



Puck Air 2 Dive Computer

TABLE OF CONTENTS

•1 INTRODUCTION	3	•3 DIVING WITH PUCK AIR	12
1.1 GLOSSARY	3	3.1 A FEW WORDS ABOUT NITROX	12
1.2 OPERATING MODES	4	3.2 ALTITUDE	12
1.3 USER-REPLACEABLE BATTERY	4	3.3 ALARMS	12
1.4 CONNECTING PUCK AIR TO AN EXTERNAL DEVICE USING BLUETOOTH	4	3.3.1 ASCENT RATE	12
1.5 BUTTON OPERATION	4	3.3.2 MOD/ppO ₂	12
•2 MENUS, SETTINGS AND FUNCTIONS	6	3.3.3 CNS	13
2.1 MOdE	6	3.3.4 MISSED DECOMPRESSION STOP	13
2.2 SEt	7	3.3.4.1 MISSED DECO STOP MODE	13
2.2.1 SEt dIVE	7	3.3.5 LOW TANK PRESSURE	13
2.2.1.1 LiGht (BACKLIGHT)	7	3.3.6 LOW BATTERY	13
2.2.1.2 GrAd FAct (GRADIENT FACTORS)	7	3.4 DISPLAY INFORMATION	14
2.2.1.3 REP dIVE (REPETITIVE DIVE)	8	3.5 DEEP, DECO AND SAFETY STOPS	14
2.2.1.4 MLtI dAY (MULTIDAY)	8	3.5.1 DEEP STOPS	14
2.2.1.5 PrEdICt (PREDICTIVE)	8	3.5.2 DECO STOPS	14
2.2.1.6 bELOW MOd (ALLOW SWITCH BELOW MOD)	8	3.5.3 SAFETY STOP	14
2.2.1.7 WAtR (WATER)	8	3.6 COMPASS OPERATION	15
2.2.1.8 UNItS	8	3.7 AFTER THE DIVE	15
2.2.1.9 GAS INtEGr (GAS INTEGRATION)	9	3.8 DIVING WITH MORE THAN ONE GAS MIXTURE	16
2.2.1.10 dEEP	9	3.8.1 SETTING MORE THAN ONE GAS	16
2.2.1.11 dECO	9	3.8.2 SWITCHING GAS	16
2.2.1.12 COMPSS dECLIn (COMPASS DECLINATION)	9	3.8.3 SPECIAL SITUATIONS	17
2.2.1.13 COMPSS CLbR (COMPASS CALIBRATION)	9	3.8.3.1 SWITCHING BACK TO A GAS MIXTURE WITH LOWER OXYGEN CONCENTRATION	17
2.2.1.14 COMPSS tImE (COMPASS TIME)	10	3.8.3.2 SUBMERGING BELOW THE MOD AFTER A GAS SWITCH	17
2.2.1.15 FASt (FAST ASCENT)	10	3.9 bOtTOM tIMR (BOTTOM TIMER)	17
2.2.1.16 ALRM (ALARMS)	10	3.9.1 DIVE VIOLATION INDUCED BOTTOM TIMER MODE	17
2.2.1.17 ErASE (ERASE DESATURATION)	10	•4 TAKING CARE OF PUCK AIR	17
2.2.2 SEt tImE	10	4.1 TECHNICAL INFORMATION	17
2.3 LOG (LOGBOOK)	11	4.2 MAINTENANCE	17
2.4 PLAN (DIVE PLANNER)	11	4.2.1 REPLACING THE BATTERY IN PUCK AIR	18
2.5 bLE	11	4.3 WARRANTY	18
2.6 InFO	11	4.4 WARRANTY EXCLUSIONS	18
		4.5 HOW TO FIND THE PRODUCT SERIAL NUMBER	18
		•5 DISPOSAL OF THE DEVICE	18

IMPORTANT WARNINGS

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.

WARNING

A dive computer is an electronic instrument and as such it is not immune to failure. To protect yourself against the unlikely event of a failure, in addition to the dive computer, also use a depth gauge, a submersible pressure gauge, a timer or watch, and dive tables.

WARNING

Do not dive if the display appears unusual or unclear.

WARNING

The dive computer 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.

DISCLAIMER




This manual describes how to operate an instrument and it describes the information provided by the instrument during a dive.

Neither this manual nor the instrument are a substitute for dive training, common sense and good diving practices.

How the information provided by the instrument is interpreted and put to use by the diver is not the responsibility of Mares. Read the manual carefully and make sure you understand completely how the instrument works and the information it provides during a dive, including information on depth, time, decompression obligations and all warnings and alarms. Unless you fully understand how the instrument works and the information it displays and unless you accept full responsibility for using this instrument, do not dive with it.

•1 INTRODUCTION

1.1 GLOSSARY

	Symbolizes decompression stop violation.
	Symbolizes uncontrolled ascent and uncontrolled ascent violation
	Altitude class, as described in section 3.2.
AIR:	Air dive
ASC	Total ascent time, the time it takes to perform the ascent from your current depth to the surface in a decompression dive, including all decompression stops.
AVG:	Average depth, calculated from the beginning of the dive.
CNS:	Central Nervous System. CNS% is used to quantify toxic effects of oxygen.
DESAT:	Desaturation time. The time needed for the body to eliminate the nitrogen taken up during diving.
Gas integration:	The feature in Puck Air 2 2 to include tank pressure information in its calculations and to display it on the computer screen.
Gas switching:	The act of changing from one breathing gas to another.
GF:	Gradient factor
Gradient Factor:	Percentage of Bühlmann's original value of maximum allowed supersaturation.
Max depth:	Maximum depth attained during the dive.
MOD:	Maximum Operating Depth. This is the depth at which the partial pressure of oxygen (ppO ₂) reaches the maximum allowed level (ppO ₂ max). Diving deeper than the MOD will expose the diver to unsafe ppO ₂ levels.
Multigas:	Refers to a dive in which more than one breathing gas is used (air and/or Nitrox).
Nitrox:	A breathing mix made of oxygen and nitrogen, with the oxygen concentration being 22% or higher.
NO FLY (✕):	Minimum amount of time the diver should wait before taking a plane.
No deco time:	This is the time that you can stay at the current depth and still make a direct ascent to the surface without having to perform mandatory decompression stops.
O₂:	Oxygen.
O₂%:	Oxygen concentration used by the computer in all calculations.
ppO₂:	Partial pressure of oxygen. This is the pressure of the oxygen in the breathing mix. It is a function of depth and oxygen concentration. A ppO ₂ higher than 1.6bar is considered dangerous.
ppO₂max:	The maximum allowed value for ppO ₂ . Together with the oxygen concentration it defines the MOD.
Switch depth:	The depth at which the diver plans to switch to a higher oxygen concentration mix while using the multigas option.
S.I.:	Surface interval.
TTR:	Time To Reserve, it is the time that a diver can spend at the current depth and current breathing rate before reaching the tank reserve.

1.2 OPERATING MODES

The functions of the Puck Air 2 computer can be grouped into three categories, each corresponding to a specific mode of operation:

- **surface mode:** Puck Air 2 is dry on the surface. You can change settings, review your logbook, use the dive planner, see remaining desaturation after a dive, download via Bluetooth and much more;
- **dive mode:** Puck Air 2 monitors depth, time, tank pressure, temperature and performs all decompression calculations; dive mode itself can be broken down into 4 sub categories:
 - **pre-dive** (Puck Air 2 is on the surface but actively monitoring ambient pressure, so that it can begin to calculate a dive the instant it is submerged below 1.2m/4ft);
 - **dive**
 - **surfacing** (Puck Air 2 is on the surface at the end of a dive; dive time calculation is halted but if the diver submerges within three minutes the dive is resumed including the time spent on the surface);
 - **post-dive** (after the three minutes of surfacing mode, Puck Air 2 closes the logbook and reverts to a display showing desaturation time, no-fly time and surface interval; this lasts until the desaturation and the no-fly time both have been reduced to zero).
- **sleep mode:** the computer is on the surface after 1 minute without operation (3 minutes from pre-dive mode). Though the computer appears to be turned off completely, it is still active. Puck Air 2 computes tissue desaturation and checks the ambient pressure once every 20 seconds for uninterrupted monitoring of the environment.

1.3 USER-REPLACEABLE BATTERY

Puck Air 2 uses a CR2450 user-replaceable battery. See section 4.2.1 for instructions on how to replace it. Good quality batteries should suffice for approx 100-120 dives, depending on the usage of the backlight and the temperature of the water. Diving in cold water, usage of the backlight and of the beeper increases battery consumption.

The display alerts you of the status of the battery. The three possible situations are described as follows:

- **battery symbol not visible:** the remaining battery charge is adequate for diving;
- **steady battery symbol on the display:** there is enough charge for a few more dives, but you should consider replacing the battery at the next opportunity;
- **blinking battery symbol on the display (surface only):** the battery is too weak for diving. Puck Air 2 will not function as a dive computer and will not turn on if submerged.

The level of the battery charge can also be found on the "INFO" page (see section 2.6).

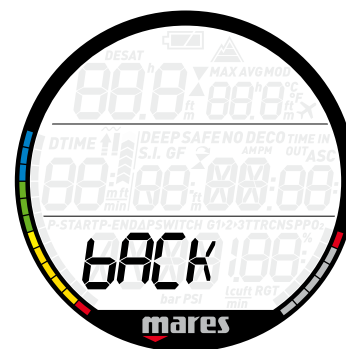
1.4 CONNECTING PUCK AIR 2 TO AN EXTERNAL DEVICE USING BLUETOOTH

Puck Air 2 can communicate via low power bluetooth and the apps Mares and MySSI directly to a smart device (iOS or Android) to transfer logbook information or to perform firmware upgrades.

To initiate a bluetooth connection, select "bLE" from the main menu, then start the Mares or MySSI app on your smart device and follow the instructions.

1.5 BUTTON OPERATION

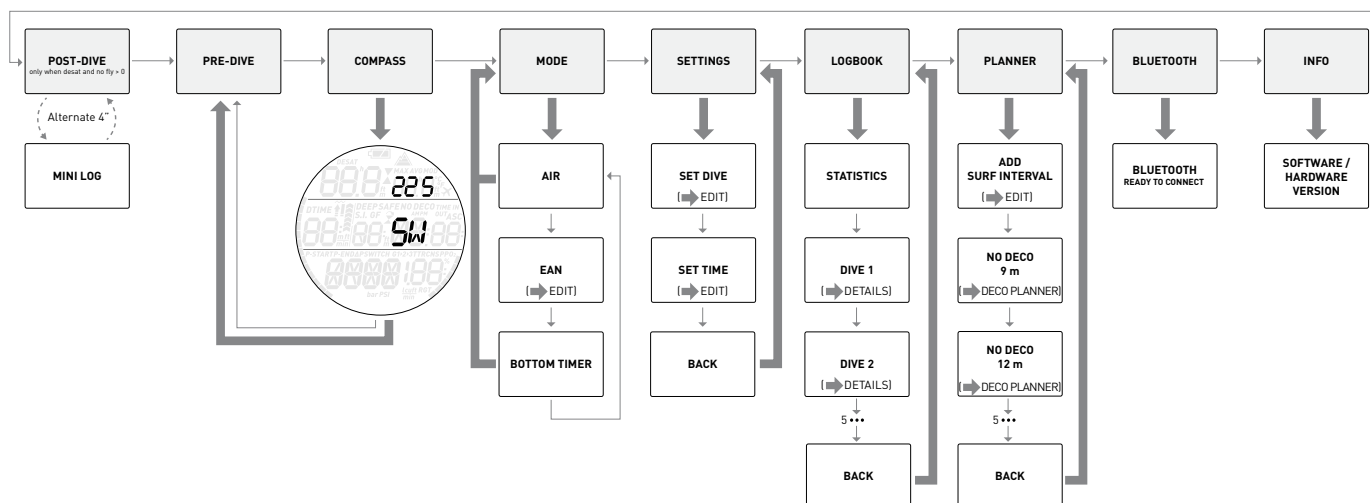
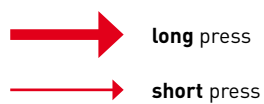
Puck Air 2 has only one button, which allows you to access menus and change settings while in surface mode and access alternate information during the dive, all in a very simple and intuitive manner. On the surface, press the button to change menu or value of a setting, and press and hold to enter a menu or confirm a setting. To exit a menu, press the button to advance until you see **BACK** on the display, then press and hold the button.



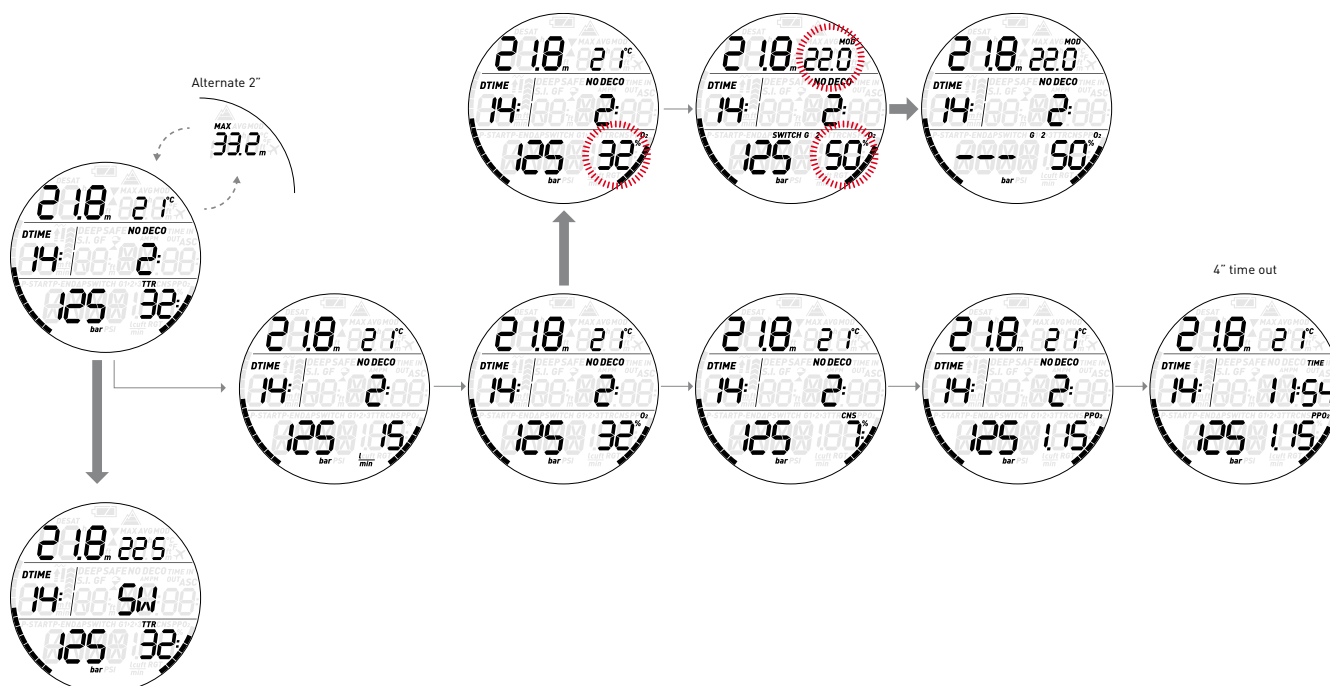
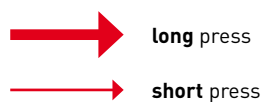
During the dive, press the button to access alternate information on the display and press and hold the button to activate the backlight, the compass or to initiate the gas switch sequence (described in 3.6 and 3.8, respectively).

An overview of the button function both in surface mode and during a dive is presented in the next figures.

SURFACE MODE



DIVE MODE



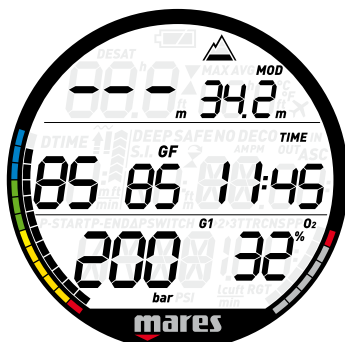
•2 MENUS, SETTINGS AND FUNCTIONS

This chapter describes in detail all menus, setting and functions of the Puck Air 2 dive computer.

Puck Air 2 always switches on in pre-dive mode. From here, pressing the button allows you to scroll through the following sequence of menus:

- **COMPSS**: allows you to use the compass on the surface;
- **MODE**: allows you to set the computer to air, nitrox or bottom timer mode;
- **SEt**: allows you to view and change all settings relative to the dive computer;
- **LOG**: allows you to access the detailed history of the dives performed;
- **PLAN**: allows you to plan dives as a function of depth based on your current nitrogen load;
- **bLE**: allows you to communicate with an external device via low energy Bluetooth;
- **InFO**: allows you to view information about software and hardware of your Puck Air 2.

The **pre-dive** mode puts the computer in a ready-to-dive mode and ensures that Puck Air 2 starts to monitor the dive as soon as a depth of 1.2m/4ft is reached. If you start the dive without putting Puck Air 2 into **pre-dive** mode, it will start to monitor the dive automatically but with a delay of up to 20 seconds from immersion.

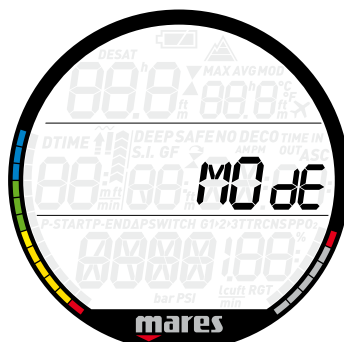


The pre-dive display shows the set gradient factors (alternating with the surface interval if there is remaining desaturation) and altitude class, time of day and tank pressure (when available). If Nitrox is set, it will show the O₂ percentage and the corresponding MOD.

NOTE

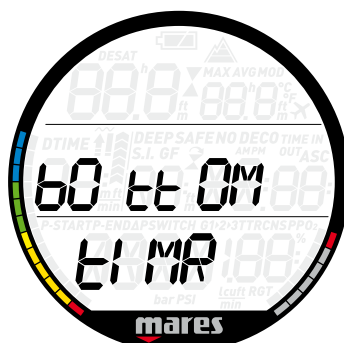
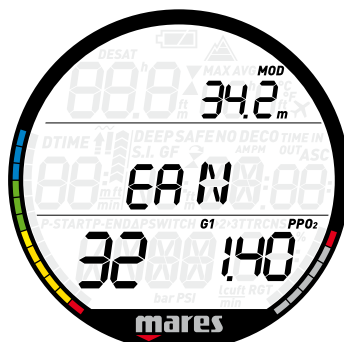
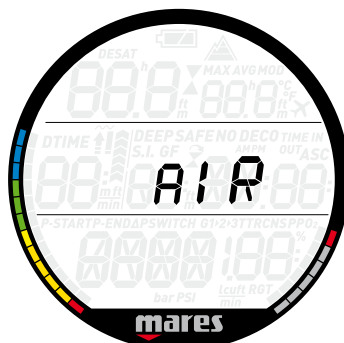
- If you remain in pre-dive for longer than 3 minutes without pressing any button, Puck Air 2 will switch off.
- It is recommended to put Puck Air 2 into pre-dive before submerging. Not doing so can lead to a delay of up to 20s in Puck Air 2 monitoring the dive.

2.1 MODE



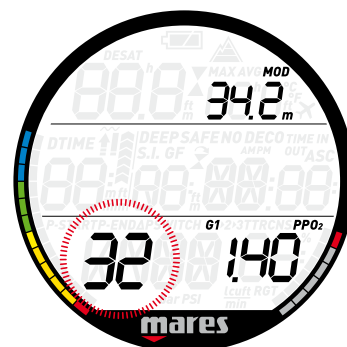
Here you can define the type of gas you will be breathing during the dive (air or enriched air nitrox, including multigas). You can also set Puck Air 2 to bottom timer, in which case Puck Air 2 will show only time, depth, tank pressure and temperature: it will not carry out any decompression calculation and it will not show any warnings and alarms.

Press the button to scroll through the three possible options (**AIR**, **EAN** or **bottom timer**), then press and hold the button to select it.

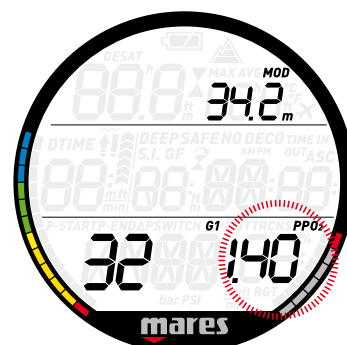


AIR is the equivalent of setting **EAN** to 21% and a ppO₂max of 1.4bar, but simplifies the display a bit by not showing the CNS (its value however is calculated in the background and if needed the 75% warning and the 100% alarm are triggered).

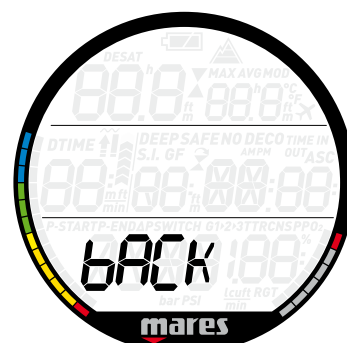
When selecting **EAN**, you are taken to a submenu in which you can define the percentage of oxygen in the mixture (%O₂) and the maximum value of oxygen partial pressure (ppO₂max) for up to three breathing mixes. The maximum possible value for the ppO₂max is 1.6bar. Most training agencies recommend not to exceed a value of 1.4bar.



Once inside this menu, press the button to change the O₂% and observe how this affects the maximum operating depth (MOD). Then press and hold the button to move on to the ppO₂max and use the button to change the value, again noticing how this affects the MOD. Press and hold the button again to save the setting.



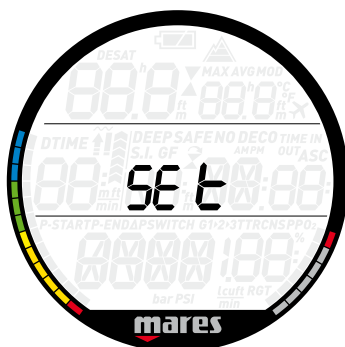
This leads you to the **BACK** screen. Press and hold the button to exit the menu or go to section 3.8 to read about diving with more than one gas.



⚠ WARNING

- Diving with Nitrox may only be attempted by experienced divers after proper training from an internationally recognized agency.
- Before every dive and after changing the tank, you must make sure that the set oxygen concentration in Puck Air 2 corresponds to the oxygen concentration in the tank. Setting the wrong oxygen concentration can lead to serious injury or death.

2.2 SEt



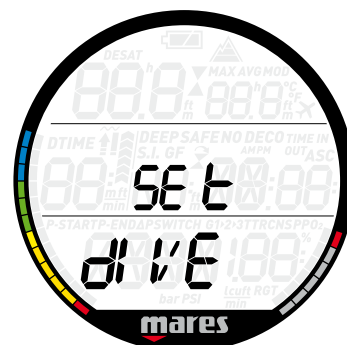
Puck Air 2's **SEt** menu allows you to change settings. Once inside this menu, press the button to scroll between two submenus: **SEt dIVE**, where you can set parameters pertaining to the dive, and **SEt TIME**, where you can set parameters pertaining to time and date.

Press and hold the button to enter a menu, press the button to scroll through the available options or to change the value of a setting. Then press and hold the button to confirm the change in setting. Press the button until you see **bACK** on the display then press and hold the button to go up one level in the menu tree.

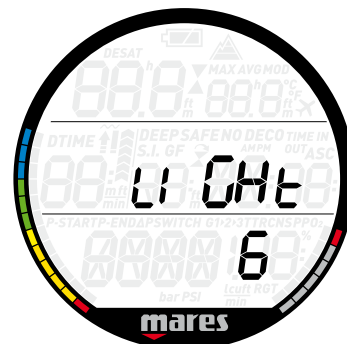
MENU	Description
SEt dIVE	
- LiGht	Allows you to set the duration after which the backlight turns off automatically. You can set this between 1 and 10 seconds.
- GrAd FAcT	Allows you to define the conservatism of the algorithm via the gradient factors.
- REP dIVE	Allows you to turn on or off the extra conservatism for repetitive dives.
- MLtI dAY	Allows you to turn on or off the extra conservatism for multiday dives.
- PrEdICt	Allows you to define how to calculate the decompression if more than one gas is used.
- bELOW MOD	Allows you to define whether a gas switch below its MOD is allowed or not.

- WAtR	Allows you to choose between salt (1.025kg/l) and fresh (1.000kg/l) water or EN13 (1.0197kg/l), corresponding to the water density used in European Norm 13319.
- UNItS	Allows you to choose between metric (m, °C, bar) and imperial (ft, °F, psi) units.
- GAS INT EGr	Allows you to define all parameters concerning gas integration (tank volume, half tank pressure and tank reserve).
- dEEP	Allows you to activate or deactivate the visualization of deep stops.
- dECO	Allows you to choose the depth of the shallowest stop among 3m/10ft, 4.5m/15ft and 6m/20ft.
- COMPSS dECLIn	Allows you to compensate between magnetic north and geographic north in the digital compass.
- COMPSS CLbR	Allows you to recalibrate the compass.
- COMPSS tIME	Allows you to set the time after which the compass automatically reverts to the dive computer display.
- FAST	Allows you to turn off the dive violation due to uncontrolled ascent. This is for dive instructors only, who may find themselves in such a situation because of their teaching requirements.
- ALRM	Allows you to turn on or off all audible alarms of Puck Air 2.
- ErASE	Allows you to reset the nitrogen saturation to zero, thereby erasing the effects of a previous dive. This is only for people who plan to lend their computer to another diver who has not performed a dive within the last 24 hours.
SEt tIME	Allows you to set the time and date.

2.2.1 SEt dIVE



2.2.1.1 LiGht (BACKLIGHT)



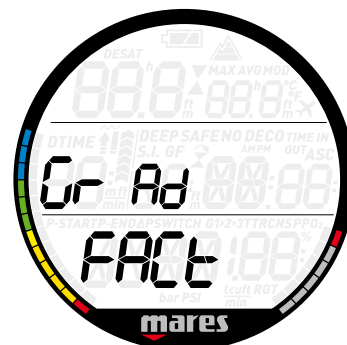
Puck Air 2 has a backlight which can be activated in case of low ambient light. The backlight is activated by pressing and holding the button. During a dive, the backlight will stay on for the duration defined in this menu. You can choose between 1 and 10 seconds.

NOTE

- The backlight consumes battery energy: the longer the backlight stays on, the less your battery will last.
- If the **low battery** warning is activated, the backlight will be disabled.

In surface mode, the backlight can be activated by pressing and holding the button from pre-dive or post-dive. The backlight will stay on for 6 seconds, unless you go into any menu, in which case it will stay on until you return to the pre-dive display or after one minute of no button operation (at which point Puck Air 2 turns off).

2.2.1.2 GrAd FAcT (GRADIENT FACTORS)



Puck Air 2 employs the unmodified Bühlmann ZH-L16C algorithm with gradient factors.

Gradient factors are used to lower the maximum tolerated inert gas pressure in the tissues with respect to Bühlmann's original

values. This results in less nitrogen in the body at the end of the dive, which under normal circumstances makes the dive safer. Gradient factors are expressed in pairs: the first value, also called **GF low**, represents the reduction of the original Bühlmann value that defines the beginning of the final ascent (relevant only in decompression dives); the second value, also called **GF high**, represents the reduction of the original Bühlmann value that defines the residual nitrogen at the surface at the end of a dive. As an example GF 50/85 will get you to the surface with a 15% lower gradient factor with respect to Bühlmann's original maximum tolerated inert gas pressure and, if this was a decompression dive, your first decompression stop would have been at a depth such that you would not have exceeded 50% of the gradient with respect to Bühlmann's original value at that depth.

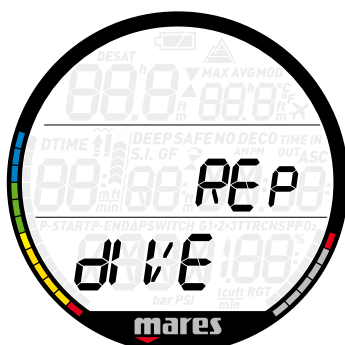
For more information about gradient factors, please refer to www.mares.com/sports/diving/gradientfactor. This is where you set the conservatism level of the ZH-L16C algorithm via gradient factors.

We use Bühlmann's original values reduced by 15% as a starting point, and you can make the algorithm more conservative from there. There are four predefined sets of gradient factors with increasing conservatism from **R0 (85/85)** to **R3 (50/60)**. You can also enter the GF low and GF high values directly via the **CUSTOM** setting. The default value is **R0 (85/85)**.

NOTE

The choice of **gradient factors** will be reflected in the dive planner.

2.2.1.3 REP dIVE (REPETITIVE DIVE)

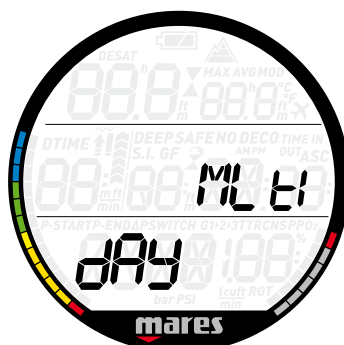


The original Bühlmann algorithm assumes normal offgassing of inert gas via diffusion after a dive. This seems to work well for most people and indeed most dive computers available today compute repetitive dives like this. There is evidence however that some people produce bubbles after a dive, or produce more bubbles than others, and these bubbles though harmless slow down the offgassing process. Surface intervals of three hours or longer are known to dissipate most if not all bubbles. Puck Air 2 allows you to account for this by applying an additional conservatism to repetitive dives, reducing both gradient factor values by 8 upon surfacing from a dive and then increasing it again by 1 every 15 minutes of surface interval. When setting **REP dIVE** to **ON** you will have recovered the full gradient factor values after a two-hour surface interval. Any dive started before such surface interval will carry an automatic

additional gradient factor reduction. If you set the value to **OFF**, the GF values are not modified during a surface interval.

The default value is **OFF**.

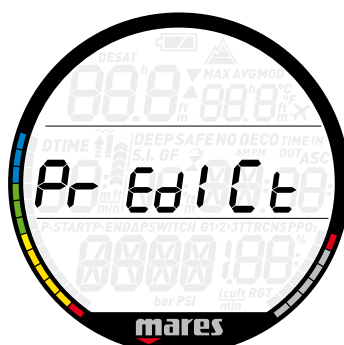
2.2.1.4 MLti dAY (MULTIDAY)



Increasing inert gas load on your tissues over several days of diving has effects that are not fully understood and are different from person to person. Most dive computers available today do not account for this and compute simple inert gas offgassing by diffusion. Puck Air 2 allows you to increase the conservatism automatically for each day of diving with less than 24-hours of surface interval by reducing both gradient factor values by 2 on the second day, an additional 2 on the third day and an additional 2 on the fourth day up to a maximum of 6.

The default value is **OFF**.

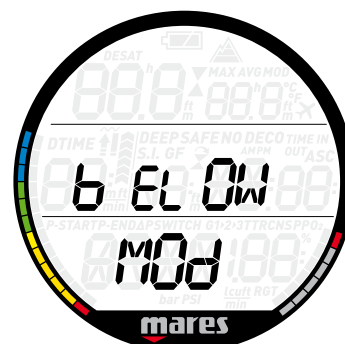
2.2.1.5 PrEdIct (PREDICTIVE)



When set to **ON**, Puck Air 2 will consider all set gases in the decompression calculation, with switches carried out at the MOD of each gas. When set to **OFF**, the decompression calculation will consider the currently breathed gas only. See Section 3.8 for more information about the **PrEdIct** feature.

The default value is **ON**.

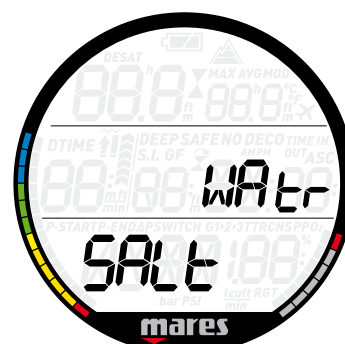
2.2.1.6 bELOW MOD (ALLOW SWITCH bELOW MOD)



When set to **ON**, Puck Air 2 will allow a switch to a gas at a depth deeper than the MOD of the gas (resulting in an immediate MOD alarm).

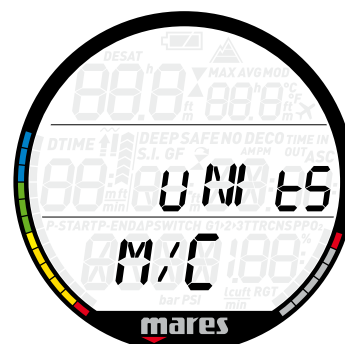
The default value is **ON**.

2.2.1.7 WAtR (WATER)



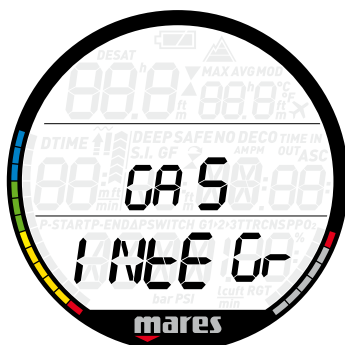
You can set the computer for **FRSH** water, **SALT** water or **EN13** calibration, depending on where you intend to dive. Setting the wrong water type entails an error in depth measurement of 1-3% (e.g. at a depth of 30m/100ft, a computer set to salt water will show 29m/97ft in fresh water whereas a computer set to fresh water will show 31m/103ft in salt water). Note that this does not affect the proper functioning of the computer, since the computer performs all of the calculations based purely on pressure measurements.

2.2.1.8 UNITS

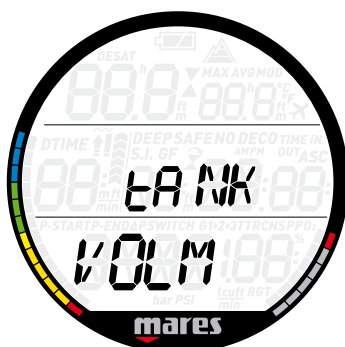


You can choose between metric (depth in meters, temperature in °C, tank pressure in bar) and imperial units. (depth in feet, temperature in °F, tank pressure in psi).

2.2.1.9 GAS INTEGr (GAS INTEGRATION)



This menu contains four submenus. The first menu, **TANK VOLM**, allows you to set the size of the volume of the tank (**G1** only). This parameter is important for a correct evaluation of your gas consumption in l/min or cu ft /min. Default setting is **12l** for metric system and **80 cubic feet** in imperial. For the imperial setting it is paramount that you also set the correct operating tank pressure, since the size of the tank is referenced to this pressure.



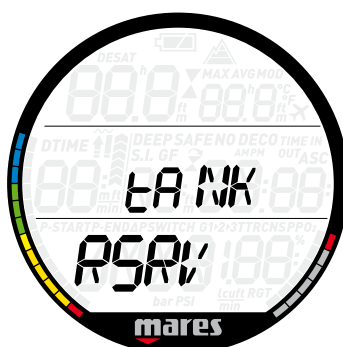
The second menu, **OP. TANK PRESS** is where you define the nominal fill pressure of your tank (**G1** only). When the units are set to ft/°F/psi, this value is important because together with the tank volume it allows Puck Air 2 to correctly evaluate your gas consumption in cu ft/min. Default values are **200bar** and **3000psi**.



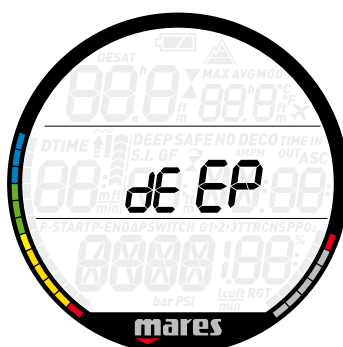
The third menu, **TANK WARN**, is the value at which Puck Air 2 triggers a half tank warning (**G1** only). Default values are **100bar** and **1500 psi**.



The fourth menu, **TANK RSRV**, is the value at which an alarm is triggered because you should always be at the surface before reaching this level. Furthermore, this value is used to calculate the **TTR** value (see section 3.3.5 and 3.4). Default values are **50bar** and **500psi**.



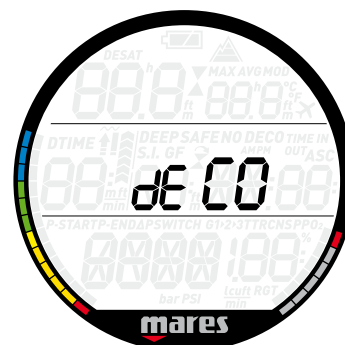
2.2.1.10 dEEP



Puck Air 2 calculates a deep stop for air and nitrox dives only. The depth is defined as that at which the 5th compartment (27-minute half time) switches from ongassing to offgassing. Stopping at this depth during an ascent allows the first four tissues to offgas at a relatively high ambient pressure (theoretically preventing microbubble formation) without causing excessive nitrogen uptake in the other tissues. The deep stop is optional, not carrying it out does not introduce any penalties and its duration is **NOT** included in the total ascent time.

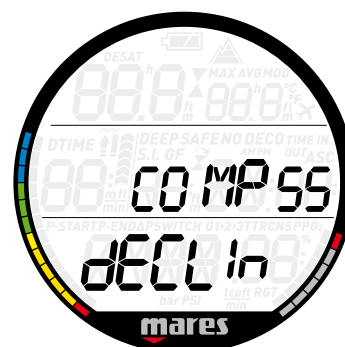
This menu allows you turn off the calculation and display of the deep stop. The default setting is **OFF**.

2.2.1.11 dECO



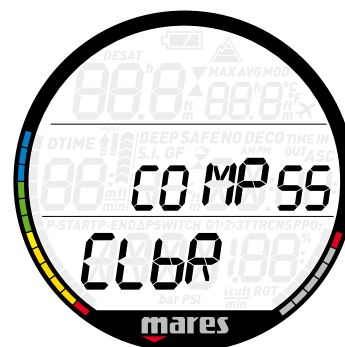
This menu allows you to choose the depth of the shallowest stop among 3m/10ft, 4.5m/15ft and 6m/20ft. Decompression times increase when the shallowest stop is deeper.

2.2.1.12 COMPSS dECLIn (COMPASS DECLINATION)



Depending on the exact location on the planet, there can be a deviation between true North and magnetic North. Any compass will always show magnetic North, so via this menu you can set a value for the so-called declination that will make the compass show true North instead.

2.2.1.13 COMPSS CLbR (COMPASS CALIBRATION)

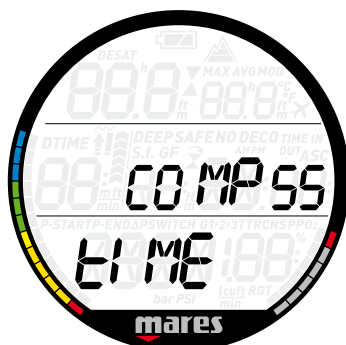


The digital compass in Puck Air 2 is calibrated from the factory and does not require, under normal circumstances, any further maintenance. In certain instances, however, such as after exposure to extremely intense magnetic fields, it may be necessary to recalibrate the compass to ensure its accuracy. If you notice an obvious deviation in the indication of the compass, access this menu and perform the calibration as described below.

First you must enter the security code, **1234**.

Now hold Puck Air 2 horizontal to the surface and perform one slow counter clockwise circle. Once you have finished the circle, the calibration is completed.

2.2.1.14 COMPSS tIME (COMPASS TIME)

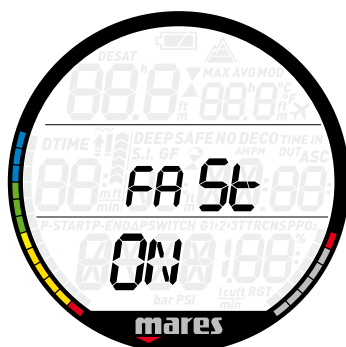


You may use the compass for long stretches of navigation or you may just glance at it once in a while to get a bearing. In the latter case you may want the display to automatically return to the regular display after a set number of seconds. The default value is **ON**, meaning that you return to the regular display by pressing or pressing and holding the button, but you can set it to 5, 15, 30 or 60 seconds.

NOTE

if an alarm is triggered while you are in compass mode, the display automatically switches back in order to show the alarm as described in section 3.3.

2.2.1.15 FASt (FAST ASCENT)

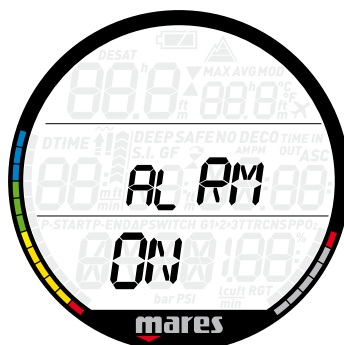


If the ascent rate exceeds 120% of the allowed value over a depth change of more than 20m/66ft, due to the potential of harmful bubble formation, Puck Air 2 locks the computer for 24 hours in order to prevent you from diving again. In this menu, you have the option to disable the locking up of the computer in the event of an uncontrolled ascent.

WARNING

- An uncontrolled ascent increases your risk of decompression sickness (DCS)
- This feature is intended for very experienced divers only, such as dive instructors, who take full responsibility for the consequences of turning off this function.

2.2.1.16 ALRM (ALARMS)

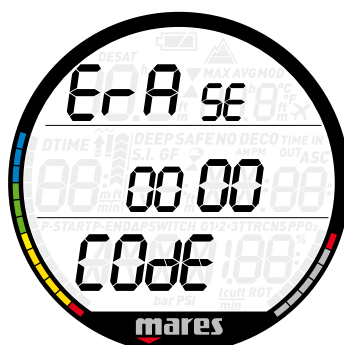


In this menu you can disable audible alarms.

WARNING

Disabling audible alarms can lead you into potentially dangerous situation and could result in serious injury or death.

2.2.1.17 ErASE (ERASE DESATURATION)



Puck Air 2 allows you to reset the desaturation in the computer. Any tissue saturation information from a recent dive will be reset to zero and the computer treats the next dive as a non-repetitive dive. This is useful when the computer is loaned to another diver who has not dived in the last 24 hours.

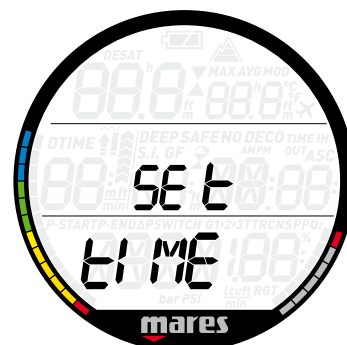
WARNING

Diving after having reset the desaturation is extremely dangerous and is very likely to cause serious injury or death. Do not reset the desaturation unless you have a valid reason to do so.

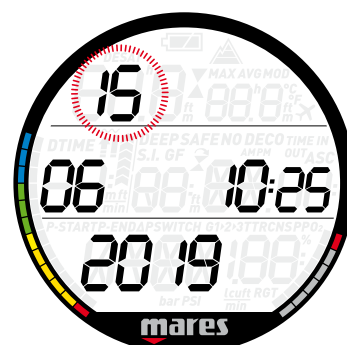
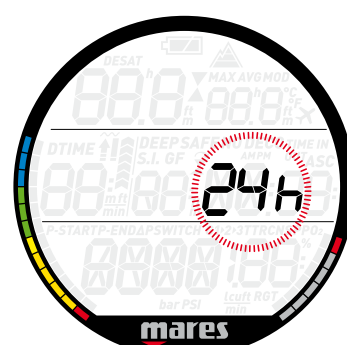
In order to prevent accidental desaturation reset, you must enter the security code once you decide to proceed with the reset. The security code is **1234**.

After entering the security code you will get a confirmation of the successful completion of the operation.

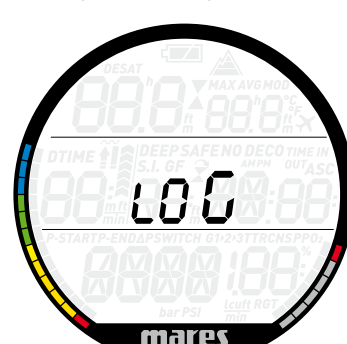
2.2.2 SEt tIME



This menu allows you to set the time and date. Press and hold the button and **24h** or **AMPM** will start to blink. Press the button to switch between the two and/or press and hold the button to confirm and move on to set the hour, the minutes and the date.

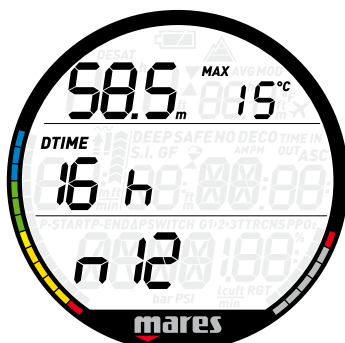


2.3 LOG (LOGBOOK)

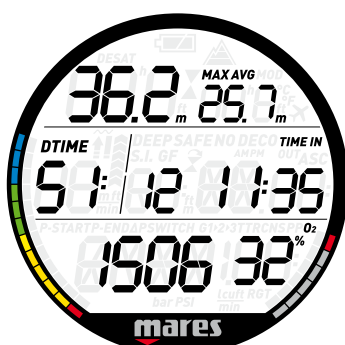


Puck Air 2 can record the profiles of approximately 150 hours of diving, at a sampling rate of 5 seconds. The information can be transferred via Bluetooth to an external device. In addition, Puck Air 2 can show most of the information directly on the display.

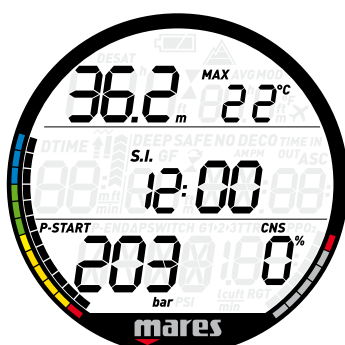
When you first enter the logbook menu, you will see a summary of all dives performed to date. In particular, the maximum depth ever reached, the total number of dives, the total number of hours spent underwater and the coldest water temperature recorded.



From here, press the button to scroll through all dives in the memory of the computer. Every 5 dive logs there is a **BACK** screen which allows you to exit the logbook by pressing and holding the button. Each dive has two pages of data. Page 1 has maximum depth of the dive in the upper left corner while minimum temperature and average depth alternate every 2s in the upper right corner. The dive time is displayed in its usual location, next to it there is a sequential dive counter (1 being the most recent dive) followed by alternating time in and time out information. In the bottom left corner is the date of the dive and next to it the oxygen concentration of G1 (if more than one gas was used, the values will alternate every 2 seconds).



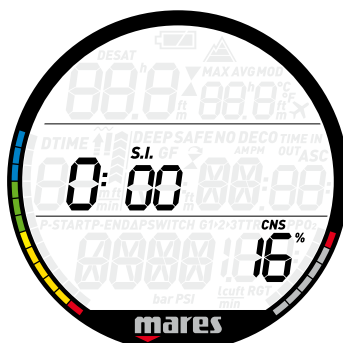
Press and hold the button to view the next page of the dive log, which shows the surface interval prior to the dive instead of the dive time, the tank pressure (alternating starting, ending and differential value every 2s) and CNS (alternating between start and end value) in the bottom row. Press and hold the button to return to the list of dives.



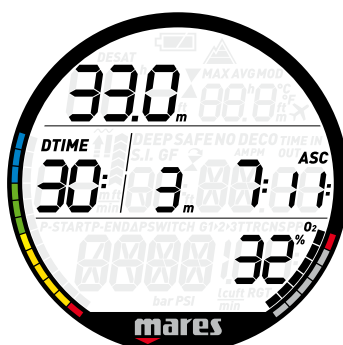
2.4 PLAN (DIVE PLANNER)



This function allows you to plan your next dive. Upon entering this menu, the middle row shows a surface interval of 0:00: in case you dived recently, you can enter an additional surface interval in 15-minute increments between now and when you intend to dive by pushing the button; the residual nitrogen load will be adapted accordingly. Next press and hold the button to enter the actual dive plan: Puck Air 2 displays a depth and the corresponding no deco time.



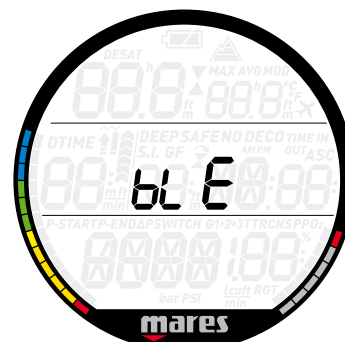
Use the buttons to increase the depth in 3m / 10ft increments (limited to the MOD of G1) and view the related no deco time. Press and hold the button to enter deco planning: Puck Air 2 will add one minute to the no deco time and show the corresponding deco obligation. Now press the button to modify the dive time and view how this affects the deco calculation. Press and hold the button to return to the no deco dive planner. From here either choose a different depth and repeat a deco plan or press and hold the button when you get to a display with **BACK** to exit the dive planner.



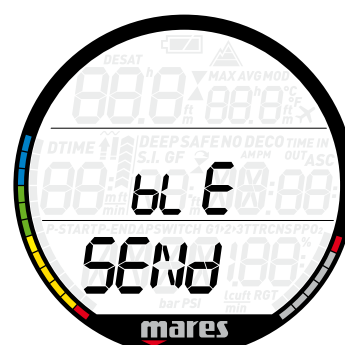
NOTE

The dive planner is enabled only if either air or nitrox mode is set

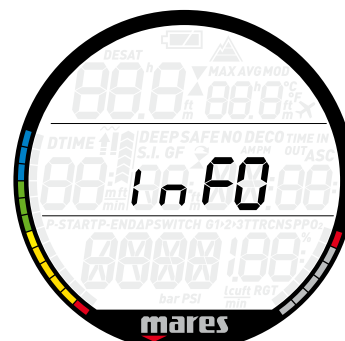
2.5 bLE



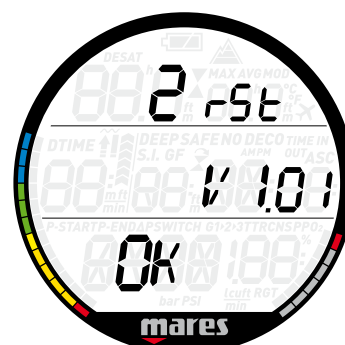
This submenu allows you to communicate with an external device via Bluetooth. Press and hold the button and the display will show **bLE SEND**, symbolizing that Puck Air 2 is ready to communicate.



2.6 InFO



This submenu provides information about the hardware and software of your Puck Air 2 and about the status of the battery: **OK** means the battery is good, **LOW** means the battery is weak but you can still do a few more dives, and **K0** means the battery is very low and Puck Air 2 won't function as a dive computer.



•3 DIVING WITH PUCK AIR 2

3.1 A FEW WORDS ABOUT NITROX

Nitrox is the term used to describe breathing gases made of oxygen-nitrogen mixes with an oxygen percentage higher than 21% (air). Because Nitrox contains less nitrogen than air, there is less nitrogen loading on the diver's body at the same depth as compared to breathing air.

However, the increase in oxygen concentration in Nitrox implies an increase in oxygen partial pressure in the breathing mix at the same depth. At higher than atmospheric partial pressures, oxygen can have toxic effects on the human body. These can be lumped into two categories:

- Sudden effects due to oxygen partial pressure over 1.4bar. These are not related to the length of the exposure to high partial pressure oxygen, and can vary in terms of the exact level of partial pressure they happen at. It is commonly accepted that partial pressures up to 1.4bar are tolerable, and several training agencies advocate maximum oxygen partial pressures up to 1.6bar.
- Long exposure effects to oxygen partial pressures over 0.5bar due to repeated and/or long dives. These can affect the central nervous system, cause damage to lungs or to other vital organs.

Puck Air 2 keeps you safe with respect to these two effects in the following ways (as long as it is set to either **air** or **nitrox**):

- Against sudden effects: Puck Air 2 has an MOD alarm set for a user-defined ppO_2 max. As you enter the oxygen concentration for the dive, Puck Air 2 shows you the corresponding MOD for the defined ppO_2 max. The default value of ppO_2 max from the factory is 1.4bar. This can be adjusted to your preference between 1.2 and 1.6bar. Please refer to section 2.1 for more information on how to change this setting. If Puck Air 2 is set to air, the ppO_2 max is set to 1.4bar by default.
- Against long exposure effects: Puck Air 2 "tracks" the exposure by means of the CNS% (Central Nervous System). At levels of 100% and higher there is risk of long exposure effects, and consequently Puck Air 2 will activate an alarm when this level of CNS% is reached. Puck Air 2 also warns you when the CNS level reaches 75%. Note that the CNS% is independent of the value of ppO_2 max set by the user.

3.2 ALTITUDE

Atmospheric pressure is a function of altitude and of weather conditions. This is an important aspect to consider for diving, because the atmospheric pressure surrounding you has an influence on uptake and subsequent release of nitrogen. Above a certain altitude, the decompression algorithm has to change in order to account for the effect of the change in atmospheric pressure. Puck Air 2 automatically adapts the algorithm by sensing the ambient pressure every 20 seconds even when it is turned off. Puck Air 2 displays the mountain symbol with various levels of fills to represent the elevation:

- from sea level to approximately 700m/2300ft - no symbol;
- from approximately 700m/2300ft to approximately 1500m/4900ft - 1 fill segment;
- from approximately 1500m/4900ft to approximately 2400m/7900ft - 2 fill segments;
- from approximately 2400m/7900ft to approximately 3700m/12100ft - 3 fill segments;

NOTE

We do not recommend diving at altitudes above 3700m / 12100ft. If you do, set Puck Air 2 to bottom timer and find appropriate altitude dive tables.

3.3 ALARMS

Puck Air 2 can alert you of potentially dangerous situations. There are six different alarms:

- Ascent rate alarm;
- Exceeding a safe ppO_2 /MOD;
- CNS;
- Missed decompression stop;
- Low tank pressure;
- Low battery during the dive.

WARNING

When in bottom timer mode, all warnings and all alarms are **OFF** aside for the low battery alarm and tank reserve alarm.

NOTE


- Alarms are both visual and audible, as described in detail below.
- Ascent rate alarm has priority over other alarms if they are triggered simultaneously.

3.3.1 ASCENT RATE

As soon as depth decreases Puck Air 2 activates the ascent rate control algorithm and displays the calculated value both numerically and graphically.

WARNING

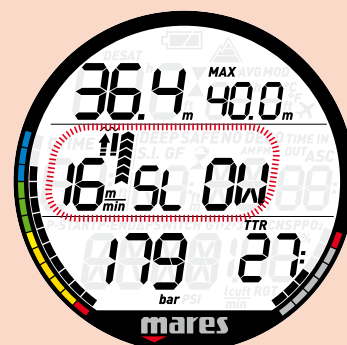
A rapid ascent increases the risk of decompression sickness.


If Puck Air 2 determines an ascent rate higher than set limits, the fast ascent alarm is triggered: an audible alarm goes off, the fast ascent  symbol appears and the message **SLOW** is displayed in the middle of the screen. This persists until the ascent rate is reduced to below the pertinent limit. The limits are dependent on the current depth as follow:

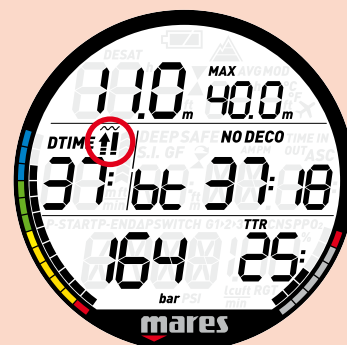
Depth in m	Speed in m/min	Depth in feet	Speed in ft/min
< 10m	5	< 30ft	15
10 – 30 m	10	30 – 100 ft	30
30 – 50 m	15	100 – 165 ft	45
> 50 m	20	> 165 ft	60

WARNING

If the ascent rate exceeds 120% of the allowed value over a depth change of more than 20m/66ft, due to possible harmful bubble formation, Puck Air 2 locks the computer for 24 hours in order to prevent you from diving again.



In this case, if the diver attempts a repetitive dive after surfacing, Puck Air 2 will only function as a depth gauge and timer (bottom timer mode), and will display  on the screen throughout the dive.



NOTE

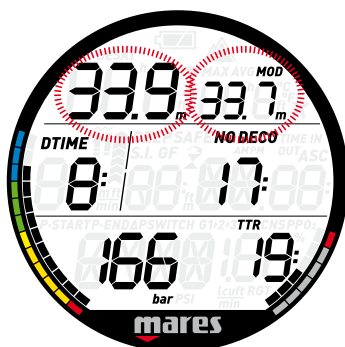
You can disable this function in the menu **FAST**. This should only be done by highly experienced divers, who take full responsibility for the consequences of this action.

3.3.2 MOD/ ppO_2

WARNING

- The MOD should not be exceeded. Disregarding the alarm can lead to serious injury or death.
- Exceeding a ppO_2 of 1.6bar can lead to sudden convulsions resulting in serious injury or death.

When the diver reaches a depth at which the ppO_2 of the inspired gas exceeds the maximum limit entered in the corresponding setting (from 1.2 to 1.6bar), an audible alarm goes off, the current depth starts to blink and the value of the MOD is shown to the right of the current depth, also blinking.



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

WARNING

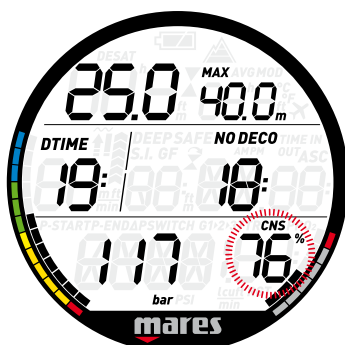
When the MOD alarm is triggered, ascend immediately until the alarm stops. Failure to do so could result in serious injury or death.

3.3.3 CNS

WARNING

When the CNS reaches 100% there is danger of oxygen toxicity. Start procedure to terminate the dive.

Oxygen toxicity exposure is tracked on Puck Air 2 by means of the CNS% 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 reaches 75%, an alarm goes off and the CNS value blinks on the screen. Additionally the CNS becomes the default item in the lower right corner: if you call up other information after 8 seconds the CNS appears again. Ascend to shallower depth to decrease oxygen loading and consider terminating the dive.



When the oxygen toxicity level reaches 100% the alarm is repeated for 5 seconds in one-minute intervals after the first occurrence and for as long as the value of CNS stays at or above 100%. Consider terminating the dive immediately!

WARNING

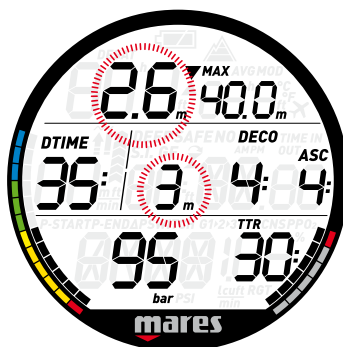
Diving with oxygen toxicity at levels of 75% or greater may put you into a potentially hazardous situation, which could result in serious injury or death.

3.3.4 MISSED DECOMPRESSION STOP

WARNING

Violating a mandatory decompression obligation may result in serious injury or death.

If you ascend above the decompression stop depth by more than 0.3m (1ft), a downward pointing triangle appears, an audible alarm goes off and both the current depth and the depth of the deco stop start blinking. This alarm remains active until you return to the correct depth.

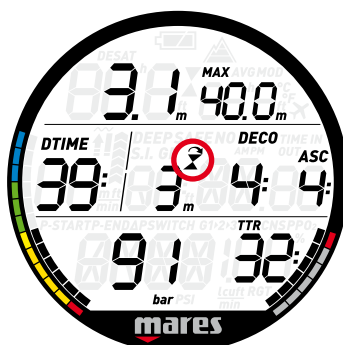


WARNING

Never ascend above the displayed decompression stop depth.

3.3.4.1 MISSED DECO STOP MODE

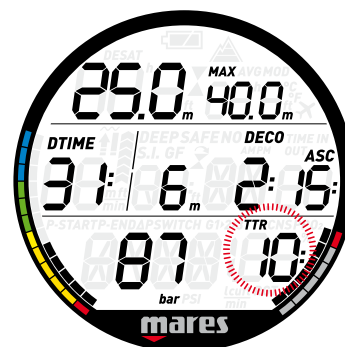
If the stop depth is exceeded by less than 1m (3ft) for more than three minutes or by more than 1m (3ft) for more than 1 minute, Puck Air 2 considers it a dive violation and the display will show .



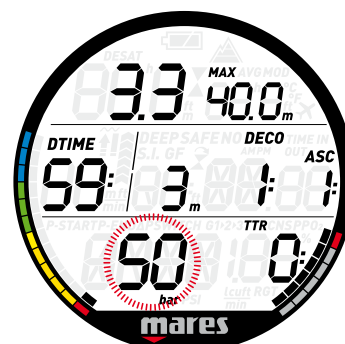
In this case, if the diver attempts a repetitive dive after surfacing, Puck Air 2 will function only as a depth gauge and timer (bottom timer mode), and it will display on the screen.

3.3.5 LOW TANK PRESSURE

When during a decompression dive Puck Air 2 calculates a TTR which is inferior to the total ascent time, the TTR value starts to blink and an audible alarm goes off. Press the button to acknowledge the alarm and it will turn off. We strongly suggest initiating an ascent when this situation arises, in order to avoid running out of breathing gas during decompression.



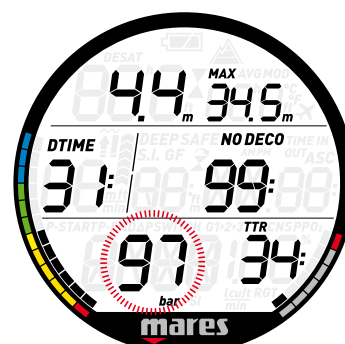
Additionally, when the tank pressure reaches the value specified under **TANK RSRV**, the tank pressure starts to blink and an audible alarm goes off. Press the button to acknowledge the alarm and silence it, though the tank pressure will continue to blink.



NOTE

For metric setting only: if the tank reserve is set to a value below 50bar, the alarm will go off at 50bar and the value defined as tank reserve will be used for TTR calculation only.

Puck Air 2 features also a half tank alarm, which goes off when the pressure defined in the **TANK WARN** menu is reached. The pressure will blink and an audible alarm goes off: press the button to acknowledge the alarm and to turn it off.

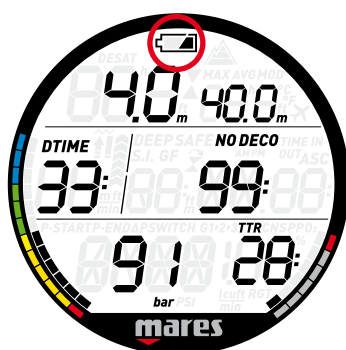


NOTE

If you set the **TANK WARN** value to the same value as **TANK RSRV**, you will eliminate the half tank alarm.

3.3.6 LOW BATTERY

If Puck Air 2 detects that the battery power level is safe for diving but without much reserve left, it will show the steady battery symbol on the display.

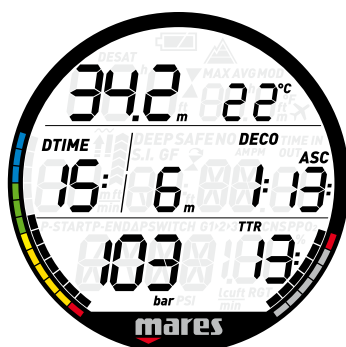
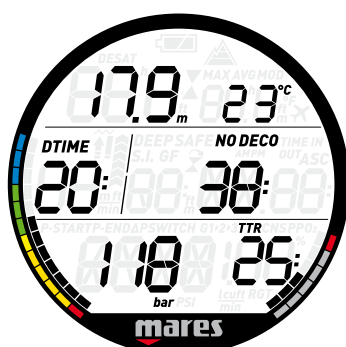


3.4 DISPLAY INFORMATION

Upon immersion, if Puck Air 2 was set to pre-dive, it will immediately start monitoring the dive. Otherwise, it will turn on automatically within 20 seconds of having reached a depth of 1.2m/4ft.

The following information is shown:

- current depth
- temperature alternating with max depth every 2 s
- no deco time (or depth and duration of deepest stop and total ascent time in case of decompression dives)
- dive time
- tank pressure (both numeric and graphic)
- TTR
- nitrogen saturation bar graph



By pressing the button, you can modify the information displayed in the bottom right corner.

At each button press, the screen cycles through TTR, gas consumption, oxygen percentage, CNS, ppO₂ and time of day (in lieu of decompression information; the latter has a 4-second time out after which the decompression information is displayed again).

In case of an ascent, the **speed** in m/min or ft/min is displayed in lieu of the dive time.

The **depth** is given in 10cm resolution until 99.9 meters, after which it is given in 1m resolution. When the depth is displayed in feet, the resolution is always 1 foot. At a depth shallower than 1.2m/4ft, the display shows ---. Maximum possible depth is 150m/492ft.

The **dive time** is displayed in minutes. If during the dive you ascend to the surface, the time spent on the surface will only be counted if you descend again below 1.2m/4ft within 3 minutes. This allows for brief periods of orientation. While on the surface, the time will not show as progressing but it is running in the background. As soon as you submerge, the time will resume, including the time spent on the surface.

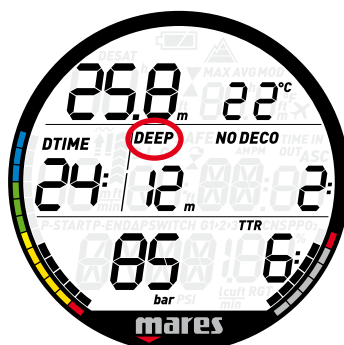
The **no deco time** is calculated in real time and updated continuously. Maximum displayed no deco time is 99 minutes. If you remain at depth beyond a no deco time of zero minutes, you will enter into decompression: you can no longer make a direct ascent to the surface and Puck Air 2 displays a **MANDATORY** decompression stop. Instead of a no deco time, it shows you the depth and duration of the deepest stop and the total ascent time (**ASC**), which includes each decompression stop and the time required to travel the vertical distance to the surface at the allowed rate. **ASC** does not include the duration of deep stops.

3.5 DEEP, DECO AND SAFETY STOPS

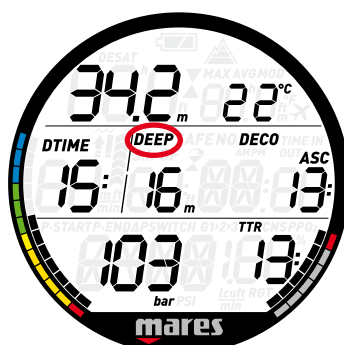
3.5.1 DEEP STOPS

A **DEEP** stop is generated as you approach the no deco limit. A **DEEP** stop is always 2 minutes in duration and it is **NOT** mandatory.

In a **NO DECO** dive, the depth of the deep stop is displayed in the center window to the left of the **NO DECO** time, which is temporarily shifted to the right for better readability.

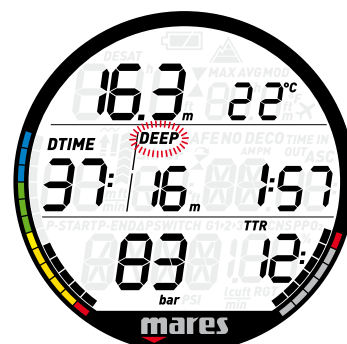


In a **DECO** dive, the depth of the deep stop replaces the depth of the deepest **DECO** stop, and the duration of the stop is not shown to avoid misinterpreting it as a **DECO** stop.



In both a **NO DECO** and a **DECO** dive, the **DEEP** label is lit when a deep stop is displayed.

Upon reaching the optimum range for carrying out a deep stop (+/- 1m/3ft of the displayed depth), the countdown timer replaces the **NO DECO** or **ASC** time to indicate the progress of the stop.

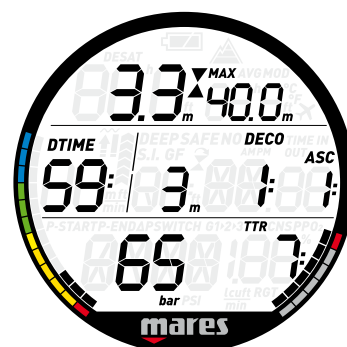


Deep stops can be deactivated in a dedicated settings menu.

3.5.2 DECO STOPS

DECO stops are generated progressively as you stay down beyond the no deco time.

DECO stops are **MANDATORY**.



For **DECO** stops, since the duration is a function of the exact depth, only the minutes are shown.

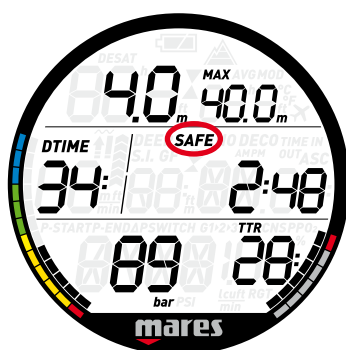
During a decompression stop, the following symbols may appear:

- ▲ : optimal range for the decompression stop;
- ▼ : above decompression stop depth, descend immediately!

3.5.3 SAFETY STOP

A **SAFETY** stop is generated as soon as the depth of the dive exceeds 10m / 33ft. It has a duration of 3 minutes and it is carried out between depths of 6m / 20ft and 3m / 10ft at the end of a dive prior to surfacing. The 3-minute countdown timer is shown in the center row together with the label **SAFE**.

Such stop is **NOT** mandatory but **HIGHLY RECOMMENDED**.



WARNING

During all dives, perform a safety stop between 3 and 6 meters/10 and 20 feet for 3 minutes, even if no decompression stop is required.

The **tank pressure** is based on the signal from the high pressure sensor built into the computer. The tank pressure is displayed numerically in the bottom row but also graphically along the left edge of the display, via 12 segments as per the table below.

Lit segments	Tank pressure range		Color code
	bar	psi	
12	>200	>3000	blue
11	181-200	2751-3000	blue
10	161-180	2501-2750	blue
9	141-160	2251-2500	green
8	121-140	2001-2250	green
7	101-120	1751-2000	green
6	91-100	1501-1750	yellow
5	81-90	1251-1500	yellow
4	71-80	1001-1250	yellow
3	61-70	751-1000	yellow
2	51-60	501-750	yellow
1	30-50	300-500	red
0	<30	<300	-

The **TTR** (time to reserve) is the time you can spend at the current depth breathing at the current rate before reaching the user defined tank reserve.

NOTE

Puck Air 2 needs approximately 2 minutes to analyze your breathing pattern, thus the TTR is not displayed at the very beginning of the dive.

The **nitrogen bar graph** is on the right side of the display. It represents nitrogen saturation in the leading tissue compartment. The bar graph is made of six segments, which gradually fill during the dive. The more black segments you see, the closer to the no deco limits you are. As you enter a situation of mandatory decompression stop, all segments will be black.

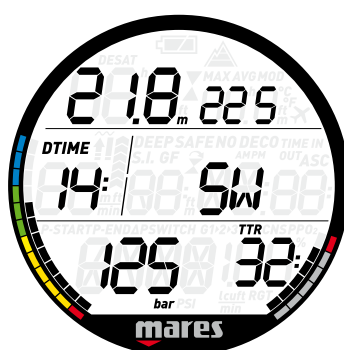
During a surface interval, the segments will gradually turn off as Puck Air 2 tracks the offgassing of your tissues.

Ascent rate: in presence of a depth change in excess of 80cm / 3ft, Puck Air 2 calculates the corresponding ascent speed and displays in place of the dive time, for the duration of the ascent.

3.6 COMPASS OPERATION

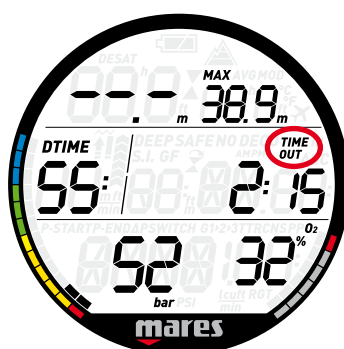
Pressing and holding the button while **TTR** is on display activates the compass. The compass shows the heading in digits (0-359°) in the top right corner and in alphanumeric characters (N, NE, E, SE, S, SW, W, NW) in the middle row in lieu of the decompression information.

Press or press and hold the button to revert back to the standard display. If **COMPSS TIME** is set to a value different than **ON**, Puck Air 2 will automatically switch back after the defined duration.



3.7 AFTER THE DIVE

Upon returning to the surface, Puck Air 2 first goes into surfacing mode. This mode allows you to resume your dive after a brief period of orientation. The screen shows a 3-minute countdown.

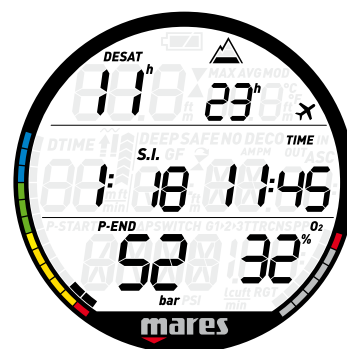


If you submerge again before the 3-minute countdown is over, the dive time will resume from where it left off, including the time spent on the surface. If you do not submerge before the end of the countdown, Puck Air 2 considers the dive finished, records the data to the logbook and reverts to post-dive mode.

The post-dive screen shows two sets of information, alternating in 4s intervals. One contains:

- The remaining desaturation time (**DESAT**): this is calculated by the decompression model in the computer. Any dive started while there is remaining desaturation on your computer is considered a repetitive dive, meaning that Puck Air 2 accounts for the pre-existing nitrogen load in your body.

- The no-fly time (**✈**): this is the time during which an exposure to the reduced pressure inside the cabin of an airplane could cause decompression sickness. Puck Air 2 employs, as recommended by NOAA, DAN and other agencies, a standard 12-hour (no-deco non-repetitive dives) or 24-hour (deco and/or repetitive dives) countdown. Hence you may find a situation in which the desaturation time is shorter than the no-fly time. This is simply the consequence of the desaturation time being calculated by the algorithm based on the actual dive profile, while the no-fly time is an accepted standard in the diving industry. Since the real effect of flying after diving has never been fully investigated, this approach fits with our philosophy.

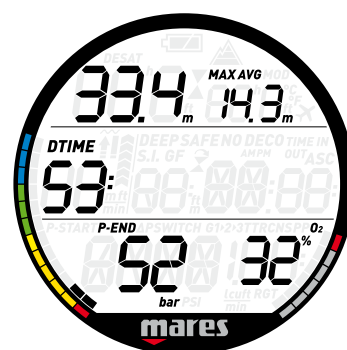


WARNING

Flying while Puck Air 2 displays **✈** can result in serious injury or death.

- The surface interval (**S.I.**): this is displayed from the moment the dive is closed (3 minutes after surfacing) for as long as there is remaining desaturation or no-fly time on the computer.
- In case of a dive violation, the corresponding symbol (**⚠**, **!**) is shown.

The other contains a condensed log of the last dive: maximum and average depth in the top row, dive time in the middle row to the left, final tank pressure and set O2% in the bottom row. In addition, the bar graph shows the calculated nitrogen load in the leading tissue. You can use this to gauge your progress in getting rid of nitrogen as the surface interval grows. Puck Air 2 continues to perform decompression-related calculations (nitrogen release), for as long as there is desaturation time left.



3.8 DIVING WITH MORE THAN ONE GAS MIXTURE

WARNING

- Diving with more than one gas mixture represents a much higher risk than diving with a single gas mixture, and mistakes by the diver may lead to serious injury or death.
- During dives with more than one gas mixture, always make sure you are breathing from the tank that you intend to breathe from. Breathing from a high oxygen concentration mix at the wrong depth can kill you instantly.
- Mark all your regulators and tanks so that you cannot confuse them under any circumstance.
- Before each dive and after changing a tank, ensure that each gas mixture is set to the correct value for the corresponding tank.

Puck Air 2 enables you to use up to three gas mixtures during the dive (air and Nitrox only). The three mixtures are labeled G1, G2 and G3 and must be in ascending order of oxygen content, i.e. G1 has the lowest oxygen concentration, G2 an intermediate value, and G3 has the highest oxygen concentration of the three. If you are diving with only two mixtures, you will be utilizing tanks G1 and G2.

NOTE

Puck Air 2 can only show the tank pressure of the tank to which it is connected.

Puck Air 2 can be set to consider all active gases in the decompression calculation, or it can be set to consider only the gas currently in use. In the first case (**PrEdict = ON** in 2.2.1.5), when you switch gas when prompted to do so during an ascent, you will not see a change in the decompression calculation: Puck Air 2 considered that you were going to switch gas and already considered the effect of this on the decompression. In the second case (**PrEdict = OFF** in 2.2.1.5) you will see a reduction in the total ascent time as you switch to a gas with higher oxygen content and Puck Air 2 considers this for the decompression calculation.

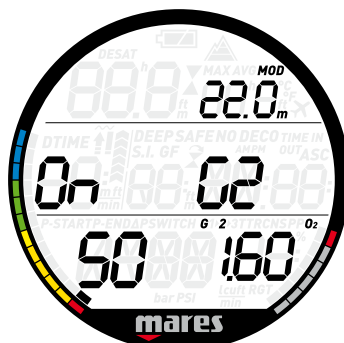
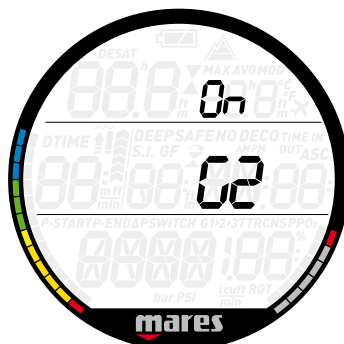
NOTE

- If you dive using just one gas, select G1 and deselect the other two.
- For dives with two gases, select G1 and G2 and deselect the third.
- When enabling G2 and G3, you must first define G2 and then G3.
- You cannot activate G3 without first having activated G2.
- G2 cannot have an oxygen percentage higher than G3.
- If you set G2 to OFF, G3 will automatically be set to OFF also.
- The MOD for G2 and G3 is the switch depth for the corresponding gas. This is what Puck Air 2 uses for its calculation, alarms and suggested switch points.

3.8.1 SETTING MORE THAN ONE GAS

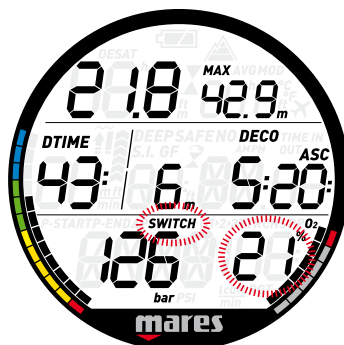
The characteristics of the gases must be entered in the computer before the dive. It will then be your responsibility to tell Puck Air 2 which gas is currently being used during the various phases of the dive.

To use multiple gases, you will need to enable the gases and set the oxygen percentage and the ppO_2 max for each one. This is done in the same way as for G1, with the difference that for G2 and G3 you can turn a gas **ON** or **OFF**. Keep in mind that the MOD for G2 and G3 is the depth at which Puck Air 2 will prompt you to perform the gas switch (see section 3.8.2 below). To enable G2 press the button from the **BACK** display to reach the **G2 OFF** display, then press the button again to reach the **G2 On** display, which shows also the oxygen concentration, ppO_2 and MOD. Proceed as you would for G1 until you get to the **BACK** screen. Either press and hold the button if you have finished setting gases, or press the button to advance to the **G3 OFF** display and setting of G3.

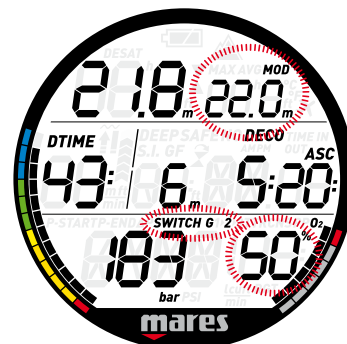


3.8.2 SWITCHING GAS

Puck Air 2 always begins the dive with G1, which has the lowest percentage of oxygen. When during the ascent you reach the depth corresponding to the MOD of G2, Puck Air 2 sounds an audible signal and the oxygen concentration of G1 together with the word **switch** start to blink in the lower right corner.



Press the button while this indication is blinking to initiate the gas switch: the oxygen percentage of G2 starts to blink in lieu of that of G1, and in the top right corner the MOD of G2 is displayed, also blinking.

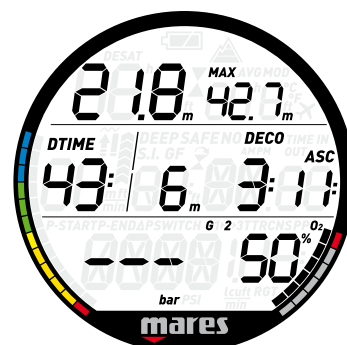


Press and hold the button to confirm the switch to G2: the set oxygen concentration will be displayed steadily in the lower right corner of the screen: if **PrEdict** is set to **ON**, the decompression calculation will not change; if **PrEdict** is set to **OFF**, within 20 seconds of having switched gas, the decompression calculation will be updated to reflect the change in gas. In addition, the tank pressure will show ---.

NOTE

If **PREDICT** is set to **ON** and you don't switch gas when prompted to do so,

- the decompression calculation will change to reflect the exclusion of G2 from its calculation;
- if you then drop below the MOD of G2, the decompression calculation will change again to reflect the reinclusion of G2.



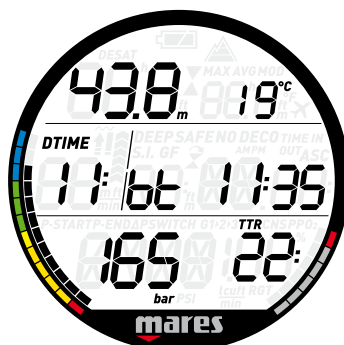
If you press the button (as opposed to pressing and holding it) while G2 is blinking, the next available gas in the list will be displayed instead. This will be G1 or G3 (if set), depending on the depth and whether you allowed the switch below MOD.

NOTE

- The automatic blinking of the oxygen concentration of G1 lasts only for 20 seconds. You can however initiate the gas switch at any time by pressing and holding the button when the oxygen concentration is displayed in the lower right corner.
- The same process is repeated when you approach the MOD for G3 with G2 blinking instead of G1.
- If you have set G1, G2 and G3 and have not switched from G1 to G2, once you reach the MOD for G3 the oxygen concentration of G1 will again blink to alert you of the possibility of switching gas.

- in case of an ascent: ascent speed (in m/min or ft/min).

Press the button to bring up the time of day in lieu of the dive time (the display reverts back to dive time after 4 seconds).



Pressing and holding the button restarts the stopwatch.

3.9.1 DIVE VIOLATION INDUCED BOTTOM TIMER MODE

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

- Uncontrolled ascent.
- Missed deco stop.

In case of a violation, Puck Air 2 will restrict the use of Air and Nitrox mode for 24 hours, and will only allow operation in bottom timer mode.

•4 TAKING CARE OF PUCK AIR 2

4.1 TECHNICAL INFORMATION

Pressure gauge function

The pressure gauge integrated in the Puck Air 2 dive computer has been tested and CE certified by RINA, notified body 0474, located in Via Corsica 12, 16128 Genova, Italy.

The pressure gauge is a Category III device as defined under European Regulation 2016/425, and complies with the specifications set out in the harmonized European Standard EN250 for use with air compliant with Standard EN 12021 (oxygen content of 21%).

It is compliant with the specifications set forth in the harmonized European Standard EN 13949:2003 for use with oxygen-rich mixtures (Nitrox).

The EC certification process and verification of the operating performance of the pressure gauge in the Puck Air 2 dive computer under standards EN250 are understood to be applicable to a maximum depth of 50 m below the surface.

The Puck Air 2 dive computer can be used in cold water (water at temperatures below 10°C).

Marking

- working pressure rating: 300 bar (NITROX 200 bar max);
- reference standard: EN250;
- reference marking: CE 0474.

The conformity marking indicates compliance with the essential health and safety requirements as per attachment II of European Regulation 2016/425. The number alongside CE identifies RINA, notified body 0474, located in Genova, Italy, authorized to inspect the

finished product in compliance with Module D of European Regulation 2016/425.

Operating altitude:

- with decompression – sea level to approximately 3700m/12100ft
- without decompression (gauge mode) – at any altitude

Decompression model: ZH-L16C

Depth measurement:

- Max displayed depth: 150m/492ft
- Resolution: 0.1m until 99.9m and 1m at depth deeper than 100m. Resolution in ft is always 1ft
- Temperature compensation of the measurement between -10 °C to +50 °C / 14 °F to 122 °F
- Accuracy from 0 to 80m/262ft: 1% ±0.2m/1ft

Temperature measurement:

- Measurement range: -10 °C to +50 °C / 14 °F to 122 °F
- Resolution: 1 °C / 1 °F
- Accuracy: ± 2 °C / ± 4 °F

Clock: quartz clock, time, date, dive time display up to 99 minutes

Oxygen concentration: adjustable between 21% and 99%, ppO₂ max range between 1.2 and 1.6bar

Logbook memory: 150 hours of dive profile at 5-second sampling rate

Operating temperature: -10 °C to +50 °C / 14 °F to 122 °F

Storage temperature: -20 to 70 °C / -4 to 158 °F

Display:

- Diagonal: 70 mm / 2 3/4"
- Mineral glass

Power supply:

- CR2450 user-replaceable battery
- battery life: 100-120 dives. Actual battery duration depends on the usage of the backlight and the water temperature.

Bluetooth:

EU

This device is in compliance with the essential requirements and other relevant provisions of RED Directive (2014/53/EU).

FCC Warnings

- Model: PUCK AIR 2 FCC ID: 2AIKSPUCKAIR2
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment

3.8.3 SPECIAL SITUATIONS

3.8.3.1 SWITCHING BACK TO A GAS MIXTURE WITH LOWER OXYGEN CONCENTRATION

There may be situations in which you have to switch back to a gas with lower oxygen concentration than what you are currently breathing. This can happen for instance if you want to descend deeper than the MOD for the current gas, or if you have run out of gas in G2 during the decompression. To do so, simply press the button until the oxygen concentration is displayed in the lower right corner, then press and hold the button to initiate the gas switch. From here on the procedure is the same as described in 3.8.2.

3.8.3.2 SUBMERGING BELOW THE MOD AFTER A GAS SWITCH

If after having switched to a gas mixture with a higher oxygen concentration you inadvertently drop again below the MOD for that mixture, the MOD alarm will immediately go off. Either switch back to a gas mixture suited for that depth, or ascend above the MOD for the gas mixture you are breathing from.

3.9 BOTTOM TIMR (BOTTOM TIMER)

When Puck Air 2 is set to **bottom timr** mode, it will only monitor depth, time, tank pressure and temperature, and will not carry out any decompression calculation. Maximum displayed dive time in gauge mode is 99 minutes. You can only switch to bottom timer mode if the computer is completely desaturated. All audible and visual alarms, other than the low battery alarm and tank reserve, are turned off.

WARNING

Dives in bottom timer mode are performed at your own risk. After a dive in bottom timer mode you must wait at least 24 hours before diving using a decompression computer.

During a dive in bottom timer mode, the following information is displayed:

- current depth
- temperature alternating with max depth every 2 s
- stopwatch
- dive time
- tank pressure
- TTR

does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Responsible party's contact located in the United States: Head USA - dba as Mares Diving a division of Head USA, 430 S Congress Ave, #1A Delray Beach, FL 33445 www.mares.com

4.2 MAINTENANCE

The tank pressure gauge and the parts of this product used to measure tank pressure should be serviced by an authorized Mares dealer every other year or after 200 dives (whichever comes first). In addition, the depth accuracy should be verified by an authorized Mares dealer every two years. Aside from that, Puck Air 2 is virtually maintenance free. All you need to do is rinse it carefully with fresh water after each dive (avoid any chemical products) and replace the battery when needed. To avoid possible problems with your Puck Air 2, the following recommendations will help assure years of trouble free service:

- avoid dropping or jarring your Puck Air 2;
- do not expose Puck Air 2 to intense, direct sunlight;
- do not store Puck Air 2 in a sealed container, always ensure free ventilation.

NOTE

If you notice signs of moisture on the inner wall of the mineral glass, take your Puck Air 2 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 Puck Air 2, because it could damage the pressure sensor area.

4.2.1 REPLACING THE BATTERY IN PUCK AIR 2

Replacing the battery is a delicate operation, and requires close attention. We suggest that you visit an authorized Mares center. Mares declines all responsibility for any damage caused by replacing the battery.

NOTE

Do not discard the old battery in the environment. Mares adopts a policy of respect for the environment, and urges use of the appropriate separated waste collection service.

WARNING

Inspect the O-ring carefully, checking for any signs of damage, tearing or warping. If necessary, replace it with a new O-ring.

Unscrew the cover of the battery vane by using a coin that best fits into the slot. Remove the cover, remove the battery and insert the new battery paying close attention to the polarity. Check the o-ring and if needed replace it. Put the cover back in place and turn clockwise while pressing down until it's tight, without forcing too much.



NOTE

The battery compartment is sealed from the electronics, so that in case of a flooding of the battery compartment the dive computer is unharmed. In such event, you will need to rinse the compartment with fresh water, dry it thoroughly, replace the o-ring and put in a new battery.

WARNING

Mares reserves the right to refuse to provide service under the warranty if the maintenance instructions are not followed.

4.3 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 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.

4.4 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.

4.5 HOW TO FIND THE PRODUCT SERIAL NUMBER

To see the product serial number, enter the INFO submenu.

•5 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.

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

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement in portable exposure condition without restriction.

