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# Installation & Quick Start Guide

## Aqua PC Range – AquaNav PC Version 2

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## 1. Introduction

Congratulations on the purchase of your AquaNav PC. It is recommended that your new computer is installed by a professional installer. **The AquaNav PC is 12v ONLY** and must not be connected directly to a 24v DC supply. Please consult your dealer or with Digital Yacht on suitable 24v to 12v DC-DC adaptors.

** Due to different battery banks, AC supplies, inverters, grounding, etc. on boats, always connect and disconnect devices and cables to the AquaNav PC with the PC and other devices turned off – particularly USB and Monitor cables.**

## 2. Before you start

You will need the following items and tools to complete the installation:

- A USB Keyboard and Mouse
- A suitable Monitor with VGA or HDMI input
- A dedicated VHF/AIS antenna or connection to the boat's existing VHF antenna via a splitter
- Access to 12V DC power supply where the unit is to be installed
- Crimps, terminal block or other connectors suitable for connecting DC/Signal wiring
- M3 or M4 screws or other fixings appropriate to the mounting location

If the AquaNav PC has Windows pre-installed, then this will have been authorised with Microsoft during production. If you are installing Windows yourself, don't forget that you will need to authorise the copy of Windows by either connecting the computer to the internet or ringing the Microsoft automated telephone authorisation system.

Other optional items you may wish to have with you during installation include;

- Suitable USB Memory stick for transferring software and data
- A powered USB hub if you intend to connect more than 4 USBs devices to the AquaNav PC
- Original CDs/DVDs of the software you wish to install on the AquaNav PC

## 3. Installation

Before starting installation select a suitable location for the AquaNav PC. The unit is not water resistant and should be mounted in a dry location where it will not come in to contact with water or excessive moisture. When locating the unit you should consider:

- Routing of power, USB and NMEA cables to the unit
- Provision of sufficient space behind the unit for cable connections
- Getting access to the AquaNav PC for plugging in USB devices and loading CDs/DVDs
- Maintaining the compass safe distance of 0.5m

### Installation Step 1

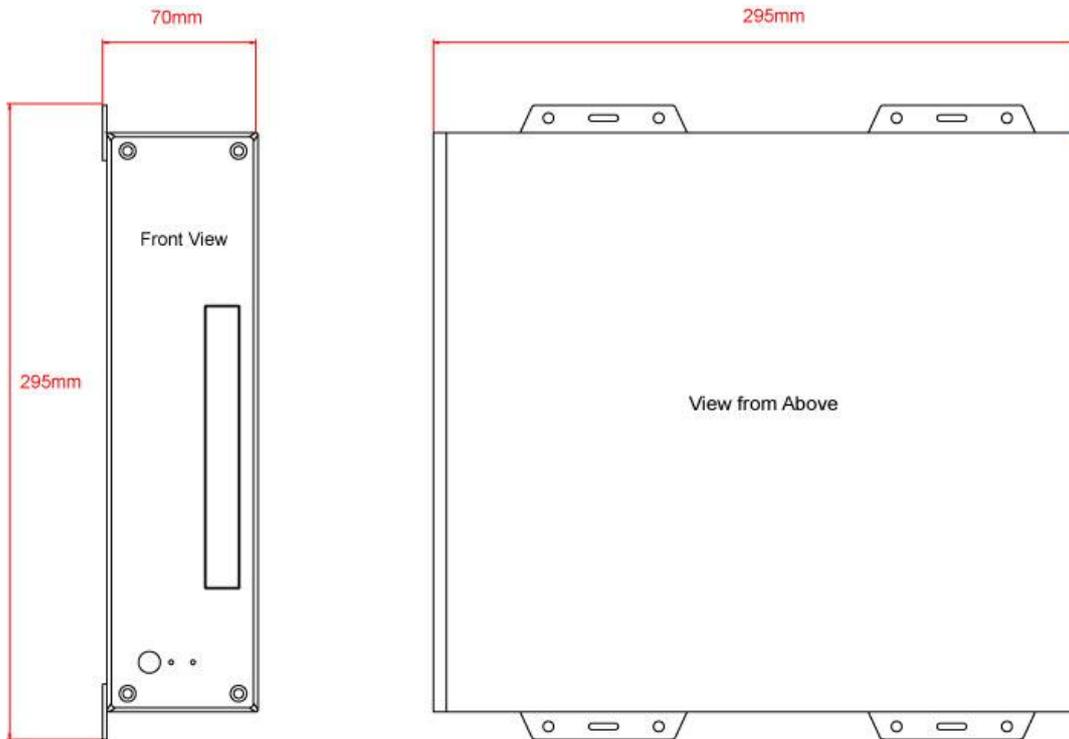
- Run a suitable 12v DC supply to the location where the AquaNav PC will be mounted.
- The AquaNav PC normally consumes around 1.5A at 12v but will consume more power if you are powering a 12v monitor or lots of USB devices from the AquaNav PC.
- Ensure a suitable in-line fuse is fitted or circuit breaker (maximum 10A).
- Run any USB or NMEA interfacing cables to the location where the AquaNav PC will be mounted.
- Do not make any connections yet.

** The USB Interface Standard specifies that USB cables should be no longer than 5m without using a special powered USB extender cable – ensure that the total USB cable length from the AquaNav PC to any USB device is < 5m.**

## Installation Step 2

- The AquaNav PC is supplied with four mounting brackets which are screwed (wrong way round) to the base of the AquaNav PC for transit. Unscrew the brackets, reverse them and screw them back in place. Use suitable fixings (not supplied) to fix the AquaNav PC to a flat surface – using the dimensions and details shown in the drawing below. Note that the unit may be installed in any orientation.

### Fixing location drawing



### Photo of AquaNav PC Rear Panel



### Installation Step 3

- On the rear of the AquaNav PC is a single black cable that has eight wires. This is the Power/IO cable. Connect the Red (+) and Black (-) wires in the Power/IO cable to the ship's 12v DC supply.
- **Ensure that the supply is connected via a suitable fuse or suitable circuit breaker (in the positive power connection).** A 5A fuse/circuit breaker is recommended for most installations and 10A is the maximum value that should be used.
- Do not try to turn on the AquaNav PC yet.

### Installation Step 4

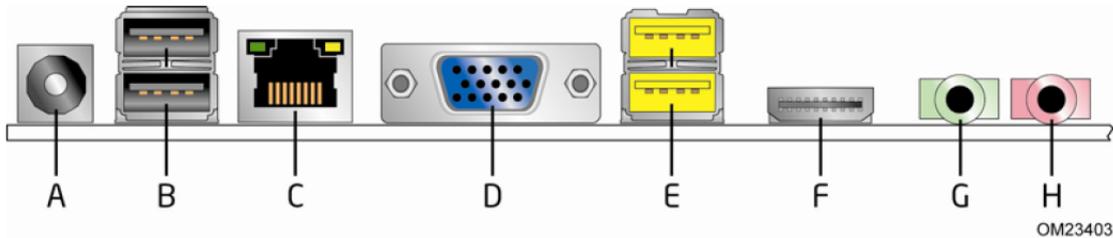
- The bottom black cable has eight wires and is the Navigation cable for connecting the GPS150 antenna and also interfacing the High Speed NMEA Output (38,400 Baud) of the AIS to other navigation equipment. This cable is terminated in a terminal block.
- After mounting the GPS150 and feeding the cable through to the AquaNav PC, connect the GPS150 cable to the AquaNav Navigation cable as follows;

GPS150 Cable		AquaNav Navigation Cable
Red	-	Red
Black	-	Black
Yellow	-	Yellow
Green	-	Green

- If you wish to take the High Speed NMEA0183 GPS and AIS data out to another piece of navigational, then use the following two wires of the Navigation Cable;
  - Orange (TX+)
  - Brown (TX-)
- Remember that this data is high speed NMEA0183 data and you must set the equipment receiving this data to accept data at 38,400 baud rate, which is the standard for AIS data
- Please note that the GPS150 and built-in AIS receiver are powered directly from the main +12v supply connected to the AquaNav PC and remain powered even when the PC is shut down. This allows the GPS and AIS units to be run independent of the PC which can be useful on sail boats where constant running of the PC can cause power consumption problems.
- To ensure that the GPS and AIS are powered down, it is necessary to turn off the circuit breaker that provides power to the AquaNav PC.
- Feed the coax cable from a dedicated AIS/VHF aerial or from a suitable VHF antenna splitter to the AquaNav PC and connect it to the BNC connector on the rear of the unit.

## Installation Step 5

- The connections on the rear of the AquaNav PC are as follows;

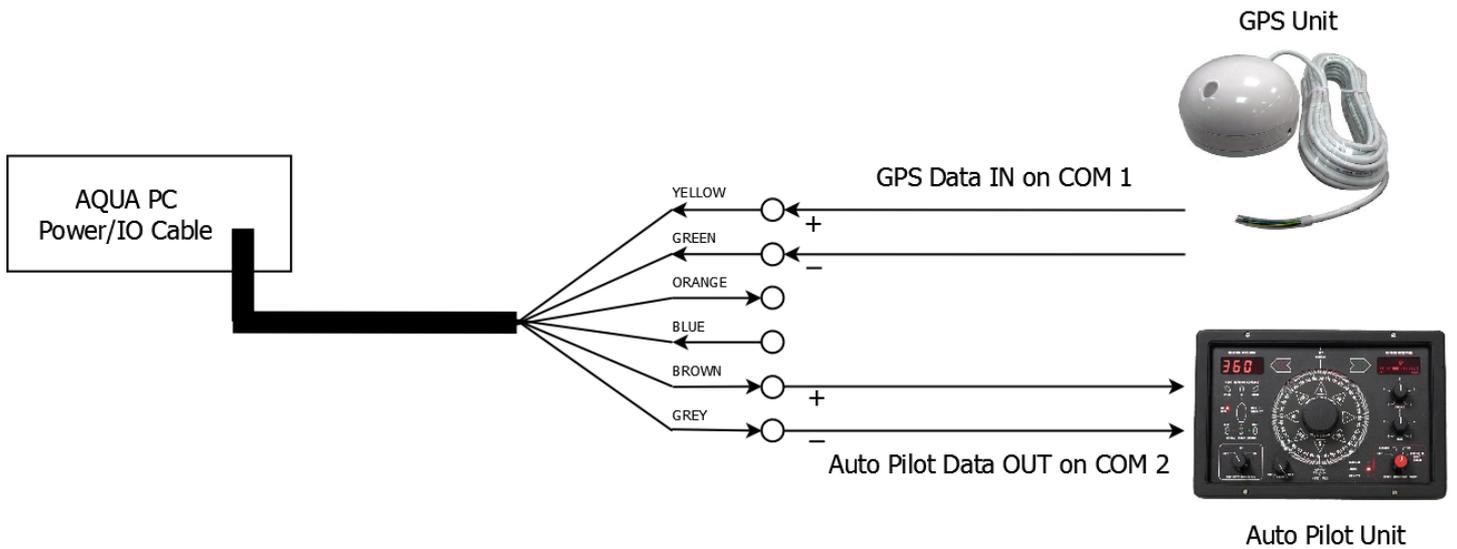


Item	Description
A	DC input jack
B	USB ports
C	LAN connector
D	VGA connector
E	High-current/fast charging USB ports
F	HDMI connector
G	Analog line out
H	Microphone in

- The wires in the eight core Power/IO are as follows;
  - RED - Power + (12v or 24v)
  - BLACK - Power - (0v)
  - ORANGE - COM 1 TX+
  - YELLOW - COM 1 RX +
  - GREEN - COM 1 Ground (-)
  - BROWN - COM 2 TX+
  - BLUE - COM 2 RX+
  - GREY - COM 2 Ground (-)
- Connect a USB mouse and keyboard to the any of the four USB ports on the AquaNav PC
- Connect a suitable monitor or monitors to the VGA and/or HDMI connectors on the AquaNav PC
- If you wish to connect any USB devices that have rechargeable batteries i.e. iPhone or need extra current i.e. external hard drive or DVD player, connect them to the Yellow "High Power" USB sockets.

**ⓘ The DC Input Jack connector should not be used. Please ensure that the supplied protective cap is always fitted and do not attempt to connect any devices or external power supplies to this connector.**

- To connect NMEA devices to the AquaNav PC you can connect them directly to the two COM port wires in the Power/IO cable. A couple of typical examples are shown below at the top of the next page.
- A complimentary copy of SmarterTrack Lite is installed on the AquaNav which can be used to test the AIS and GPS reception.



- Once all devices are correctly connected to the AquaNav PC ensure the 12v DC power is connected i.e. the circuit breaker is ON (if fitted). Press the Power switch on the front of the AquaNav PC and the Power and Hard Disk LEDs should come on as the PC starts its power up sequence.
- Installation is now complete.