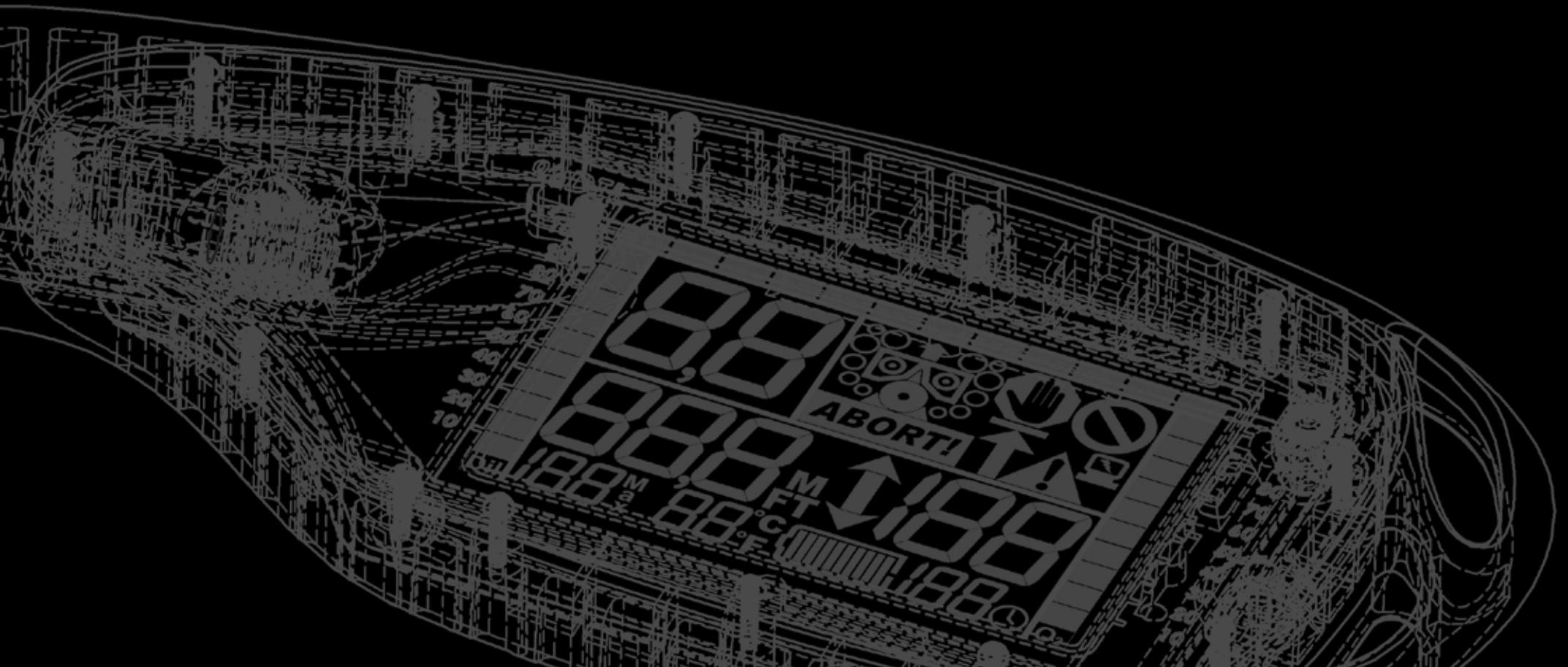# POSEIDON MKVI
PC CONFIGURATION SOFTWARE
USER GUIDE

PC Configuration software for Poseidon MKVI
User guide

Introduction

This user guide describes the different features included in PC Config software and how they are used. When referring to this user guide, make sure that you have the corresponding (latest) software version installed on your computer.

The PC Configuration software can be downloaded from our website at;
http://www.poseidon.com/support/mkvi

At this website, you will find all resources connected to the Poseidon MKVI rebreather.

The PC Configuration software has been tested on the following operating systems:
- Windows XP
- Windows Vista*
- Windows 7

In order for the software to work, your computer needs to have a working IrDa communication device that can communicate with the MKVI unit.

At the date this manual was created, there were no PC Configuration software available for Mac.

Download and install

To download the latest version of the PC Configuration software, go to **www.poseidon.com**, click Support and then click Poseidon MKVI.

When the zipped file has been downloaded, unpack the file and save the "MkVI_ConfigSetup_vX.XX.exe" file to your local hard drive. To install the software double click on the "MkVI_ConfigSetup_vX.XX.exe" file and follow the instructions on the screen.

If you have an earlier version of the PC Configuration software installed on your computer, we recommend that you check the "Remove old program" checkbox in the set up dialogue box.

When the program has been installed, you will find the program in your start menu and a "Poseidon logo" icon on your desktop, if you checked the "Desktop Link" checkbox in the set up dialogue box.
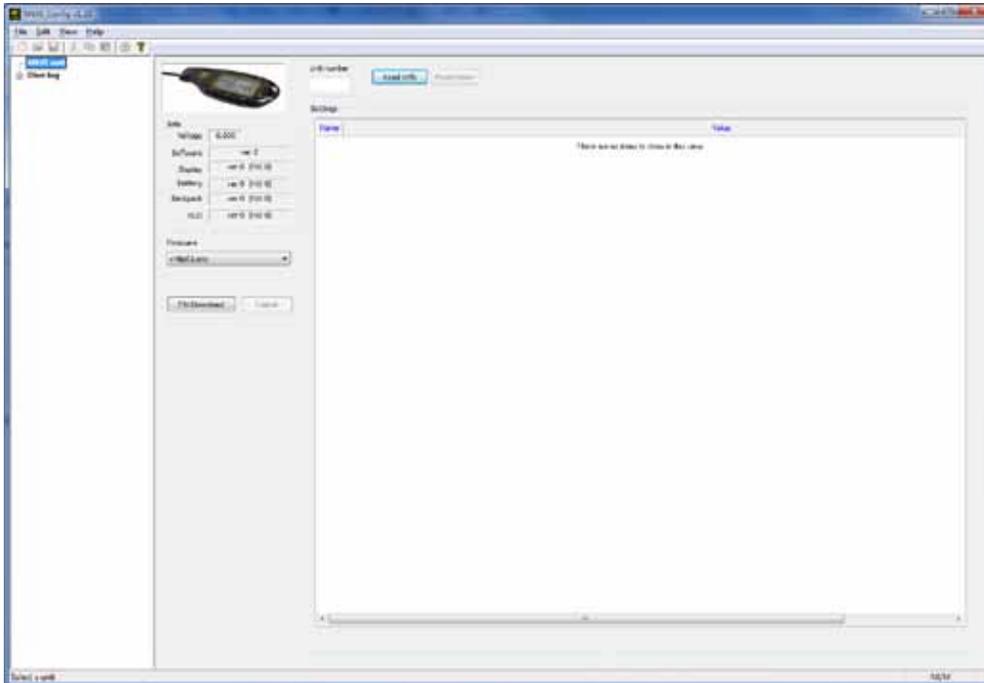
Note: Due to some write permission issues on Windows Vista and Windows 7 operating system in the previous versions of the PC Configuration software, there have been some changes made in vlater versions, regarding the location of where we save dive logs and red box log files.
In version 1.08 and later, these files are saved in the "My Documents\Discovery\Dive" folder and in the "My Documents\Discovery\redbox" folder. If you have divelogs from earlier versions of the PC Configuration software, we recommend that you copy/move these from the previous installation location to the "dive" folder of the new installation location at "My Documents\Discovery\Dive".

Starting the program

Start the PC Configuration program by locating it in the "All programs" section of your start menu or by double clicking on the desktop icon.
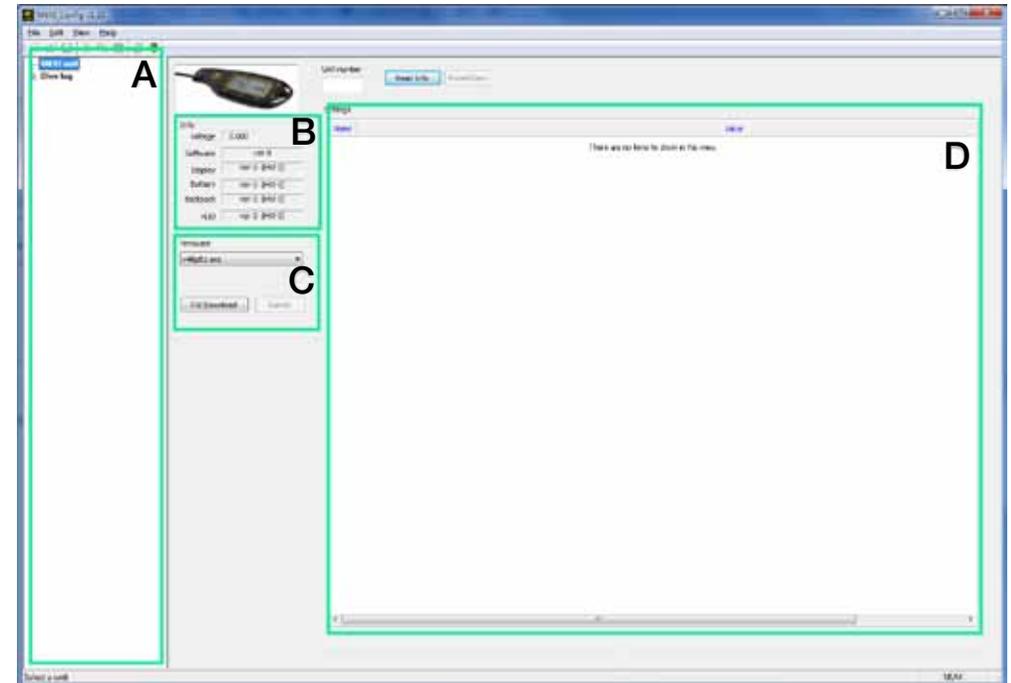

Figure 1. *When the program is started, this is what you will see on your screen.*

Since the program isn't connected to the Poseidon MKVI unit yet, there isn't much information that you can see at this stage.

So we will start by describing the functionality of the different sections of the view you will se when you first start up the program. (Fig 2).

On the left hand side of the program, you have the main menu **(A)**. By selecting either the "MKVI Unit" option or the "Dive log" option, you switch between the two main features of the program.

In the "Info" area **(B)**, all Firmware information will be displayed once you have connected to the unit.

Figure 2.

If your computer is connected to the Internet, the PC Configuration software will search on line for the latest Firmware version available. In the scrolldown meny in area **(C)**, the latest Firmware version will be displayed. This area is also where you initiate a Firmware update, by clicking on the ""Download" button. Please note that you should only press the "Download" button when the PC Configuration software is connected to the MKVI.

In the "Settings" window **(D)** all editable configuration settings will be visible once you have connected the PC Configuration software to the MKVI.

The "Dive log" feature will be described later in this user guide.

Connect the PC Configuration software to your Poseidon MKVI.

Before you attempt connecting your PC Configuration software to your MKVI, make sure that your IrDa communication device is working.

Power up the MKVI and start a pre dive check.

Next, place the IrDa communication device by the MKVI IrDa communication port, located on the primary display as shown in Figure 3.

If the unit shuts down before you have a chance to connect your PC to the unit, you can place a wet cloth over thw two wet-switches on the backside of the display. This will prevent the unit from shutting down if/when it stops on a Pre Dive check test.

Once an infrared connection is established between your PC and the MKVI unit, you should hear a sound being played on your computer.

In the "Unit number" field, type in the serial number of the unit and then press the "Read Info" button.

The unit serial number is shown on the primary display of your MKVI, when you start it up using the wet switches on the back side of the display.
You can also find the serial number ingraved on the bottom of the e-module.

If you have typed in the incorrect serial number, the lower left hand side of the screen will look like Figure 4.
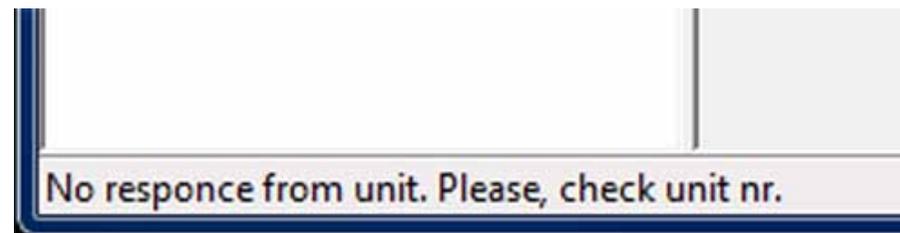

No responce from unit. Please, check unit nr.

Figure 4.

Figure 3.

If you have entered the correct serial number, the PC Configuration software will connect with the Poseidon MKVI and the program screen will look as shown in figure 5.

As you can see, there is now a bit more information shown.

In field (A), you can now see the following information:
MKVI Unit
- Dive log – The dive logs that are saved in the MKVI unit's battery
- Redbox log – The log files that contains more technical data from the dives.
  (These are the log files that you send to your Distribuitor, if you are having technical problems with the unit.)

Dive Log
- These are the dive logs that you have previously downloaded from the unit and they are saved on your local hard drive.

NOTE that your must start a pre dive check on the MKVI Unit to be able to connect to it and read the data from it!

Filed (B) now shows what Firmware version your MKVI has. The Display, battery, Backpack and HUD must all show the same version number. If they don't, do a re-installation of the latest Firmware.

In field (D), a list of configuration values are show. All items in the list shown in Fig 5, where the text is in bold letters, is editable.

On the next page, there is a list of all the configuration options and the settings that can be changed, and what they do.
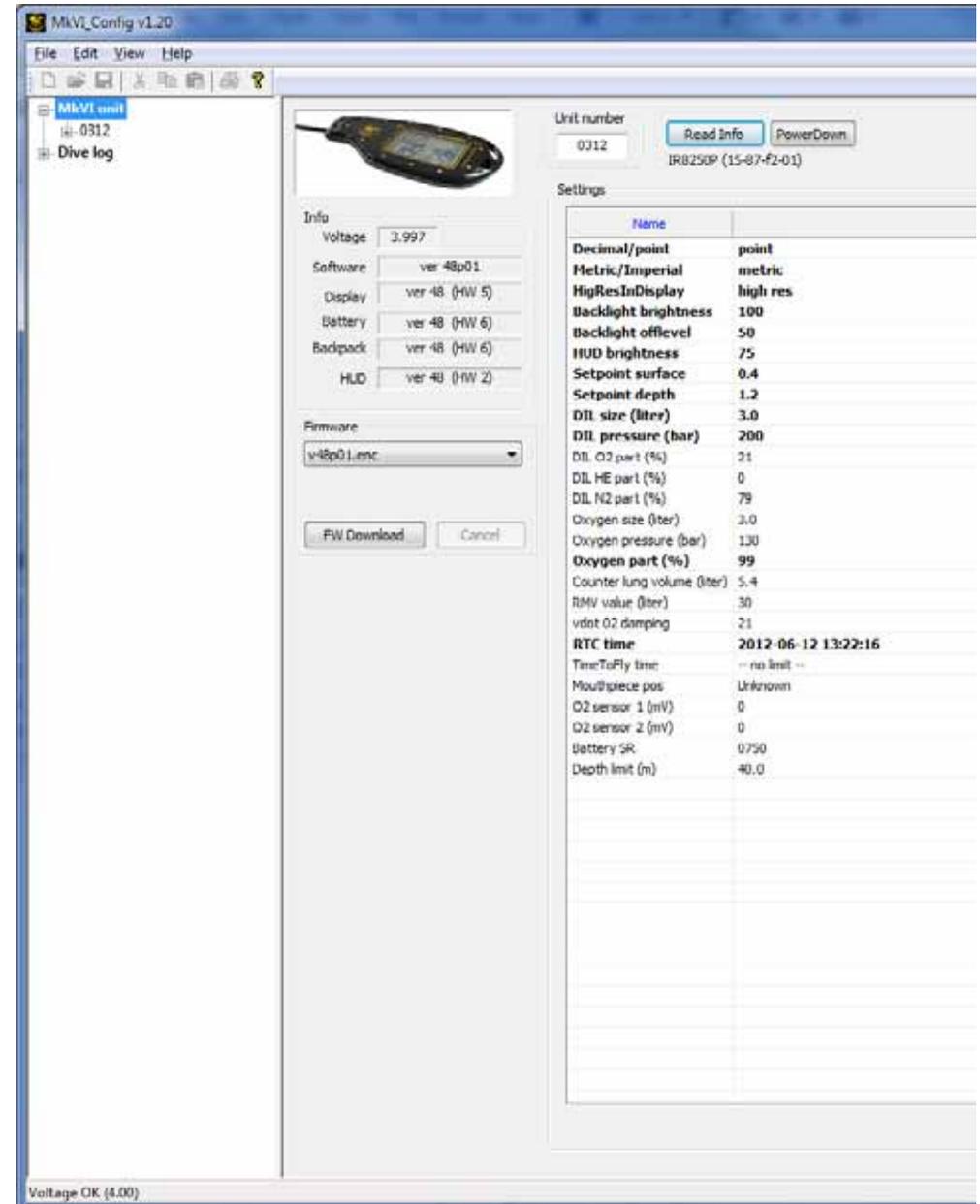

Figure 5.

Configuration values:

- Decimal / Point: Select between a decimal or period sign when displaying decimal values.
- Metric / Imperial: Select between metric (Meter/Celsius) or imperial (Feet/Fahrenheit) display
- HigResInDisplay: Show temperature or last decimal value of the O2 sensor.
- Backlight brightness: Brightness of the Display back light (0 – 100%)
- Backlight offlevel: Level of surrounding light where the display backlight is turned off.
- HUD brightness: Brightness of the HUD Led lamp (0 – 100%)
- Setpoint surface: The PO2 set point at the surface (0,4 - 0,5)
- Setpoint depth: The PO2 set point below 10 meters/32,8 feet (1,2 - 1,3)
- DIL size (liter): Size of the Diluent tank.
- DIL pressure (bar): Pressure of the Diluent tank.
- DIL O2 part (%): Percentage of O2 in the Diluent gas (21% is standard)**
- DIL HE part: Percentage of HE (Helium) in the Diluent gas (0% is standard)**
- DIL N2 part: Percentage of N2 (Nitrogen) in the Diluent gas (79% is standard)**
- Oxygen size (liter): Size of the Oxygen tank. 3.0 litres is standard.
- Oxygen pressure (bar): Pressure of the oxygen tank.
- Oxygen part: Percentage of Oxygen in the pure oxygen.
- Counter lung volume (liter): Volume of the two counter lungs. Standard is 5.4 liter
- RMV value (liter): Respiratory Minute Volume
- vdot O2 damping: Filtering of O2 consumption over time
- RTC time: Real Time Clock (set the clock on the MkVI unit). Uses the time/date on your PC
- TimeToFly time: The time when you can fly, after the last dive.
- Mouthpiece position: Indicates the position of the CC/OC switch
- O2 sensor 1 (mV): Shows the milivolt value of the primary O2 cell. (Should be between 9 - 13 mV)
- O2 sensor 2 (mV): Shows the milivolt value of the secondary O2 cell. (Should be between 9 - 13 mV)
- Battery SR: Shows the serial number of the battery
- Depth limit (m): Shows the maximum depth the unit is configured for. **

** These values can only be edited if you use a Trimix enabled battery.

If you double click on the row where it says "Oxygen part", a small dialog box will appear. (See Figure 6)

This is where you change the percentage in the O2 that you use. Click "OK" when you have set the correct value, to configure the MKVI.

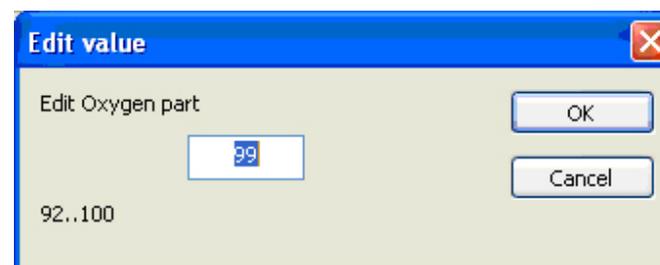Similar dialog boxes will appear for all other editable values.

Figure 6.
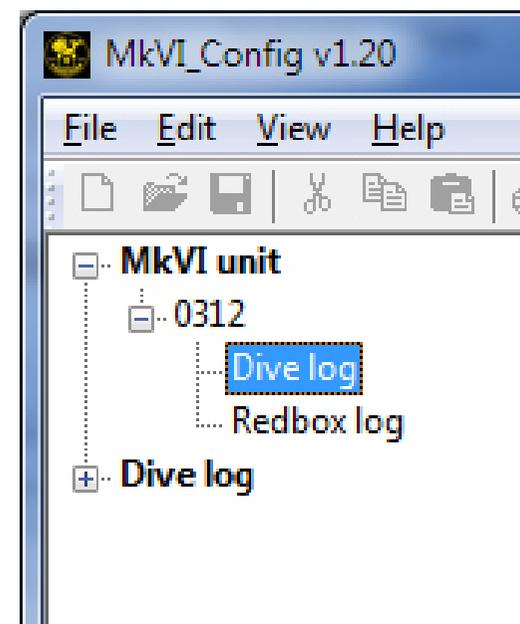
Downloading dive logs to your computer.

As described earlier, you can download two different types of log files from your Poseidon MKVI:
- Dive logs
- Red box logs

The Dive logs contain dive related information that allows you to view your dive profile in the Dive Log section of the program.

To download the Dive Log files from the battery to your computer, do the following:

- High-light the word Dive Log in the menu tree under the serial number (i.e. 0312).

- All available dive logs on the battery will be displayed in the "Info Area" (B).
- Double click on the log file you want to save and it will automatically be saved to your local
  hard drive.
("My Documents\Discovery\dive")
- The downloaded log file should now appear in the Dive Log tree menu.
- Repeat this process until you have saved all the dive logs you want to save.

Note that you can only download one dive log at a time.

If you high-light one of the dive logs shown in the lower left hand side menu, the right side of
the program will give you a graphic view of the dive profile of the selected dive. (Figure 7)
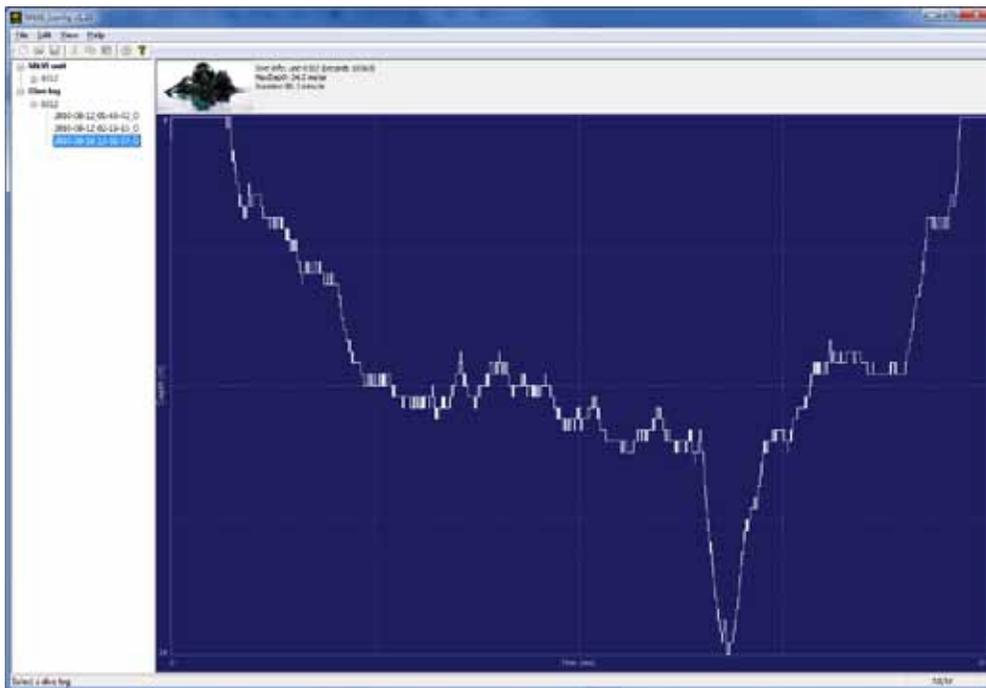

Figure 7.

Red Box Log files

Downloading the Red box log files are very similar to downloading the dive logs, but with one
noticeable difference; the location where the Red Box Log files are saved.

When you click on "Redbox log" in the left hand side menu, the program will connect to the
MKVI unit to retrieve the Redbox log files and list them (see figure 8). If there are a lot of logs,
this might take several minutes.

When you double click on a red box log file and the download is completed, the program will
ask you where you want to save the log file. Select a folder on your computer where you save
the file.

These Red Box Log files can then be sent as attachments to e-mails.

Note that you can only download one Red Box log file at a time.

Figure 8.

Performing a Firmware update.

Before you start a Firmware update of a Poseidon MKVI, you must make sure that the HUD is NOT mounted on the mouthpiece. Leaving the HUD mounted on the mouthpiece during a Firmware update might damage the electronics of the unit!

The next step is to make sure that you are connected to the MKVI using the IrDa device. When the connection is established, select the Firmware version you want to install, in the scroll down menu in field "C" and click the "Download" button located underneath the scroll down menu.

Once the update has started, the display will show the letters "BL" and then it will show what part of the e-module that is currently being updated (Backpack, Display, Battery and HUD). The update procedure should take about 6 minutes.

MAKE SURE YOU DO NOT LOSE CONNECTION BETWEEN YOUR PC AND THE MKVI DURING THE FIRMWARE UPDATE! LOSING CONNECTION MIGHT LEAD TO PERMANENT ELECTRONICS FAILURE!

Once the update is completed, the MKVI will re-boot and start a Pre Dive check.

NOTE: If you are updating from Firmware version 42 to version 44, the first Pre Dive check after the update, when the unit automatically re-boots, will fail on test 06. This is normal.

When this happens, do the following:

- Allow the unit to shut down after the error code.
- When the unit is shut down, pull the battery out of the unit.
- Re-insert the battery and let the unit start a new Pre Dive check.

This time, the Pre Dive check should go through as normal.

When the firmware update has been completed, and the Pre Dive check has passed test 06, connect your MKVI to the PC Configuration and check the following:

- The software version number in filed "B" says "ver 44.00"
- All four parts of the electronics (Display, battery, Backpack and HUD) show the same firmware version number (44)

If you are updating your unit to firmware version 48, you MUST first update your unit to firmware version 46. You can not update to firmware version 48 from versions 42 or 44 directly.

Once you have updated your MKVI to firmware version 48, you CAN NOT down-grade it to earlier versions.

If one or more part of the electronics unit have a different firmware version number, the Firmware update has failed and you need to re-do the update. Do NOT dive with a unit that isn't properly updated!

Shutting down the Poseidon MKVI and the program

When you are finished working with your MKVI and PC configuration software, do the following to shutdown and disconnect:

- Click the "Power Down" button (See figure 9). This will power down the MKVI.
- Close the PC Configuration software.

DO NOT REMOVE THE BATTERY FROM THE UNIT WHILE THE PRE DIVE CHECK IS RUNNING.

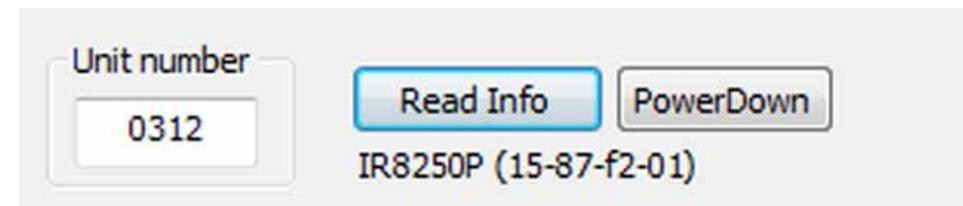**DO NOT REMOVE THE BATTERY FROM THE UNIT WHILE IT IS POWERED ON.**

Figure 9.