

# VR3 Mixed Gas Dive Computer



**Air • Nitrox • Trimix  
Heliair • Heliox  
Helitrox • Rebreather**



Ocean Management Systems announces the release of the new VR3 Mixed Gas Diving Computer.

## Specifications:

- Updated helium algorithm
- Single user replaceable AA Battery. (Alkaline, lithium, or nicad)
- Air, Nitrox, Trimix, Heliair, Heliox, Helitrox
- 10 Programmable gases
- Dive plan mode (enter gases, depth and time and the unit calculates a list of stops so you can write down the schedule instantly. No laptop needed in the field.)
- Icon driven menu multilayered system
- Multi language
- Variable ceiling indicator (variable or stepped decompression can be conducted)
- Programmable safety factor
- No Lockouts
- Open and Closed Circuit
- Altitude displays
- Auto turn on, no wet contacts
- Tissue loading graphs
- Total time to surface calculations
- Calendar mode
- Improved helium and microbubble algorithm
- Dive graphing replayable during and after dives
- High resolution dot matrix display with backlight and contrast control
- Fixed and variable ceiling decompression
- PIN number system to allow user reprogramming
- Decompression Games (to help pass the time)
- 99 levels of decompression
- Links to most rebreathers for on-line decompression

**Upgrade path available for existing VR3 users**

## Introduction

The VR3 is designed as a multi-gas, multi-mode decompression computer. It is available in a variety of configurations - from a simple air and nitrox unit through to a full, mixed gas open and closed circuit system. The basic options are:

- Open Circuit Air and Nitrox
- Open Circuit Air, Nitrox and Trimix / Heliox
- Closed Circuit Nitrox
- Closed Circuit Nitrox, Trimix / Heliox

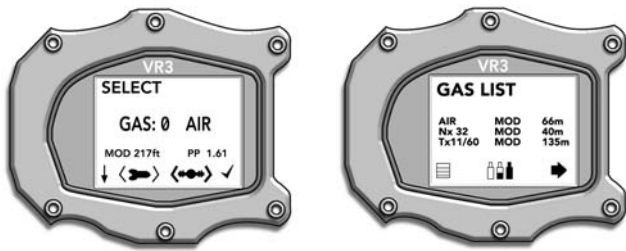
The VR3 is designed to integrate with both the Proplanner decompression software and the Prolog dive logging system. It is fully re-programmable should the diver choose to upgrade between options or if new technology / physiology become available.

## Decompression Algorithm:

The VR3 uses a derivative of the Buhlmann ZHL 16 algorithm. Exactly the same adaptation is used in the Proplanner decompression software.

The new versions of both systems employ some of the latest thinking in microbubble avoidance. They may seem to modify the dive profile compared with standard parallel compartment models. The modification takes the form of deepwater microbubble controlling decompression stops. In certain circumstances the VR3 will prompt the diver to do a short decompression stop, or stops, well below the bulk of the decompression sequence. Along with other modifications to the remaining profile, this helps reduce the problems associated with potential microbubble growth.





## Alarms

The VR3 has several on screen alarms indicated by on screen messages and the backlight flashing.

## Decompression Stop Violation

If the diver should ascend past their required decompression stop depth the descend arrow appears on the screen. If the warning is ignored, after 60 seconds a message will appear which says "USE TABLES". After this the VR3 will still provide best guess decompression data but should not be relied upon. If the diver recorrects their depth before a 60 second violation the timer will start back up again.

## Switch

Based on the dive plan entered by the diver, the VR3 will prompt for a gas change when the depth has been reached. The diver may ignore this if they wish and carry on with the same gas.

## PO2

A PO2 alarm occurs when an open circuit gas or diluent has exceeded 1.6 bar.

## Air Break

This alarm will display when the user set CNS alarm limit is exceeded.



## VR3 Review by Robert Powley

When I was asked to review the new VR3 from Delta P Technology and distributed by Ocean Management Systems in the United States, I had a hard time determining where to start. So, I decided to go back to when I was first considering buying a dive computer. As a new diver, I quickly learned that there were many dive computers offering many different features. I spoke to experienced divers, instructors and friends, and the sum experience was confusing and sometimes overwhelming. Now, as an instructor who owns too many computers, I firmly believe that a computer should be purchased with your diving future in mind and not limited solely to your current level of diving. With this as a guide, if you are interested in technical diving and believe it is the direction that you will pursue, the new VR3 may be the last computer you'll need to own.

The VR3 is offered in four different versions, starting with Open Circuit and Nitrox and culminating with Closed Circuit Nitrox and Trimix. However, the base level computer can be upgraded to more advanced levels as a diver's training and experience grows. The computer can also be upgraded within a specific level to add new features or to incorporate the most current decompression algorithms. Additionally, the VR3 can be upgraded to include a rebreather link, which provides for direct analysis of the gas in the breathing loop, enabling more accurate decompression analysis and redundancy to existing onboard electronics. The unit even employs an altimeter for accurate sensor calibration during your pre-dive safety checks.

Apart from the ability to be upgraded, the new VR3 is independently a significant upgrade from the original VR3, even though many of the features remain. I used the original VR3 the last two years and enjoyed its application to Trimix and Closed Circuit dives. However, the original VR3 was not good on battery consumption, was relatively large and did not have an automatic activation in water. The new VR3 is improved in all these areas and many more. The new VR3 is in a well-built metal housing and the buttons are very easy to operate, even with heavy gloves. The new version is at least half the size of its predecessor and automatically activated by depth. The screen on the new VR3 is easier to read and the backlight is a much-improved, battery-friendly, blue light. Furthermore, the unit is powered by one user replaceable, ultra available, AA battery, which without the backlight, provides 100 hours of operation. The computer also provides complete dive planning, which takes into account actual tissue saturation of the diver, providing the ability to write back-up tables without having to bring your laptop.

As found in the original VR3, the new VR3 retains the ability to be switched between 10 gases and from closed circuit to open circuit during a dive. Even though back-up tables must always be carried, the VR3 can continue to analyze a dive based on the actual gas in use during an emergency, and therefore, can provide the fastest safe way out of the water. The new VR3 also provides a detailed description of all decompression stops during any point in a dive, including time to the surface, and not just the first or current stop. Furthermore, the new VR3 stores a graphical dive profile in the log for great post-dive analysis.

Finally, I cannot forget to mention the game feature, which is designed to help pass the time during long decompression stops. There are many features not discussed in this review, but the new VR3 should merit serious consideration by any technical diver. Quite simply, the new VR3 is an amazingly well-conceived dive computer, which is a significant improvement from the original.