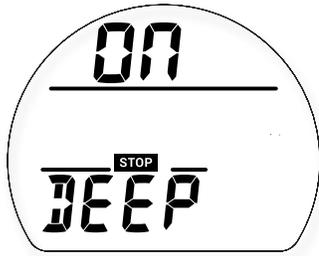
DEEP STOP

next item in
Utility Menu
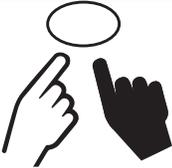
access
Set Deep
Stop

SET DEEP STOP

ON ———— ON or OFF

DEEP STOP
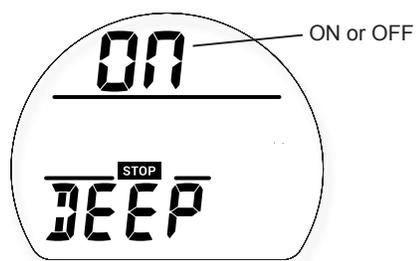
toggle
setting

save
setting

5. SAFE (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).
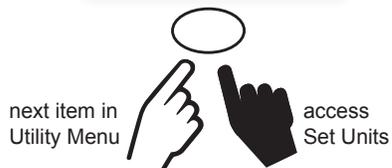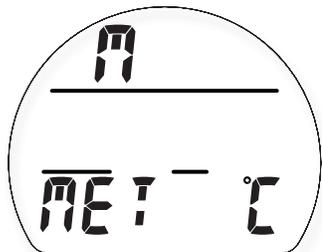
SAFETY STOP LEAD-IN

ON
5 3 MIN
m STOP
SAFE

next item in
Utility Menu
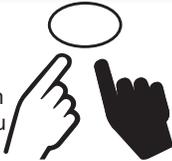
access
Set Safety
Stop ON/OFF

SET SAFE STOP ON/OFF

OFF ———— ON or OFF
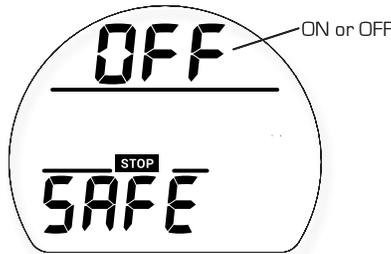
STOP
SAFE
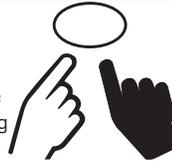
toggle
setting

save
setting

**if OFF: save and procede to next item in the
        Utility Menu**
if ON: proceed to Set Stop Time

SET STOP TIME

ON
5 3 MIN
m STOP
SAFE

3 or 5 min

[3, 4, 5; 6 m]
or [10, 15; 20 ft]
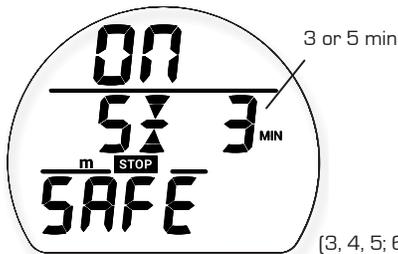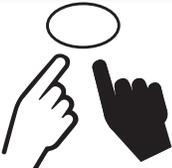
toggle
setting

save
setting

SET STOP DEPTH

ON
5 3 MIN
m STOP
SAFE

advance
setting
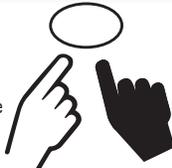
save
setting

6. CF (Conservative Factor)
The CF feature can be set ON or OFF.

CF LEAD-IN

OFF
CF
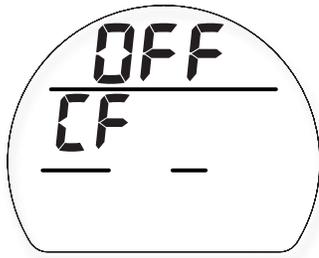
return to
Utility Menu
Lead-in
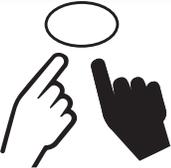
access
Set CF

SET CF

ON or OFF

OFF
CF

toggle
setting
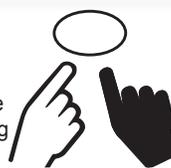
save setting,
return to Utility
Menu Lead-in

SET TIME
Holding the 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 LEAD-IN

SET
TIME
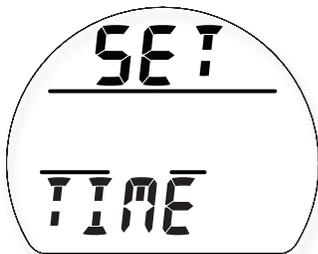
next item in
Main Menu

access
Set TIME
menu

DATE FORMAT LEAD-IN

(M - D) or (D - M)
M = month
D = day
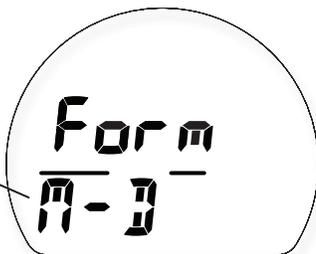
Form
M - D

next item in
Time Menu

access
Set Date
Format

SET DATE FORMAT

(M - D) or (D - M)
M = month
D = day
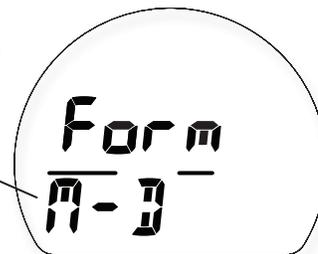
Form
M - D

toggle
setting
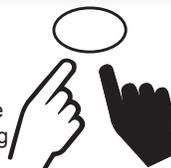
save
setting

HOUR FORMAT LEAD-IN

Form
HR - 12

12 or 24

next item in
Time Menu

access
Set Hour
Format

SET HOUR FORMAT

Form
HR - 12

12 or 24

toggle
setting

save
setting

TIME OF DAY LEAD-IN

08:49 AM

next item in
Time Menu

access
Set Time of
Day

SET TIME OF DAY

08:49 AM

set flashing digit,
save to proceed to
the next digit

advance
setpoint of
the flashing
digit

save
setting

DATE LEAD-IN

M - D
2017
12.10

or D - M depending
on selected format

year

month and day

next item in
Time Menu

access
Set Time of
Day

SET DATE

M - D
2017
12.10

set flashing digit, save
to proceed to the next
digit then exit

advance
setpoint of
the flashing
digit

save setting,
return to Time
Menu Lead-in

SET MODE

Set Mode allows you to choose between diVE (standard recreational dive), GAUGE, and FrEE (free diving) modes of operation.

NOTE: The i100 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 any Surface Mode.

SET MODE LEAD-IN

SET
MODE
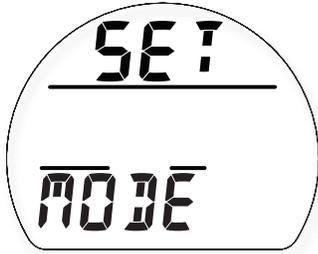
next item in Main Menu

access Set Mode

SET MODE
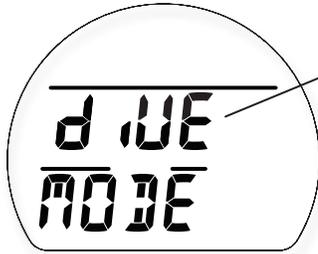
Choose between diVE, GAUGE, or FrEE.

d iVE
MODE

alternate setpoint

save setting, return to Set Mode Lead-in

TOT dIVES (HISTORY)

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

NOTE: Dives made in Free mode are not shown in History or the Log Mode. Free dive data is only visible using the PC Download software.

TOTAL DIVES

TOT
d iVES
9999

0 - 9999

next item in Main Menu

access Total Hours

TOTAL HOURS

TOT
HOURS
9999

to Extremes Display

EXTREMES

highest altitude recorded for a dive

lowest recorded water temperature

SEA
11C
65.3   76
m   MAX   DIVE-T
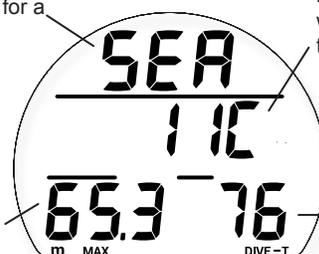
deepest recorded dive

longest recorded dive

back to Main Menu (Total Dives)

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 i100 requires factory service.

SERIAL NUMBER

revision #

serial #

return to
Dive Surf
Main
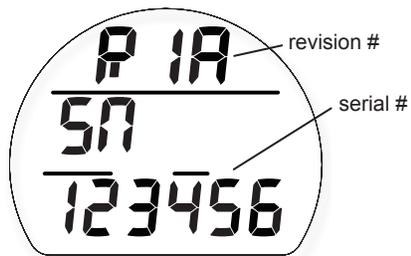
DIVE OPERATION

INITIATING A DIVE

With the i100 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.

NO DECO DIVE MAIN
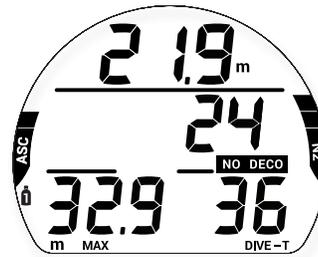
NOTE: If no button is pressed the i100 will revert to the Dive Main screen after 5 seconds.

Gas Menu
(only if Gas 2 is set ON)
ALT 1
ALT 2 (only if Nitrox dive)
Deep Stop Preview
back to Main

to access
Gas Menu
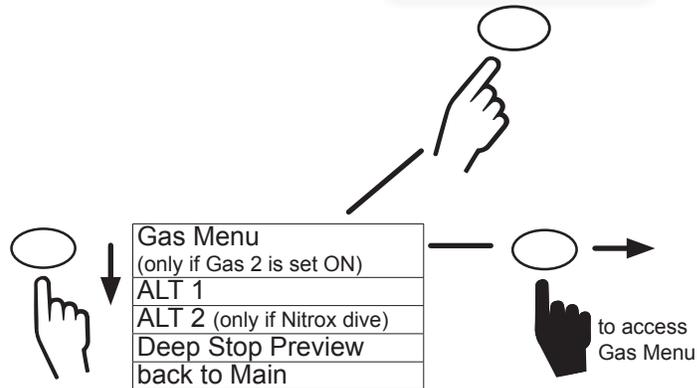
NO DECO DIVE MAIN

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 i100 take time to familiarize yourself with both normal and alarm conditions of operation.**

depth

Dive Time Remaining
0 - 99 min, all times greater than 99 display as 99
(NO DECO or O2 MIN depending on which is the limiting factor)

ASC bar graph

N2 bar graph

Gas #

max depth

elapsed dive time
0 - 999 min
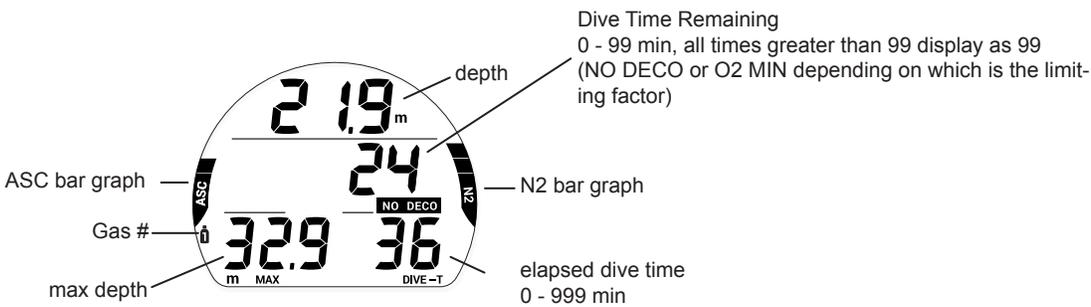
GAS MENU

The Gas Menu allows you to manually switch gases during the dive. Gas Menu Lead-in screen is bypassed if your i100 is set to Air or Gas 2 is set OFF. See the following section "Gas Switches" for further details on this feature.

DIVE ALT 1

This screen simply tells you the current time of day and ambient temperature.

10:24 AM
23℃

DIVE ALT 2

The ALT 2 screen displays information pertaining to nitrox; it is bypassed if the i100 is set for Air Mode.

% O$_2$ saturation
0 - 100

47 O2 SAT

current PO$_2$ value — 0.96   32 — FO$_2$ setting

PO2   FO2
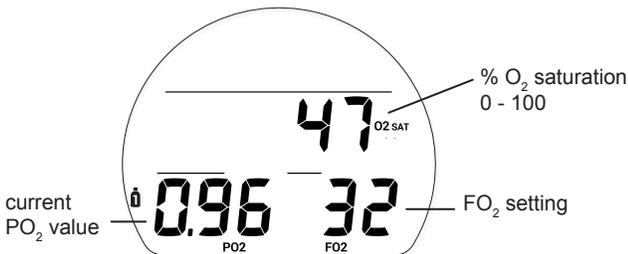
DEEP STOP PREVIEW

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 depth — 32.0 m
18-
m STOP
2:00 — stop time (min:sec)

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 0:00 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 button repeatedly to cycle through them. They are similar to the No Deco Main, Dive ALT 1, and Dive ALT 2 displays, respectively. See Deep Stop in the Dive Features chapter for further details.

NOTE: The i100 does not penalize for a missed Deep Stop.

stop depth — 18.2 m
18
m STOP
2:00 — remaining stop time (min:sec)
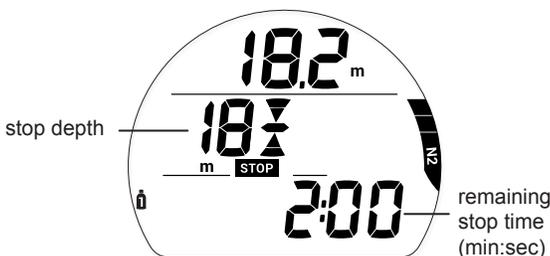
SAFETY STOP MAIN

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 Deco dive. The stop time will then countdown to 0:00. While Safety Stop Main is displayed, you may access up to 3 ALT displays by pressing the button repeatedly. They are similar to the No Deco Main, Dive ALT 1, and Dive ALT 2 displays, respectively. See Safety Stop in the Dive Features chapter for further details.

📘 **NOTE: The i100 does not penalize for a missed Safety Stop.**

stop depth

remaining
stop time
(min:sec)
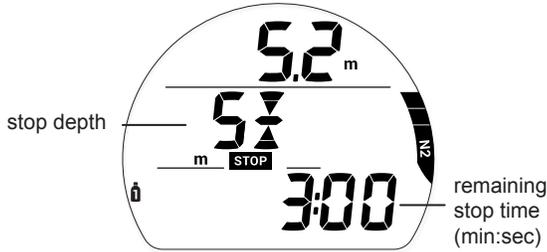
SURFACING

Upon ascending to 0.9 m (3 ft) the i100 transitions to Dive Surface mode. For the first 10 minutes after a dive the i100 will continue to display the maximum depth and elapsed dive time. Once the surface time reaches 10 minutes the i100 will display the standard Dive Surface screen.

📘 **NOTE: The i100 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 i100 memory.**

< 10 MIN ON SURFACE   **≥ 10 MIN ON SURFACE**

surface time
hr:min

max depth

dive time

FO$_2$ (% O$_2$)
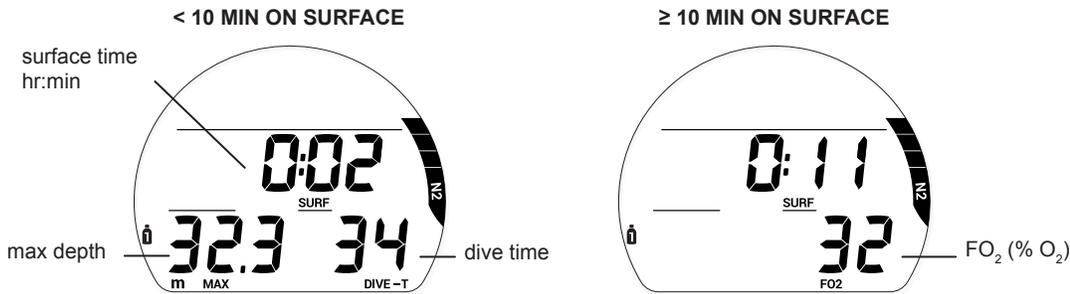
GAS SWITCHES

⚠ 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 i100 is no guarantee of avoiding decompression sickness.**
· **The i100 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 i100's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i100.**
· **If you exceed certain limits, the i100 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 active gas defaults to GAS 1 after 10 minutes on the surface.
· Gas switches can only be made when gas 2 is 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).

GAS MENU LEAD-IN

GAS MENU

current PO$_2$ value — 1.60   50 — %O$_2$ mix

to Alt 1   access Gas Menu

toggle between Gas 1 & 2   select gas*
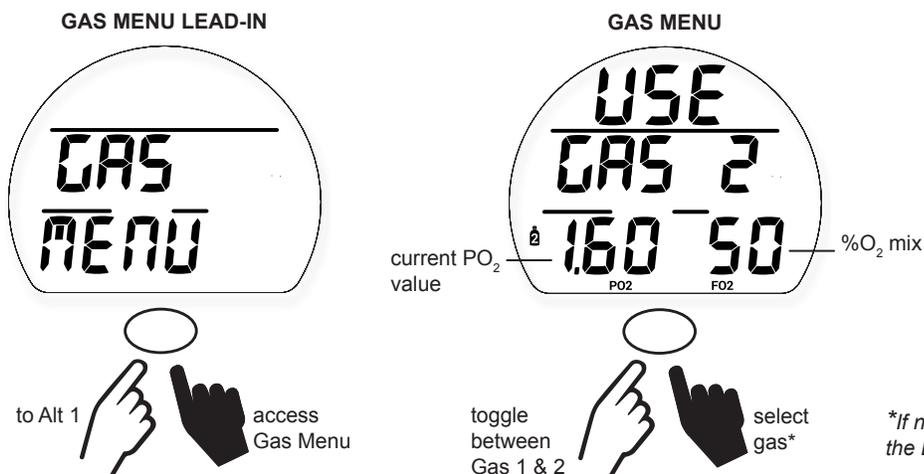
If no button is pressed the i100 will revert to the Dive Main screen after 10 seconds.

If the current PO_2 value of the gas is greater than 1.6, then a warning not to switch will display. The i100 will maintain the current gas without switching. The diver may override the i100 and force the gas switch by pressing the button during the "HI PO2" message.

⚠ **WARNING: Switching to gases with a PO_2 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.**

HIGH PO₂ WARNING

current PO_2 value —— HI $PO2$ 1.70 50 —— $\%O_2$ mix

PO2 F02

COMPLICATIONS

The preceding information has described stress free casual dive operations. Your new i100 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 i100.

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

> Once within 10 FT (3 M) below the required Stop Depth (stop zone), the Full Stop icon (both Arrows with Stop Bar) will be displayed solid. The Stop message will also flash for ten seconds, then remain 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.

stop time

stop depth

flashing during audible alarm, then solid

TTS 0 - 99, then - - if greater than 99 min
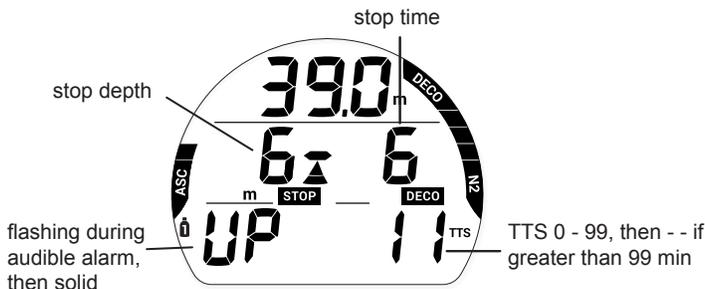
GAS SWITCH WARNING
If gas 2 is set on and the current gas is not the best gas when approaching the decompression stop zone, the i100 will warn you to switch gases. You must confirm the gas switch by holding the button for 2 seconds. If the gas switch is not confirmed within 30 seconds, no switch will be made. Though you may still manually switch gases at any time throughout the dive by using the Gas Switch menu.

stop depth

recommended gas, flashing

stop time

to Gas Menu

confirm gas switch
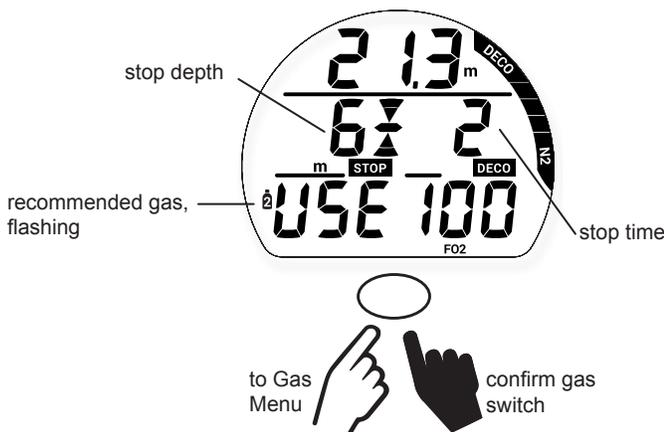
DECOMPRESSION STOP MAIN

Decompression Stop Main will display upon ascending to within 10 ft (3 m) below the Decompression Stop depth. The message STOP will flash for 10 seconds, then remain solid. Meanwhile, 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 button repeatedly to cycle through them. They are similar to the No Decompression Main, Dive ALT 1, and Dive ALT 2 displays, respectively.

stop time

stop depth

flashing for 10 seconds, then solid

TTS 0 - 99, then - - if greater than 99 min
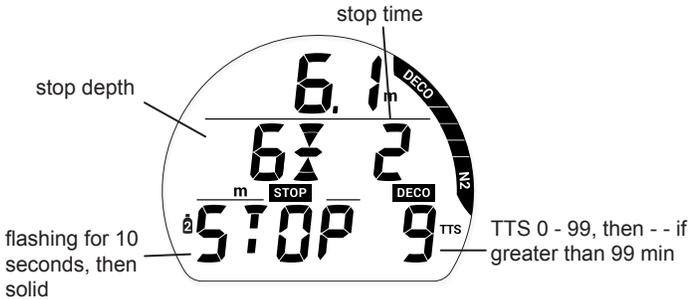
CV (CONDITIONAL VIOLATION)

Upon ascent above the required Deco 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. The full N2 Bar Graph, Down Arrow icon, and DOWN message will flash 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 Deco Stop before 5 minutes elapse, Decompression process 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 the required Stop Time.
> The added penalty (deco) time will have to be cleared in addition to the original required stop time.
> If the total stop time (original + penalty time) is cleared the i100 will revert to normal No Decompression status with no further penalty.
> If the violation is ignored for more than 5 minutes, the alarm will escalate to a Delayed Violation 1 Alarm, see the following section.
> If the diver surfaces while still in CV without clearing the require decompression stops, the i100 will enter Violation Gauge Mode 5 minutes after surfacing, see section VGM (Violation Gauge Mode) On the Surface.

down arrow flashing

N2 Bar Graph flashing
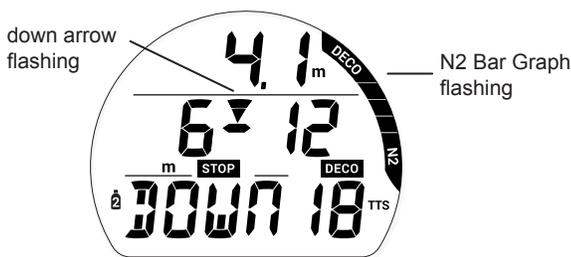
DV 1 (DELAYED VIOLATION 1)

If you remain shallower than a Deco Stop Depth for more than 5 minutes, operation will enter DV1* which is an escalation of the CV alarm 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 can be accessed and appear similar to Deco ALT screens.

*DV 1 appears similar to CV but your i100 will now lock into Violation Gauge Mode 5 minutes after surfacing. Unlike CV, it will do this whether the stop times are cleared or not.

> The Down Arrow icon and DOWN message will continue to flash until you descend below the required Stop Depth, then the full Stop icon will be on solid.
> If the DV1 status is ignored, the message VIO (Violation), Down Arrow icon, and SURF icon will be flashing once on the surface. After 5 minutes on the surface in DV1 mode, the unit will enter VGM (Violation Gauge Mode).

DV1 DIVE MAIN

time required
at missed stop

3.7 m

6 - 13

missed stop
depth

DOWN20 TTS

DV1 < 5 MIN ON SURFACE

VIO (Violation),
flashing

UIO

3 - 8

surface interval
showing 2 min

SI -0:02
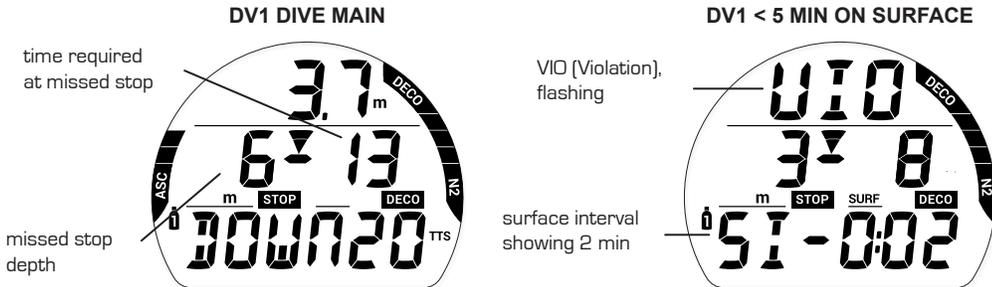
DV 2 (DELAYED VIOLATION 2)

If the calculated Deco 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.

> The 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 message and Stop icon (both Arrows with Stop Bar) will be displayed solid.
> 5 minutes after surfacing from a DV2 alarm the i100 will lock in Violation Gauge Mode.

18.2 m

18 - 4

STOP36 TTS

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/Gauge/Free Mode 100 M (330 FT) is the depth at which the i100 can properly perform calculations or provide accurate display information.

Upon ascending above the maximum functional depth, current depth will be restored, however, max depth will continue to be displayed as dashes for the remainder of that dive. Then 5 minutes after surfacing from a DV3 alarm the i100 will lock into Violation Gauge Mode. Also, the Log for that dive will display dashes for max depth.

DV3 DIVE

LOG, DV3 DIVE

flashing
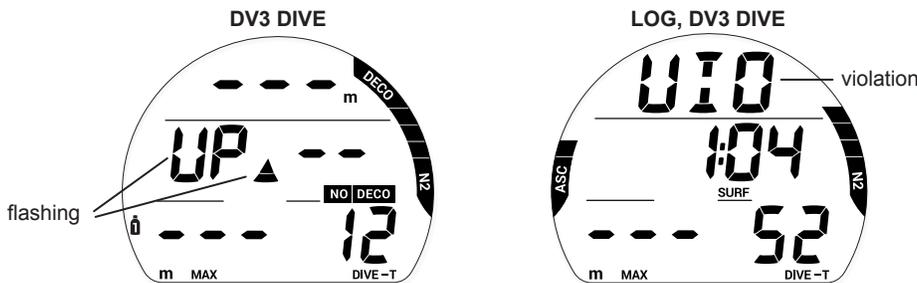
violation

VGM (VIOLATION GAUGE MODE) DURING A DIVE

During Dive mode dives, operation will enter VGM when Deco requires a Stop Depth greater than 21 m (70 ft). It will also enter VGM if Deco is activated during a dive in Free mode, described later. Operation would then continue in VGM during the remainder of that dive and for 24 hours after surfacing. VGM turns the i100 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 VIO (violation) and Up Arrow icon will flash. After the audible alarm becomes silent, the NO DECO and N2 Bar Graph will be removed from the display.

VGM DURING AUDIBLE ALARM

flashing

flashing

VGM AFTER AUDIBLE ALARM
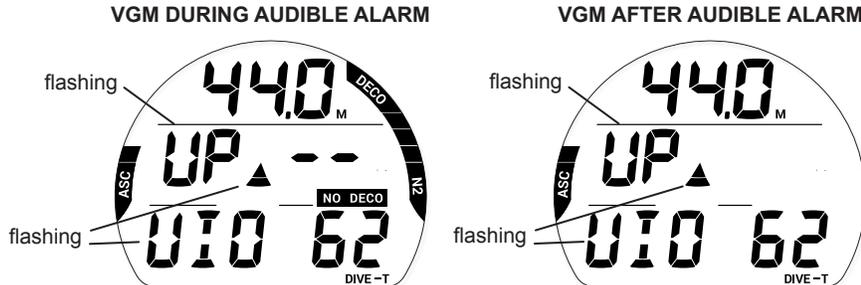
flashing

flashing

VGM (VIOLATION GAUGE MODE) ON THE SURFACE

Upon surfacing during VGM, the VGM Dive Main will remain on display for 10 minutes with Surface Interval time displayed with the SURF icon flashing. The graphic VIO will also still be displayed flashing. Operation will also enter Surface VGM 5 minutes after surfacing from a dive in which a Delayed Violation 1, 2, or 3 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, SAT (Desat), and FREE Mode features/screens.
> The FLY countdown indicates time remaining before normal operation can resume with full features and functions.

VGM SURFACE < 10 MIN

flashing

VGM SURFACE > 10 MIN
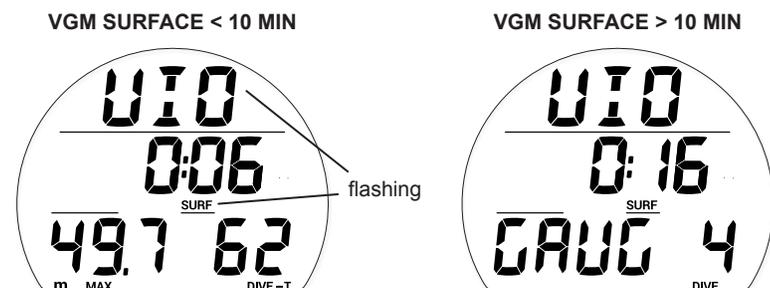
HIGH PO$_2$

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

Alarm

If PO$_2$ 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 PO$_2$ decreases below the alarm set point. After the audible alarm is silenced, the PO$_2$ will alternate with max depth.

DURING AUDIBLE ALARM

flashing

AFTER AUDIBLE ALARM

flashing
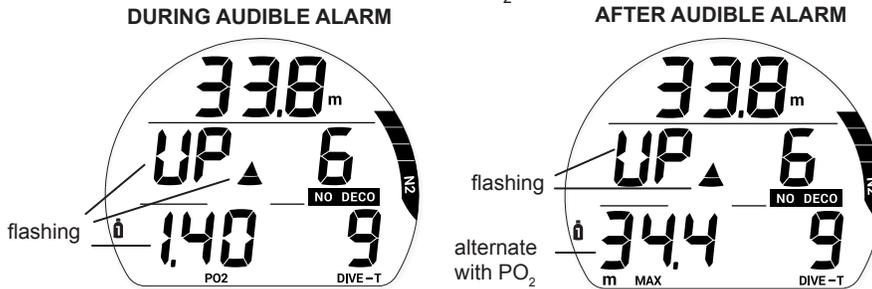
alternate with PO$_2$

PO$_2$ During Deco

The PO$_2$ alarm setting does not apply when in Deco. If PO$_2$ reaches 1.60 while at a Deco Stop, the PO$_2$ value (1.60) with icon will alternate with STOP message once each minute*.

*PO$_2$ on for 10 seconds, Deco Stop Depth/Time on for 50 seconds until PO$_2$ decreases below 1.60, then PO$_2$ will not be displayed.

alternate with STOP
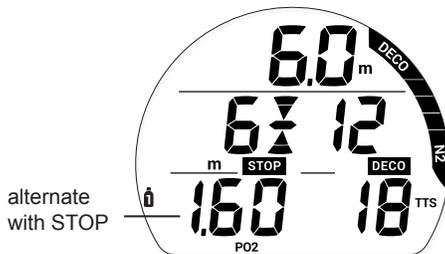
HIGH O2 SAT (OXYGEN SATURATION)

Warning >> at 80 to 99% (240 OTU)
Alarm >> at 100% (300 OTU)

Warning

When O$_2$ 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.
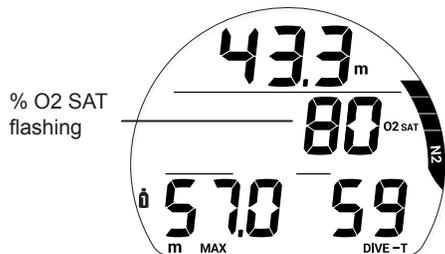
% O2 SAT flashing

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.
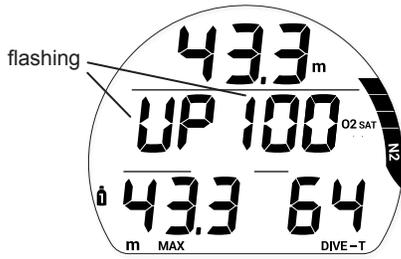
flashing

Warning During Deco

When O2 SAT reaches the Warning Level, the audible alarm sounds and the O2 SAT value will flash in the middle of the screen. The Stop Depth and Stop Time moves to the lower portion of the screen. When the audible alarm is silenced, the standard Deco Dive screen is restored with max depth and TTS (Time To Surface) restored.

% O2 SAT flashing

required stop depth

required stop time
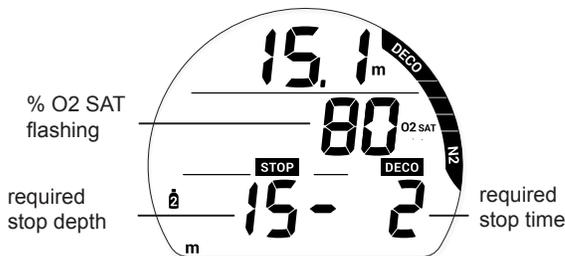
Alarm During Deco

If O2 SAT reaches the Alarm level, the audible alarm sounds and the O2 SAT value will flash in the middle of the screen. The Stop Depth and Stop Time moves to the lower portion of the screen. When the audible alarm is silenced, the message MAX O2 SAT (100% O2 SAT) will flash (in place of max depth and TTS) until on the surface.

DURING AUDIBLE ALARM

% O2 SAT flashing

required stop depth

required stop time

AFTER AUDIBLE ALARM

required stop depth

required stop time

flashing
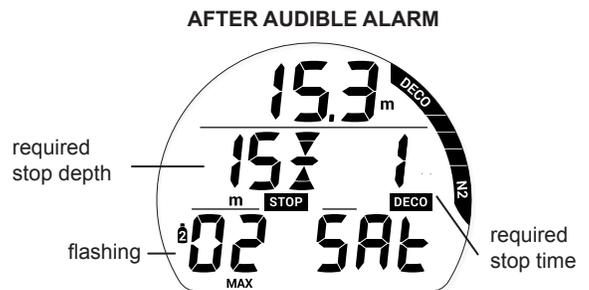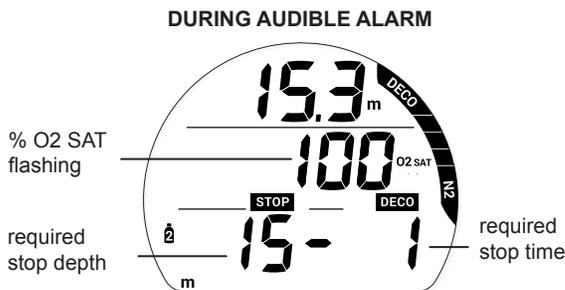
Alarm On Surface

Upon surfacing, the Dive Surf Main screen is displayed for 10 minutes with access to the Dive ALT screens are 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 VGM (if Violation) or SURF time.

• If you surface due to 100% O2 SAT without completing the Deco 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.

SURFACE < 10 MIN,
100% O2 SAT

% O2 SAT
flashing

100 O2 SAT

55.5   48
m   MAX   DIVE-T

SURFACE > 10 MIN,
VGM TRIGGERED

UIO
0:12
SURF
32
FO2

alternating with
% O2 SAT
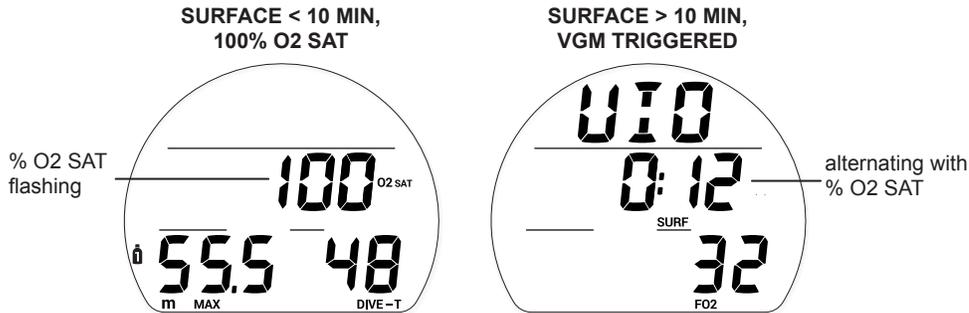
GAUGE MODE

ON THE SURFACE BEFORE A DIVE

There are two main 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 or equal to 10 min. The second screen displays only during the first ten minutes after a dive.
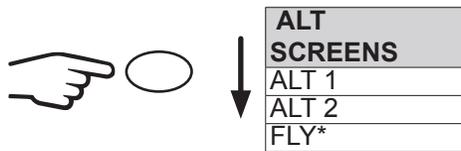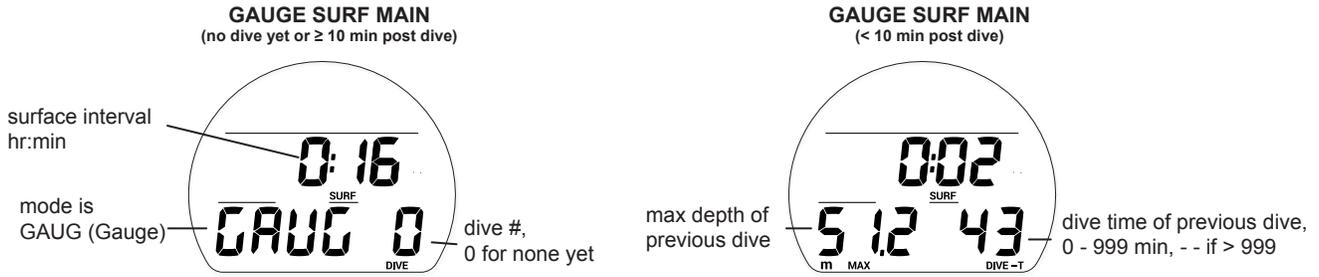
GAUGE SURF MAIN
(no dive yet or ≥ 10 min post dive)

surface interval
hr:min

mode is
GAUG (Gauge)

0:16
SURF
GAUG 0
DIVE

dive #,
0 for none yet

GAUGE SURF MAIN
(< 10 min post dive)

max depth of
previous dive

0:02
SURF
51.2 43
m MAX   DIVE-T

dive time of previous dive,
0 - 999 min, - - if > 999

ALT SCREENS
ALT 1
ALT 2
FLY*

NOTE: If no button is pressed the i100 will revert to the Gauge Surface Main screen after 5 seconds.

bypassed if no previous dive

0:16
SURF
GAUG 0
DIVE

to access
Main Menu

MAIN MENU
LOG
SET AL
SET UTIL
SET TIME
SET MODE
TOT diVES
SN

to Select
an option

NOTE: Within the Main Menu and settings screens the i100 will revert to the Gauge Surface Main screen after 30 seconds of inactivity.

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 a more detailed description of these items.

GAUGE SURF MAIN MENU

To view i100 logs, change settings, or switch modes you must navigate through the Surf Main Menu. Enter the menu by holding the button for 2 seconds. When you reach the end of the menu the i100 will return to the Gauge Surface Main screen. Some screens simply display data. While other screens are lead-ins to sub menus and settings. Hold the button for 2 seconds to choose menus or options from the Main Menu when available.

INITIATING A DIVE

With the i100 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
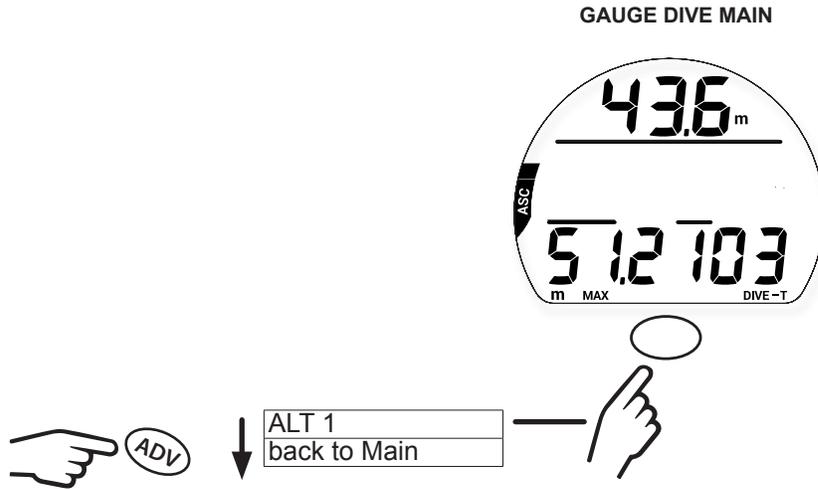
ALT 1
back to Main

GAUGE DIVE MAIN

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

depth
ASC bar graph
max depth
elapsed dive time
0 - 999 min
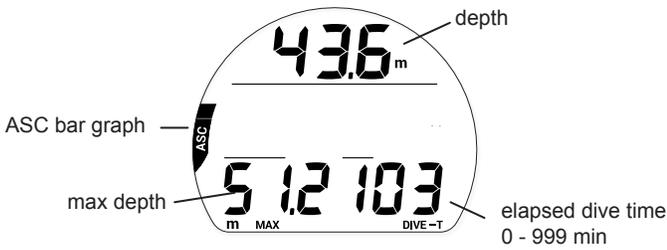
GAUGE DIVE ALT 1

This screen simply tells you the 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/Max Depth will only indicate dashes signifying that you are Too Deep.

The maximum functional depth Dive/Gauge/Free Mode 100 M (330 FT) is the depth at which the i100 buutons 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, however, max depth will continue to be displayed as dashes for the remainder of that dive. The Log for that dive will also display dashes for max depth.

DV3 GAUGE

LOG, DV3 GAUGE
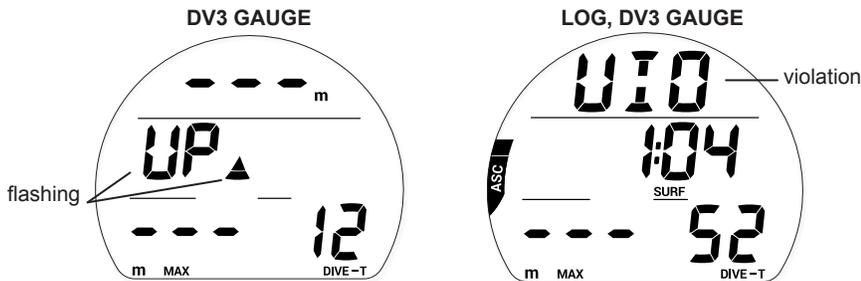
FREE MODE

FREE DIVE MODE DETAILS

- Although breathing apparatus is not utilized for free dive activities, nitrogen tissue loading remains a factor. Nitrogen loading is calculated based upon a fixed FO_2 of Air.
- Since a user has the option of alternating between SCUBA and free dive activities within a 24 hour period, nitrogen calculations and the displayed value of No Deco Dive Time Remaining are carried over from one operating mode to the other, which permits the user to maintain awareness of nitrogen absorption and off-gassing status.
- The mathematical models currently used in the i100 are based on no decompression/decompression multilevel repetitive dive schedules.
- These algorithms do not take into account the physiological changes associated with the high pressures that competitive type free diving can expose a diver to.

⚠ WARNINGS:

- **Ensure that you know which Operating Mode is selected (DIVE, GAUGE, or FREE) prior to commencing any dive.**
- **Conducting free dives within a 24 hour period after conducting SCUBA dives, combined with the effects of multiple rapid free dive ascents, increases your risk of decompression sickness. Such activities may result in accelerated entry into decompression which could cause serious injury or death.**
- **Combining competitive type free dive activities that involve multiple descents/ascents with activities utilizing SCUBA during the same 24 hour period is not recommended. Presently, there is no data relating to such activities.**
- **It is highly recommended that anyone planning to become involved in competitive type free dive activities obtain proper instruction and training from a recognized free diving trainer. It is imperative that the physiological affects be understood and the diver is physically prepared.**
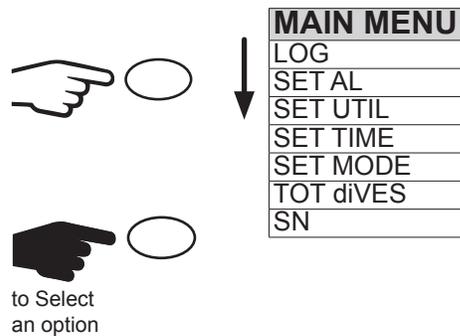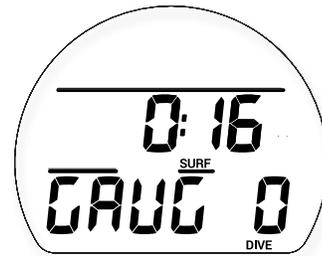
ON THE SURFACE BEFORE A DIVE

There are two main Free Surface Main screens. The first version displays when there have been no dives yet or the surface interval after a dive has been greater than 1 min. The second version displays only during the first minute after a free dive.
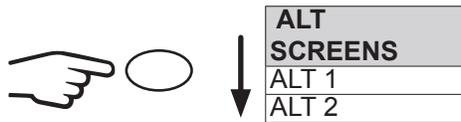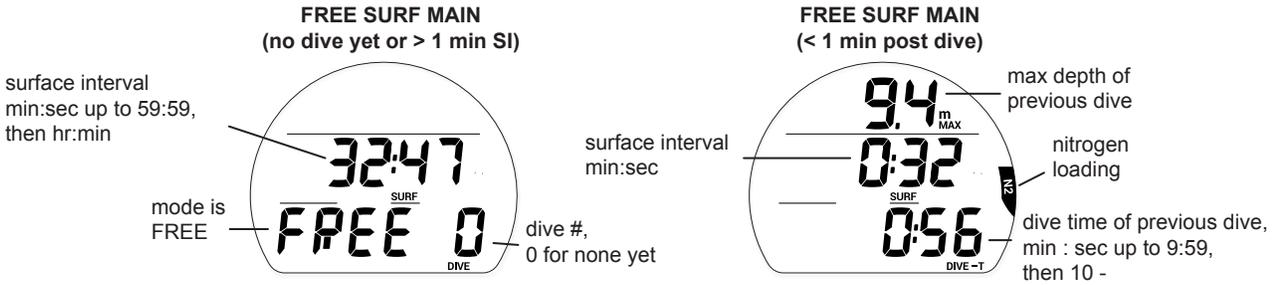
FREE SURF MAIN
(no dive yet or > 1 min SI)

surface interval min:sec up to 59:59, then hr:min

32:47
SURF
FREE 0
DIVE

mode is FREE

dive #, 0 for none yet

FREE SURF MAIN
(< 1 min post dive)

9.4 m MAX
0:32
SURF
0:56
DIVE-T
N2

max depth of previous dive

surface interval min:sec

nitrogen loading

dive time of previous dive, min : sec up to 9:59, then 10 -

ALT SCREENS
ALT 1
ALT 2

32:47
SURF
FREE 0
DIVE

to access Main Menu

📧 **NOTE: If no button is pressed the i100 will revert to the Free Surface Main screen after 5 seconds.**

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.

3 previous dives

15.5 m MAX
2:03
LASt 3
DIVE

maximum depth

elapsed dive time min:sec

dive #, showing 3 previous dives

no previous dives

- - - m MAX
-:- -
LASt 0
DIVE

ALT 2

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

11:56 AM
20C
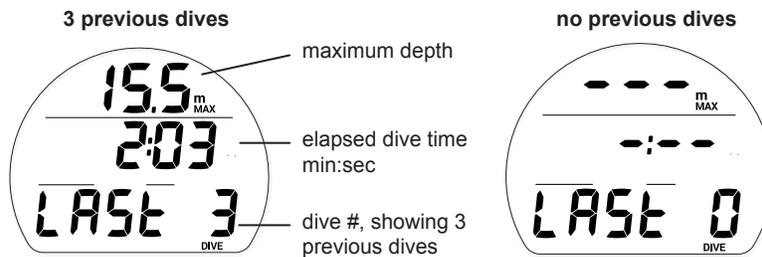
elevation
(EL2 - EL7, blank if sea level)

time

temp.

FREE SURF MAIN MENU

To change settings, or switch modes you must navigate through the Surf Main Menu. Enter the menu by holding the button for 2 seconds. Scroll through the menu by repeatedly pressing the button. When you reach the end of the menu the i100 will return to the Free Surface Main screen. Hold the button for 2 seconds 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.

📖 **NOTE: Free Dive mode has no Log feature in the menu. Free Dive information is only available using the PC Download software.**
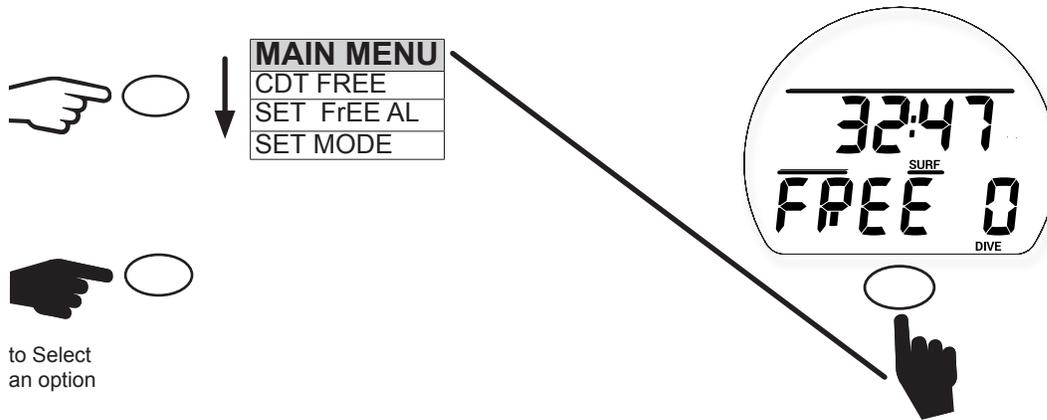
to Select an option

📖 **NOTE: Within the menu and settings screens the i100 will revert to the Free Surface Main screen after 30 seconds of inactivity.**

CDT FREE (COUNTDOWN TIMER)

While on the surface, the CDT can be set, started, and stopped within this sub menu. Once set and started, it continues to run in the background when a dive is started and becomes available as an ALT display. When a set Countdown Time reaches 0:00, the audible alarm will sound. During which time, the graphic CDT will be flashed on the Surface or Dive Main screens until the audible alarm is silent.

CDT LEAD-IN

next item in Main Menu   access CDT Status

CDT STATUS

min:sec

toggle setpoint OFF, ON, SET

Set to:
- OFF > return to Main Menu
- ON > return to Main Menu
- SET > go to Set CDT
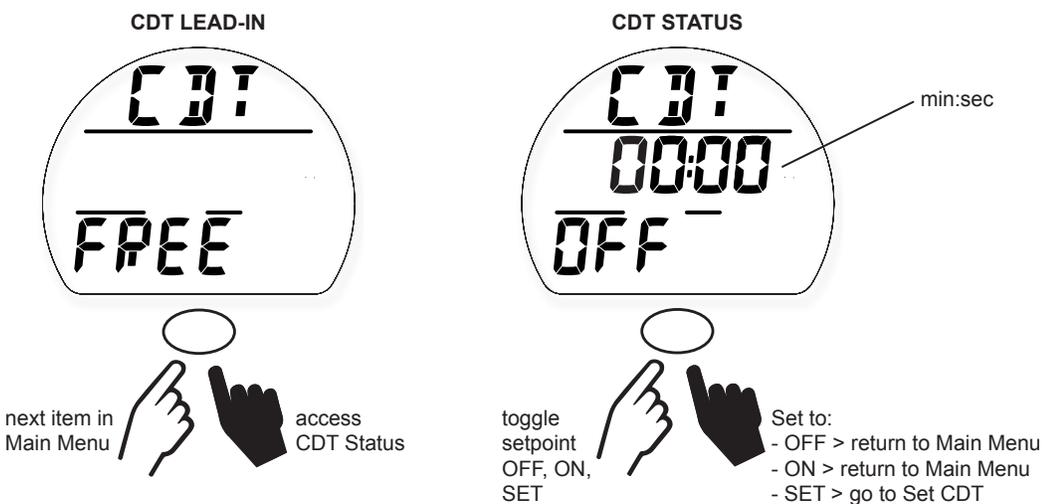
SET CDT

set flashing digit, save to proceed to the next digit

CDT
10:00
TIME

advance setpoint of the flashing digit
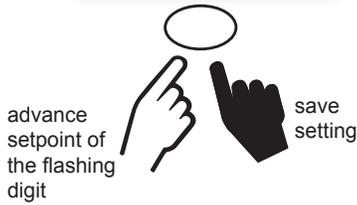
save setting

SET FREE AL (ALARMS)

Holding the button while viewing the Set Free Alarm Lead-in screen accesses the Set Free Alarm sub menu. Within this menu you can customize the following two alarm settings.

SET FREE AL LEAD-IN

SET
FrEE
AL

next item in Main Menu

access Set Free Alarm Menu
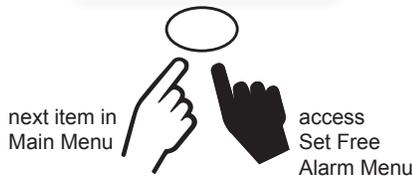
1. EDT (Elapsed Dive Time) Alarm

Factory set for a fixed 30 seconds, the EDT alarm sounds the audible alarm every 30 seconds while underwater in Free Dive Mode.

EDT ALARM LEAD-IN

OFF
:30
EDT

next item in Main Menu

access Set EDT Alarm

SET EDT ALARM

OFF ——— ON or OFF
:30
EDT

toggle setpoint

save setting
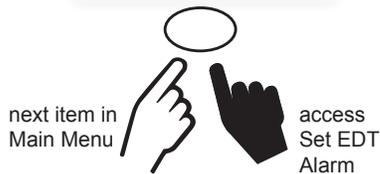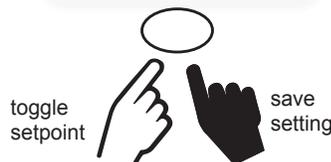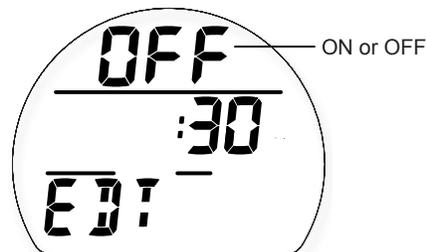
2. dEPtH AL (ALARM) 1-3

There are 3 Free DA's (Depth Alarms) that can be set at progressively deeper depths, in intervals of 1 m (10 ft).

📋 **NOTE: Each successive DA can only be set deeper than the DA that proceeds it. For example: If DA 1 is set for 10 m then DA 2 settings start at 11 m.**

DEPTH AL LEAD-IN

SET DEPTH ALARM 1

OFF, SET,
or last depth saved
10 - 100 m
(30 - 330 ft), solid

depth alarm #

advance setting | access Set Depth Alarm 1

toggle setting | save setting

if OFF: save and return to Set Free Alarm Lead-in
if SET: proceed to Set Depth Value
if last depth setting: save and proceed to DEPTH AL 2 Lead-in

SET DEPTH VALUE (DA1)

10 - 100 m (30 - 330 ft),
active digit flashing
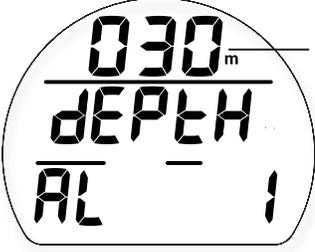
📋 **NOTE: DA 2 and DA 3 are set the same way as DA 1.**

increase value | save digit, proceed to Set DA2 after last digit

SET MODE

Set Mode operates the same way as previously described for Dive mode, see the Dive Surface Mode chapter.

SHARED SETTINGS

To change items that Free Mode shares with Dive Mode, access the Dive Main Menu, then SET UTIL, then -
> H2O ACT
> Units
> CF (Conservative Factor)

INITIATING A DIVE

With the i100 activated, a Free dive will commence upon descending to 1.5 m (5 ft) for at least 5 seconds. Below is a diagram to help you navigate Free Dive Mode functions.
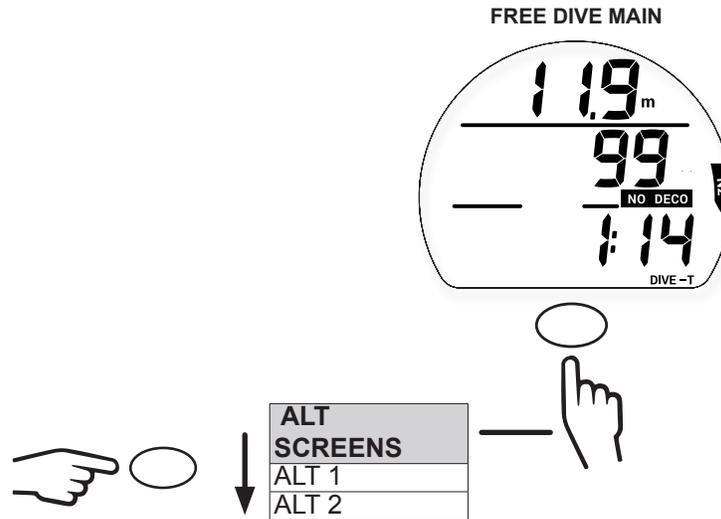
FREE DIVE MAIN

FREE DIVE MAIN

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

current depth

Dive Time Remaining
0 - 99 min, all times greater than 99 display as 99

N2 Bar Graph

elapsed dive time
min:sec
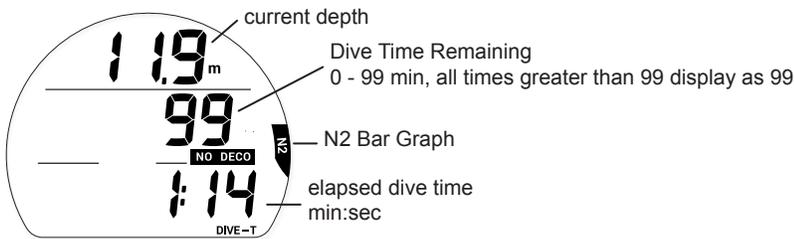
ALT 1

This screen displays the current status of the CDT (Countdown Timer). Pressing the button will start (ON) and stop (OFF) the CDT.

Countdown Timer
min:sec

ON/OFF

go to
ALT 2

toggle CDT
OFF/ON
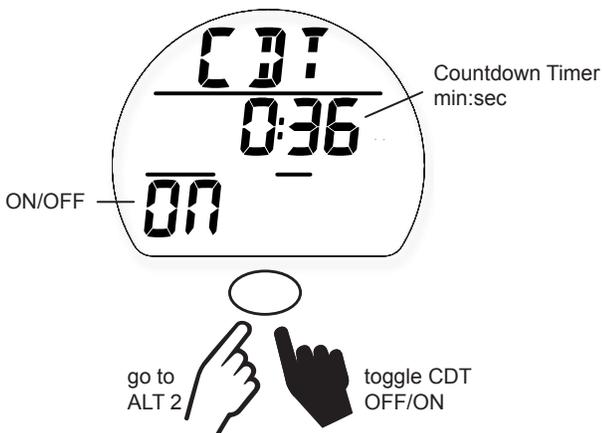
ALT 2
This screen displays the maximum dive depth, current time of day, and the temperature during the dive.

max depth — **30.0** m MAX

time — **10:38** AM

temperature — **20°C**
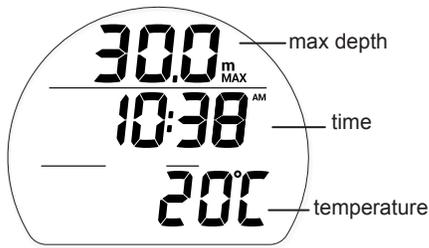
FREE DIVE ALARMS
Free Mode alarms, which are separate from Dive (or Gauge) alarms, sound either 1 or 3 times as 3 beeps. They cannot be manually acknowledged or silenced.

FREE CDT (COUNTDOWN TIMER) ALARM
When a set Countdown Time reaches 0:00, the audible alarm will sound. During which time, the graphic CDT will flash on the Free Dive Main screen.

8.6 m

99

NO DECO

flashing — **CDT 1:20**
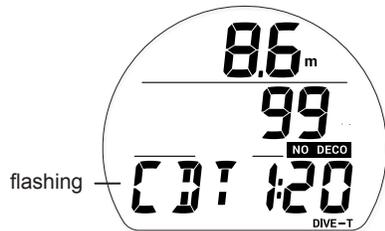
DIVE-T

FREE EDT (ELAPSED DIVE TIME) ALARM

When set ON, the EDT alarm activates every 30 seconds during a dive. The audible alarm will sound. During which time, the graphic EDT and time digits will flash on the Free Dive Main screen.

flashing — EDT — flashing
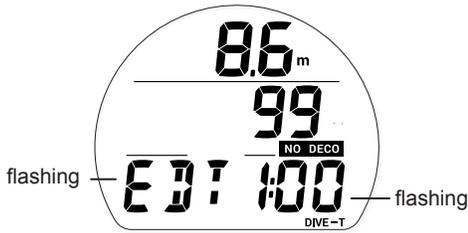
FREE DEPTH ALARMS

When set ON, the Depth alarms (1, 2, 3) activate at their respective set depths. The audible alarm will sound. During which time, the depth digits and the graphic dA 1 (2, 3) will flash on the Free Dive Main screen.

flashing

flashing
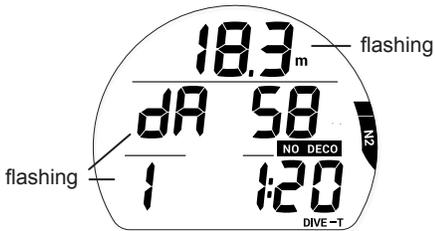
HIGH NITROGEN ALARMS

When nitrogen increases to the caution level (4 N2 Bar Graph segments), the N2 Alarm will sound. During which time, the N2 Bar Graph segments will flash on the Free Dive Main screen.

In the event that nitrogen continues to increase and reaches the Deco level, the VIO (violation) Alarm will sound. During which time, all 5 N2 Bar Graph segments, the UP message, Up Arrow icon, and the graphic VIO will flash. Additionally, the NO DECO will display 0 min.

When the audible alarm is silent, the N2 Bar Graph and NO DECO digits are removed. The graphic VIO, UP message, and Up Arrow icon flash until on the surface. Then the UP message and Up Arrow icon are removed.

The graphic VIO flashes until 1 minute elapses on the surface. Then it alternates with FREE and operation reverts to Violation Gauge Mode for 24 hours.

N2 ALARM

flashing

VIO ALARM (during audible alarm)

flashing

flashing

VIO ALARM (after audible alarm)

flashing

VIO < 1 MIN ON SURFACE

flashing

alternating with FREE

VIO > 1 MIN ON SURFACE
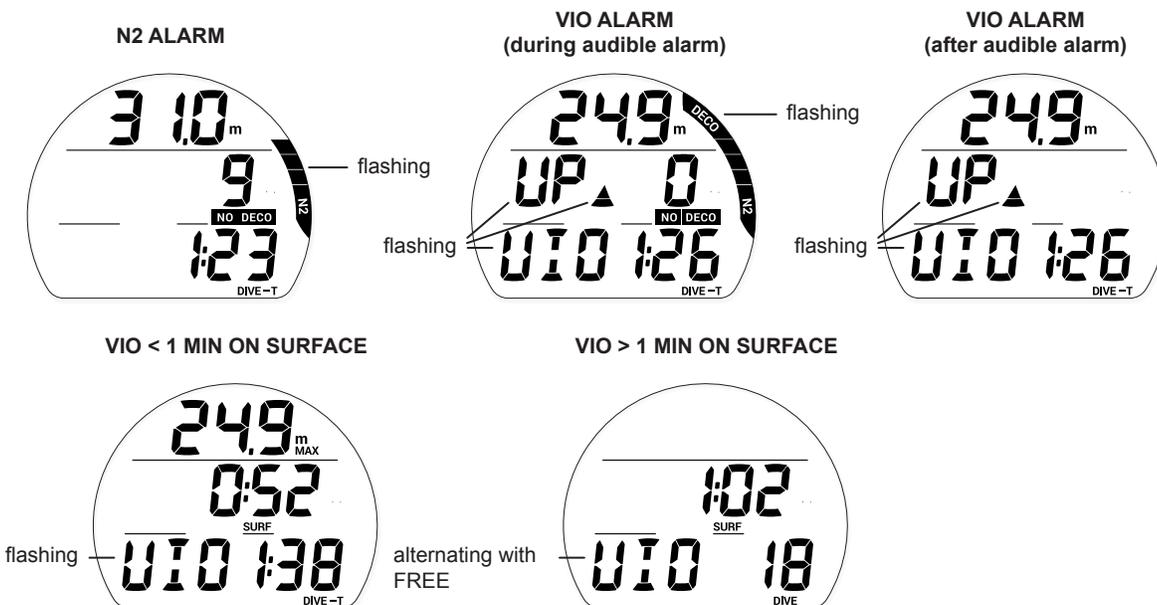
REFERENCE

PC INTERFACE

The i100 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 that is available as an optional accessory. 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 FO_2 and Mode settings must be entered using the i100 button controls.

Information available for retrieval* (download) from the i100 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.

FREE Mode dive information is only available using the PC Interface system.

The i100 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 i100. 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 i100.

Prior to attempting to download data from your i100 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.

PC COUNTDOWN

PC interface data port

depth sensor

PC

CD 1:59
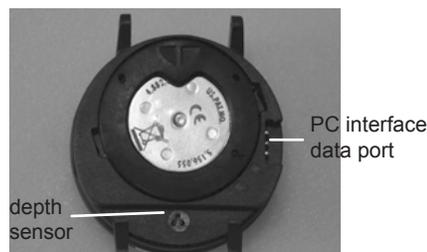
📖 **NOTE: The PC Countdown screen will not appear if the cable is attached upside down.**

CARE AND CLEANING

Protect your i100 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 i100 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 i100 under gently running fresh water. Towel dry before storing.
• Keep your i100 cool, dry, and protected during transport.

SERVICE

⚠️ **WARNING: At a minimum, annually check the altitude reading on the ALT 2 screen (p. 17, 65) and Pre-Dive Planner (p. 19, 64) for accuracy. If your i100 is ever out of calibration (incorrect elevation reading, incorrect No Deco 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 i100 to the USA factory:
• 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 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 i100's warranty.**

MODULE REMOVAL FROM A BOOT

If the module is in a console, bend the rubber console boot back to expose the edge of the module. If the boot is flexible enough to permit, you may bend it back far enough to scoop the module out with your finger. Otherwise, it may be necessary to insert a blunt screwdriver until the tip rests just underneath the module. DO NOT pry the module from the console! Slowly increase the pressure under the module by releasing the tension on the rubber boot. The module will slide up the screwdriver and exit the console.

If the module is in a wrist boot, it will be necessary to peel the lips of the boot downward off the module while applying pressure from underneath, working it out slowly.

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.
• While applying steady inward pressure on the clear battery cover, rotate the cover ring clockwise 10 degrees (using a battery key).
• Lift the ring up and away from the housing, or turn the module over to allow the ring to drop out into your hand.
• Remove the battery cover.

Battery Removal
• Remove the retaining bar located across the lower portion of the battery.
• Remove the cover O-ring. DO NOT use tools.
• Slide the battery up and out of the battery compartment.
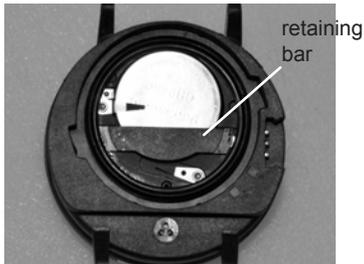
Inspection
• Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
• Inspect the button, lens, and housing to ensure they are not cracked or damaged.

⚠ **WARNING: If damage or corrosion is found, return your i100 to an authorized Aqua Lung dealer, and DO NOT attempt to use it until it has received factory prescribed service.**

Battery Installation
• Slide a new 3 volt type CR2450 lithium battery, (-) negative side down into the battery compartment. Slide it in from the right side and ensure that it slides under the contact clip on the left rim.
• Orient the retaining bar across the lower portion of the battery and carefully push it down into position.
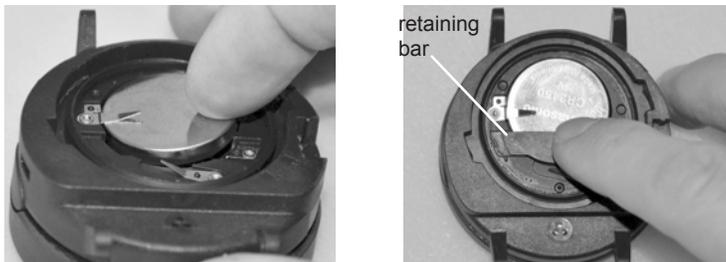
Battery Cover and Retaining Ring Installation
• Lightly lubricate a new cover O-ring with silicone grease and place it on the inner rim of the battery cover. Ensure that it is evenly seated.

⚠ **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.**

• Slide the cover ring, top portion first (small opening), onto your thumb.
• Carefully place the cover (with O-ring) into position on the rim of the battery compartment, then press it completely and evenly down into place with your same thumb.
• Maintain the cover securely in place and, using your other hand, slide the cover ring off your thumb and into position around the battery compartment. The tabs on the ring fit down into the slots located at the 2 and 9 o'clock positions.
• Using your fingers, turn the ring counter clockwise 5 degrees until the tabs engage, then tighten it 5 more degrees by turning it counter clockwise with the aide of a battery key.
• While tightening the retaining ring, exert continuous inward pressure on it until it is secured in the proper position. A small key symbol located on the ring should be aligned with the locked symbol located on the housing.
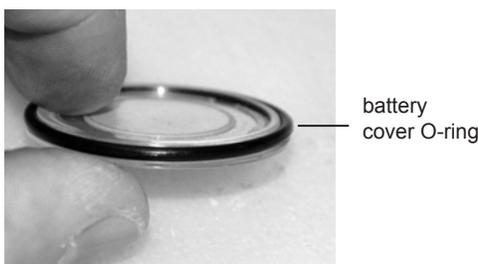
Inspection
• Activate the unit and watch carefully as it performs a full diagnostic and battery check, and enters Surface mode.
• Observe the LCD display to ensure it is consistently clear and sharp in contrast throughout the screen.

⚠ **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.**

RETURNING THE MODULE TO A BOOT
• If the boot was fitted with a spacer and it was previously removed, replace the spacer into the boot.
• Orient the module over the opening in the boot. Then dip the bottom edge into it while pressing the top edge with the palm of your hand. Stop pressing when the bottom edge of the module has just entered the boot.
• Correct the alignment of the module as needed so that it is straight.
• While watching the alignment, press the module completely into place with your thumbs until it snaps into place.

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 foot) 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 meters (3,001 to 14,000 feet), the i100 automatically adjusts to these conditions providing corrected depth, and reduced NO DECO and O2 MIN (O_2 saturation) times at intervals of 305 meters (1,000 feet).
• When the Conservative Factor is set ON, NDLs are calculated based upon the next higher 915 meter (3,000 foot) altitude. At sea level, calculations are based upon an altitude of 1828.8 m (6,000 feet). All adjustments for altitudes greater than 3,355 meters (11,000 feet) are then made to allowable dive times for 4,270 meters (14,000 feet).
• The i100 will not function as a dive computer above 4,270 meters (14,000 feet).

TECHNICAL DATA

NO DECO TIME LIMITS

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

Altitude (meters) Depth (M)	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
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

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

Altitude (feet) Depth (FT)	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
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

64   Doc. 12-7876-r04 (10/11/17)

ALTITUDE LEVELS

DISPLAY	RANGE: METERS (FEET)
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)

PO2 (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
• Free Dive Computer

DIVE COMPUTER PERFORMANCE
• Bühlmann ZHL-16C based Z+ algorithm
• Decompression in agreement with Bühlmann ZHL-16C
• No Deco Deep Stops - Morroni, Bennett
• Deco 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, FREE displays #1 to 99 (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 meters (14,000 feet) 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 meters (3,001 feet) elevation and every 305 meters (1,000 feet) higher.

Power:
• (1) 3 vdc, 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 immersion in water (if H2O ACTis 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 meters (14,000 feet)

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   segments
• No Deco Normal Zone   1 to 3
• No Deco Caution Zone   4
• Decompression Zone   5 (all)

ASC (Ascent) Rate

	segments	MPM	FPM
• 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:	**Range:**	**Resolution:**
• Dive Number	0 to 24	1
• Depth	0 to 99.9 M (330 FT)	.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 Deco Deep Stop Time	2:00 to 0:00 min:sec	1 second
• No Deco Safety Stop Time	5:00 to 0:00 min:sec	1 second
• Deco Stop Time	0 to 999 min	1 minute
• DIVE/GAUGE Elapsed Dive Time	0 to 999 min	1 minute
• Free Elapsed Dive Time	0:00 to 9:59 min:sec	1 second
• Surface Interval Time	0:00 to 23:59 hr:min	1 minute
• Free Surface Interval Time	0:00 to 59:59 min:sec,	1 second
	then 1:00 to 23:59 hr:min	1 minute
• Time to Fly & Desaturate	23:50 to 0:00 hr:min*	1 minute
	starting 10 min after the dive	
• Temperature	-18 to 60°C (0 to 99°F)	1°
• Time of Day	0:00 to 23:59 hr:min	1 minute
• Free Countdown Timer	59:59 to 0:00 min:sec	1 second
• Violation Countdown Timer	23:50 to 0:00 hr:min	1 minute

Max Functional Depth: **Limit:**
• DIVE/GAUGE/FREE   100 M (330 FT)

ABBREVIATIONS/TERMS

ACT = Activation
AL = Alarm
ALT = Alternate
ASC Bar Graph = Ascent Rate
ATA = Standard Atmosphere (unit)
AUD = Audible Alarm
BATT = Battery
CDT = Countdown Timer
CF = Conservative
DA/dA = Depth Alarm (Free Dive)
DCS = Decompression Sickness
DECO = Decompression
DFLT = Default
DS = Deep Stop
DTR = Dive Time Remaining
DURA = Duration (backlight)
EDT = Elapsed Dive Time
EL = Elevation (altitude)
FLY = Time To Fly
FO2 = Fraction of Oxygen (%)
FORM = Format (date, time)
FREE = Free Dive Mode
FT = Feet (depth)
GAU/GAUG/GAUGE = Digital Gauge Dive Mode
H2O = Water
HIST = History
IMP = Imperial (measure)
LAST = Previous (dive)

LO = Low (battery)
M = Meters (depth)
MET = Metric
MFD = Maximum Functional Depth (equipment limits)
MIN = Minutes (time)
MOD = Maximum Operating Depth
N2 = Nitrogen
N2 Bar Graph = Tissue Loading Bar Graph
NDL = No Deco Limit
NO DECO = No Deco DTR
O2 = Oxygen
O2 MIN = Oxygen Time Remaining (DTR)
O2 SAT = Oxygen Saturation
PC = Personal Computer (download)
PLAN = Dive Planner
PO2 = Partial Pressure of O2 (ATA)
SAFE = Safety (stop)
SAT = Desaturation Time
SEA = Sea Level
SEC = Seconds (time)
SLO = Slow Down
SN = Serial Number
SR = Sample Rate
SS = Safety Stop
SURF = Surface
TOT = Total
TTS = Time To Surface
VIO/VIOL = Violation

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