mares®

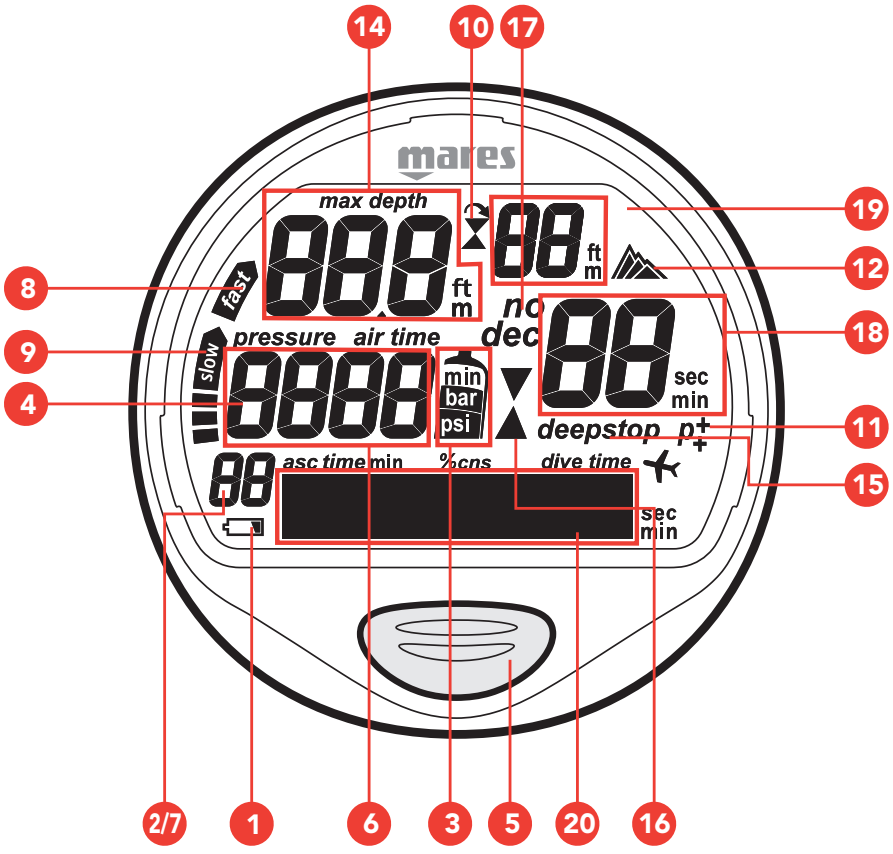
PUCK AIR

Dive computer

User's Guide

• TABLE OF CONTENTS

• QUICK GUIDE



1. Low battery indicator
2. Ascent rate / % O_2 in Predive mode
3. Pressure units of measure / min.
4. Tank pressure
5. Button
6. Air time
7. O_2% indicator
8. Uncontrolled ascent icon
9. Ascent speed percentage indicator
10. Omitted stop indicator
11. Personal correction factor indicator
12. Altitude indicator
13. "No fly" indicator
14. Current depth/maximum depth indicator
15. Deepstop depth warning
16. Decompression-stop indicator
17. No-decompression dive indicator (no dec)
    Decompression-stop diving indicator (dec)
18. Deco time
    Deepstop countdown
    Safety Stop countdown
19. Deco stop depth
20. Bar graphic showing various information:
    - Dive type (Predive/Dive)
    - CNS% (no dec / deco)
    - Temperature (no dec / deco/ Time)
      Asc Time (deco)
    - Safety Stop (Dive) Indicator (min)
    - Deepstop (Dive) planning indicator
    - Deepstop depth indicator (Dive)
    - Tank reserve alarms (Dive)
    - Set dive computer parameters
    - Date indicator
    - Time indicator
    - Dive time indicator
    - Surface time indicator
    - Desaturation time indicator
    - "No fly" time indicator

• PUCK AIR DIVE COMPUTER

Congratulations!
Your new Puck Air dive computer is the result of the latest Mares technology, and has been designed to guarantee maximum safety, efficiency, reliability and long life.
Simple and easy to use, it is ideal for all types of dives.
This manual contains all the instructions for its use.
Mares thanks you for your choice and urges you to always practice safe and responsible diving.
Enjoy!

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.

• IMPORTANT WARNINGS

⚠ WARNING

Before diving with the Puck Air you must be sure to have read and understood the entire manual.

⚠ WARNING

When using oxygen rich (Ean) mixtures, you are advised to replace the high pressure (HP) hose every two years.

⚠ WARNING

The high-pressure gaskets on Puck Air must be lubricated exclusively with oxygen compatible grease. Using other types of lubricants in the presence of oxygen-rich mixtures may spark an explosion.

⚠ WARNING

The air used in the tank must comply with the EN 12021 European standard. For safety reasons, mixtures other than that indicated may not be used.

⚠ WARNING

Do not under any circumstances use Ean mixes with oxygen percentages greater than 50%.
In the event of use with mixtures contaminated with oil, the entire system must be cleaned by trained personnel.

⚠ WARNING

Before starting an Ean dive, check that the dive computer is set to Ean mode, then check the composition of the breathing mix you will be using and enter its oxygen percentage in the appropriate setting.
Entering an incorrect oxygen percentage will lead to errors in the readouts for:
- no-decompression time remaining;
- decompression-stop times;
- alarm for exceeding the "Maximum Permitted O_2 Partial Pressure."

⚠ WARNING

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

⚠ WARNING

It must be kept in mind that the depth and duration of the dive are strictly dependent on the percentage of oxygen in the breathable mixture.

⚠ WARNING

Only divers who have the necessary certification should use Puck Air for diving with oxygen-rich mixes (Ean).
Attempting to dive without adequate Nitrox training might result in serious injury.

⚠ WARNING

During dives in cold water, air consumption could be higher than during standard dives. Consult the gauge indications frequently.

⚠ WARNING

During dives that include greater physical exertion than standard dives, air consumption could be higher. Consult the gauge indications frequently.

⚠ WARNING

Check the position of the high pressure hose to avoid the risk of entanglement.

⚠ WARNING

The Puck Air dive computer is designed exclusively for recreational sports use and not for professional applications.

⚠ WARNING

The dive computer cannot ensure against possible decompression sickness (DCS).
The dive computer cannot take into account the physical condition 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

Never dive alone. Puck Air cannot substitute for a diving buddy.

⚠ WARNING

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

⚠ WARNING

Always check the battery power level before starting the dive.
Do not dive if the icon indicates that the battery is low. Replace the battery.

⚠ WARNING

Do not fly within 24 hours of your last dive, and in any case wait until the Puck Air "NO FLY" warnings turn off.

⚠ WARNING

Never dive to depths greater than 40 meters (130 feet) and never take decompression dives with Puck Air unless you possess the specific license (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 experienced 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.

⚠ WARNING

Mares recommends that divers never exceed the maximum permitted depth for their qualification. Dives deeper than 40 m (130 ft) or outside the safety curve (decompression dives) significantly increase the risk of decompression sickness. Always ascend several minutes before going into DEC mode, and allow yourself even more time in the case of cold water conditions, repetitive dives deeper than 18 m (60 ft), or for any dive involving unusually high exertion. Failure to do this will increase your risk of decompression sickness.

⚠ WARNING

Do not use Puck Air, or any other dive computer, for repetitive "square profile" dives (dives to the same or nearly the same depth) deeper than 60 ft (18 m). This is an unsafe diving practice that will greatly increase your risk of decompression sickness regardless of the information provided by Puck Air.

⚠ WARNING

Before diving, make sure you have correctly set the units of measurement. An incorrect setting may give rise to confusion during the dive, and hence to underwater behavior errors.

⚠ WARNING

Do not dive in mountain lakes without having first checked that the appropriate altitude program is selected and without special training for altitude diving.

⚠ WARNING

In order to use your Puck Air safely, Mares suggests, in addition to the dive computer, also using a depth gauge, a submersible pressure gauge, a timer or watch, and dive tables.

⚠ WARNING

When diving in poor visibility conditions, the indications provided by the computer may not be visible.

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 the behaviour listed below:

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 m (-20 and -10 ft) for at least 3 minutes.
- After any decompression-stops, ascend very slowly to the surface.
- 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 2 hours.
- Your deepest dive should be the first one of the day.
- Avoid diving until the computer memory has cleared from the preceding day's dive.
- 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 m (130 ft) 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 m (60 ft).
- Always wait at least 12 hours, and preferably 24 hours, after a dive before flying, in accordance with the recommendations of the Divers Alert Network (DAN).

FLYING AFTER DIVES

Mares Dive Computers have the follow recomendations:

- Single no-decompression dive: a minimum no-fly time of 12 hours is suggested
- Single dives with decompression-stops: a minimum no-fly time of 24 hours is suggested
- Repetitive dives: a minimum no-fly time of 24 hours is suggested

• HOW THE PUCK AIR DIVE COMPUTER WORKS

Press the button to switch on Puck Air, which starts in Predive - Air mode (Figure 1).

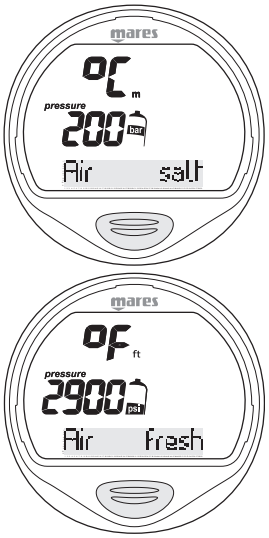


FIG. 1

Press the button to scroll through the main menu, which offers 10 operating modes:

- Predive
- Set Mode
- Set Data
- Set Alarm
- Time
- Watchset
- Pc Link
- Logbook
- Planning
- System

The button follows the same logic in all operating modes:

- Press and release to scroll through the menu items.
- Holding down the button for approximately 2 seconds will enter a specific menu or confirm the selections you have made.

CHECK THE BATTERY POWER LEVEL

Puck Air will periodically check the battery power level; you can view an indicator in System mode.

There are three power levels:

- Battery: Ok (Figure 2)
- Battery: Lo1
- Battery: Lo2

FIG. 2

If a low charge level is detected (Battery: Lo1), the battery icon turns on and the display backlight function is disabled (Figure 3).

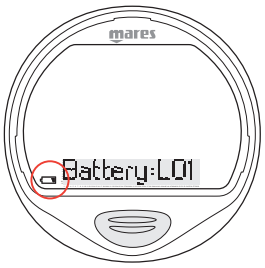


Fig. 3

When the icon first appears, replace the battery as soon as possible (Figure 4).

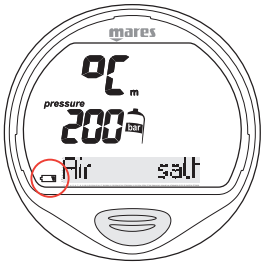


Fig. 4

If the level reaches the minimum level (Battery: Lo2) all the Puck Air functions will be disabled, and only System mode can be accessed (Figure 5).

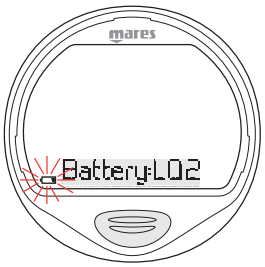


Fig. 5

⚠ WARNING

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

BACKLIGHTING

Pressing the button for 2 seconds will temporarily turn on the backlight (for about 4 seconds).

When the backlight is on, pressing the button will prolong illumination of the display.

⚠ 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. **In this case, backlighting is disabled.**

If backlighting has been disabled due to low temperature, you can repeat the battery status check by entering System mode.

If the battery icon disappears, the backlighting function has been re-enabled.

⚠ WARNING

We recommend that you replace the battery if you intend to dive in cold water.

AUTOMATIC SWITCH-OFF

If Puck Air is turned on but no button is pressed for a certain period of time, it will turn off automatically. The delay before automatic switch-off varies depending on the current operating mode.

• SETTING PARAMETERS FOR THE PUCK AIR COMPUTER

ADJUSTING THE WATCH: WATCHSET

The Watchset menu is divided into three submenus, where you can adjust the following parameters:

- Adj Time
  - Time
  - Watch display (12h-24h)
  - Date
- Contrast
  - Display contrast
- Set Beep
  - Enable/disable the beep that sounds when the button is pressed
- Intro
  - Enable or disable the introduction displayed each time Puck Air is switched on

Scroll through the main menu and move to Watchset (Figure 6).

Fig. 6

To enter the Watchset menu, press and hold the button. The words Adj Time will appear (Figure 7).

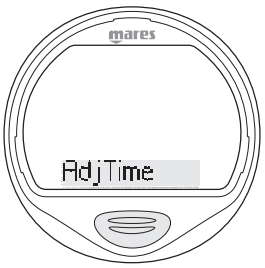


Fig. 7

WATCHSET - ADJ TIME

When the words "Adj Time" appear, press and hold the button.
The minutes number will flash. Press the button to increase the minutes (Figure 8).

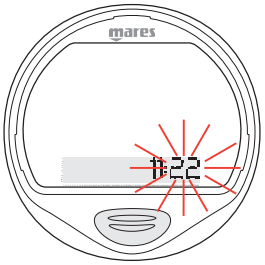


Fig. 8

Press and hold the button to save the current minutes value.
The hour number will flash.
Change and set the number using the same procedure as for the minutes.
In sequence, the information displayed is:

- minutes
- hour
- time format
- year
- month
- day

Setting the day returns you to the Adj Time menu.
Press the button to move to the Contrast menu.

WATCHSET – CONTRAST

Press and hold the button to enter this mode.
The current contrast value will flash (Figure 9).

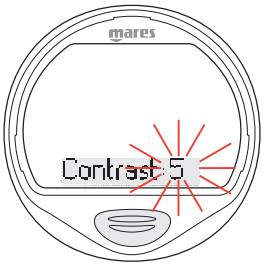


Fig. 9

Press the button to increase the contrast (maximum value 6).
Press and hold the button to select the desired value.

WATCHSET – SET BEEP

Press and hold the button to enter this mode.
The current value, "On" or "Off", will flash (Figure 10).

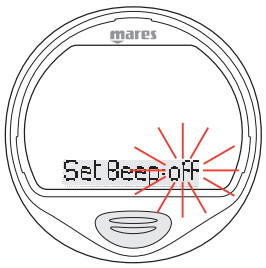


Fig. 10

Press the button to change your selection.
Press and hold the button to confirm your selection.

WATCHSET – INTRO

Press and hold the button to enter this mode.
The current value, "On" or "Off", will flash.

Press the button to change your selection.
Press and hold the button to confirm your selection.

Press the button to move to the Esc position (Figure 11).

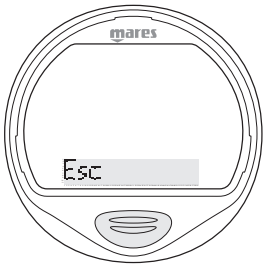


Fig. 11

Press the button to return to the Watchset menu.
Press and hold the button to exit this menu and return to the main menu.

NOTE
The Esc position is available in all menus. When you are in this position, if you press the button, it takes you to the beginning of the current menu. If you press and hold the button, it will exit the current menu and go back to the main menu.

ADJUSTING THE GENERAL DIVE PARAMETERS: SET DATA

In this menu you can adjust the general dive parameters selected.

- salt / fresh water
- degrees in Celsius – meters – bar / degrees Fahrenheit – feet – psi
- clear residual nitrogen

Scroll through the main menu and move to Set Data (Figure 12).

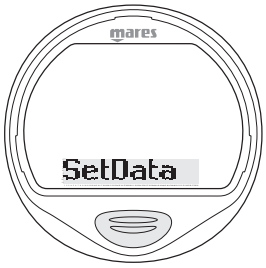


Fig. 12

To enter the Set Data menu, press and hold the button. Either FRESH or SALT will appear.

SET DATA – FRESH / SALT

To ensure maximum accuracy, you need to set Puck Air for either fresh water ("Fresh") or seawater ("Salt") as appropriate. Check this setting often, especially if you use the instrument in a variety of environments (lake, sea, swimming pool). Press and hold the button to enter change settings mode (Figure 13).

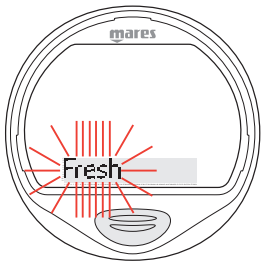


Fig. 13

Press the button to select the desired mode.
Press and hold the button to confirm your selection.
Press the button to move to the next selection.

> **⚠ WARNING**
>
> Before diving, make sure you have correctly set the units of measurement. An incorrect setting may give rise to confusion during the dive, and hence to under water behavior errors.

SET DATA : °C – METERS – BAR / °F – FEET – PSI

You can select the units of measure to use: metric (°C, m, bar) or Imperial (°F, ft, psi) (Figure 14).

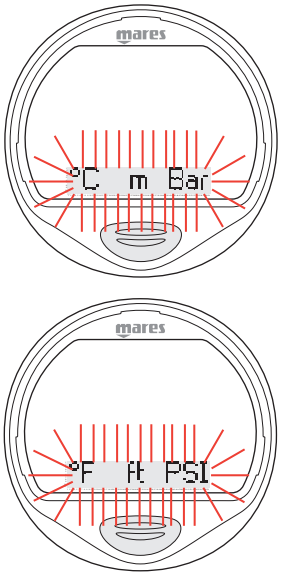


Fig. 14

Press and hold the button to enter change settings mode.
Press the button to select the desired unit of measure.
Press and hold the button to confirm your selection.
Press the button to move to the next selection.

SET DATA – N2RESET

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

In Set Data mode, display the word N2Reset (Figure 15).

Fig. 15

Press and hold to enter; the word "no" will begin to flash (Figure 16).

Fig. 16

If you do not want to clear the residual nitrogen memory in the tissue compartments, press and hold when the word "no" is displayed.

Press the button to change the selection.
To clear the residual nitrogen memory in the tissue compartments, press and hold when the word "yes" appears (Figure 17).

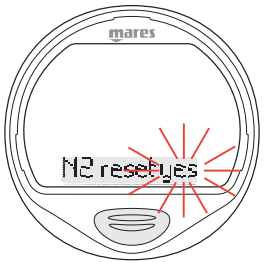


Fig. 17

In order to really clear the residual nitrogen memory in the tissue compartments you have to confirm your choice (Figure 18).

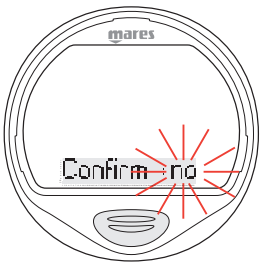


Fig. 18

> **NOTE**
> If you do not want to clear the residual nitrogen memory in the tissue compartments, press and hold when the word "no" is displayed.

Press the button to change the selection.
The word "yes" will begin to flash (Figure 19).

Fig. 19

To clear the residual nitrogen memory in the tissue compartments, press and hold, when the word "yes" appears. Appears the figure 20.

Fig. 20

Press the button to move to the Esc position.
Press the button to return to the Set Data menu.
Press and hold the button to exit this menu and return to the main menu.

ADJUSTING THE ALARM PARAMETERS: SET ALARM

In this menu you can activate or deactivate the alarm signals that can be triggered during the dive.

- Reserve H (reserve)
- Reserve L (minimum reserve)
- fast asc: on/off (Air and Ean only)
- audio: on/off.

Scroll through the main menu and move to Set Alarm (Figure 21).

Fig. 21

To enter the Set Alarm menu, press and hold the button.

AIR RESERVES ALARMS

With Puck Air you can set two different alarm thresholds that will signal the minimum air reserves. When these thresholds are reached, there will be various audible signals and visible indications on the display.

SET ALARM: RESERVE H

The first threshold that can be set is:
Reserve H (reserve).
This first alarm can be set from 80 bar (1160 psi) to 120 bar (1740 psi) in increments of 10 bar (145 psi), or it can be deactivated (figure 22).

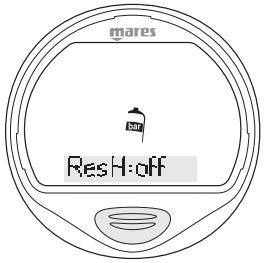


Fig. 22

Press and hold the button to enter this mode.
Entering this section will display the value selected for air reserves; the value will flash. (The default value is off.)
This value can be changed in increments of 10 bar (145 psi) using the button.
Press and hold the button to confirm your selection.
Press the button to move to the next selection.
If you exceed the programmed threshold during the dive, an audible alarm will sound and the pressure value will flash (Figure 23).

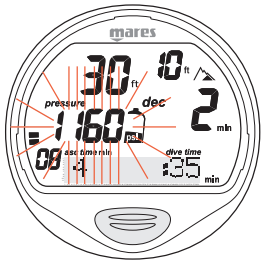


Fig. 23

The visible alarm will deactivate in surfacing mode.

SET ALARM: RESERVE L

The second threshold that can be set is:
Reserve L (minimum reserve).
Values can be set from 50 bar (725 psi) to 70 bar (1015 psi) in increments of 10 bar (145 psi).
The default value is 50 bar (725 psi) (Figure 24).

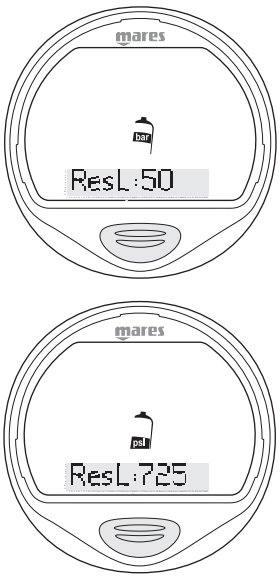


Fig. 24

Press and hold the button to enter this mode.
Entering this section will display the value selected for air reserves; the value will flash.
The default value is 50 bar (725 psi).
This value can be changed in increments of 10 bar (145 psi) using the button. Press and hold the button to confirm your selection.
Press the button to move to the next selection.

If the tank pressure drops below the value set during the dive, a constant audible alarm will sound, the word LOW Air will appear on the screen, and the tank pressure value will flash (Figure 25).

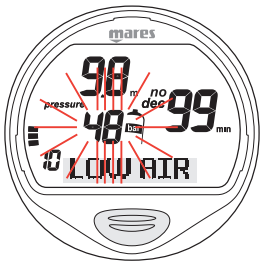


Fig. 25

NOTE
The alarms can be switched off by pressing the button. When the tank pressure drops below 30 bar (450 psi) the alarms will be switched on again.
The alarms can be switched off again by pressing the button again.

SET ALARM: FAST ASC

This function enables or disables the "Stop" function in case of uncontrolled ascent to prevent the dive computer from locking out after a rapid ascent. The feature can be useful for instructors who need to practice emergency ascents. Press and hold the button if you wish to change this setting. The current selection ("On" or "Off") will flash (Figure 26):

- "On" indicates that the function is enabled.
- "Off" indicates that the function is disabled.

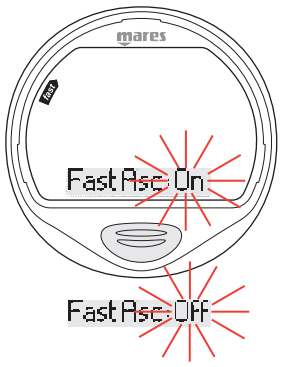


Fig. 26

Press the button to select the chosen function.
Press and hold the button to save your selection.

⚠ 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" function on uncontrolled ascent.

SET ALARM: AL BEEP

This function enables or disables the audible alarms. To set the desired selection, press and hold the button when the words AL-BEEP appear. The word "On" or "Off" will flash (Figure 27).

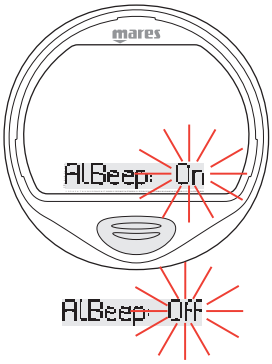


Fig. 27

Press the button to change the setting. Press and hold the button to confirm your selection.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

NOTE
The alarm for any Deepstops is always enabled.

⚠ WARNING

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

ADJUSTING THE DIVE PARAMETERS: SET MODE

In Set Mode you can define the specific parameters for the type of dive you intend to take. When "Set Mode" appears, press and hold to enter that menu (Figure 28).

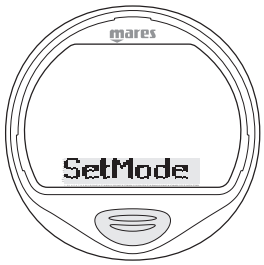


Fig. 28

The current setting will be displayed: Air, Ean, or Bottom Time
At this point you can choose to keep the current dive mode or select another.
Press and hold to change the desired dive type.
The last operating mode will begin to flash.
Press the button to scroll through the 3 dive mode options (Figure 29).

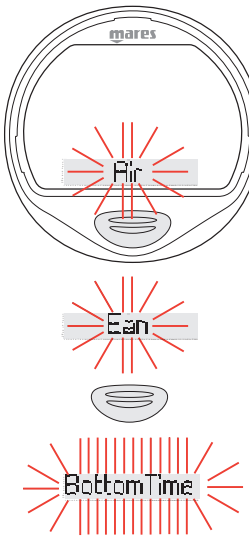


Fig. 29

When the dive type you want is displayed, press and hold the button.
This will save the selected mode.
Press the button to move to subsequent settings.

NOTE
If you have completed an Ean dive and wish to do a repetitive dive with air, set the computer for "Ean" with O_2 at 21%. By so doing, the calculation of the %CNS will remain active.

AIR

In this mode you can set:
- Personal Correction Factor
- Altitude

SET AIR - PERSONAL CORRECTION FACTOR

Puck Air allows you to set an additional personal safety factor to make the computer more conservative. The correction factor should be used by inexperienced divers, for strenuous dives or when diving after a prolonged period of inactivity. The Pf0 program introduces no additional margin of safety. When activated, the current personal correction factor will be displayed. This can be Pf0, Pf1, or Pf2. To change the desired value, press and hold when the letters Pf appear (Figure 30).

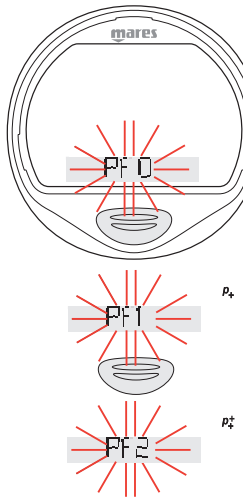


Fig. 30

The number next to Pf will flash. If the value selected is Pf1 or Pf2, an icon will appear that will remain visible during the dive to indicate that the personal correction factor is enabled and at what level. Press the button to select the desired safety factor. Press and hold the button to record your selection and move to the next setting.

SET AIR - ALTITUDE

When this item is accessed, it displays an indication of the current altitude program.
To set the desired selection, when the word "alt" appears, press and hold the button (Figure 31 and 32).

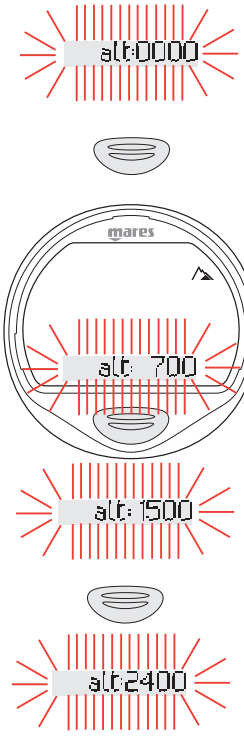


Fig. 31

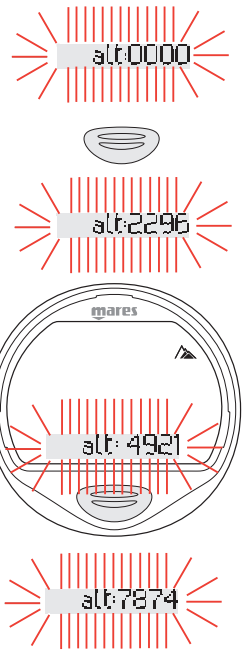


Fig. 32

Altitude programs:
P0
(0-700 m) (0-2296 ft)
P1
(700-1500 m) (2296-4921 ft)
P2
(1500-2400 m) (4921-7874 ft)
P3
(2400-3700 m) (7874-12139 ft)

The word "alt" and the number corresponding to the maximum altitude will flash.
Press the button to change the desired altitude.
Press and hold the button to confirm your selection.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

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 and without special training for altitude diving.

EAN

In this mode you can set:
- personal correction factor
- altitude
- oxygen percentage (%O_2) in the mix
- maximum O_2 partial pressure (PPO_2)

The general parameters for Ean dives are the same as those for compressed air dives (Air), with the addition of settings for the percentage of oxygen and its maximum partial pressure. We recommend that you carefully read the "Set Mode - Air" section before proceeding further.

⚠ 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

Do not use breathing mixes with an oxygen percentage greater than 50%.

⚠ 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.

SET EAN - %O_2

The percentage of oxygen in the mix can be adjusted within the interval 21% - 50%, in increments of 1%.
To set the desired value, press and hold the button when the oxygen percentage appears (Figure 33).

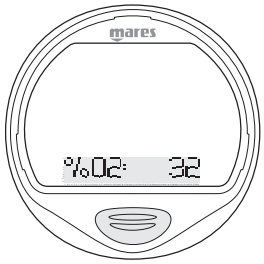


Fig. 33

The oxygen percentage will flash.
Press the button to increase the value.
Press and hold the button to set the selected value.
Press the button to move to the next setting.

SET - EAN - PPO_2

Puck Air sounds an alarm when the partial pressure of oxygen reaches a pre-established limit.
This limit can be varied from a minimum 1.2 bar to a maximum of 1.6 bar, in increments of 0.1 bar.
As this value changes, Puck Air will show the maximum dive depth compatible with the oxygen percentage and maximum partial pressure that have been programmed.
To set the desired value, press and hold the button when the display reads PPO_2 (Figure 34).

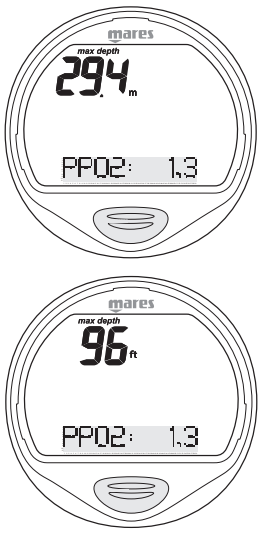


Fig. 34

The word PPO_2 and the number alongside will flash.
Press the button to select the desired value.
Press and hold the button to confirm the selected value.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

BOTTOM TIME (GAUGE)

In this mode Puck Air functions as an electronic timer and depth gauge. There are no specific settings for this kind of dive. Read carefully sections Set Data and Set Alarm.

TIME MODE

In this menu you can view the watch, date, and temperature.
Scroll through the main menu to Time (Figure 35).

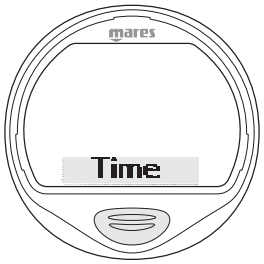


Fig. 35

Press and hold the button to enter Time mode; the current time will appear.
Press the button to display the date.
Finally, press the button to display the temperature.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

• DIVING WITH PUCK AIR

Puck Air manages three different dive types:

- Air
- Ean
- Bottom Time (GAUGE)

To help clarify how Puck Air operates during the dive, the display screens have been grouped into four stages:

- Predive
- Dive
- Surfacing
- Surface mode

NOTE
Hold down the button for 2 seconds to activate the display backlight.

PREDIVE - AIR

This operating mode remains active until the diver goes below 1.2 meters (4 feet).
The following details are displayed (Figure 36):

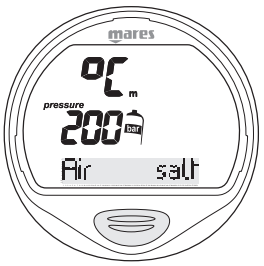


Fig. 36

- type of dive (air)
- units of measurement (m-°C or ft-°F)
- type of water (Salt, Fresh)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- tank pressure in bar or psi

NOTE
Before every dive, you should check that all parameters have been set correctly.

NOTE
If you stay in Predive mode for more than 10 minutes without pressing the button, Puck Air will turn off.

⚠ WARNING

We recommend before you begin diving, you always put Puck Air into Predive mode. Early in your dive, always check that the dive computer is switched on.

DIVE – AIR: "NO-DECOMPRESSION" DIVE

When the diver descends below 1.2 m (4 ft) Puck Air automatically switches to Dive mode and starts displaying the dive data. Remaining in this mode for more than 20 seconds will make Puck Air begin recording the dive details in the Logbook memory. The following details are displayed (Figure 37):

Fig. 37

- current depth (in "m" or "ft")
- the duration of the dive so far (dive time) in numbers
- no-decompression time remaining, expressed in minutes
- "no dec" icon
- the temperature (in °C or °F)
- the Deepstop icon (if the stop is required)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- ascent rate in analog and digital mode
- tank pressure in bar or psi

Pressing the button will display additional information (Figure 38):

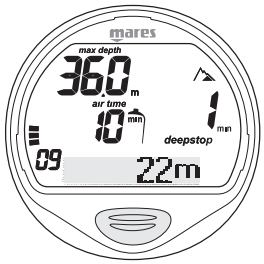


Fig. 38

- the maximum depth reached
- the Deepstop icon if applicable
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- air time remaining at the current depth
- ascent rate in analog and digital mode

Pressing the button again will display:
- type of dive (air)
- units of measurement (m-°C or ft-°F)
- type of water (salt, fresh)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- tank pressure in bar or psi

NOTE
When the Deepstop icon appears, pressing the button will display the estimated stop required. The data displayed during the ascent may vary as a result of the diver's behavior. Divers should check this data during the ascent for more precise information on the estimated stop.

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.

DIVE – AIR: "DECOMPRESSION STOP" DIVE

If the diver does not ascend when the residual time has expired, Puck Air switches to "decompression-stop" mode, indicated by the appearance of the "dec" message and by an audible alarm.
The following data are displayed in this mode (Figure 39):

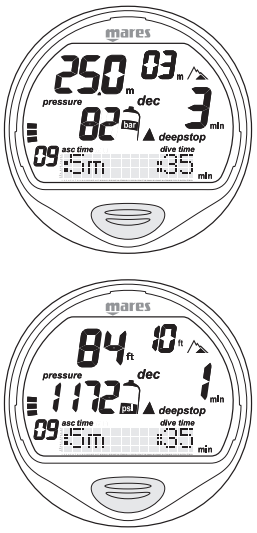


Fig. 39

- "dec" icon
- current depth (in "m" or "ft")
- depth of deepest decompression-stop (in "m" or "ft")
- duration of the deepest decompression-stop
- the Deepstop icon (if the stop is required)
- the ascent time
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- ascent rate in analog and digital mode
- tank pressure in bar or psi

Pressing the button will display additional information (Figure 40):

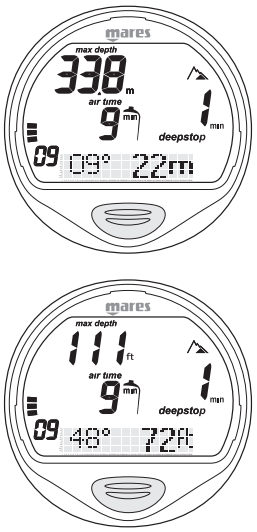


Fig. 40

- the maximum depth reached
- the Deepstop icon if applicable
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- air time remaining at the current depth
- ascent rate in analog and digital mode
- the current temperature

Pressing of the button again will display:
- type of dive (air)
- units of measurement (m-°C or ft-°F)
- type of water (salt, fresh)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)

TIME TO SURFACE (ASC TIME)

The ascent time is given by the sum of:
- the durations of the various decompression-stops
- time required to ascend at an average speed of 10 m/min (32 ft/min)
- any Deepstops.

DECOMPRESSION STOPS

Puck Air will also check that the decompression-stops have been observed; two icons graphically indicate what action the diver should take (Figure 41):

Fig. 41

- 2 triangles: correct decompression-stop depth
- upward triangle: diver below decompression-stop depth, ascend!
- downward triangle: diver has ascended beyond decompression-stop depth, descend!

⚠ 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.

If the decompression-stop depth is exceeded by more than 30 cm (11 inches), the "downward triangle" icon will flash; if it is exceeded by more than 1m (3 ft) the icon keeps flashing and an audible alarm will sound.

These warnings remain active until the diver returns to the correct depth.

⚠ WARNING
Never ascend above the correct decompression-stop depth.

NOTE
If the deco-stop overshoot exceeds one meter and lasts more than three minutes, the computer switches to "Omitted Stop" mode and the corresponding icon appears. In this case, if after surfacing the diver attempts a repetitive dive, Puck Air will only function as a depth gauge and timer (BT mode), and will display the errors of the preceding dive.

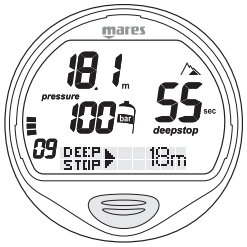
DEEPSTOP

To minimize the likelihood of critical bubble-seed formation, in the case of decompression dives or dives close to the no-deco limit,

Puck Air prompts for a series of one-minute Deepstops at different depths depending on the dive profile. Thus, whenever the applicable conditions have been met, Puck Air will display an icon during the dive that reads Deepstop. This indication is helpful in planning for your Deepstop during your ascent. Near the Deepstop depth, Puck Air will sound an audible alarm, and the word Deepstop appears (Figure 42).

Fig. 42

At the indicated depth, a countdown also appears that will show you how much time remains in the Deepstop. There can be more than one Deepstop during a dive. This depends on the dive profile and on the type of decompression (Figure 43).



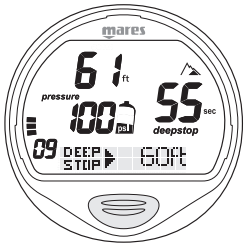


Fig. 43

NOTE
During the dive, when the button is pressed, Puck Air will display the estimated Deepstop required. The data displayed during the ascent may vary as a result of the diver's behavior. Divers should check this data during the ascent for more precise information on the estimated stop (Figure 44).

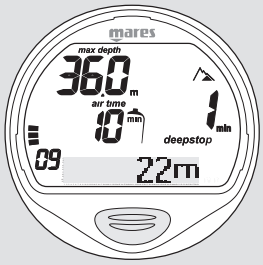


Fig. 44

DIVE – AIR: ASCENT

⚠ WARNING

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

⚠ WARNING

Disabling the "Stop" on an uncontrolled ascent should only be done by highly experienced divers, who take full responsibility for the consequences of this action.

As soon as the depth decreases, Puck Air activates the ascent rate control algorithm, displaying the value both in m/min (ft/min) and graphically; when the ascent rate exceeds 12 m/min (39 ft/ min) the bar appears with the word "Slow." Puck Air emits an audible alarm that continues until the ascent rate returns to within the maximum allowable limit (12 m/min - 39 ft/min). At the same time that the audible alarm is triggered, the computer begins monitoring an "uncontrolled ascent". 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 criterion only applies to alarms triggered below a depth of 12 m (39 ft). In case of an uncontrolled ascent, upon surfacing Puck Air disables the Air and Ean functions of Dive Mode, and will only function as a timer and depth gauge (Bottom Time).
The other operating modes remain active.
The "Stop" on uncontrolled ascent function can be disabled in Set Data mode.

SAFETY STOP

If the maximum depth of a dive exceeds 10 meters, a "Safety Stop" is activated for the ascent. Puck Air suggests that divers take a 3-minute safety stop between 2.5 and 6 m in depth (8 - 19 ft), and will display the word "SafeStop" (Figure 45).

Fig. 45

A timer indicates the time needed to complete the stop. If the diver moves outside the depth range mentioned above, the safety stop timer is halted. When the diver re-enters the correct depth range, the safety stop timer resumes from where it left off. If the diver returns to a depth below 10 m (32 ft), the "safety stop" timer will ignore the previously aborted stop and will start over from zero. In the case of a decompression-stop dive, the safety stop extends the duration of the decompression-stop at 3 m (10 ft) by an additional 3 minutes, displaying the safety stop information as described previously.

DIVE – AIR: SURFACING

When the measured depth is less than 1 m (3 ft), Puck Air 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, Puck Air 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. Data displayed in Surface mode (Figure 46):

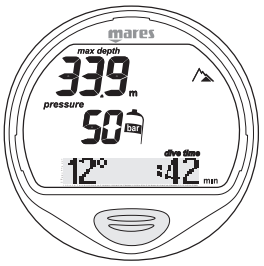


Fig. 46

- duration of the dive
- max depth
- icons for any mistakes made during the dive(omitted stop, uncontrolled ascent)
- coldest logged temperature
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- tank pressure in bar or psi

⚠ WARNING

If an Air or Ean dive ends with an uncontrolled ascent or an omitted stop , Puck Air will restrict Air and Ean modes for 24 hours and will only allow the Bottom Time operation mode.

NOTE
The backlight function is operational in surface mode.

⚠ WARNING

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

DIVE – AIR: SURFACE MODE

When Puck Air considers the dive to be concluded, it moves from Dive mode to Time MODE, showing the desaturation time and the No fly icon.
In addition, Puck Air displays the icons for any errors made during the dive (omitted stop, uncontrolled ascent).
Press the button to display the No fly time and the SURF Time.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

DIVE - EAN

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 that are not generally encountered in recreational dives with compressed air.
In Ean mode, Puck Air computes oxygen toxicity on the basis of the dive time, the depth and the oxygen percentage setting, providing indications that enable the diver to remain within the safe limits for oxygen exposure.
To dive with an Ean mix, you must select the Ean mode in the Set Mode menu.
Puck Air handles Ean dives in a similar manner to compressed air dives.
That means that you will have the same functions and procedures for selecting the Dive mode.
The only differences in managing the two types of dives lie in setting the general parameters for Ean dives and in the display of these parameters in addition to the normal air dive parameters (discussed in the preceding section).
This section will examine the general parameters that are specific to Ean dives monitored by Puck Air and the differences in how the data are displayed.

⚠ 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 Ean 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 hazards different from those associated with compressed air. The diver should be aware of these risks and understand how to avoid them.

⚠ WARNING

Puck Air should only be used for diving with oxygen rich mixes (Ean) by divers who have the necessary certification. Lack of appropriate diver training may result in possibly serious injury.

⚠ WARNING

The user is advised to carefully read the section on compressed air diving before reading the section on Ean dives.

DIVE – EAN: CHECKING THE GENERAL DIVE PARAMETERS

OXYGEN PARTIAL PRESSURE

When the diver reaches a depth at which the PPO2 exceeds the maximum limit entered in the corresponding parameter (from 1.2 to 1.6 ATM), Puck Air triggers an alarm condition signaled by:
- blinking depth indication
- audible alarm

The alarm continues until the diver ascends enough to bring the PPO_2 back to within the programmed limit.

⚠ WARNING

When the max PPO_2 alarm triggers, ascend immediately until the alarm condition ceases. In this case you should finish the dive and return to the surface. Pay attention and respect all indicated decompression and safety stops. Mares recommends not diving in the next 12 hour period.

EFFECTS ON THE CENTRAL NERVOUS SYSTEM

Oxygen toxicity exposure is monitored by means of a CNS (Central System Calculation), based on currently accepted recommendations for exposure limits.
This toxicity is expressed as a percentage value which ranges from 0% to 100%. When the CNS percentage value shown on the display exceeds 75%, an alarm is triggered and the figure will flash.

DIVE – EAN: PREDIVE

This operating mode remains active until the diver goes below 1.2 meters (4 feet).
The following details are displayed: (Figure 47):
- type of dive (Ean)
- units of measurement (m-°C or ft-°F)
- type of water (salt, fresh)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- icon for $\%O_2$
- tank pressure in bar or psi

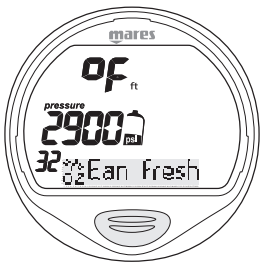


Fig. 47

NOTE
If you stay in Predive mode for more than 10 minutes without pressing the button, Puck Air will turn off.

NOTE
Before every dive, it is advisable to enter Set Dive mode and check all the parameter settings and the Ean parameters in particular.

⚠ WARNING

We recommend before you begin diving, you always put Puck Air into Predive mode. Early in your dive, always check that the dive computer is switched on.

DIVE - EAN: "NO-DECOMPRESSION" DIVE

When the diver descends below 1.2 meters (4 feet) Puck Air automatically switches to Dive Mode and starts displaying the dive data. Remaining in this mode for more than 20 seconds will make Puck Air begin recording the dive details in the Logbook memory.
The following details are displayed (Figure 48):
- current depth (in "m" or "ft")
- no-decompression time remaining, expressed in minutes
- "no dec" icon
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- the % CNS
- the duration of the dive so far (dive time) in numbers
- the Deepstop icon (if the stop is required)
- tank pressure in bar or psi

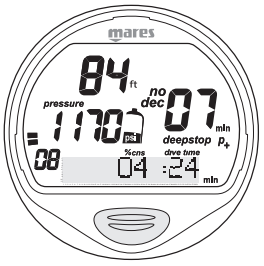


Fig. 48

Pressing the button will display (Figure 49):
- the maximum depth reached
- the Deepstop icon if applicable
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- no-decompression time remaining, expressed in minutes
- the current temperature
- "no dec" icon
- air time remaining at the current depth
- ascent rate in analog and digital mode

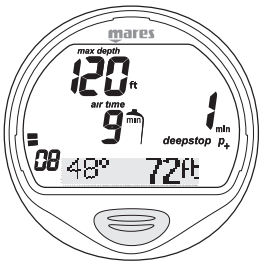


Fig. 49

Pressing the button again will display:
- type of dive (Ean)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- units of measurement (m-°C or ft-°F)
- type of water (salt, fresh)
- the $\%O_2$
- tank pressure in bar or psi

NOTE
Hold down the button for 4 seconds to activate the display backlight.

DIVE - EAN: "DECOMPRESSION STOP" DIVE

If the diver does not ascend when the residual time has expired, Puck Air switches to "decompression-stop" mode, indicated by the appearance of the "dec" message and

by an audible alarm. The following data are displayed in this mode (Figure 50):

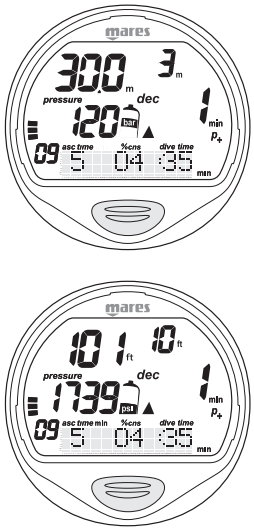


Fig. 50

- "dec" icon
- current depth (in "m" or "ft")
- depth of deepest decompression-stop (in "m" or "ft")
- duration of the deepest decompression-stop
- the Deepstop icon (if the stop is required)
- the ascent time
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- the % CNS
- the duration of the dive so far (dive time) in numbers
- ascent rate in analog and digital mode
- tank pressure in bar or psi

Pressing the button will display (Figure 51):

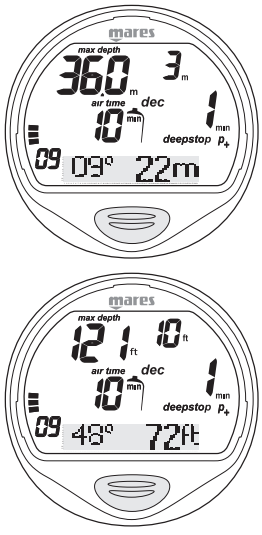


Fig. 51

- the maximum depth reached
- "dec" icon
- the Deepstop icon if applicable
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- current depth (in "m" or "ft")
- depth of deepest decompression-stop (in "m" or "ft")
- duration of the deepest decompression-stop
- the current temperature
- air time remaining at the current depth
- ascent rate in analog and digital mode

Pressing the button again will display:

- type of dive (Ean)
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- units of measurement (m-°C or ft-°F)
- type of water (salt, fresh)
- the $\%O_2$
- tank pressure in bar or psi

NOTE
The display modes are identical to those described in the chapter for dives with air.

NOTE
During the dive, when the button is pressed, Puck Air will display the estimated Deepstop required. The data displayed during the ascent may vary as a result of the diver's behavior. Divers should check this data during the ascent for more precise information on the estimated stop.

⚠ WARNING
To fully understand how to perform decompression with Ean, the user should also carefully read the corresponding section for compressed-air deco-stop dives.

NOTE
If you have completed an Ean dive and wish to do a repetitive dive with air, set the computer for "Ean" with O2 at 21%. By so doing, the calculation of the %CNS will remain active.

SAFETY STOP

If the maximum depth of a dive exceeds 10 meters, a "Safety Stop" is activated for the ascent. Puck Air suggests that divers take a 3-minute safety stop between 2.5 and 6 m in depth (8 - 19 ft), and will display the word "SafeStop." A timer indicates the time needed to complete the stop.
If the diver moves outside the depth range mentioned above, the safety stop timer is halted. When the diver re-enters the correct depth range, the safety stop timer resumes from where it left off.
If the diver returns to a depth below 10 m (32 ft), the "safety stop" timer will ignore the previously aborted stop and will start over from zero. In the case of a decompression-stop dive, the safety stop extends the duration of the decompression-stop at 3 m (10 ft) by an additional 3 minutes, displaying the safety stop information as described previously.

DIVE – EAN: SURFACING

When the measured depth is less than 1 m (3 ft), Puck Air 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, Puck Air 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. Data displayed in Surface mode (Figure 52):

Fig. 52

- duration of the dive
- max depth
- icons for any mistakes made during the dive (omitted stop, uncontrolled ascent)
- display of % CNS
- altitude program and level (if enabled)
- personal correction factor and level (if enabled)
- tank pressure at the end of the dive
- coldest logged temperature

⚠ WARNING
If an Air or Ean dive ends with an uncontrolled ascent or an omitted stop, Puck Air will restrict Air and Ean modes for 24 hours and will only allow the Bottom Time operation mode.

NOTE
The backlight function is operational in surface mode.

⚠ WARNING
Do not fly or travel to high altitudes while the no-fly icon remains active.

DIVE – EAN: SURFACE MODE

When Puck Air considers the dive to be concluded, it moves from Dive mode to Time mode, showing the desaturation time and the No fly icon. In addition, Puck Air displays the icons for any errors made during the dive (omitted stop, uncontrolled ascent).
Press the button to display the No fly time, the SURF Time, and the %CNS.
Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

DIVE - BOTTOM TIME (GAUGE)

In this mode Puck Air functions as an electronic timer and depth gauge, but does not perform any calculations for no-deco limits or for deco-stop times. Responsibility for planning the no-decompression limits or an adequate decompression therefore lies entirely with the user.
The details displayed in Predive and Surfacing modes are the same as those already described for air or Ean dives (Figure 53):

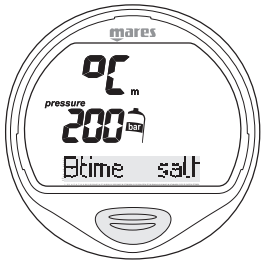


Fig. 53

The data displayed in Dive mode are (Figure 54):

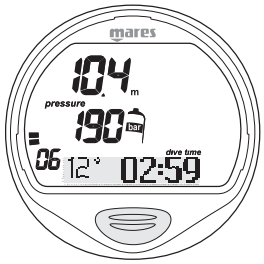


Fig. 54

- dive time
- current depth
- ascent rate
- tank pressure in bar or psi
- temperature (in °C or °F)

Pressing the button will display (Figure 55):
- the maximum depth reached
- temperature (in °C or °F)
- ascent rate
- air time remaining at the current depth

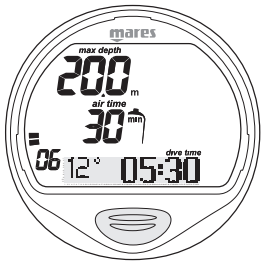


Fig. 55

Pressing the button again will display:
- type of dive (bt)
- units of measurement (m-°C or ft -°F)
- type of water (salt, fresh)
- tank pressure in bar or psi

⚠ WARNING

We recommend before you begin diving, you always put Puck Air into Predive mode. Early in your dive, always check that the dive computer is switched on.

NOTE

After a dive in "BT" 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 Set Data menu).

⚠ WARNING

This option is intended only for highly experienced divers. Users who clear the residual nitrogen memory cannot then use the instrument for repetitive dives. After clearing the residual nitrogen memory, do not dive with Puck Air if you have already dived within the previous 24 hours.

NOTE

Hold down the button for 4 seconds to activate the display backlight.

SURFACE MODE – BOTTOM TIME

The desaturation time and the delay before flying or traveling to high altitudes are displayed in the same way as for Air or Nitrox dives.

BOTTOM TIME WITH BEHAVIOR ERROR

The following errors can occur during an air or Ean dive:
- uncontrolled ascent
- omitted deco stop

In this case, Puck Air will inhibit the Dive – Air and Dive - Ean modes for 24 hours, allowing operation in Bottom Time mode only, and will continue to display the error committed during the previous dive.

PC LINK MODE

Using a special interface unit and a dedicated Windows software application, you can transfer all the data from the Puck Air Logbook to a personal computer.
Puck Air and the computer communicate through a special USB interface module (optional).
Scroll through the main menu to PC (Figure 56).

Fig. 56

Press and hold the button to enter "Pc Link" mode.
The letters "LinkOn" will appear in the middle of the screen (Figure 57).

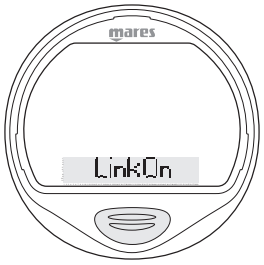


Fig. 57

Lay Puck Air so the display faces down, and insert the interface into the special port. More detailed information is available in the software needed to communicate with Puck Air. For more information about options for interaction between Puck Air and the PC, check the special section of the www.mares.com Web Site. You can download the dedicated software and any updates from the Web Site. Press the button to move to the Esc position. Press and hold the button to exit this menu and return to the main menu.

LOGBOOK

Logbook mode is used for viewing the details of past dives on the display. The dives are organized as in the pages of a "Logbook" with the number "1" assigned to the most recent dive, "2" to the preceding dive and so forth until the memory is full. If the memory is full, when the user dives again the oldest record is deleted to free up memory for the new dive.

Maximum capacity of approximately 40 hours of diving with profile points at twenty second intervals. Scroll through the main menu to Logbook. Press and hold the button to enter the Logbook. The first page of the Logbook contains the history of the dives saved (Figure 58):

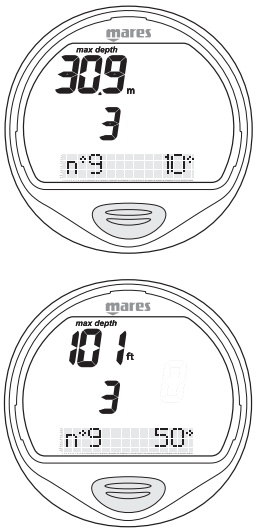


Fig. 58

- maximum depth reached
- total dive time (hours)
- total number of dives done
- coldest logged temperature

Pressing the button will display the information for the dives stored (the first dive displayed is the most recent one). Press and hold the button to select the Esc position. In this position, press and hold the button to return to the main menu. From the first Logbook screen, pressing the button takes you to the information about the most recent dive stored.

NOTE
For more extensive data storage, management and viewing functionality, use a PC with a USB interface (optional).

LOGBOOK - DIVE N°
The dives are numbered in order, from the most recent to the oldest.
The following details are displayed:
- type of dive (air, Ean, bottom time)
- sequential dive number
- alternating dive start date and time

Press and hold the button to view additional information.

LOGBOOK - TECH DATA
This mode displays the summary details of each individual dive (Figure 59):

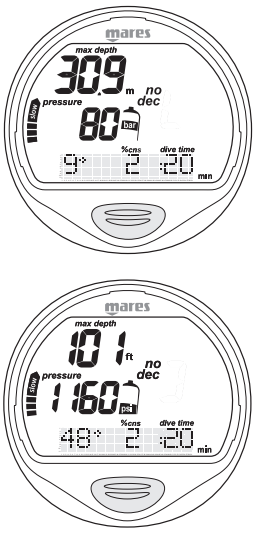


Fig. 59

- maximum depth reached
- maximum ascent rate reached
- "uncontrolled ascent" icon
- omitted deco stop (only Air, Ean)
- "dec" icon for decompression-stop dives (only Air, Ean)
- omitted deco stop (only Air, Ean)
- selected personal correction factor (only Air, Ean)
- "no dec" icon for no-decompression dives (only Air, Ean)
- selected altitude program (only Air, Ean)
- duration of the dive
- coldest logged temperature
- tank pressure in bar or psi
- %CNS maximum (Ean only)

Pressing the button will display:
- type of water (salt, fresh)
- INITIAL tank pressure in bar or psi
- $\%O_2$ in the breathing mix (Ean only)

Press and hold the button to return to the first screen of information about the current dive.
Press the button to scroll through the dives to the end. Press the button again to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

NOTE
For dives in Bottom Time mode, the uncontrolled ascent and omitted deco stop icons refer to errors committed during the preceding dive.

PLANNING: SCROLLING OF NO-DECOMPRESSION LIMITS

This function allows the user to scroll through the no-decompression limits, automatically taking into consideration the residual nitrogen level in the tissue compartments from a previous dive.
The times displayed take into account all the settings under Set Mode.
Scroll through the main menu to Planning.
Press and hold the button to enter Planning (Figure 60).

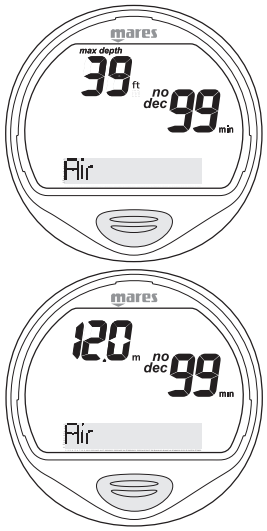


Fig. 60

Pressing the button increases the depth shown by three meters each time, up to a maximum of 48 m (157 ft). For each depth, the display shows the corresponding no-decompression time expressed in minutes. If "Ean" 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 % O_2 and maximum PPO_2 that have been entered. Upon reaching the maximum depth, pressing the button again moves to Esc mode. Press and hold the button to return to the main menu.

NOTE
The Plan function will only be active after having selected Air or Ean mode in Set Mode.

NOTE
To switch to Esc mode and easily exit the Planning function, simply press and hold down the button at any point during scrolling.

SYSTEM

Scroll through the main menu to System.
Press and hold the button to enter System.
Here you can view:
- the serial number
- firmware version
- the number of times the battery has been replaced
- the charge level of the battery, with three possible levels:
  - battery: Ok
  - battery: Lo1
  - battery: Lo2

Press the button to move to the Esc position.
Press and hold the button to exit this menu and return to the main menu.

NOTE
When the battery charge level is displayed, press and hold the button to run an instant battery check.

• FAQ

Q: What happens if I replace the battery after a dive, before the desaturation time has gone to zero?
A: The residual nitrogen memory will be cleared, and the RGBM calculations for any previous dives will be aborted. The diver who used the computer in the previous dive must not dive for at least 24 hours.
Q: What happens if I start a dive while Puck Air is still in System mode?
A: If left in System mode when you begin the dive, Puck Air will still activate Dive mode within 20 seconds of descending past 1.2 m (4 ft).
Q: When I replace the battery, will my Logbook dive data be lost?
A: No.
Q: What happens if there is an uncontrolled ascent or omitted decompression-stop during an Air or Ean dive?
A: After the dive, Puck Air switches automatically to "Stop". Only Bottom Time mode will remain operational.
Q: What indicates that "Bottom Time" mode was chosen by the user, rather than forced as a result of diver errors during the preceding dive?
A: In the latter case, during the dive and in surface mode, the pertinent error icons are displayed along with the standard "Bottom Time" indications.
Q: If Air or Ean mode is selected after completing a dive in "Bottom Time" mode, how will the new dive be managed?
A: Puck Air does not allow you to do an Air or Ean dive in the 24 hours immediately following a Bottom Time dive.
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.
If this happens, Puck Air switches to Bottom Time and prevents use of the Dive – Air and Dive – Ean for 24 hours.
Q: What is System mode for?
A: Putting Puck Air into System mode allows you to view specific information about your dive computer.
Q: Where can I find the product serial number?
A: In System mode.
Q: If I already own the Iris interface, can I use it with Puck Air?
A: No.
Q: Are the 3 minutes of the safety stop included in the ascent time?
A: The 3 minutes of the safety stop are not included in the ascent time.

Q: What is a Deepstop?
A: To reduce the chances of micro-bubbles forming and growing, during decompression-stop dives or dives very close to the no-decompression limits, Puck Air will prompt for a series of Deepstops of a minute each at variable depths, as a function of the dive profile. This is one of the special characteristics of the RGBM Mares-Wienke Algorithm.
Q: If I ascend above the depth for the Deepstop can I go back down to do the stop?
A: If you surpass the Deepstop by more than a meter (3 ft), the stop is cancelled.
Q: Why doesn't the Deepstop icon appear during the dive?
A: The Deepstop icon only appears for decompression dives or dives close to the deco limit.
Q: If I start my Deepstop and then go back down what happens?
A: If you begin the Deepstop and then descend, the countdown stops. It resumes when you return to the Deepstop depth.
Q: Why doesn't Puck Air turn off after a dive?
A: If the no-fly period has not expired, after a dive Puck Air switches to Time mode and shows information about the most recent dive.
Q: If I am in Predive with the hose inserted, can I exit Predive to change the settings?
A: Even in Predive and when Puck Air is reading the tank data, you can exit this mode by pressing and holding the button and then change the settings.
Q: If I am in DIVE, can I exit to change the settings?
A: No.

⚠ WARNING

If the battery is replaced after a dive before the desaturation time has gone to zero, the residual nitrogen memory will be cleared, and the RGBM calculations for any previous dives aborted. The diver who used the computer in the previous dive must not dive for at least 24 hours.

• MAINTENANCE

After diving in seawater it is recommended that you rinse Puck Air with freshwater to remove any salt residues. This operation should be done with the Puck Air connected to the hose.
Do not use chemical products; just put the Puck Air under running water.

NOTE
With regard to downloading data from the logbook to the PC, it is important that the two pins located in the back near the battery plug are carefully cleaned with freshwater after every dive.

In the event of a malfunction, do not use the instrument for diving and have it checked by an authorized Mares service center. In any case, every 2 years or after completing 100 dives, the instrument must be serviced at an authorized Mares service center.

NOTE
If you notice signs of moisture on the inside of the plastic lens, take your Puck Air to an authorized Mares service center immediately. In any case, Mares declines responsibility for any water seepage resulting from an incorrect battery replacement procedure.

⚠ WARNING

If you notice any malfunction or water seepage, bring your Puck Air to an authorized Mares service center immediately. It is strictly prohibited to disassemble the computer. Doing so will void the warranty.

⚠ WARNING

The plastic lens is not immune to scratches caused by improper use.

⚠ WARNING

The plastic lens is protected by a plastic lens cover that is easily replaceable (Mares spare part Code 44200617).

STORAGE INSTRUCTIONS

Storage temperature: from -20 to +70° C (-4/+158° F).
When replacing the hose be careful not to damage it by folding it too far (bending radius not less than 31 mm).

TRANSPORT INSTRUCTIONS

No special operations are required for transport. It can be transported with the rest of your equipment, but be careful to avoid violent blows

REPLACING THE BATTERY

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 (Mares spare part Cod. 44200654).

Unscrew the waterproof cover on the back of Puck Air, rotating counter-clockwise.
Lift the cover, prying in the two grooves.
Remove the battery, paying close attention to the proper polarity.
Insert a new battery, Lithium CR 2450, making sure the polarity is correct.
Check the gasket in the cover.
Insert the cover onto Puck Air so that the icons are correctly positioned.
Press the cover inward.
Turn clockwise, pressing the cover until the icons are aligned.

⚠ WARNING

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

INSTRUCTIONS FOR CONNECTING PUCK AIR TO THE HP HOSE

Puck Air is made up of two distinct elements: the computer and the high pressure hose, which are tested for an operating pressure of 300 bar.
The hose must be connected to the regulator's first stage before the latter is mounted on the tank: if this operation is carried out when the regulator is already assembled on the tank, make sure that the tank valve is fully closed and that the entire system is depressurized by pressing the purge button on the regulator second stage.

1) Locate the high-pressure ports on the regulator first stage (refer to the instruction manual of the regulator; the high-pressure ports on the first stage may be marked with the letters "HP" or with the maximum pressure rating) and, following the instructions, remove the plug from the chosen port.
2. Remove the thread protection cap before connecting the hose to the regulator first stage.
3. Screw the hose fully into the high-pressure port of the regulator first stage. Tighten firmly but carefully, using a 14-mm hex wrench; if you have a dynamometric wrench available, apply a closing force of 8 N/m. The Puck Air is ready for use.

Once the tank valve is open and the system is pressurized, reclose the valve and make sure there are no leaks, checking that the pressure indicated by Puck Air is stable and does not drop. If a drop in pressure is detected, do not dive and double-check the entire system.
During the dive, remember to check the residual air pressure frequently.
The Puck Air is equipped with a hose long enough to avoid hindering the diver during use. It is in any case recommended to secure the instrument using the special fasteners provided on the harness or BC. Protect the instrument from knocks. The Puck Air must only be used with CE-marked SCUBA components.

⚠ WARNING

The Puck Air can only be connected and subsequently disconnected from the high pressure hose after depressurizing the system. Therefore, if the computer is assembled on the first stage of a regulator that is already connected to a tank, depressurize the group as described above.

Before using, the user must carefully ensure that the Puck Air is compatible with the maximum working nominal pressure values of the regulators on which the device will be mounted.
The nominal working pressure for the Puck Air is shown on the back of the case.
After assembling the Puck Air, slowly open the tank control valve to avoid the "water hammer"

effect resulting from the high pressure entering the hose.
Never look directly at the Puck Air dial when opening the tank valve.

⚠ WARNING

In models designed for use with Nitrox, always open the valve(s) on the tank(s) very slowly to reduce the risk of the mixture combusting.

⚠ WARNING

Under no circumstances should the user replace the hose fitted on the Puck Air with one of a different type; consult your dealer or Mares for information about the type of hose to be used.

COMPASS

TECHNICAL CHARACTERISTICS

- Front and side reading.
- Oil bath system with temperature compensation.
- Maximum working tilt of 20°.
- Dual magnet for faster response.

DIAL

- Diameter: 50 mm.
- Scale: Bezel ring with numbering at 10° intervals.

CASE MATERIALS

- High-strength technopolymers.
- Polycarbonate.

MAINTENANCE

- Avoid exposing the instrument to direct sunlight or sources of heat.
- Treat the compass like a precision instrument, and protect it against knocks.
- Rinse in fresh water after every dive.

⚠ WARNING

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

INSTRUCTIONS FOR ATTACHING THE COMPASS

(OPTIONAL COMPONENT, SOLD SEPARATELY)

With reference to figure 61-68, the following steps are necessary in order to attach the compass:

1. remove the pin

Fig. 61

2. remove the Puck Air from the back side of the boot and pull until the air plug is visible and accessible

Fig. 62

3. using the appropriate tool, unplug the Puck Air from the air hose

Fig. 63

4. remove the air hose

Fig. 64

5. insert the air hose into the new boot
6. connect the air hose to the Puck Air

Fig. 65

7. Insert the Puck Air into the boot

Fig. 66

8. insert the pin

Fig. 67

Fig. 68

• TECHNICAL/FUNCTIONAL CHARACTERISTICS

TECHNICAL FEATURES

PRESSURE GAUGE FUNCTION

The pressure gauge integrated with the Puck Air dive computer has been tested and CE certified by Registered Test Center #0426 - ITALCERT, V.le Sarca, 336 - 20126 Milan - Italy and by - INPP – Entrée n°3 – Port de la Pointe Rouge BP 157 -13267- Marseille – France.
The pressure gauge integrated with the Puck Air computer is a Category III device as defined under European Directive 89/686/CEE, and complies with the specifications set out in the harmonized European Standard EN 250/2000 for use with air compliant with Standard EN 12021 (oxygen content of 21%).
The pressure gauge is compliant with the specifications set forth in the 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 dive computer under standards EN 250:2000 and EN 13949: 2003 are understood to be applicable to a maximum depth of 50 m below the surface.
The Puck Air dive computer can be used in cold water (water at temperatures below 10°C).

MARKING

The instrument markings are located on the back of the case, and consist of the following:

- working pressure rating: 300 bar / 4,350 psi;
- reference standard: EN 250/2000;
- reference marking: CE 0426.

The conformity marking indicates compliance with the essential health and safety requirements as per attachment II D. and 89/686/EEC. The number alongside the EC identifies the Notified Body #0426 – ITALCERT V.le Sarca, 336 – 20126 Milan - Italy, authorized

to inspect the finished product under art. 11 B D.e. 89/686/CEE.

CHARACTERISTICS

Maximum operating pressure: 360 bar (5150 psi).
Accuracy: The guaranteed accuracy of the pressure measurement is:

- at 50 bar ± 5 bar • at 750 psi ± 72 psi
- at 100 bar ± 10 bar • at 1450 psi ± 145 psi
- at 200 bar ± 10 bar • at 2900 psi ± 145 psi
- at 300 bar ± 15 bar • at 4350 psi ± 217 psi

Connecting port airflow: <100 liters/min. at a pressure of 100 bar.

MEASUREMENT RESOLUTION

Metric: 1 bar
Imperial : 10 psi.

MEASUREMENT OF HIGH PRESSURE

- every 5 seconds.

DEPTH MEASUREMENT

- Maximum displayed depth: 150 m (492 ft)
- Measurement resolution:
  - 10 cm (3.95 in) in the 0-100 m (0-328 ft) range
  - 1 m (3.28 ft) in the 100-150 m (328-492 ft) range
- 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
- Depth display: meters (m) / feet (ft)
- Manual fresh/seawater selection
- Difference between fresh/seawater: 2.5%

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)

BATTERY

- Lithium 3V CR 2450 battery
- Life: over 170 dives*

*** NOTE**
Data calculations were performed with the following parameters:

- Average length of each dive is 45 min
- 12 months of OFF Mode
- Battery life is affected by the operating temperature
- Battery life decreases at lower temperatures
- The life of the battery will vary depending on use

ALGORITHM

- RGBM Mares-Wienke, the result of collaboration between Dr. Bruce R. Wienke and the Mares Research and Development Center.
- 10 tissue compartments
- Reduction of permissible gradient (M factors) in case of repetitive dives, deeper-than-previous dives or dives on multiple consecutive days.
- Deep decompression-stops
- Safety stop
- Ascent rate: 10 m/min
- Altitude programs:
  - P0 from 0 to 700 meters ASL (0-2296 ft)
  - P1 from 700 to 1500 meters ASL (22 96-4921 ft)
  - P2 from 1500 to 2400 meters ASL (4921-7874 ft)
  - P3 from 2400 to 3700 meters ASL (7874-12139 ft)
- Personal correction factor for added safety

MECHANICAL CHARACTERISTICS

- Plastic lens
- Plastic lens cover
- 1 button

FUNCTIONAL CHARACTERISTICS

DIVE operating mode

- Air
- Ean
- Bottom Time

SCROLLING OF NO-DECOMPRESSION LIMITS

- From 12 to 48 m (39 -157ft)

Logbook

- History
- All dives are stored with profile points at 20 second intervals, a maximum of 40 hours.

BACKLIGHTING

- Temporary

AUDIBLE ALARMS

- Omitted decompression-stop
- Excessive ascent rate
- No-decompression limit reached
- Deepstop
- Maximum depth allowed by the max PPO_2 setting

PC INTERFACE

- USB (optional)

• 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: upon serious technical inspection, any components that 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.

VALIDATION OF THE WARRANTY

To validate the warranty, the first purchaser must mail this certificate complete with the vendor's stamp to Mares S.p.A. within 10 days of the date of purchase. 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 improper use of compressed air with pressure higher than the indicated maximun operating pressure, 360 bar (5150 psi).

HOW TO FIND THE PRODUCT CODE

To view the product code, enter the System menu.
The product serial number is indicated here. You should note this number on the warranty certificate inside the packaging. The serial number can also be found on the Puck Air 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.

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Algorithm

Deep Stop

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