

VRX additional features

Following on from world leading VR3 dive computer, the new VRX has more features including some more world firsts.

- VGM dive compression algorithm (Variable Gradient Model)
- Torch
- Display Auto Flip

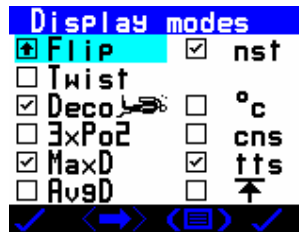
The VRx has a rechargeable Lithium-ion battery with a 4 year warranty. The VRx comes complete with a world-wide universal battery charger.

Display modes

In display modes there are three additional features:

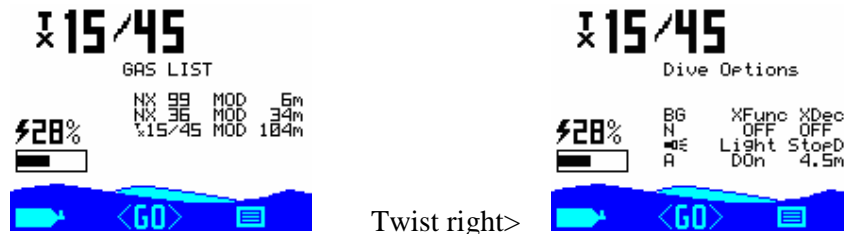
Automatic display flip

The A option for the Flip mode causes the screen to be automatically flipped over if the VR is turned upside down. This means the display will auto rotate to show the information the right way up, even if you have turned the VR upside down.



Twist mode for mini screen jumping

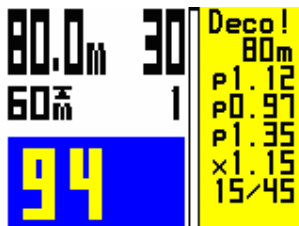
Setting Twist mode on allows the user to skip through the mini screens in the main dry screen by twisting the VR to the right 90degrees or to the left 90degrees. The unit has to be held for half a second or so to trigger the mini screen change. A twist to the right will be equivalent to a short right button push, so the mini screen will change to the next one as though a short press of the right button had been performed. A twist to the left is equivalent to a short left button push and will change the mini screen accordingly.



A twist down (version 1.1) will navigate to the mini screen currently displayed.

3xPo2 Triple PO2 - Option

If the triple PO2 monitoring option is purchased and enabled in Dive Options, then the further option to display all 3 cells in the dive screen can be chosen. This option displays each of the cells in the message area on the right of the dive screen.



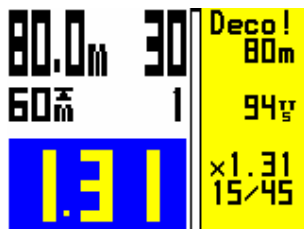
Note: Because this takes up three lines out of the 5 available in the dive message area, at least 3 lines must be available to allow selection of this option.

The total of lines used in the message area is counted. No more than 5 can be selected at any time. Number of lines used for each option are as follows:

- x3po2 uses 3 lines
- MaxD uses 2 lines
- AvgD uses 2 lines
- Temperature uses 1 line
- CNS uses 1 line
- TTS uses 1 line
- Ceiling uses 1 line

XFunc – 3x02

XFunc has an additional option in the VRx. If purchased as an option, the 3x02 Xfunc turns on the triple cell monitor for rebreathers. Once turned on, then the 3xpo2 option in Display modes, and XDec for external po2 for decompression are also enabled.



Dive Options - Gmode

The dive screen graph are at the bottom left can be used to display the dive graph, or the Total Time to Surface TTS, or external PPO2, if external triple or single cell option is enabled. To make your choice, go to the Gmode option in the display options. The three modes are:

Dive Options

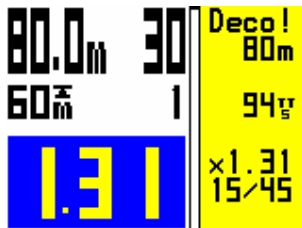
```

Gmode XFunc XDec
PO2 3xO2 ON
Light StopD
A On 4.5m
  
```

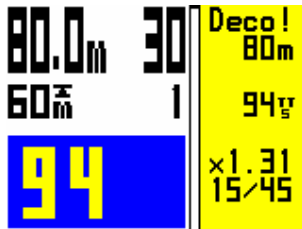
Graph = display dive graph

PO2 = display external PO2

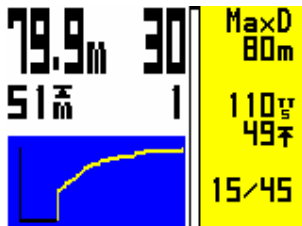
TTS = display Total Time to Surface



External PO2



TTS Total Time to Surface



Dive graph

Triple Po2 monitor – Option

A triple PO2 cell monitor for a rebreather can be directly connected to the connector on the VRx. This option, when enabled makes the following screens and options available:

Dive Options

```
Gmode XFunc XDec
PO2 3xo2 ON
Light StopD
A On 4.5m
```

Xfunc = 3xo2. This turns on the option. Once turned on, then XDec can be enabled, and Gmode can be chosen as PO2.

XDec uses the external PO2 level for decompression calculations.

Gmode = PO2 displays the external PO2 in large numbers in the bottom left of the dive screen.

To allow calibration of the o2 cells, the o2 sensor screen below is enabled and accessed from the main dry mini screen menu.

O2 Sensor

```
1 1.398 139.2mV
2 1.029 100.8mV
3 1.010 102.6mV
av9 1.14
```

Calibration adjustment screen

```
x 15/45 xGas 15/45
Display modes
 Flip  nst
 Twist
 Deco  °c
 3xPo2  cns
 MaxD  tts
 AvgD  ↕
```

Enabling the Display modes 3xPo2 option displays all three cell values in the dive screen.

Dive Options

UGM

```
HUD AvgD ScrSv
Off Off Off
```

If the HUD option is also purchased, then it can be turned on from the second screen of the dive options.

PP02 ⚡
1.35
0.88
1.11

A display option for rebreather monitoring is to just show the external po2 cell readings. This gives a clear simple display of each cell.

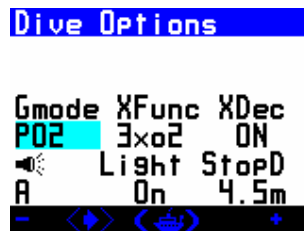
WARNING – IN THIS MODE THE VR_x WILL NOT ENTER THE DIVE SCREEN, NEITHER WILL IT LOG THE DIVE. IT IS FOR USE AS A PO2 MONITOR ONLY.

Torch



The VRX is fitted with an LED torch. The control for this is found in the Dive options screen. There are three settings:

- N = torch always off
- Y = torch is always on when the VR is on
- A = torch turns on when the VR is on and turned face down. The torch stays on for 10seconds after the VR is returned to a non -face down position.



Note: The torch is intended as a last resort backup when diving, and should not be considered as an alternative to a good dive torch.

Colours

The VRx is available in a range of colour options as well as standard grey:

- Chrome plated
- Red anodised
- Gold anodised
- Blue anodised

Power Monkey charging option

We are pleased to announce our association with Power Traveller who make a superb range of mobile charging products. With our special adaptor, you can charge your VRx with their Power Monkey shown here. The Power Monkey will also charge your mobile phone and most MP3 and MP4 products. The Power Monkey itself can be

charged from its own world wide mains supply, or its Solar Cell or a computer USB port. Please visit the Power Monkey web site for full details. The VRx adaptor is only available when buying the Power Monkey option from VR Technology Ltd - Part# 2014.

Battery

The VRX is fitted with a rechargeable Lithium -ion battery. A multi-voltage charger is supplied, that will recharge a completely flat battery in approximately 3 hours.

The battery level is shown in percentage on the main front dry screen. A full battery will give the approximate performance:

- Total sleep time without use = 6 months
- On time with backlight on = 10 hours
- On time with backlight off = 20 hours
- On time with torch and backlight on = 8 hours

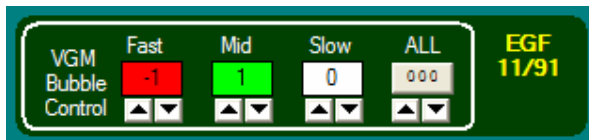
The battery comes with a 4 year warranty. The lithium battery can also be serviced and replaced at the factory. Do not take the VR apart or change the battery yourself. Warranty is void if the VR has been opened or tampered with.

VRX Dive Computer and Variable Gradient Model VGM Decompression Algorithm

Release version features 8th October 2008

Following the huge success of the VR3 dive computer VR Technology will be launching the VRX dive computer at DEMA this month.

The Variable Gradient Model (VGM) algorithm is available from October 08 exclusively in the new VRx dive computer. Free download software to complement the product is also available at www.technologyindepth.com/vrx.html



VGM - Decompression philosophy

The VGM algorithm is built on recent practical dive planning and diving techniques as well as the scientific and theoretical understanding over the past 100 years. It combines better theoretical knowledge of bubble physics together with known diving practices that help decompression and well being after and during decompression diving.

VGM also gives the user the ability to change the conservatism to increase or decrease decompression times. Some technical divers find they feel good after a decompression with less in water time than others.

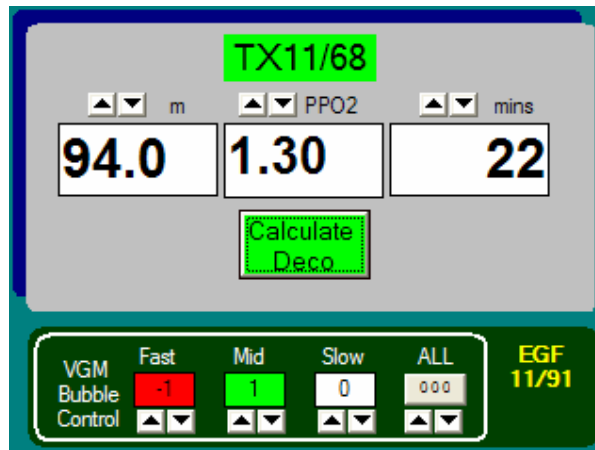
The Equivalent Gradient Factor for the VGM setting is displayed for comparison with other dive planning software and computers.

The default settings have been implemented based on feedback and dive records from many experienced divers, and it is the input of real technical divers in the choice of these settings that has made VR Technology and its team at the forefront of technical diving product design for over 20 years.

Decompression is a physiologically complicated event. There are many factors that affect how well the human body decompresses and how well it is able to withstand pressure exposures. All dive algorithms have been devised to combine the complexity and risk of staying in the water with the risk of decompression sickness after surfacing. Things like hydration before a dive, rest and even oxygen after a dive all help reduce the risk of DCS. So bear in mind that as with all decompression planning there needs to be a balance and understanding of the risk of reducing decompression times and the impact of DCS. Please refer to your training agencies' information and advice on these issues.

WARNING!

Even if your dive computer or PC generated software allows for less conservatism and a reduction in decompression times this should not be arbitrarily undertaken without first researching data available from other divers/agencies, conducting controlled trials and understanding that you may be undertaking a level of experimentation in order to adjust the algorithm for your specific needs.



VGM incorporates 5 main features:

1. Bühlmann decompression model
2. Modification of tissue over pressure tolerances or M values for the faster tissues to create a decompression profile similar to a bubble model like VPM
3. Further modification of over pressure tolerances for deep or long exposure dives, especially in the fast and middle order tissues
4. Automatic adjustment of the above parameters to allow the default settings to give common decompression and No Stop times across the range of diving from 10m to 120m
5. User adjustable parameters so the diver can use his/her experience to further modify the decompression to that which suits him/her. The Equivalent Gradient Factors are displayed for a particular dive for ease of comparison with other dive computers and dive tables, although because this system goes beyond Gradient Factors certain adjustments may only give an estimate of the nearest GF equivalent.

A basic version of VGM PC dive planning software VGM ProPlanner is available free from the web site. This allows a quick way to see what decompression the VRx dive computer will give and allow specific conservatism factors to be tried out on the PC before then choosing the right ones for a dive using the VRx. The PC software also gives print outs and an output in common spreadsheet style format for use in creating back-up tables.