



• TABLE OF CONTENTS

ICON HD	3
CHARACTERISTICS OF ICON HD	3
IMPORTANT WARNINGS	3
RESPONSIBLE DIVING PRACTICES	3
HOW ICON HD WORKS	4
DURING THE DIVE WITH ICON HD	4
AIR MODE	5
PREDIVE PHASE	5
DIVE PHASE: "NO-DECOMPRESSION" DIVE	5
BACKLIGHTING	6
DIVE PHASE: "DECOMPRESSION STOP" DIVE	6
OMITTED STOP	7
SURFACING - AIR	9
SURFACE MODE - AIR	9
NITROX	9
CHECKING THE GENERAL DIVE PARAMETERS	9
Effects on Central Nervous System	9
DIVE - BOTTOM TIME (GAUGE)	12
PREDIVE-Bottom Time	12
DIVE - Bottom Time	12
BOTTOM TIME WITH BEHAVIOR ERROR	12
COMPASS MODE	12
ON THE SURFACE	12
DURING THE DIVE	12
MAPS	13
VIEWING MAP ON THE SURFACE	13
LOADING MAP FOR VIEWING DURING THE DIVE	13
VIEW MAP DURING THE DIVE	13
PHOTO	13
VIEWING PHOTOS	13
BATTERY	13
RECHARGING THE BATTERY	13
CHECK THE BATTERY POWER LEVEL	14
SETTINGS MENU	14
Computer	14
Dive	15
SETTING THE CHANGE OF MIX	15
LOGBOOK	17
LOGBOOK - Digital View	17
PLANNING	17
PLANNING: SCROLLING OF NO DECOMPRESSION LIMITS	17
PC MODE	17
HOW TO CONNECT ICON HD TO A PC	18
SOFTWARE UPGRADE	18
FAQ	18
MAINTENANCE	18
Replacing the battery	18
TECHNICAL/FUNCTIONAL CHARACTERISTICS	18
WARRANTY	19
WARRANTY EXCLUSIONS	19
HOW TO FIND THE PRODUCT SERIAL NUMBER	19
DISPOSAL OF THE DEVICE	19

• ICON HD

*Congratulations on your purchase of an **ICON HD**.*

ICON HD represents the cutting-edge in Mares technology, and was designed to ensure maximum safety, efficiency, reliability and durability over time. Simple and easy to use, it is ideal for all types of dives.

In this manual you will find all the instructions for its use.

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form without the written permission of Mares S.p.A.

Mares adopts a policy of continuing improvement, and therefore reserves the right to make changes and enhancements to any of the products described in this manual without notice.

Under no circumstances shall Mares be held responsible for any loss or damage sustained by third parties deriving from the use of this instrument.

CHARACTERISTICS OF ICON HD

ICON HD is a color-display Dive Computer and much, much more.

With **ICON HD**, you can:

- display your information digitally or graphically during your dive.
- have a clear indication at all times of the stops you need to make.
- display a map of the seabed during the dive.
- keep the compass active at all times, and usable on demand.
- store .jpg format files.
- instantly review the Logbook of your dives in both digital and graphic formats.
- recharge the **ICON HD** battery anywhere, even from your computer.

IMPORTANT WARNINGS

Before diving, make sure you have read and understood all parts of this manual.

WARNING

ICON HD is intended strictly for recreational and sport uses.

WARNING

In addition to the dive computer, also use a depth gauge, a submersible pressure gauge, a timer or watch, and dive tables.

WARNING

Never dive alone. **ICON HD** is not a replacement for a dive buddy.

WARNING

Do not dive if the readings on the instrument appear unusual or unclear.

WARNING

ICON HD must not be used in conditions that preclude its use (e.g.: low or no visibility, making it impossible to read the gauge).

WARNING

The dive computer cannot ensure against possible decompression sickness. The dive computer cannot take into account the physical conditions of the individual diver, which may vary from one day to the next. For your safety, have a general medical check-up before undertaking a dive.

WARNING

Always check the battery power level before starting the dive. Do not dive if the icon indicates that the battery is low. Recharge the battery. If this doesn't work, contact an authorized center to replace the battery.

WARNING

Do not fly within 24 hours of your last dive, and in any case wait until the **ICON HD** "no fly" warning disappears.

WARNING

Recreational divers should not dive deeper than 40 m (130 feet). Although this computer will continue to provide information for compressed-air dives deeper than 40 m (130 ft.), the risk of nitrogen narcosis and decompression sickness (DCS) is greatly increased; therefore this information should be treated as only approximate.

WARNING

Never dive to depths greater than 40 m (130 feet), and never take decompression dives with **ICON HD** unless you possess the specific certification (IANTD, NAUI, PADI, DSAT, PSA, SSI, TDI, etc.) for deep scuba diving to depths of more than 40 m (130 ft) and fully understand the risks and the skills that this type of dive requires. This type of dive can entail a greater risk of decompression sickness, even for the most qualified and expert divers, and regardless of the instrumentation or computer used. Divers attempting these types of dives must have completed a specialist course and gained the necessary experience. The safety of a dive can only be increased through adequate preparation and training. Mares therefore recommends using the dive computer only after having completed a specialist diver training course. Mares recommends scrupulous adherence to the simple rules of behavior listed in the next column.

RESPONSIBLE DIVING PRACTICES

- Always plan your dives in advance.
- Never exceed the limits of your skill and experience.
- Go to your deepest planned depth at the beginning of the dive.
- Check your computer frequently during the dive.
- Comply with the ascent rate indicated by the computer.
- Always do a safety stop between -6 and -3 meters (-20 and -10 feet) for at least 3 minutes during your final ascent.
- After any decompression stops, don't exceed the recommended ascent speed, 10 m/min (32 ft/min).
- Avoid yo-yo dives (repeatedly ascending and descending underwater).
- Avoid strenuous activity during the dive and for half an hour after surfacing.
- When diving in cold water or after an intense exertion, start ascending well before reaching the no-decompression limits.
- In the case of a decompression dive, prolong the decompression stop nearest the surface for safety.
- Repetitive dives should be separated by a surface interval of at least 1 hour.
- Your deepest dive should be the first one of the day.
- Avoid diving until the desaturation time deriving from the previous dive has elapsed.
- When doing repetitive dives for several consecutive days, take at least one day off from diving every week. In the case of decompression-stop diving, it is recommended to take one day off from diving every three days.
- Avoid decompression-stop dives and do not dive deeper than 40 meters (130 feet) unless you have been specifically trained in this type of technical diving.
- Avoid repetitive "square profile" dives (dives to a single depth) deeper than 18 meters (60 ft).
- After a single dive wait at least 12 hours, for multiple dives and/or multiple days wait at least 18 hours and preferably 24 before flying, in accordance with the recommendations of the Divers' Alert Network (DAN).
- Each member of a buddy team must have their own dive computer and follow whichever is the most conservative profile.

• HOW ICON HD WORKS

Pressing any key will turn on **ICON HD** and call up the welcome screen.

ICON HD then moves to the main menu, which offers eight icons representing the main functions:



In the main menu you can move among the icons using the **central keys** (left and right arrows).

With the first key from the left (person icon) you can display your Personal Information, or ICE (In Case of Emergency), entered previously using the software interface (Figure 1).



Fig. 1

The **select** button accesses the submenu of the highlighted icon. The image below, shows access to the **Settings** submenu. Use the **back** button to return to the main menu (Figure 2).

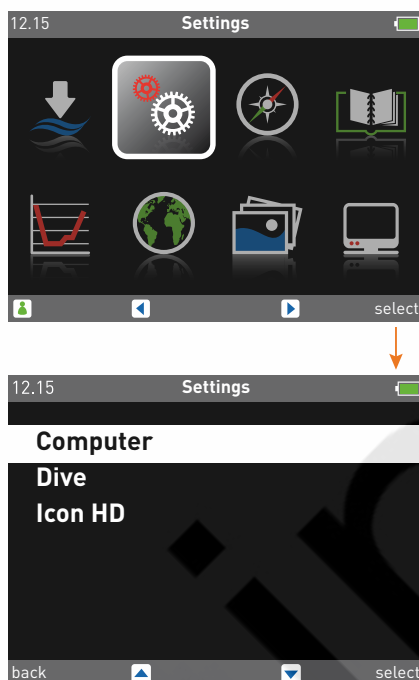


Fig. 2

NOTE

Surface shut-off mode: if **ICON HD** is switched on but you don't press any buttons for a certain period, it will switch off automatically. The delay before automatic switch-off depend on current operating mode:
 Pre-dive: 10 min.
 Others: 1 min.

• DURING THE DIVE WITH ICON HD

ICON HD can manage three kinds of dives:

- AIR
- NITROX
- BOTTOM TIME (Gauge)

The information can be displayed in two different ways:

- **EXTENDED**: digital mode.
- **PROFILE**: graphic mode.

You can select the main viewing mode from the **Settings** submenu (Figure 3).

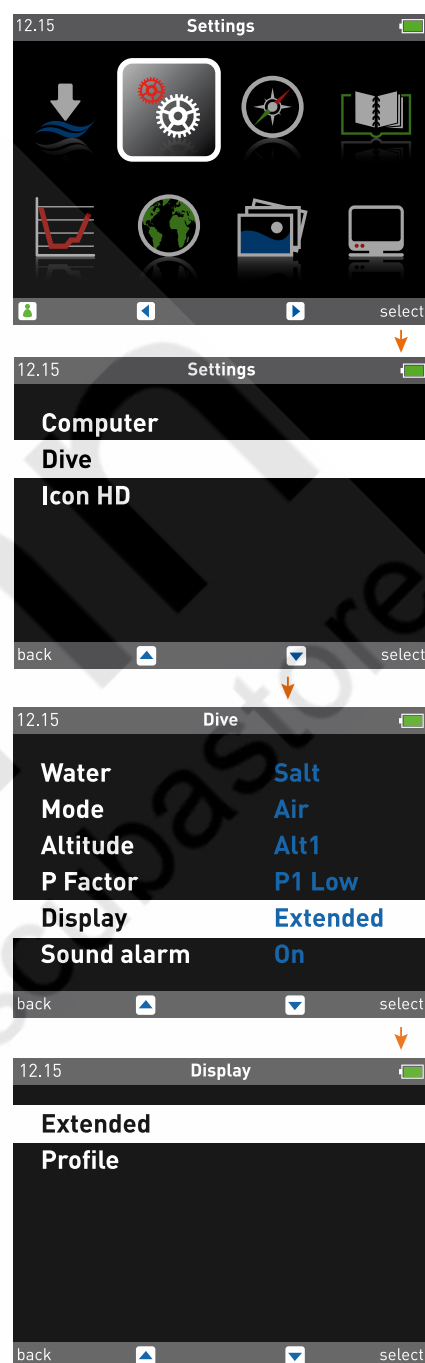


Fig. 3

You can access Dive mode (Figure 4) by using the **select** key to choose the icon in the figure (which indicates access to the Dive submenu).



Fig. 4

To better understand how **ICON HD** works during a dive, the displays have been organized into four different phases:

- PreDive
- Dive
- Surfacing
- On the Surface

• AIR MODE

PREDIVE PHASE

This mode is active until the diver descends below 1.2 meters (approximately 4 feet) (Figures 5-6).

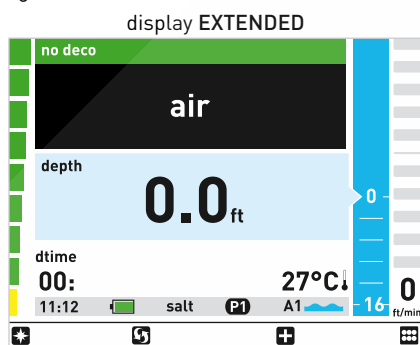


Fig. 5

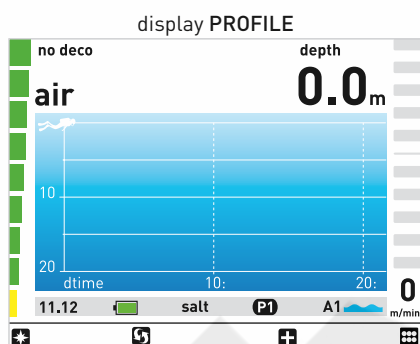


Fig. 6

NOTE

If you remain in PREDIVE Mode for longer than 10 minutes without pressing any buttons, ICON HD will switch off.

NOTE

Before each dive, it is recommended that you enter the **Settings** submenu to verify all parameters that have been set.

WARNING

It is recommended that you put ICON HD into Dive Mode every time you dive.

KEY FUNCTIONS

- ★ Displays the Compass Mode. Carefully read the **Compass** chapter to fully take advantage of this feature.
- ↻ Moving from one display mode to another (EXTENDED ↔ PROFILE).
- ⌂ Return to the main menu.

DIVE PHASE: "NO-DECOMPRESSION" DIVE

As soon as the diver descends past 1.2 meters (4 feet), ICON HD switches to Dive Mode and begins displaying the dive data. Remaining in this mode for more than 5 seconds will cause ICON HD to begin recording the dive details in the Logbook memory.

The information displayed in the two modes (EXTENDED ↔ PROFILE) is as follows: (Figures 7-8).

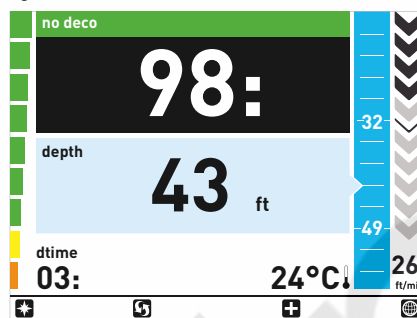


Fig. 7

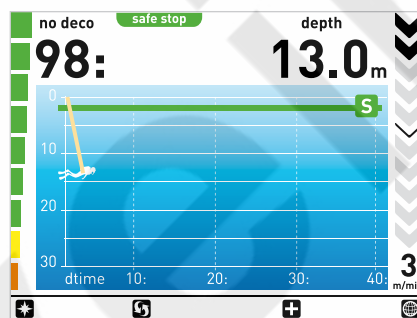


Fig. 8

KEY FUNCTIONS

- 🌐 Display the map, if one was selected in advance. Read the maps chapter carefully to use this mode to best advantage.
- + Additional data is also shown, such as current time, maximum depth, and settings (Figures 9-10).

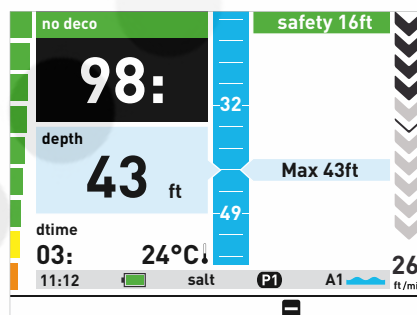


Fig. 9

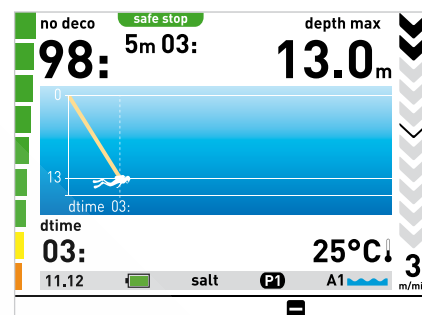


Fig. 10

⌂ Return to the main display.

WARNING

If ICON HD was not set to Dive Mode before you start, always check, always check, early in your dive, that the ICON HD has switched on.

WARNING

When you select a display mode (COMPASS, EXTENDED, PROFILE, MAPS), the computer will stay in this mode until you decide to exit.

GRAPHIC BARS

The following indications are active at the two sides of the screen.

The graphic bar on the left shows the no-decompression limits. At the beginning of the dive this bar will be green and will turn orange as the no-decompression limits approach (Figure 11).

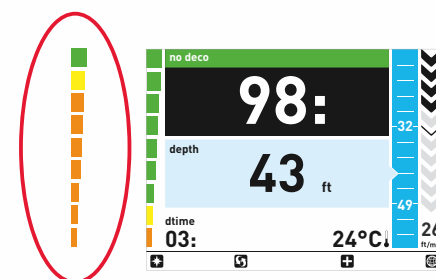


Fig. 11

The graphic bar on the right indicates the descent speed and ascent speed with a series of black arrows. If your speed is excessive during the ascent, the arrows will turn red (Figure 12).

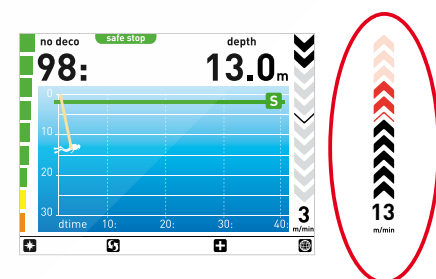


Fig. 12

NOTE

These indications are not active in Maps Mode.

BACKLIGHTING

There are two levels of display backlighting available during the dive: normal and low consumption. Using the **Settings** submenu, you can set how long the light stays on in normal mode (from 10 sec to always on). ICON HD remains in normal mode for the set amount of time and then switches to low consumption. Pressing any button will switch the computer back to normal mode. The information is always visible, even on low consumption.

NOTE

The setting for how long the light stays on in normal mode cannot be changed during the dive.

DIVE PHASE: "DECOMPRESSION STOP" DIVE

If the diver does not ascend when the residual time has expired, ICON HD switches to Decompression Stop Mode, indicated by the appearance of the deco message and by an audible alarm.

The switch to Decompression Stop Mode is also indicated by the orange color in the graphic bar on the left.

NOTE

When the no-decompression time remaining is one minute, an audible alarm is sounded to indicate that the diver is about to exceed the no-decompression limits.

In deco mode, the deep stops, deco stops, and safety stops are displayed.

In PROFILE mode, the dive profile is replaced by graphic indications that show the required stops (Figures 13-14).

To show the full dive profile, press **+**.

NOTE

In dives that call for more than 5 stops, ICON HD will only display the 5 deepest at once: 3 deco stops and 2 deep stops. When the last of the deepest stops has been completed, the subsequent stops and safety stops will appear.

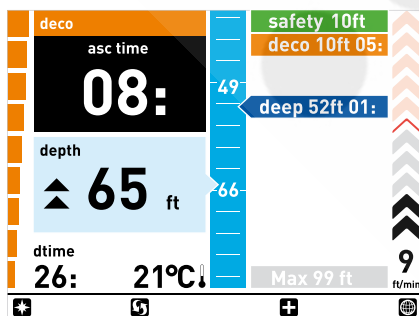


Fig. 13

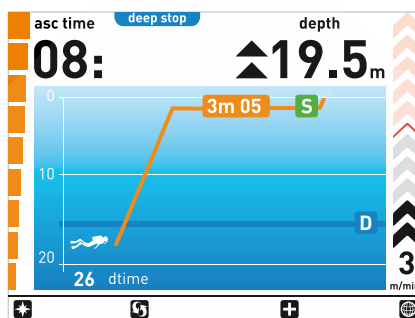


Fig. 14



Additional data is displayed, such as current time, maximum depth, and settings. In PROFILE mode, the complete dive profile is shown (Figures 15-16).

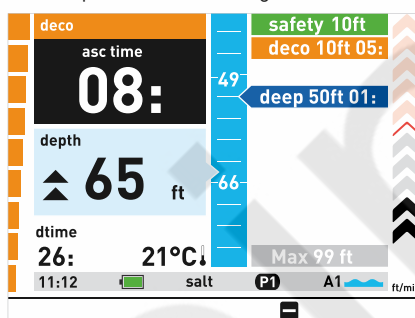


Fig. 15

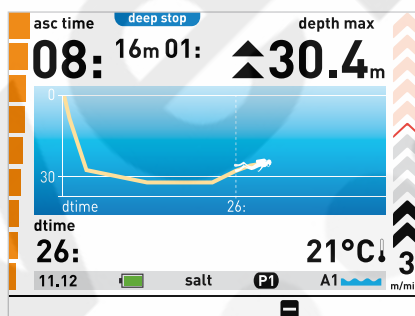


Fig. 16

NOTE

This display remains active until you press **+**.

ASCENT TIME

The Ascent time is given by the sum of:

- time scheduled for the deep stops
- time scheduled for the deco stops
- time required to ascend at an average speed of 10 m/min (32 ft/min).

NOTE

The ascent time does not include the safety stop at 3 meters.

DECOMPRESSION STOP

ICON HD verifies compliance with the decompression stops by indicating the various stops that must be made on the right side of the screen.

EXTENDED MODE

In EXTENDED mode, the deco stops are shown on the right side of the screen. They are shown graphically with the color orange. The depths of the stops and the number of minutes are indicated (Figure 17).

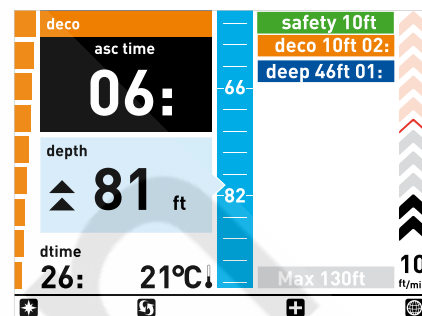


Fig. 17

When nearing the deco stop depth, ICON HD will sound an audible signal.

When the diver's current depth reaches the deco stop depth, the tag that shows the deco information will enlarge, showing a countdown of the time remaining in the stop.

On the left side of the screen, two opposing arrows indicate the correct depth planned for the stop (Figure 18).

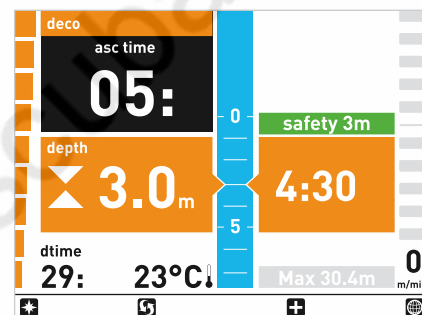


Fig. 18

Three icons graphically indicate what the diver must do when making the deco stop:



Correct depth for the decompression stop, maintain depth.



Diver below decompression stop depth, ascend.



Diver above decompression stop depth, descend.

PROFILE MODE

In PROFILE mode, the dive profile is replaced by graphic indications that show the required stops. Orange tags indicate the stop depth and time required (Figure 19).

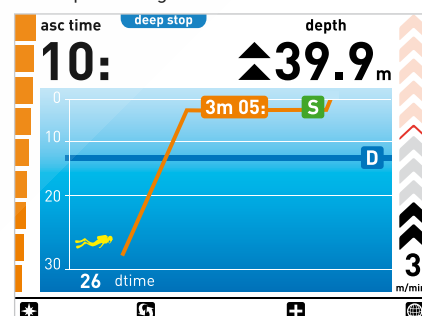


Fig. 19

When the stop depth is reached, two opposing arrows will indicate the correct depth planned for the stop (Figure 20).

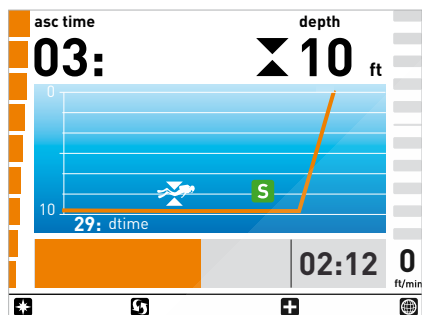


Fig. 20

The temperature and dive time information is replaced (for the duration of the stop only) by an orange bar that graphically displays the passage of time. The digital countdown is shown in the section on the bottom right. Three icons graphically indicate what the diver must do when making the deco stop:

- ✕ Correct depth for the decompression stop, maintain depth.
- ▲ Diver below decompression stop depth, ascend.
- ▼ Diver above decompression stop depth, descend.

OMITTED STOP

If the decompression stop depth is exceeded by more than 30 cm (11 inches), a downward pointing red triangle will appear. If the depth is exceeded by more than 1 m (3 ft), an audible alarm will sound.

These warnings remain active until the diver returns to the correct depth (Figures 21-22).



Fig. 21

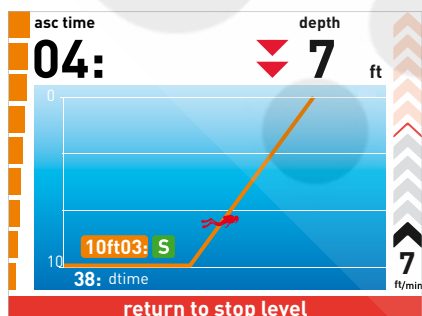


Fig. 22

WARNING

When the omitted deco stop alarms are triggered, desaturation of the simulated tissue compartments is halted and resumes only when the diver returns to the correct stop depth.

WARNING

Buttons are disabled when an alarm is active.

WARNING

Never ascend above the correct decompression stop depth.

OMITTED STOP WARNING

If the stop depth is exceeded by more than a meter and continues for longer than three minutes (Figures 23, 24, 25, 26),



Fig. 23

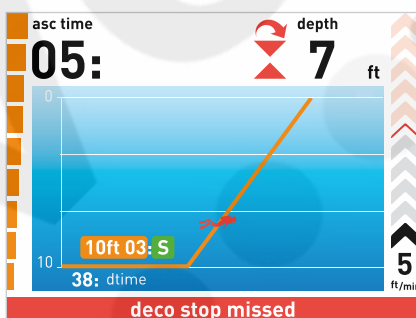


Fig. 24

the "Omitted Stop" mode will activate and the corresponding icon will appear.

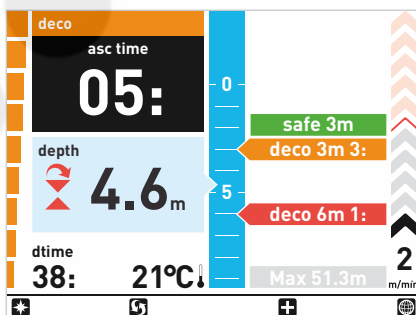


Fig. 25

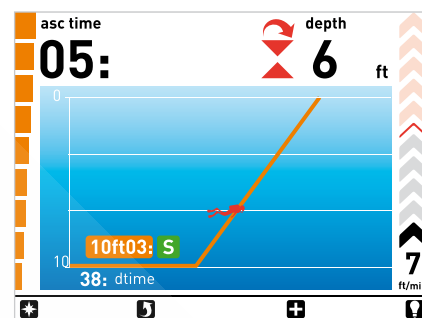


Fig. 26

In this case, if the diver attempts a repetitive dive after surfacing, ICON HD will only function as a depth gauge and timer (Bottom Time Mode), and it will display the errors from the preceding dive.

DEEP STOPS

To minimize the likelihood of critical bubble seed formation, in the case of decompression dives or dives close to the no-deco limit, ICON HD prompts for a series of one-minute deep stops at different depths depending on the dive profile.

Thus, whenever the applicable conditions have been met, ICON HD will display an icon during the dive that reads "deep" with the appropriate depth and time.

Deep stops are displayed and managed in the same way as the deco stops described above. The images that follow show the various phases (Figure 27).

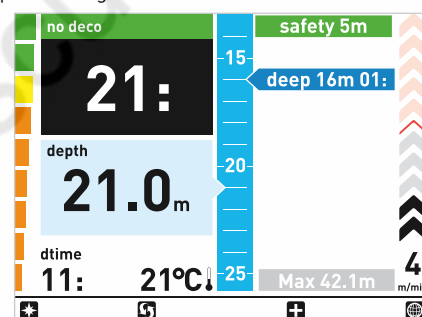


Fig. 27

When nearing the deep stop depth, ICON HD will sound an audible signal (Figure 28).

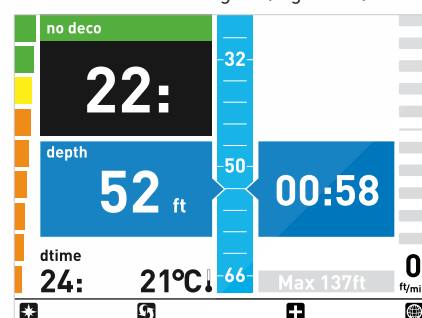


Fig. 28

All buttons function in Deep Stop Mode.

If the computer is in Maps or Compass mode and the diver enters a deep stop, there will simply be a longer audible signal.

There can be more than one deep stop during a dive. This depends on the dive profile and on the type of decompression.

In PROFILE Mode, the deep stops are displayed in the dive profile with blue lines (Figure 29-30).

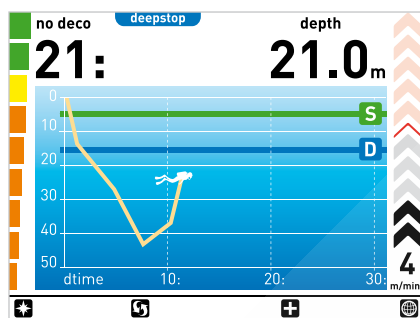


Fig. 29

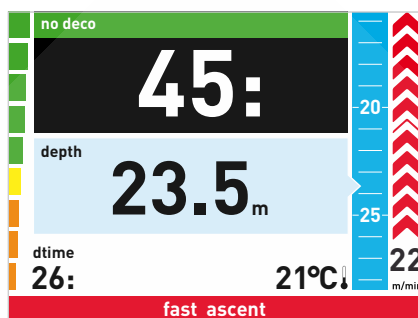


Fig. 31

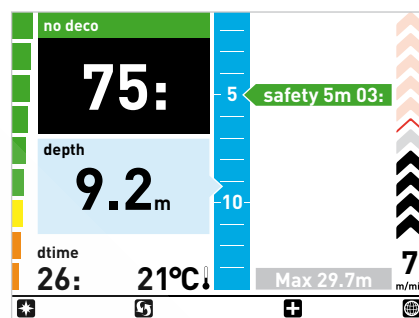


Fig. 33

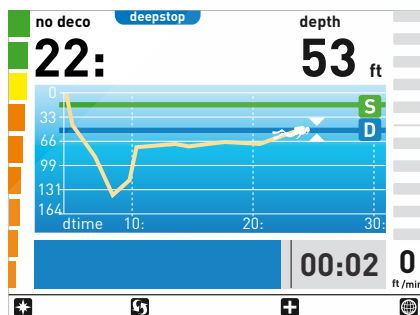


Fig. 30

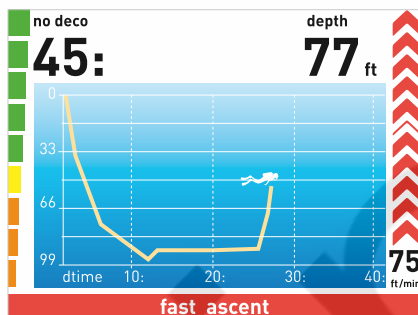


Fig. 32

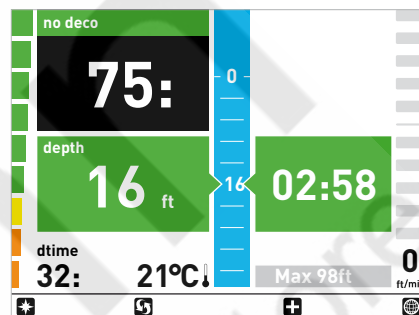


Fig. 34

NOTE

The algorithm does not introduce penalties if you skip the deep stops.

RATE OF DESCENT

As soon as the depth increases, ICON HD will enable descent rate control and will graphically and digitally display the value.

NOTE

There is no alarm for an excessively fast descent rate.

EXCESSIVE ASCENT RATE ALARM

As soon as depth decreases ICON HD activates the ascent rate control algorithm and will graphically and digitally display the value.

WARNING

A rapid ascent increases the risk of decompression sickness.

ICON HD checks that the ascent rate does not exceed the optimum rate: 10 m/min (32 ft/min).

When the ascent speed exceeds 12 m/min (39 ft/min) at depths below 12 m (39 ft), the "uncontrolled ascent" control is activated.

An ascent is considered "uncontrolled" when the diver exceeds the maximum rate for a stretch equal to at least two thirds of the depth at which the audible alarm was triggered. This control is displayed with a horizontal red bar that reads **Fast Ascent**, vertical red arrows, and an audible alarm, which remains active until the ascent speed returns within permitted values (Figure 31-32).

If ICON HD detects an uncontrolled ascent, the arrows that indicate ascent speed will remain visible, with a red background.

In this case, if the diver attempts a repetitive dive after surfacing, ICON HD will only function as a depth gauge and timer (Bottom Time Mode), and it will display the errors from the preceding dive.

WARNING

You can disable the uncontrolled ascent check under the **Settings** submenu. This mode should only be used by highly experienced divers, who take full responsibility for the consequences of this action.

WARNING

You can disable the "Stop" after an uncontrolled ascent by clearing the tissue memory in the **Settings** submenu. This mode should only be used by highly experienced divers, who take full responsibility for the consequences of this action.

SAFETY STOP

If the maximum depth of a dive exceeds 10 meters, a *safety stop* is activated for the ascent.

Safety stops are 3 minute stops to protect the diver's health that are executed at depths between 2.5 to 6 m (8 - 19 ft).

Safety stops are displayed and managed in the same way as the deco stops described above. The images that follow show the various phases (Figures 33-34).

In **PROFILE** Mode, the safety stops are displayed in the dive profile with a green line (Figures 35-36).

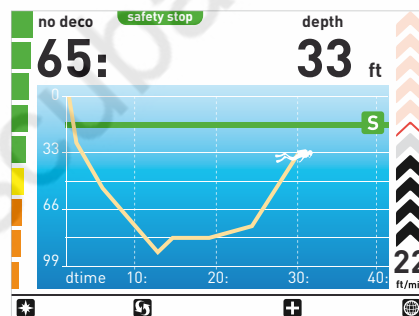


Fig. 35

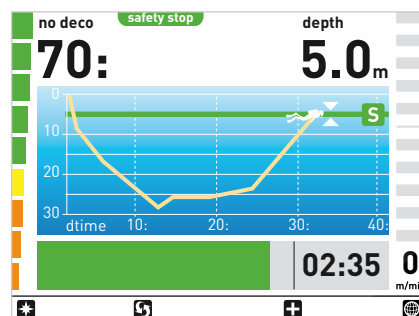


Fig. 36

If the diver moves outside the depth range mentioned above, the safety stop timer is halted. When the diver returns within the *Safety Stop* range, the time will resume from where it left off. If the diver returns to a depth of more than 10 m (32 ft), ICON HD will disregard the previous *safety stop* and will schedule another.

NOTE

The algorithm does not introduce penalties if you skip the safety stops.

SURFACING - AIR

When the diver reaches a depth of less than 1 m (3 ft), the dive is considered suspended (Surfacing); duration calculations stop. The **ICON HD** will display the profile graphic for the dive with all the useful information. If the diver does not return below 1.2 m (4 ft) within the next 3 minutes, **ICON HD** considers the dive to be finished and records its data in the logbook. If the diver does re-descend within 3 minutes, the dive continues and the dive timer resumes from where it left off (Figure 37).

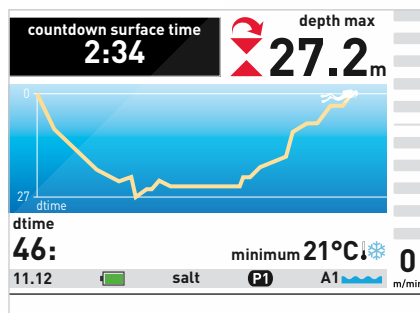


Fig. 37

WARNING

If an Air or Nitrox dive ends in an uncontrolled ascent or a skipped stop, **ICON HD** will disable the use of Air and Nitrox Mode for 24 hours, allowing the computer to be used only in Bottom Time Mode for that period.

NOTE

The buttons in Surfacing Mode are disabled.

SURFACE MODE - AIR

When the dive is considered over, **ICON HD** switches to **Surface Mode**, showing surface, desaturation, and no-fly times along with other information about the dive that has just ended (Figure 38).

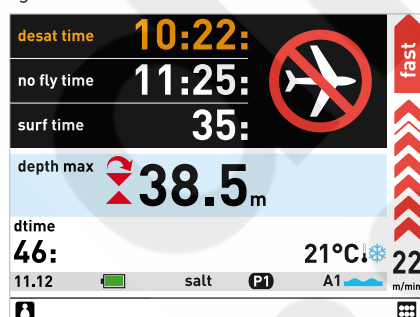


Fig. 38

The **ICE** key will call up the user's personal information (ICE).

WARNING

Do not fly or travel to high altitudes while the no-fly indication remains active.

Until the desaturation and no-fly times have elapsed, an LED will indicate that they remain active.

WARNING

If the battery is completely drained after a dive, during the tissue desat period, do not dive for the following 24 hours.

NITROX

WARNING

Before reading this chapter, you must carefully read the chapter on dives with Air.

Due to the lower percentage of nitrogen in the breathing mix, oxygen-rich mixtures make it possible to extend the no-decompression limits, as compared to the same dive with air. However, the higher oxygen content in the mix exposes the diver to oxygen toxicity hazards which are not generally encountered in recreational dives with compressed air. In Nitrox mode, **ICON HD** computes oxygen toxicity based on dive time, depth, and the oxygen percentage setting, providing indications that enable the diver to remain within the safe limits for oxygen exposure. In order to dive with a Nitrox breathing mix, Nitrox mode must first be set in the **Settings** submenu.

ICON HD manages the dive with Nitrox following the same procedures as an air dive. That means that you will have the same selection functions and procedures as those in Dive Mode. The only differences between compressed-air and Nitrox dives concern the monitoring and display of Nitrox dive parameters in addition to the normal air dive parameters (discussed in the Air section).

This section will examine the general parameters for Nitrox dives monitored by **ICON HD**, and the differences in how the data are displayed in Air Mode.

WARNING

It is essential to correctly set the oxygen percentage in the mix to ensure correct readouts of:

- no-decompression time remaining;
- decompression stop times;
- alarm on exceeding the maximum permitted ppO_2 .

WARNING

Before the dive, make sure you have correctly set up all the Nitrox dive parameters: percentage of oxygen in the mix and limit for the partial pressure of oxygen, which together determine the maximum depth of the dive.

WARNING

The use of oxygen-rich mixes exposes the diver to different hazards from those associated with compressed air. The diver should be aware of these risks and understand how to avoid them.

WARNING

ICON HD should be used for diving with oxygen-rich mixes (Nitrox) only by divers who have the necessary certification. Lack of appropriate diver training may result in potentially serious injury.

CHECKING THE GENERAL DIVE PARAMETERS

OXYGEN PARTIAL PRESSURE

When the diver reaches a depth at which the ppO_2 exceeds the maximum limit entered in the corresponding parameter (from 1.2 to 1.6 ATM), **ICON HD** triggers an alarm condition signaled by:

- depth shown in red;
- audible alarm.

The alarm persists until the diver has ascended enough for the ppO_2 to return within the set limit.

If the oxygen toxicity level reaches 75%, ascend to shallower depth to decrease oxygen loading and consider terminating the dive.

When the oxygen toxicity level approaches 100%, you must terminate the dive immediately.

WARNING

When the max ppO_2 alarm is triggered, ascend and discontinue the dive.

WARNING

Diving with oxygen toxicity at levels of 75% or greater, may put you into a potentially hazardous situation, which could result in serious injury or death.

EFFECTS ON CENTRAL NERVOUS SYSTEM

Oxygen toxicity exposure is monitored by means of a CNS (Central Nervous System), based on currently accepted recommendations for exposure limits. This toxicity is expressed as a percentage value which ranges from 0% to 100%. When the value exceeds 75%, it will turn red.

PREDIVE PHASE

This operating mode remains active until the diver goes below 1.2 meters (4 feet). The following details are displayed (Figures 39-40):



Fig. 39

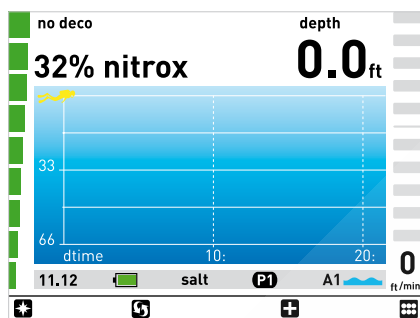


Fig. 40

NOTE

Before each dive, it is recommended that you enter the **Settings** submenu and verify all the parameters that have been set.

WARNING

It is recommended that you put ICON HD into Dive mode every time you dive. Early in your dive, always check that the dive computer is switched on.

DIVE PHASE: "NO-DECOMPRESSION" DIVE

When the diver descends below 1.2 meters (4 ft), ICON HD automatically switches to Dive Mode and starts displaying the dive data. The following details are displayed (Figures 41-42):

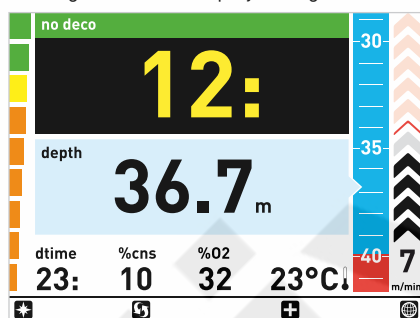


Fig. 41

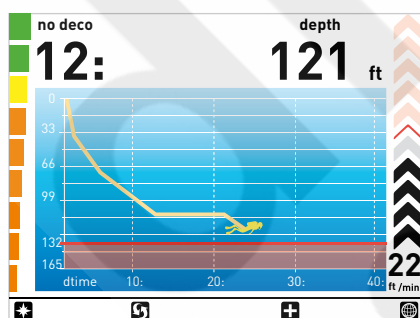


Fig. 42

The Maximum Operating Depth limit (MOD) is displayed graphically in red relative to the maximum ppO₂.

Additional data is also shown, such as current time, maximum depth, and settings (Figures 43-44).



Fig. 43

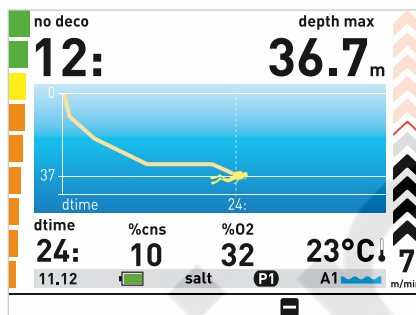


Fig. 44

DIVE PHASE: "DECOMPRESSION STOP" DIVE

If the diver does not ascend when the residual time has expired, ICON HD switches to "Decompression Stop Mode", indicated by the appearance of the "Deco" message and by an audible alarm.

The switch to "Decompression Stop Mode" is also indicated by the orange color of the graphic bar on the left (Figures 45-46).

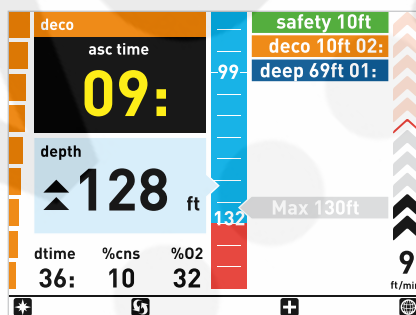


Fig. 45

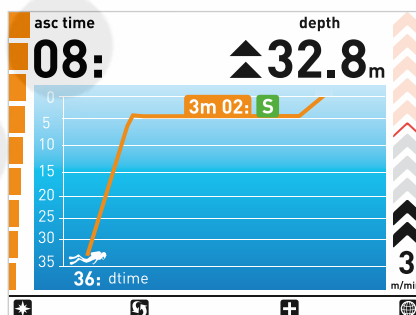


Fig. 46

Pressing **+** will display additional information (Figures 47-48).



Fig. 47

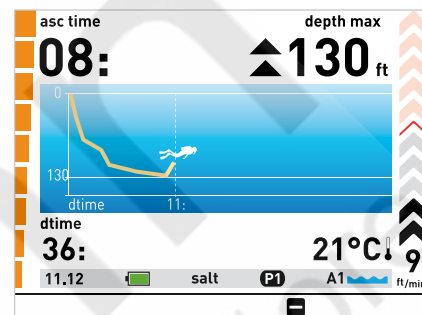


Fig. 48

NOTE

After a Nitrox dive, if you want to make a repetitive dive with Air, it is recommended that you set the computer for a Nitrox dive with %O₂ at 21%. By so doing, the calculation of the %cns will remain active.

NOTE

Indications for the deco phase and deep stops are the same as for Air mode.

WARNING

Decompression stops, deep stops, descent and ascent speeds, uncontrolled ascents, omitted stops, and safety stops are all managed the same way as described for Air Mode. Carefully read the chapter about dives with Air.

SURFACING MODE: NITROX

When the measured depth is less than 1 m (3 ft), ICON HD considers the dive to be suspended ("Surfacing") and halts the dive timer. If the diver does not return below 1.2 m (4 ft) within the next 3 minutes, ICON HD considers the dive to be finished and records its data in the logbook (Figure 49). If the diver does re-descend within 3 minutes, the dive continues and the dive timer resumes from where it left off.

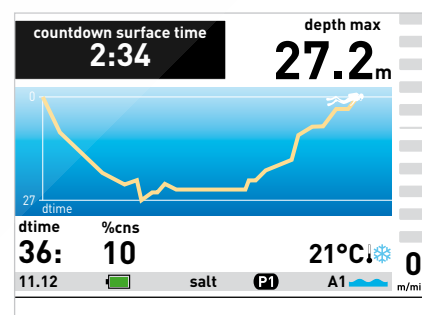



Fig. 49

WARNING

If an Air or Nitrox dive ends in an uncontrolled ascent or a skipped stop, ICON HD will disable the use of Air and Nitrox modes for 24 hours, allowing the computer to be used only in Bottom Time mode for that period.

SURFACE MODE: NITROX

When the dive is considered over, ICON HD switches to SURFACE Mode, showing surface, desaturation, and no-fly times along with other information about the dive that has ended (%cns) (Figure 50).

The  key will call up the user's personal information (ICE).

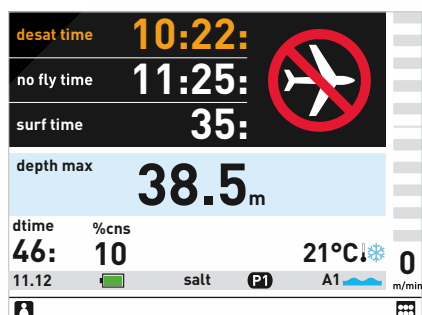


Fig. 50

WARNING

Do not fly or travel to high altitudes while the no-fly indication remains active.

WARNING

If the battery is completely drained after a dive, during the tissue desat period, do not dive for the following 24 hours.

DIVES WITH MULTIPLE MIXES

ICON HD allows divers to use up to three different mixes during a single dive. During dives with multiple mixes, the first will be that with the lowest percentage of oxygen, the second with the intermediate oxygen percentage, and third the mix with the highest percentage.

The depths at which the various mixes are allowed is indicated graphically using different shades of blue (Figures 51-52):

1. bottom mix: dark blue
2. intermediate mix: light blue
3. deco mix: sky blue

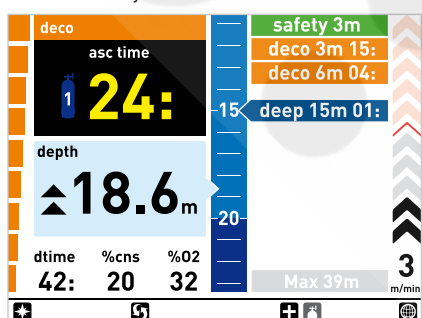


Fig. 51

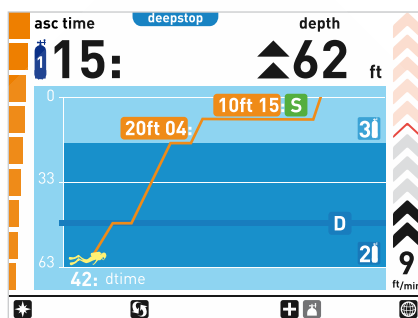


Fig. 52

NOTE



You can set all the mixes with the same oxygen percentage.

WARNING

It is not possible to change the mix at a depth at which the oxygen partial pressure for that mix is greater than the ppO_2 max.

CHANGING MIX

During Nitrox dives with the change mix function enabled, the third key from the left has two functions, indicated by a double icon:

- Brief pressure: displays the second screen .
- Prolonged pressure: displays the change mix screen .

ICON HD will indicate the anticipated mix change and will allow the change only if the diver's depth is lower than that set for the maximum ppO_2 .

ICON HD will not allow the mix change if the depth is greater.

During the ascent, when reaching the depth at which the mix change is permitted, ICON HD sounds an audible signal.

The diver can then change the mix by holding down the third button from the left.

The following screen will appear, showing the mixes entered, and ICON HD will indicate the mix to select (Figure 53).

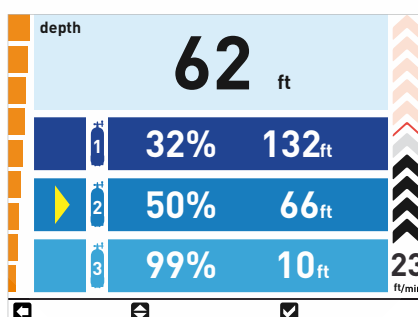
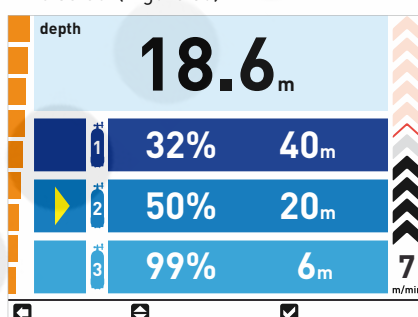



Fig. 53

Press  to activate the mix indicated (Figure 54).

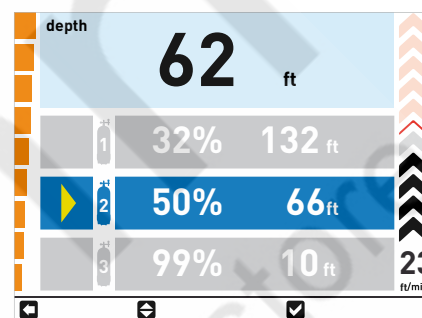
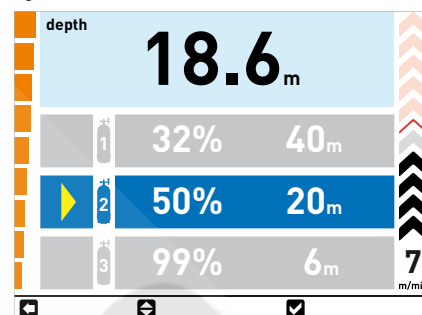



Fig. 54

Press  again to confirm the selection and move to the main screen, where the new $O_2\%$ will be displayed (Figure 55).

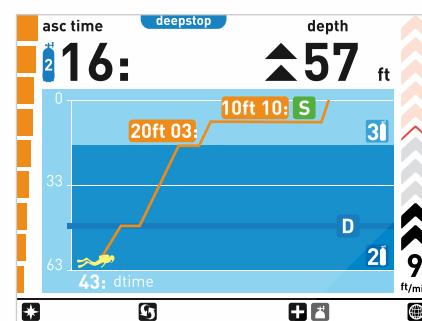
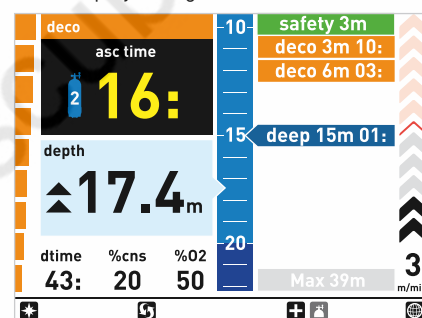




Fig. 55

NOTE

You can select another mix using the  key, if permitted at that depth.

NOTE

You can exit this mode without changing the mix by pressing .

NOTE

If there is only one mix set, the computer will not enter this menu.

• DIVE - BOTTOM TIME (GAUGE)

In this mode, **ICON HD** operates as a depth gauge, electronic timer, and stopwatch, but does not run calculations for decompression. Responsibility for planning the no-decompression limits or adequate decompression therefore lies entirely with the user.

PREDIVE-BOTTOM TIME

This operating mode remains active until the diver goes below 1.2 meters (4 feet). The following details are displayed (Figure 56):

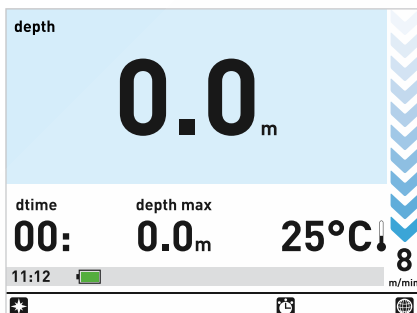


Fig. 56

NOTE

Before each dive, it is recommended that you enter the **Settings** submenu and verify all the parameters that have been set.

DIVE - BOTTOM TIME

When the diver descends below 1.2 meters (4 ft), **ICON HD** automatically switches to Dive Mode and starts displaying the dive data. Remaining in this mode for more than 5 seconds will cause **ICON HD** to begin recording the dive details in the Logbook memory, such as actual depth, maximum depth, and dive time (Figure 57).

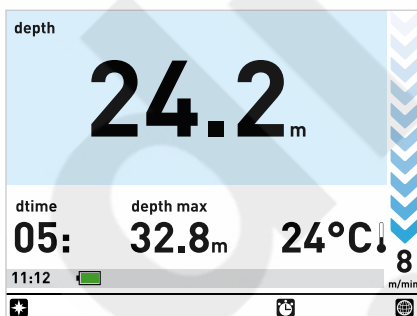


Fig. 57

Pressing will activate the stopwatch. Pressing the same button once more will reset the stopwatch and the maximum depth will be displayed again (Figure 58).

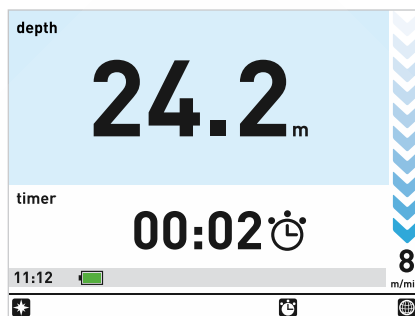


Fig. 58

The button calls up the compass. Carefully read the Compass chapter to fully take advantage of this feature. The button displays the map if one has been entered.

NOTE

The second key is not active.

WARNING

After a dive in Bottom Time Mode, the transition to Air or Ean mode will be disabled for 24 hours (you can bypass this block by resetting the residual nitrogen in the tissue compartments in the Settings submenu).

WARNING

Clearing the DESAT should only be done by your local Dive Center or Dive Store. Diving after clearing the DESAT may put you into a potentially hazardous situation, which could result in serious injury or death.

WARNING

After resetting the DESAT, do not dive for at least 24 hours or longer.

WARNING

If the computer is in a "rental" situation, the "new diver" must not have made a previous dive in the last 24 hours.

• BOTTOM TIME WITH BEHAVIOR ERROR

The following errors can occur during an Air or Nitrox dive:

- Uncontrolled ascent.
- Omitted stop.

In this case, **ICON HD** will restrict the use of Air and Nitrox Mode for 24 hours, and will only allow operations in Bottom Time Mode, continuously displaying the error committed during the previous dive. The graphic indications are the same as those given in Bottom Time Mode, with the addition of this icon which indicates that an error was committed.

• COMPASS MODE

The compass is active both on the surface and during the dive.

ON THE SURFACE

To enter compass mode when on the surface, use the **select** key to select the compass icon in the main menu (Figure 59).

The sighting function can be activated by pressing **set**.

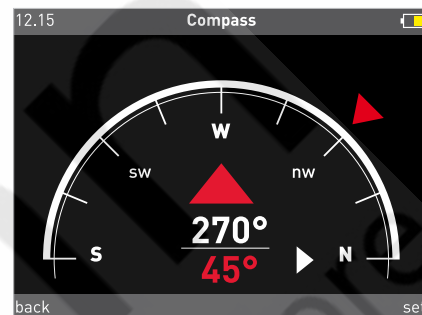


Fig. 59

To remove the sight direction, once again press **set**.

Use the **back** button to return to the Main Menu.

DURING THE DIVE

During the dive, pressing will access the compass function (Figure 60).

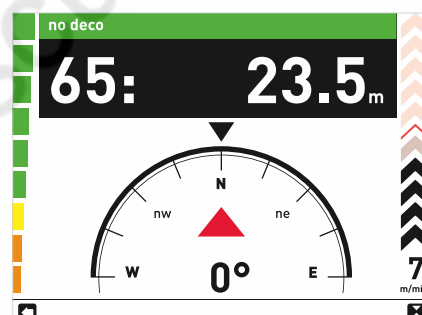


Fig. 60

In this mode, the no-deco time (or ascent time), the current depth, and the ascent rate are visible.

Pressing the same button again will return to the previous screen.

ACTIVATING SIGHTING

Divers can activate sighting so that the compass will show the selected direction. To do this, press (Figure 61). Pressing the same button again cancels the setting.

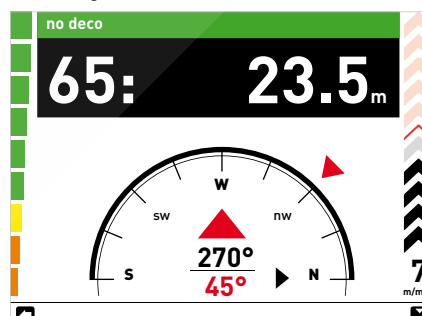



Fig. 61

NOTE

This display remains active until you press .

• MAPS

Maps loaded into the ICON HD memory can be viewed using the special submenu. You can select a map that you can consult during the dive using the **Settings** submenu. The maps can be entered using the software interface.

VIEWING MAP ON THE SURFACE

To access the maps submenu, use the select key to choose the Maps icon from the main menu.

Use the central keys to scroll through the names of maps that have been loaded (Figure 62).

Use the **view** key to see the selected map. Use the **back** key to return to the previous menu.

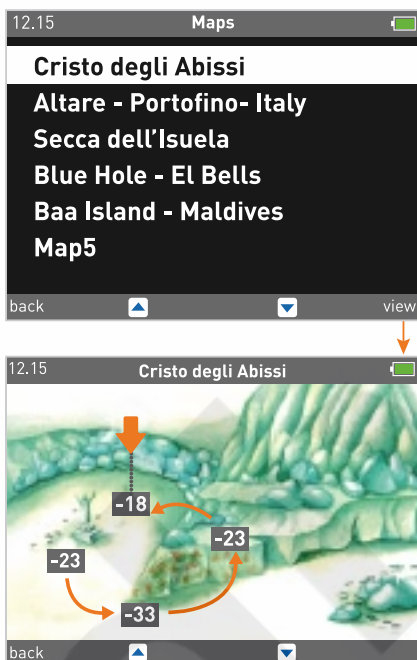



Fig. 62

LOADING MAP FOR VIEWING DURING THE DIVE

If you want to view a map during the dive, you need to select it using the **Settings** submenu (**Settings** -> **Dive** -> **Linked Map**).

VIEW MAP DURING THE DIVE

You can view the preselected map during the dive using the  key in Dive Mode (Figure 63).

NOTE

You can view one map only while diving



Fig. 63

Use the  key to return to the previous menu.

NOTE

The image is static; it does not follow the dive profile.

NOTE

This display remains active until you press **back**.

• PHOTO

On the surface you can view photos or another other file in .jpg format. Photos can be entered using the software interface.

VIEWING PHOTOS

To enter the photos submenu, use the select key to choose the photo icon in the main menu (Figure 64).

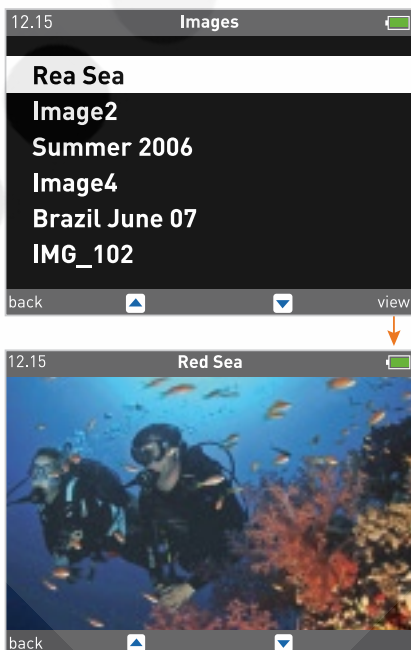


Fig. 64

Use the central keys to scroll through the names of photos that have been loaded. Use the **view** key to see the selected photo. Use the **back** key to return to the previous menu.

• BATTERY

ICON HD is supplied with a high-efficiency lithium-ion rechargeable battery with no memory effect.

A single charge offers approximately 6 dives.

NOTE

It will depend GREATLY on light time indicated AND length of dives.

The battery charges fully in about 4 hours.

NOTE

The battery lifetime is approximately 500 charging cycles.

NOTE

The information stored will not be lost even if the battery runs completely out of power.

RECHARGING THE BATTERY

The battery is charged using a USB connection with a special adaptor that can be connected to a power supply or a USB port on a computer with a standard USB cable (Figure 65).



Fig. 65

The adaptor, the cable, and the power supply are included with your ICON HD.

If ICON HD is turned off and you begin charging it, you will see the following (Figure 66):

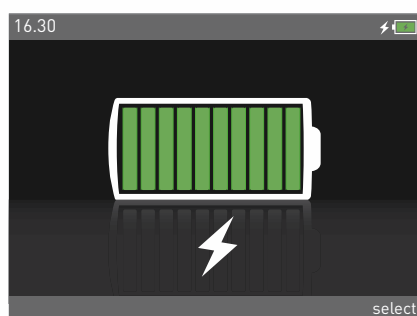
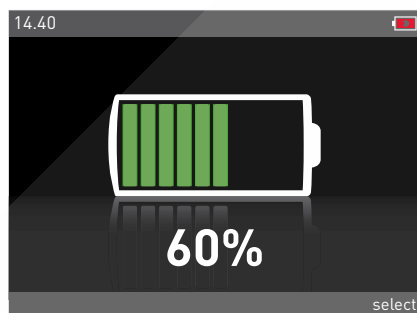
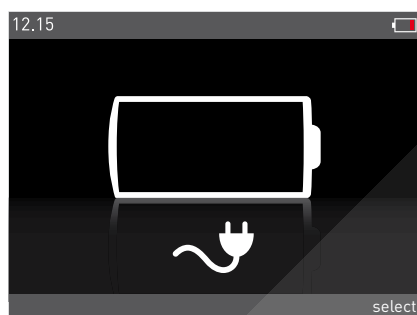


Fig. 66

Press the **select** key to return to the main menu.

If **ICON HD** is turned on and you begin charging it, you will see an indication that the battery is charging on the upper right.

CHECK THE BATTERY POWER LEVEL

ICON HD constantly monitors the battery power level.

On the surface, the power level is indicated by an icon on the upper right: as long as the battery has at least 30% power, all **ICON HD** functions remain active. If the battery level falls to between 20% and 30%, you can use all the **ICON HD** functions but you will not be able to dive. Below 20%, all functions are suppressed and the recharge screen appears.

WARNING

Initially it is recommended that you fully charge and completely discharge the battery.

WARNING

When the computer has not been used for a long time, we recommend that you check the battery power, and recharge it if necessary.

WARNING

Temperature can noticeably affect battery voltage. The icon that signals a low battery level may appear due to low temperatures, even if the battery still has sufficient capacity.

WARNING

We advise that you recharge the battery if you intend to dive in cold water.

During the dive, the same icon is shown on the lower left.
If **ICON HD** detects that the battery power level is getting low, it will signal an audible alarm and show a graphic indication (Figure 67).

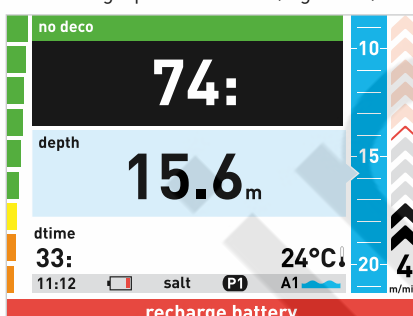


Fig. 67

WARNING

When this warning appears, stop your dive and ascend.
If the battery runs critically low, the map and compass functions will be disabled and backlighting will switch to a low-consumption safety level.
The screen is always visible in this mode.
You should stop the dive, safely, without delay.

WARNING

If the battery is completely drained after a dive, during the tissue desat period, do not dive for the following 24 hours.

• SETTINGS MENU

To enter this submenu, use the **select** key to choose the **Settings** icon in the main menu. In this submenu you can check or change parameters for the **ICON HD**.

COMPUTER

In this submenu you can set the general functions of **ICON HD**.

COMPUTER – LANGUAGE

Set the language to use.

COMPUTER – TIME FORMAT

Change the clock and calendar

- Time format: Select 12 or 24 hour format.
- Set time: Change the time.
- Date: Change the date.

After making your changes, use the back key to return to the previous submenu.

COMPUTER – UNITS OF MEASURE

Set metric or imperial units of measure.

COMPUTER – LUMINOSITY

You can adjust the display luminosity using a screen that lets you see what the setting will look like (Figure 68).

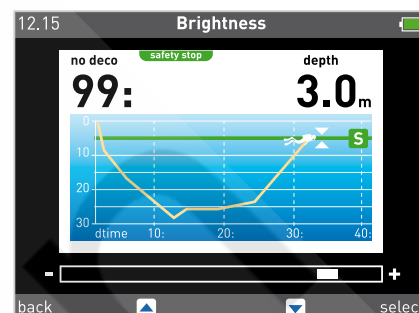


Fig. 68

COMPUTER – LCD ADJUSTMENTS

This setting provides a test screen you can use to optimize how the display looks. Make your changes using the central keys. Record the new setting using the **select** key.

COMPUTER – BACKLIGHTING

Set how long the display backlighting stays on during the dive: from 10 seconds to always-on mode (Figure 69).

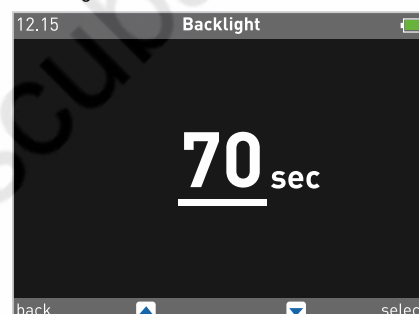


Fig. 69

NOTE

Using the backlighting continuously will affect how long the battery lasts.

COMPUTER – COMPASS DECLINATION

Compensating for the difference between geographic north and magnetic north. To perform this operation you need to set the magnetic declination value.
The declination is provided on nautical maps or topographical maps for the area. Enter the declination angle first, and then the direction (Figure 70).

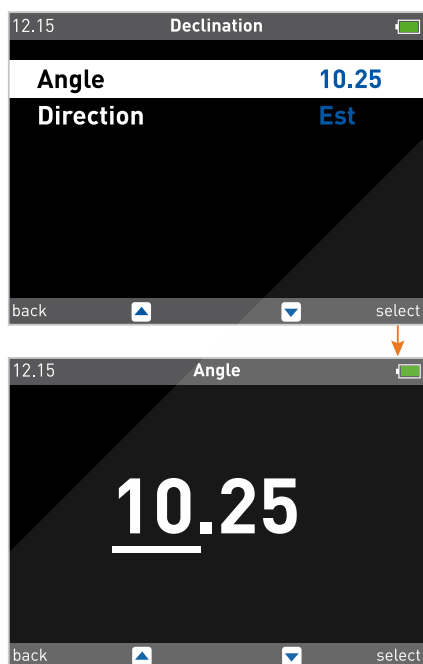


Fig. 70

DIVE

With the Dive setting you can set the parameters as a function of the type of dive selected.

WARNING

Before diving, make sure you have correctly set the units of measurement. An incorrect setting could cause confusion during the dive and lead to underwater behavior errors.

DIVE - WATER

For the greatest precision, you must set ICON HD to salt or fresh water. Check this setting often, especially if you use the instrument in a variety of environments (lake, sea, swimming pool).

DIVE - DIVE MODE

Set the dive type: Air, Nitrox, Bottom Time. If you select a Nitrox dive, move to the next window where you can change the %O₂ and the ppO₂ max (Figure 71).

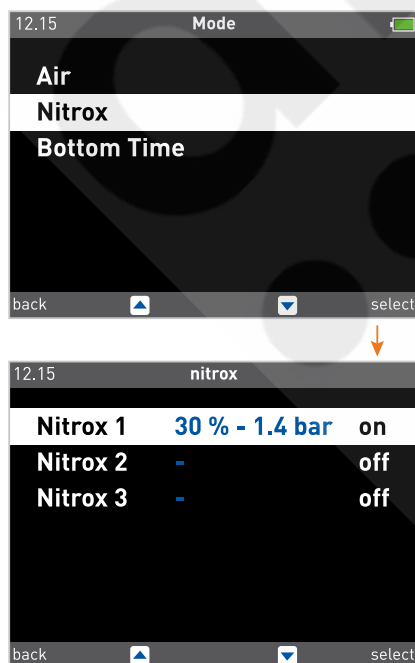


Fig. 71

WARNING

The use of oxygen-rich mixes exposes the diver to different hazards from those associated with compressed air. The diver should be aware of these risks and understand how to avoid them.

WARNING

Setting the oxygen percentage in the mix correctly is crucial for precise estimates of:

- no-decompression time remaining;
- decompression stop times;
- alarm for exceeding the maximum ppO₂.

DIVE - NITROX - %O₂

The percentage of oxygen in the mix can be adjusted for:

Nitrox 1: 21% - 50%
Nitrox 2: 21% - 99%
Nitrox 3: 21% - 99%

(Figure 72).

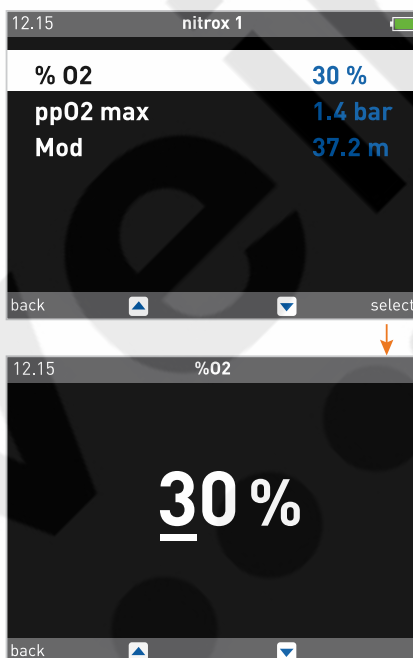


Fig. 72

DIVE - NITROX - OXYGEN PARTIAL PRESSURE

The ICON HD features an alarm that signals when the maximum oxygen pressure partial has been exceeded. This value can be adjusted from 1.2 bar to 1.6 bar, in increments of 0.1 bar.

NOTE

ICON HD shows the MAXIMUM OPERATING DEPTH (MOD) compatible with the percentage and partial oxygen pressure values set.

SETTING THE CHANGE OF MIX

ICON HD allows you to use up to 3 different mixes during a single dive.

- bottom mix
- intermediate mix
- deco mix

If you dive using just one mix, select a single tank and deselect the other two. For dives with two tanks, select tanks 1 and 2 and deselect the third.

The characteristics of the three mixes must be entered in the computer before the dive. **It will then be your responsibility** to tell ICON HD which mix is currently being used during the various phases of the dive.

If you want to dive using multiple mixes, you will need enable the mixes and set the individual parameters for each one: %O₂ and ppO₂ max.

The procedure for setting the individual parameters is described above.

First of all, you must enable the tanks you want to use, using the options Nitrox 2 and/or Nitrox 3.

The figures that follow describe how to enable the Nitrox 2 tank (Figure 73).

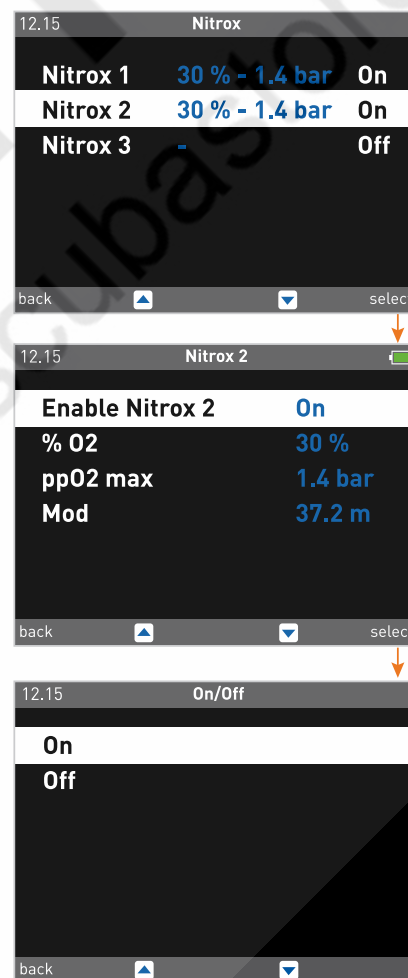


Fig. 73

After selecting the second tank, you need to enter the %O₂ and the ppO₂ max (Figure 74).

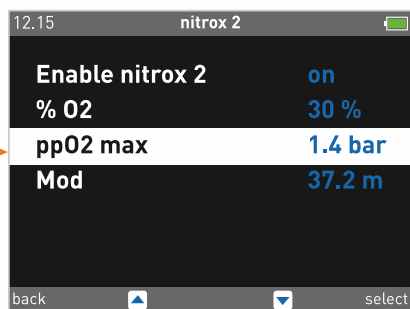
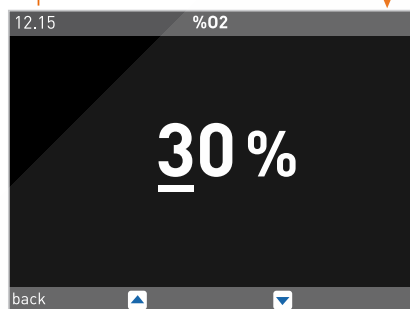
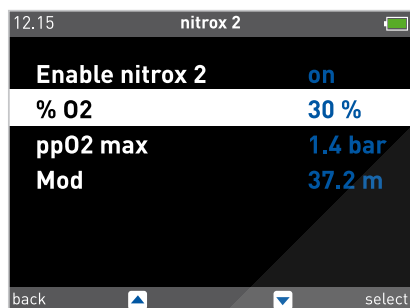


Fig. 74

Press **back** to return to the Nitrox menu, which will display all the characteristics set for each tank (Figure 75).

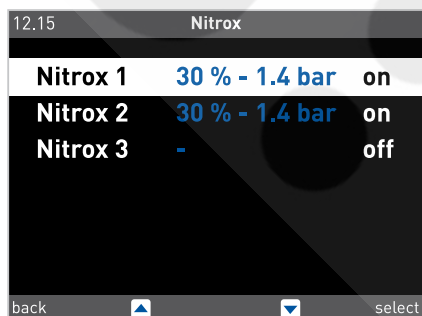


Fig. 75

NOTE

You cannot activate the third mix if you haven't activated the second mix.

NOTE

The second mix cannot have a %O₂ value higher than the third mix.

DIVE - ALTITUDE

Set the altitude at which you'll be diving. You can select from the following intervals:

- A1 (0-700 m)(0-2296 ft)
- A2 (700-1500 m)(2296-4921 ft)
- A3 (1500-2400 m)(4921-7874 ft)
- A4 (2400-3700 m)(7874-12139 ft)

NOTE

This setting cannot be changed during the dive. Therefore, carefully check all settings before going underwater.

WARNING

Do not dive in mountain lakes without having first checked that the appropriate altitude program is selected.

DIVE - PERSONAL CORRECTION FACTOR

ICON HD lets you set an additional personal safety factor to increase your safety during the dive. The correction factor should be used by inexperienced divers, for strenuous dives or when diving after a prolonged period of inactivity. The P1 low program does not apply any additional safety margins. This icon, which appears during the dive, indicates whether a personal correction factor is enabled, and if so its level.

DIVE - EXCESSIVELY FAST ASCENT ALARM

This function enables or disables the "Stop" function in case of uncontrolled ascent, to prevent ICON HD from locking out after a rapid ascent. The feature can be useful for instructors who need to practice emergency ascents.

WARNING

A rapid ascent increases the risk of decompression sickness (DCS).

WARNING

This function is intended only for highly experienced divers, who take full responsibility for the consequences of disabling the "Stop" on uncontrolled ascent.

DIVE - DISPLAY

Set the main display mode for information in Dive mode (EXTENDED, PROFILE).

DIVE - AUDIBLE ALARMS

This function enables or disables the audible alarms.

NOTE

The alarm for any deep stops is always enabled.

WARNING

The audible alarms should only be disabled by experienced divers, who take full responsibility for this operation.

DIVE - LINKED MAP

This function allows you to select a map to use during the dive (Figure 76).

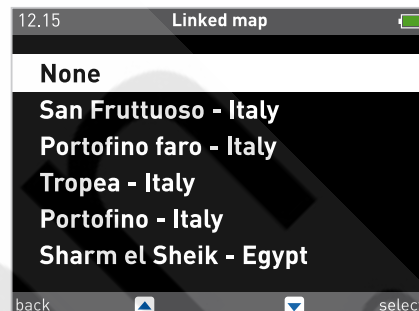


Fig. 76

NOTE

You can decide not to view any map during the dive. In this case, the corresponding button is disabled during the dive.

DIVE - CLEAR DESAT

Use this function to clear the residual nitrogen memory in the tissue compartments.

WARNING

This option is intended only for Dive Centers and Dive Stores.

WARNING

Users who clear the residual nitrogen memory cannot then use the instrument for repetitive dives. After this operation, do not dive with ICON HD if you have already dived within the previous 24 hours.

Diving after clearing the DESAT may put you into a potentially hazardous situation, which could result in serious injury or death.

WARNING

After resetting the DESAT, do not dive for at least 24 hours or longer.

WARNING

If the computer is in a "rental" situation, the "new diver" must not have made a previous dive in the last 24 hours.

To clear the residual nitrogen memory, enter the code 1234.

Enter the numbers in sequence: 1, 2, 3, 4. After each entry, confirm your choice with the select key.

If you complete the procedure correctly, the word "erased" will appear.

After cancelling the tissues, press the back button to return to the previous menu (Figure 77).

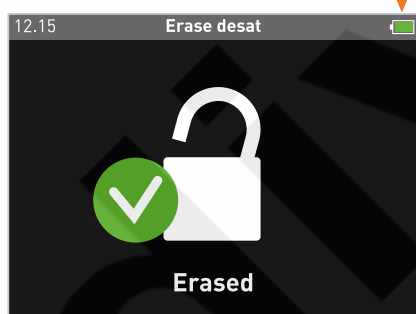
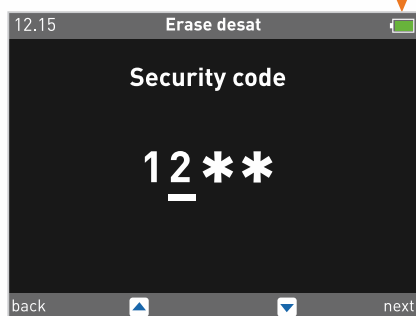
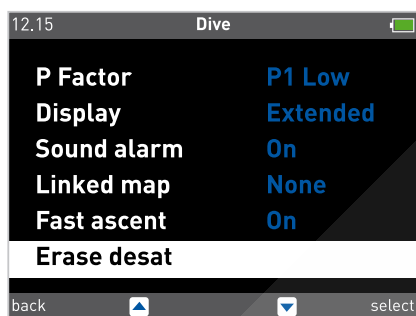


Fig. 77

NOTE

If you decide to exit from this setting without clearing the tissues, simply select the back button to exit this mode.

ICON HD

This submenu provides the serial number of the product and the firmware version.

• LOGBOOK

Using the Logbook submenu, you can display all the information about your most recent dives.

To enter this submenu, choose the Logbook icon in the main menu with the **select** button. The first page of the Logbook contains the list of dives, numbered progressively from the most recent to the oldest (Figure 78).

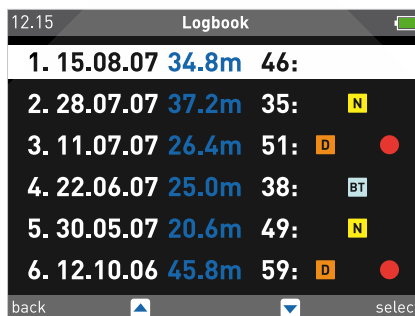


Fig. 78

The following icons for the dive are also offered:

- N** Nitrox dive.
- BT** Bottom time dive.
- D** Deco dive.
- Error committed.**

If the computer runs out of memory during a new dive, the oldest dive will be erased to allow the information for most recent dive to be saved.

ICON HD can save more than 100 hours of dives with profiles at 5 second intervals. Press the **select** icon to view the selected dive in digital mode.

LOGBOOK - DIGITAL VIEW

This format will display all information about the dive.

Use the central keys to scroll through your other dives.

Use the PROFILE button to move to a graphic display of the current dive.

Use the back key to return to the previous menu (Figure 79).



Fig. 79

NOTE

The battery icon shows the battery power level in real time, and not that referring to the dive displayed in the Logbook.

GRAPHIC DISPLAY

This mode shows a graphic display of the dive. Use the central keys to scroll through your dives.

Press the back key to return to the digital display (Figure 80).

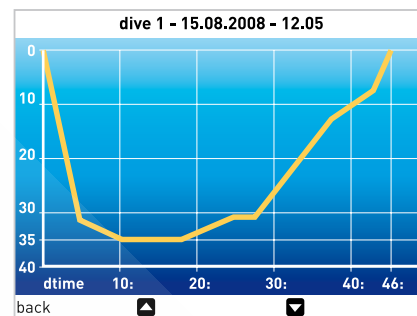


Fig. 80

NOTE

In Bottom Time dives with an error present, the uncontrolled ascent and omitted stop icons refer to errors committed during the previous dive.

• PLANNING

PLANNING: SCROLLING OF NO DECOMPRESSION LIMITS

This function allows you to scroll through the no decompression limits, automatically taking into account the current residual saturation of the tissue compartments from a preceding dive.

The times shown when scrolling the no decompression limits take into account the information entered under the **Settings** submenu: altitude, personal correction factor, Air, or in the case of Nitrox, the values for the oxygen percentage and its maximum partial pressure.

Select the Planning function using the central keys.

Press the **select** key to display the planner table, which shows the depth in increments of 3 m (10 ft), down to 48 m (157 ft). For each depth, the display shows the corresponding no-decompression time expressed in minutes. If "Nitrox" mode is selected, the display also shows the programmed oxygen percentage value. The maximum depth allowed in this case varies as a function of the % O₂ and maximum ppO₂ that have been entered. Press **back** to return to the previous menu.

NOTE

The Planning function is enabled if a dive in Air or Nitrox mode is set.

• PC MODE

PC MODE allows ICON HD to communicate with your computer using the USB port in a Windows environment (Figure 81).

Additional information and updates will be provided with the software interface, which can be downloaded free of charge from the Mares website: www.mares.com

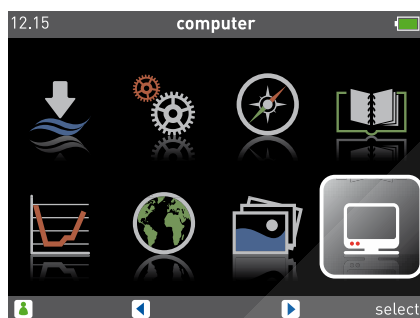


Fig. 81

• HOW TO CONNECT ICON HD TO A PC

Place **ICON HD** facing downward and plug the interface into the proper seat as shown in the following figures:
if the connection has been made correctly, the active connection message will be displayed.

At this point, **ICON HD** is ready to interact with the PC through the software interface (Figures 82-83).



Fig. 82

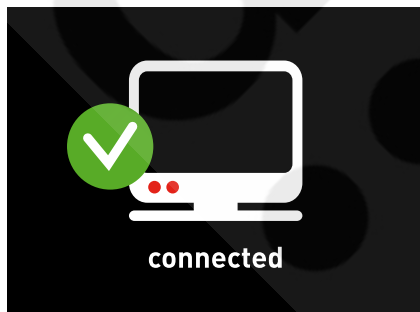


Fig. 83

• SOFTWARE UPGRADE

When Mares develops new functional options for the **ICON HD**, you will be able to upgrade your software.

The **ICON HD** software can be upgraded by downloading the new version from the Mares website and using the dedicated interface.

• FAQ

Q: Are the colors visible in deep water?

A: The colors are visible at any depth because the display is backlit.

Q: What happens if **ICON HD** isn't set to Dive Mode when I start the dive?

A: If Dive Mode is not set when you start the dive, **ICON HD** will still enable Dive Mode within 20 seconds of when you descend past 1.2 m (4 ft).

Q: What happens if there is an uncontrolled ascent or omitted decompression stop during an Air or Nitrox dive?

A: At the end of the dive, **ICON HD** switches automatically to "Stop". Only Bottom Time Mode will be accessible for diving for 24 hours.

Q: What indicates that Bottom Time Mode was chosen by the user, rather than forced as a result of underwater behavior errors during the preceding dive?

A: During the dive and in surface mode, in addition to the standard indications shown in "Bottom Time" mode, there is a special icon that indicates that **ICON HD** is blocked.

Q: If I select Air or Nitrox Mode after completing a dive in Bottom Time Mode, how will the new dive be managed?

A: **ICON HD** will not permit an Air or Nitrox dive in the subsequent 24 hours.

Q: Why is the PLANNING Mode sometimes disabled after a dive?

A: This happens if you end a dive with an omitted stop or an uncontrolled ascent. When this happens, **ICON HD** switches to Bottom Time Mode, and disables use of Air and Nitrox Modes for 24 hours.

Q: Where can I find the product serial number?

A: In the **Settings** submenu, use the central keys to select **ICON HD**.

Q: If I already own an IRIS or DRAK interface, can I use it with the **ICON HD**?

A: No. You need to use the specific interface provided with the computer.

Q: Are the 3 minutes of the safety stop included in the Ascent time?

A: No.

Q: What is the deep stop?

A: To minimize the likelihood of critical bubble seed formation, in the case of decompression dives or dives close to the no-deco limit, **ICON HD** prompts for a series of one-minute deep stops at different depths depending on the dive profile. This is one of the special characteristics of the RGBM Mares-Wienke Algorithm.

Q: If I ascend beyond the deep stop depth, can I go back down to do it?

A: If you surpass the deep stop depth by more than a meter, this stop will be canceled.

Q: Why doesn't the deep stop icon appear during my dive?

A: The deep stop icon only appears during decompression-stop dives or dives very close to the no-decompression limits.

• MAINTENANCE

After diving in seawater it is recommended that you rinse **ICON HD** with fresh water to remove any salt residues. Do not use chemical products. Simply rinse **ICON HD** under running water.

NOTE

If you notice signs of moisture on the inner wall of the mineral glass, take your **ICON HD** immediately to an authorized Mares service center.

WARNING

The mineral glass is not exempt from scratches resulting from improper use.

WARNING

Do not blow compressed air onto **ICON HD**, because it could damage the pressure sensor area.

REPLACING THE BATTERY

ICON HD uses a rechargeable battery, so it may be necessary to replace it after at least 500 charging cycles. The battery should only be replaced in a center authorized by Mares. Mares declines all responsibility for any damage caused by replacing the battery.

NOTE

Dispose of the old battery properly. Mares adopts a policy of respect for the environment, and urges use of the appropriate separated waste collection services.

TECHNICAL/FUNCTIONAL CHARACTERISTICS

GENERAL CHARACTERISTICS

Depth measurement

- Maximum displayed depth 150m (492 ft).
- Measurement resolution:
 - 10 cm (3.95 in) in the interval 0-100 m (0-328 ft).
 - 1 m (3.28 ft) in the interval 100-150 m (328-492 ft).
- Temperature compensation of the measurement between -10 and +50 °C (14/122 °F).
- Measurement accuracy from 0 to 80 m (0-262 ft): ±1% of full scale.

Temperature measurement

- Measurement range: -10/+50 °C (14/122°F).
- Measurement resolution: 1°C (1°F).
- Measurement accuracy: ±2°C (±4°F).
- Temperature display: Celsius (°C)/ Fahrenheit (°F).
- Operating temperature: from -10 to +50°C (14/122 °F).
- Storage temperature: from -20 to +70°C (-4/+158°F).

Digital compass Yes, with TILT compensation

Characteristics of the Battery

- Rechargeable lithium-ion battery
- Operating temperature:
 - Discharging: from -10 to +50°C (14/122°F)
 - Charging: from -0 to +45°C (32/113°F)

- Battery life from one charge:
 - approx 6 dives
- Lifetime of the battery:
 - 500 charging cycles

* NOTE

Data refer to calculations performed with the following parameters:

- Average length of each dive 45 min.
- Recharge when the battery is completely empty.
- Battery life is affected by the operating temperature: battery life decreases at lower temperatures.
- The life of the battery will vary depending on use.

Battery charge indicator: Yes

Battery charger: Yes

Backlighting (permanent): Yes

Audible alarms

- Omitted decompression stop
- Excessive ascent rate
- No-decompression limits reached
- Deep stop
- Maximum depth allowed by the ppO₂ max setting

Options for units of measure: Metric/Imperial: Yes

Fresh and salt water settings: Yes

Planner: Yes, from 12 - 48 meters (39 - 157 ft)

Seabed map: Yes, available during the dive

Images: Yes

ICE data (In Case of Emergency): Yes

PC Interface: Yes, included in the standard package

Software updatable by the end user: Yes

DISPLAY

Diagonal: 2.7"

Technology: TFT

Resolution: QVGA 320*240

Colors: 256000

Brightness: 420 cd/m²

MECHANICAL CHARACTERISTICS

Mineral glass: Yes

Buttons: 4

OPERATING MODES DURING THE DIVE

Air: Yes

Nitrox: Yes

Option to use different mixes: 3 mixes

Bottom Time/Gauge: Y, with stopwatch

DIVE MODE

EXTENDED display: Yes

PROFILE display: Yes

Digital descent speed indicator (m/min-ft/min): Yes

Digital ascent speed indicator (m/min-ft/min): Yes

Full decompression information: Yes

Decompression model: RGBM Mares-Wienke (10 tissues)

Personal correction factor setting: Yes

Altitude setting: Yes

Safety stop: Yes

Deep stops: Yes

NITROX CHARACTERISTICS

Settings O₂%: Yes

Maximum ppO₂ settings: Yes

%cns: Yes

LOGBOOK

Dives savable to Logbook: over 100 hours

Sampling interval in the profile: 5 sec

Display of profile points: graphic

• WARRANTY

MARES products are guaranteed for a period of two years subject to the following limitations and conditions:

The warranty is non-transferable and applies strictly to the original purchaser.

Mares products are warranted free from defects in materials and workmanship: components that, upon serious technical inspection, are found to be defective, will be replaced free of charge.

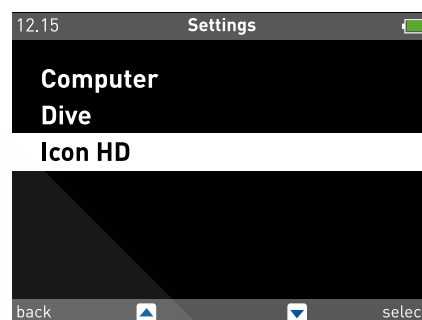
Mares S.p.A. declines all responsibility for accidents of any kind that result from tampering or incorrect use of its products. Any products returned for overhaul or repairs under warranty, or for any other reason, must be forwarded exclusively via the vendor and accompanied with a proof of purchase slip. Products travel at the risk of the sender.

WARRANTY EXCLUSIONS

Damage caused by water seepage resulting from improper use (e.g. dirty seal, battery compartment closed incorrectly, etc.). Rupture or scratching of the case, glass or strap as a result of violent impact or blows. Damage resulting from excessive exposure to elevated or low temperatures. Damage caused by the use of compressed air to clean the dive computer.

HOW TO FIND THE PRODUCT SERIAL NUMBER

To see the product serial number, enter the **Settings** submenu, move to **ICON HD** using the central keys, and press select.



This number should be noted on the certificate of guarantee in the package. The serial number is also found on the **ICON HD** packaging.

• DISPOSAL OF THE DEVICE



Dispose of this device as electronic waste. Do not throw it away with regular rubbish. If you prefer, you can return the device to your local Mares dealer.



Algorithm



Deep Stops



mares®