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Installing Bathyswath-1



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Voids

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Section	Notes

List of modifications

1.15	16/03/20	New Graphic Chart	11	FBY	
1.14	09/03/18	Changed title; now have separate document for Bathyswath-2	12	MFG	
1.13	27/01/16	Checked and changed to new ISS format		MFG	
1.12	01/04/14	Bathyswath update		MFG	N/A
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1 INTRODUCTION

1.1 REFERENCES

Ref 1 ITER Systems website: <http://iter-systems.com>
Ref 2 Bathyswath Technical Information document,
Ref 3 Bathyswath Getting Started manual: installed with the software (accessible from the Windows Start button).

1.2 GLOSSARY & ACRONYMS

ACRONYMS	DEFINITION

1.3 SCOPE

This document describes how to install the Bathyswath software and drivers.

1.4 OTHER INFORMATION

The 'Bathyswath Getting Started' [Ref 3] manual provides a full introduction to the Bathyswath system. See the 'Installation' section of that document for instructions on installing the complete system. General technical information is provided in Ref 2, and the Bathyswath website [Ref 1] has information about ITER Systems and its products.

1.5 OPERATING SYSTEMS

Bathyswath software only works on Microsoft Windows. It has been tested on Windows 10, and works on Windows 8, Windows 7, Vista, and XP.

1.6 SOFTWARE FILES

All of the Bathyswath software is installed from an installation file, "Bathyswath.msi". This can be obtained from Bathyswath; contact support@iter-systems.com.



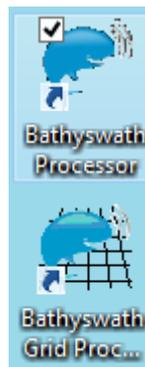
2 INSTALLING THE SOFTWARE

First, install the Bathyswath software. If you have a Bathyswath-1 or SWATHplus system, and you are installing for the first time, you will need to install the USB drivers. See section 3.

To install the software:

1. If necessary, save the configuration file: see 2.1, “Configuration File swathproconfig.txt” below.
2. Run the installation file (‘Bathyswath.msi’) by double-clicking on it in Windows Explorer
3. Select a location for the Bathyswath files.
The default is “C:\Program Files\Bathyswath\Bathyswath”
4. Let the installation complete
5. If necessary, restore the configuration file
6. Two application icons should appear:

Bathyswath Processor :



Grid Processor:

See the Getting Started manual [Ref 3] for more information on the use of these programs.

7. If using SWATHplus or Bathyswath-1, and this is an installation on a new computer or when installing a new system on this computer, install the Bathyswath USB drivers; see section Installing the SWATHplus and Bathyswath 1 Drivers.

2.1 CONFIGURATION FILE SWATHPROCCONFIG.TXT

The Bathyswath Swath Processor program reads some of its configuration settings from a text file, “swathproconfig.txt”. This file is located in the same directory that the Bathyswath software is installed to, typically “C:\Program Files\ITER Systems\Bathyswath” or “C:\Program Files (x86)\ITER Systems\Bathyswath”.

This file allows the user to adjust some of the basic functions of the program, for example to set the COM ports that are allocated for serial data communications. However, this file is overwritten when a new version of the Bathyswath software is installed, and is removed if you un-install the software in order to do a “clean” install. So, if you have made changes to this file:

1. Make a copy of swathproconfig.txt to a safe location before installing,
2. After installing, compare the saved copy of swathproconfig.txt with the new one, and transfer any entries that you have made in the previous copy. (The new version of Swath Processor may have added or removed entries to swathproconfig.txt, so simply copying your old version to the install directory might not work).



3 INSTALLING THE SWATHPLUS AND BATHYSWATH 1 DRIVERS

3.1 INTRODUCTION

The SWATHplus and Bathyswath-1 transducer interface unit (TIU) connects to the computer using USB. Some TIUs have an internal USB hub, so have one USB cable, and some connect to the internal modules separately, and so have two cables.

Bathyswath-2 connects via Ethernet, and does not require special driver software.

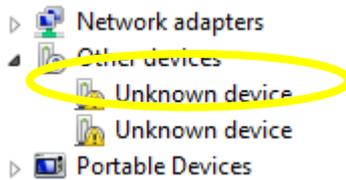
The Bathyswath drivers are not plug-and-play, and so the following installation sequence is required. Take care to follow these instructions carefully.

3.2 FINDING THE DRIVER FILES

The driver files are copied to disk by the "Bathyswath.msi" installation file, by default to "C:\Program Files (x86)\Bathyswath\Bathyswath\Drivers\TEM Drivers". Alternatively, the latest drivers for the FTDI USB device in the TIU can be down-loaded from here: <http://www.ftdichip.com/Drivers/D2XX.htm>.

3.3 DRIVER INSTALLATION STEPS

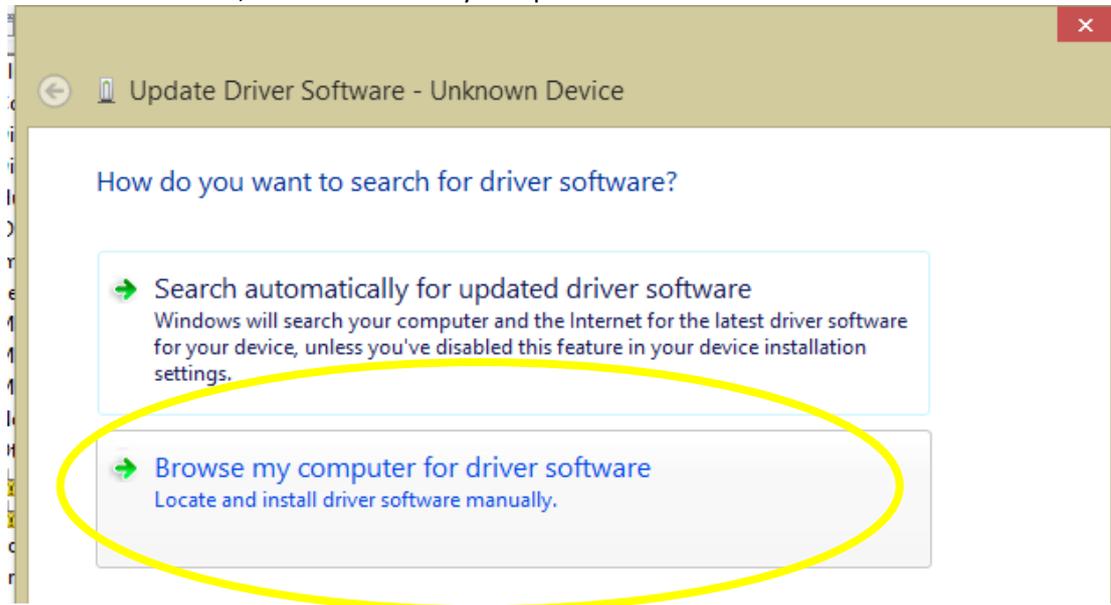
1. Connect the Bathyswath TIU to the computer using the USB lead(s) provided, and turn it on.
2. Device Setup will run automatically, but is unlikely to succeed at this stage. The following manual configuration is required.
3. Open Windows Device Manager from the Control Panel or by typing 'devmgmt.msc' from the Start Menu "Search" box. The Bathyswath TEMs will be listed as "Unknown device" under 'Other Devices'



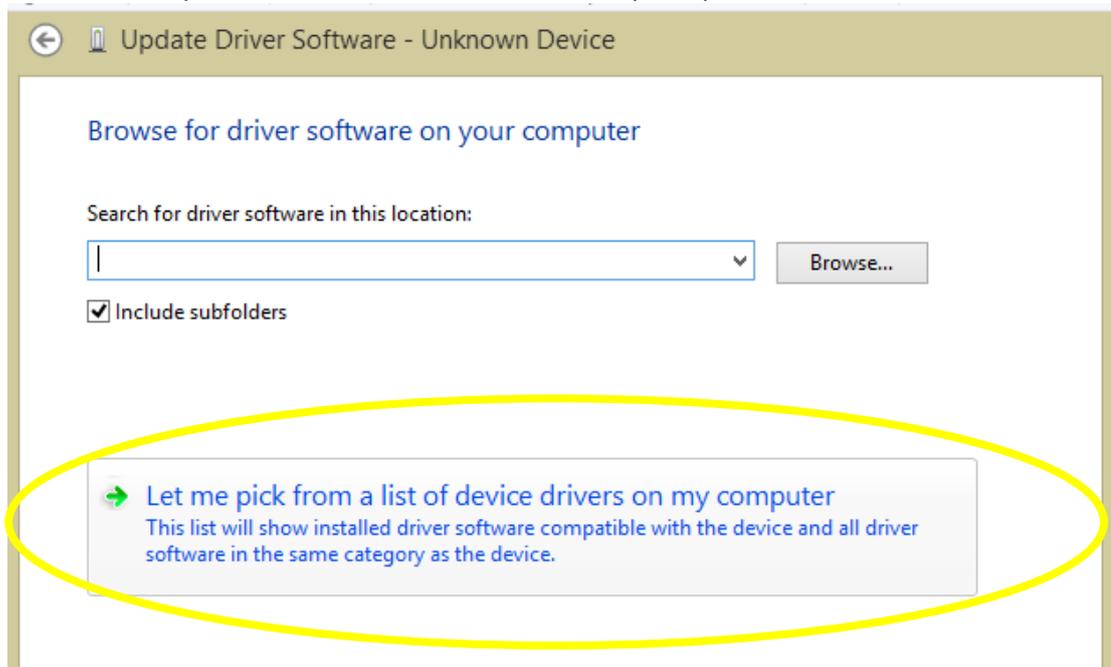
4. Right-click on the first "Unknown device" to bring up the Properties dialog and select 'Update Driver'



5. In the next window, select “Browse my computer for driver software”

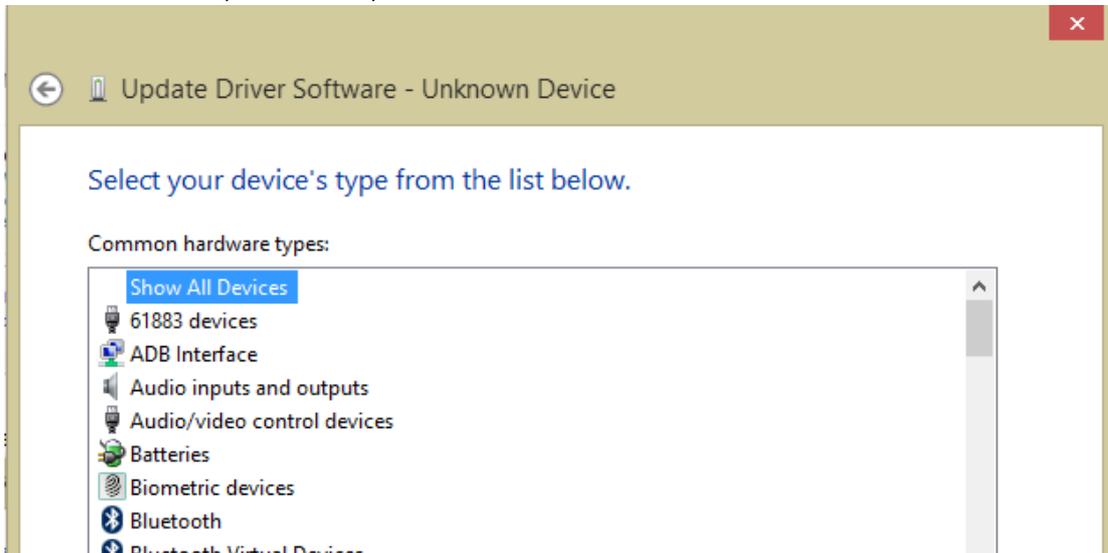


6. Then, “Let me pick from a list of device drivers on my computer”

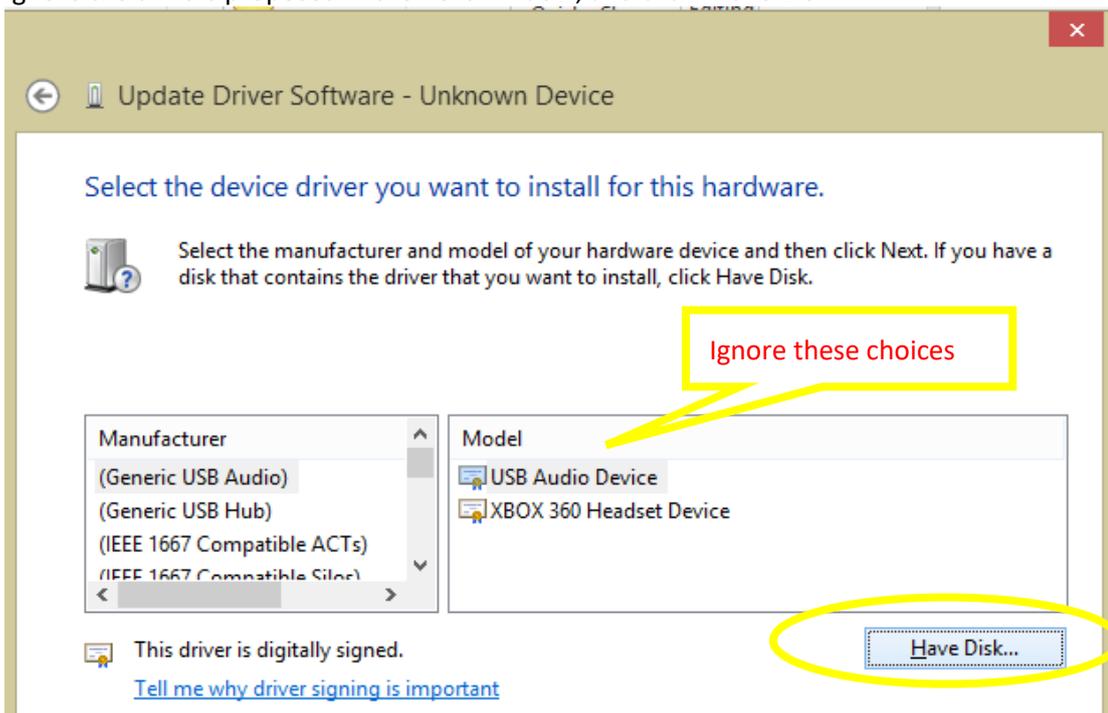




7. "Show all devices", and "Next",

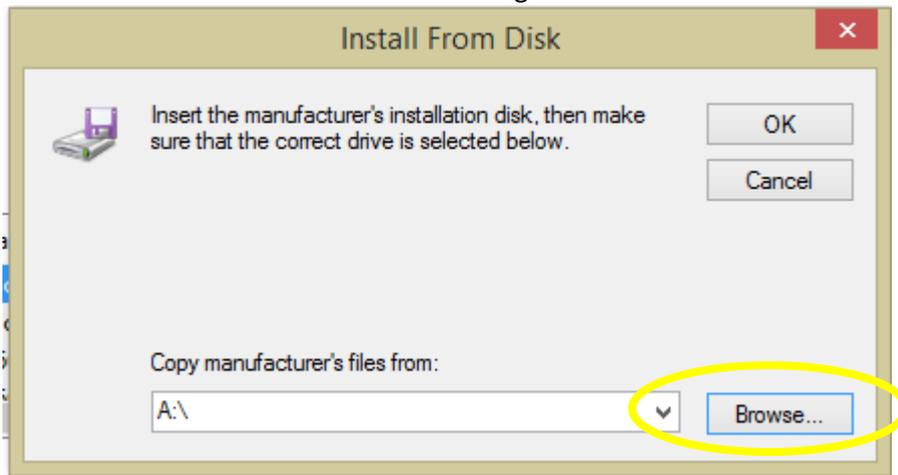


8. Ignore the drivers proposed in the next window, and click "Have Disk":

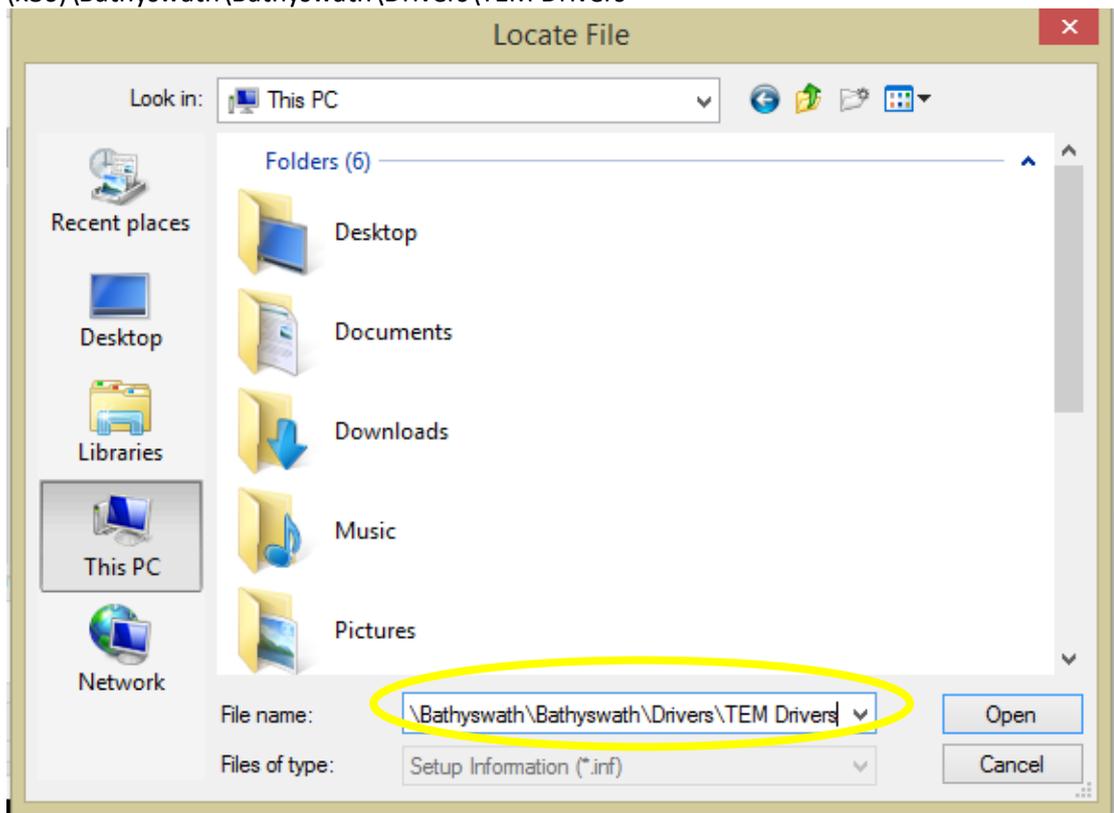




9. Click the “Browse” button in the next dialog:

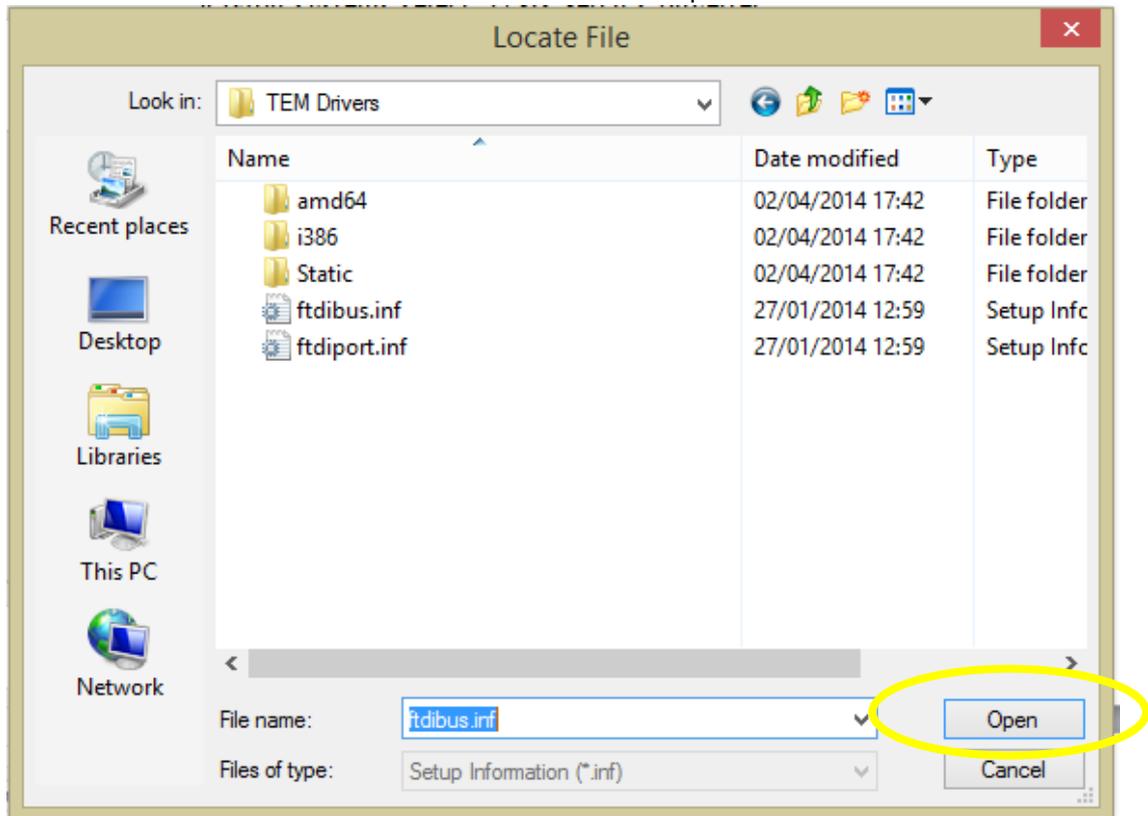


10. Enter the location of the drivers in the next window; by default “C:\Program Files (x86)\Bathyswath\Bathyswath\Drivers\TEM Drivers”

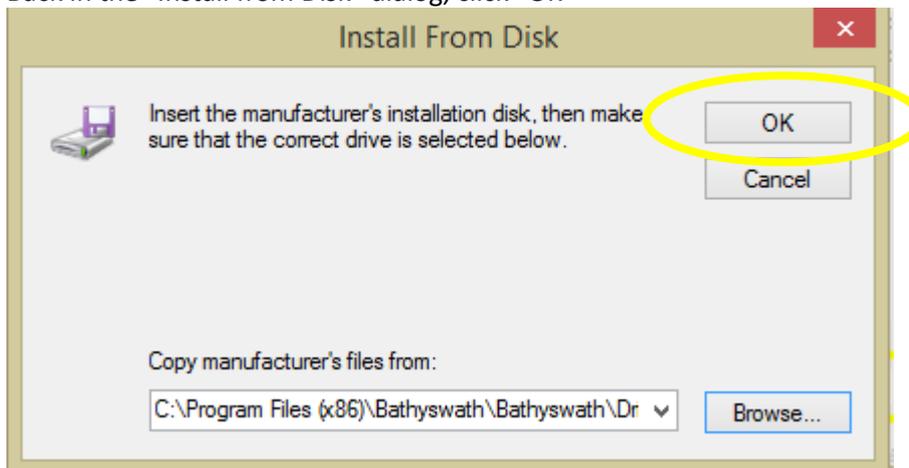




11. This should show the drivers. Select “**ftdibus.inf**” click “Open”

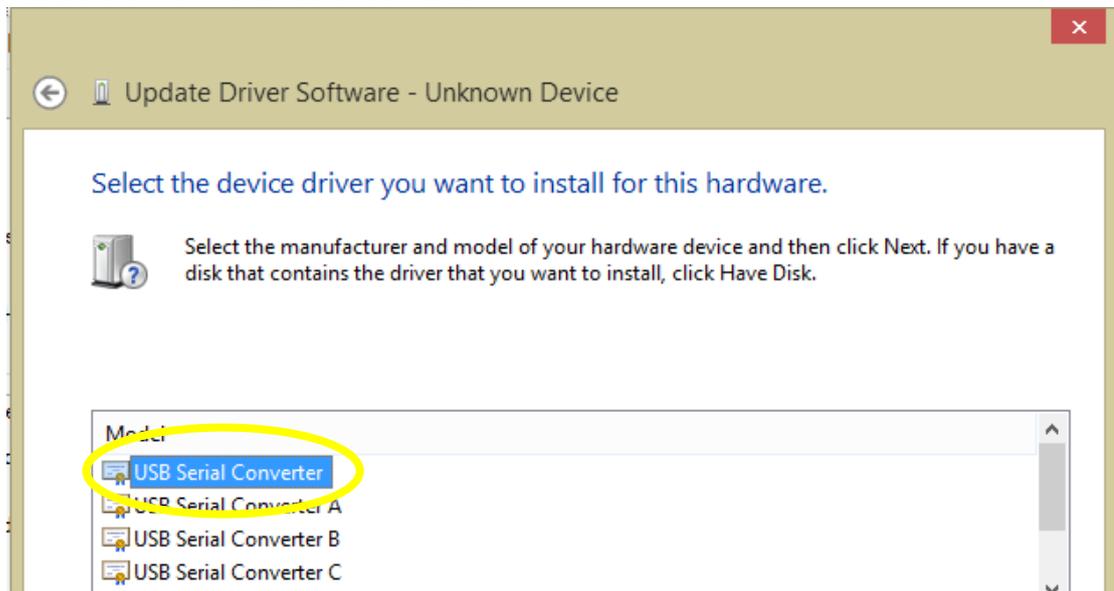


12. Back in the “Install from Disk” dialog, click “OK”

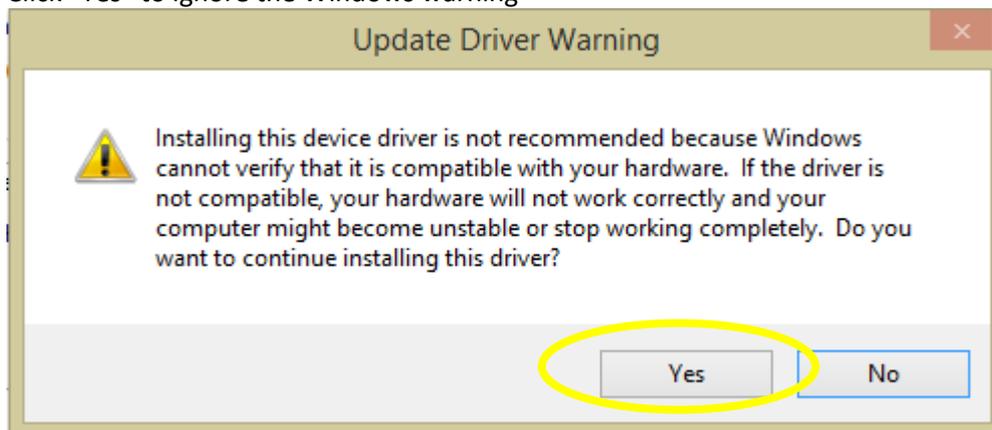




13. Double-click “Universal Serial Converter”:

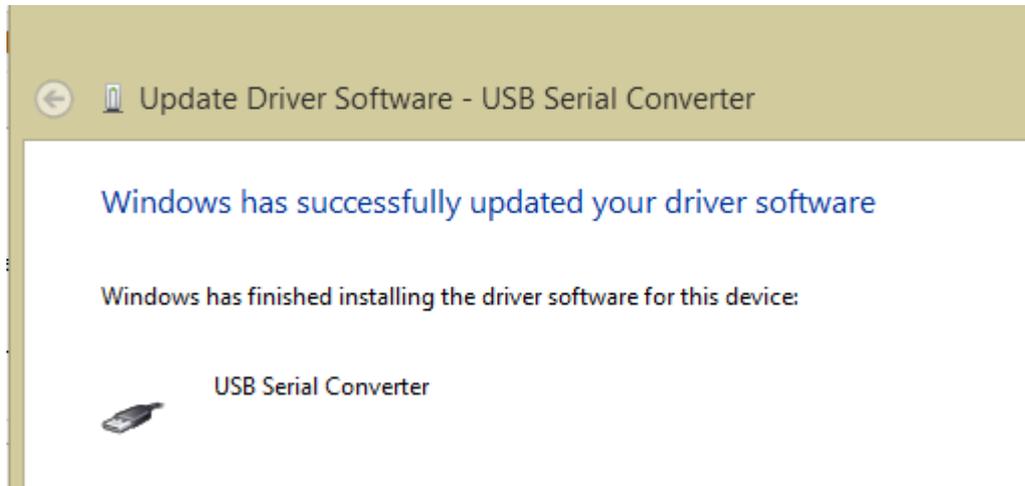


14. Click “Yes” to ignore the Windows warning





15. You should see a success screen:



16. Return to the Device Manager. You should now see “USB Serial Converter” under “Universal Serial Bus” controllers:



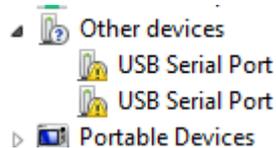


17. Right-click on this entry, select Properties, Click the Advanced tab, and click on the tick next to “Load VCP” to turn off VCP.



18. Go back to “Other devices” in the device manager window, and repeat steps 3 to 17 for the rest of the Bathyswath devices shown. There will be one of these for each transducer module in the Bathyswath system.

There will now be “USB Serial Port” entries under “Other devices” ...



3.4 USING FOR POST-PROCESSING ONLY

If the software is only to be used for post-processing, the drivers are not required, and any warnings about missing drivers can be ignored. These warnings can be suppressed by editing the “swathproconfig.txt” file in the Bathyswath program files folder (*C:\Program Files (x86)\Bathyswath\Bathyswath* by default), and changing the “hardwareFitted” flag to zero:

```
sonar hardwareFitted          0
```

3.5 USB DRIVER TROUBLESHOOTING

3.5.1 Problems Installing Drivers

If the drivers do not install properly, try the following:

1. Follow the instructions above exactly: the Windows driver installation software allows a confusing number of different ways to run, and some of them don’t work for the Bathyswath drivers,
2. In particular, it is common for people to miss out the “Have Disk ...” step



3. Make sure that the Bathyswath TIU is plugged in via the USB cable and turned on
4. Try disconnecting any other USB devices from the computer while installing the Bathyswath software, and then plug them back in after installation is complete and successful. Some USB drivers can “clash”. Bathyswath-1 TIUs use a USB chip from FTDI; the same device is used by many other USB devices, and so can use the same driver software.
5. make sure that “Use VCP” is disabled.
6. Try disabling UAC (User Account Control) on the computer. UAC setting can be controlled from User Accounts in the Control Panel.
7. Check that the USB cable is fully plugged in and undamaged. A faulty USB cable can allow the TIU to be recognised by Windows, but prevents the drivers from loading correctly. Try changing to a new USB cable and use a different USB port.
8. Try using the USB directly into the computer rather than using a hub. Hubs cause delays in the data reaching the computer and can restrict the rate of data flow.

3.6 USB DRIVER PROBLEMS IN OPERATION

If the drivers install, but operation is intermittent:

1. The drivers could be “fighting” with other USB devices on the computer. This can include the computer mouse and USB-to-Serial converters.
 - Try temporarily un-plugging other USB devices to see if the problem goes away.
 - Make sure that “Use VCP” is disabled for the TEM drivers