ABACUS ELECTRICS

Optical Probes

Installing ABACUS ELECTRICS USB Optical Probes   AN17b
under Windows 7

This note assumes that you are installing the drivers on to a clean system, i.e. one on which ABACUS ELECTRICS Optical Probe drivers have not been installed previously. If this is not the case then refer to the Appendix for guidance on uninstalling the drivers before proceeding with the installation.

The ABACUS ELECTRICS Optical Probe can be installed through Windows Update, or by using the driver files supplied on CD. The driver files are also available for download from the ABACUS website.

At certain times during the installation the User Account Control (UAC) window may appear. If you are prompted for an administrator password or confirmation, type your password, or click Continue.

Using Windows Update to install the Optical Probe driver files - <u>Recommended</u>
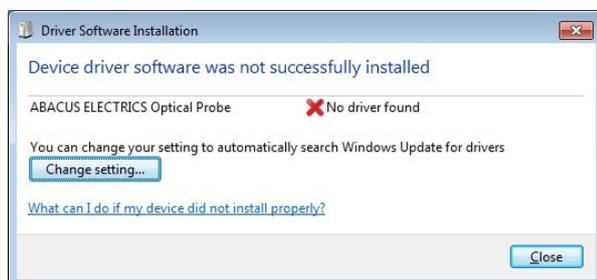
If the computer has internet access then it is recommended that the Optical Probe drivers be installed through Windows Update. These will be the latest driver files available.

Plug in the Optical Probe. This should automatically install the drivers and leave the probe ready for use.

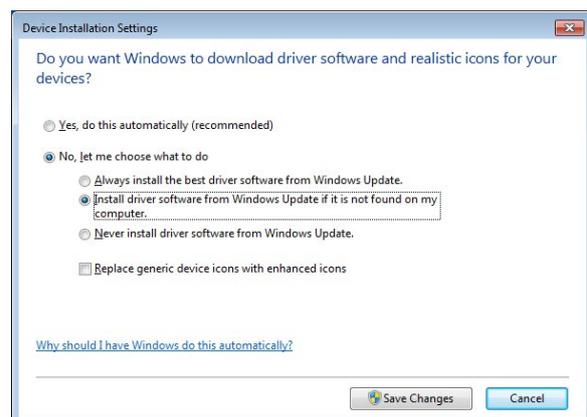If Windows Update is not configured for automatic update a warning will be given.
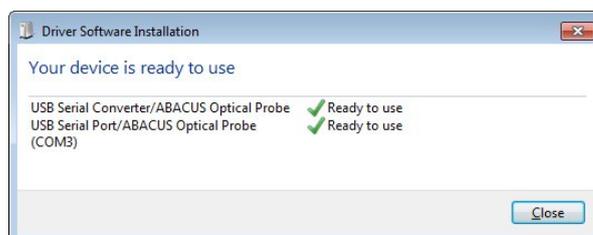

Click the balloon for details.

Then..

Click 'Change setting…'.

Select 'Install driver software from Windows Update if not found on my computer'.
Click 'Save Changes'.

Now the drivers should automatically download from Windows Update.

Click 'Close'. The USB Optical Probe should now be successfully installed.
Note that the assigned COM Port number (COM3 in this case) is displayed.

Now skip forward to the 'Checking or changing the assigned COM Port number' section.

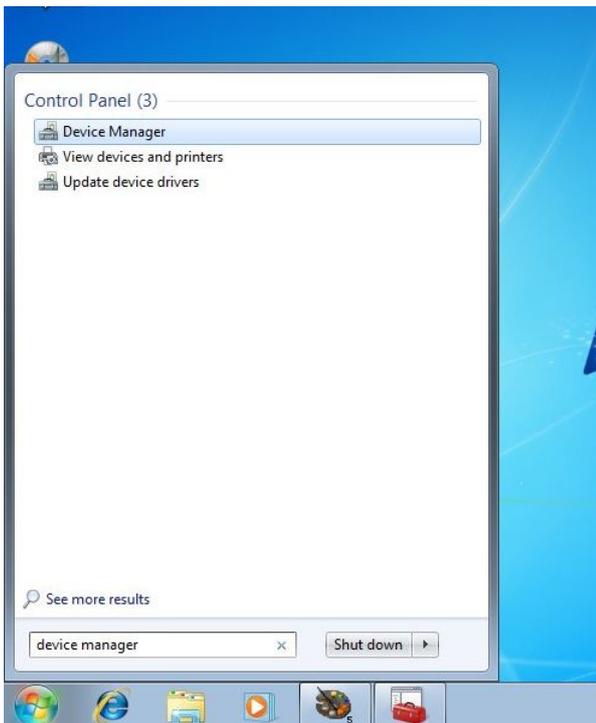**Installing the Optical Probe using the CD or downloaded driver files**

ABACUS ELECTRICS Optical Probes are supplied with a CD-ROM. The driver files are in the root directory.

Alternatively the drivers may be downloaded from http://www.abacuselectrics.com/usbsoft.htm.
Download and save the zip file to the desktop or somewhere convenient; then extract the contents.
The default extract location is C:\AbacusProbeDrivers.

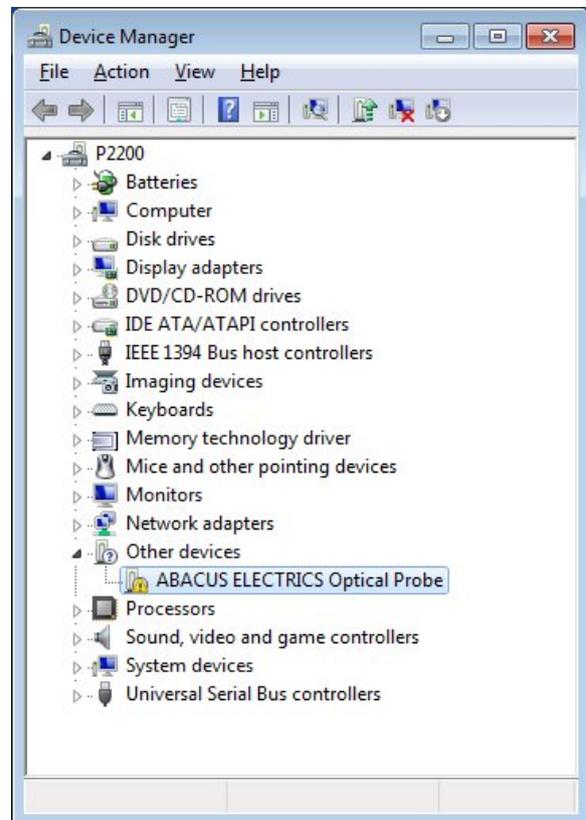Place the ABACUS ELECTRICS drivers CD in the CD-ROM drive. If AutoPlay opens a window, close it.

Plug in the Optical Probe.

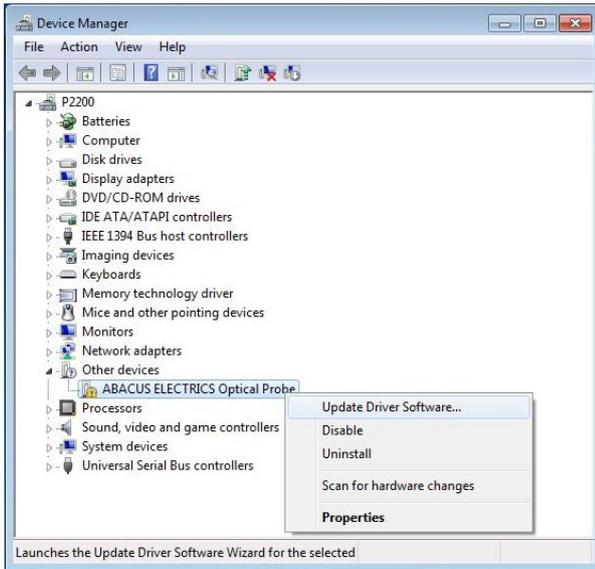In Windows 7 the optical probe drivers must be installed through the Device Manager.

Click the Start button then type device manager into the search box. When Device Manager appears in the selected items – select it.
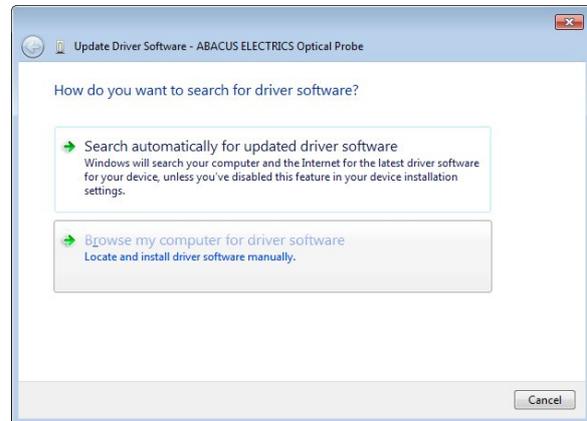
Device Manager will open.

The ABACUS ELECTRICS Optical Probe is shown under Other Devices with a yellow warning symbol.
This indicates a problem with the device (the drivers are not yet installed).

Right click on the ABACUS ELECTRICS Optical Probe entry to bring up a menu.
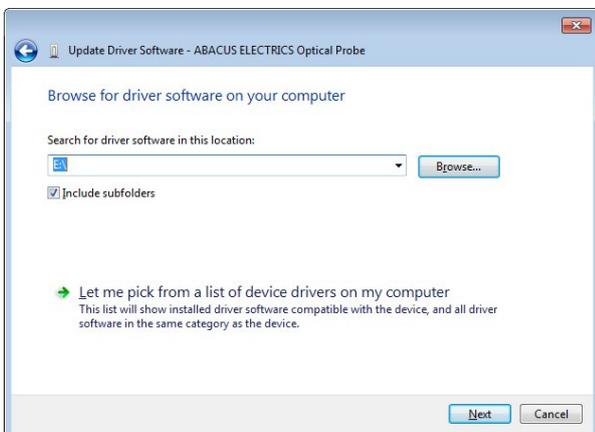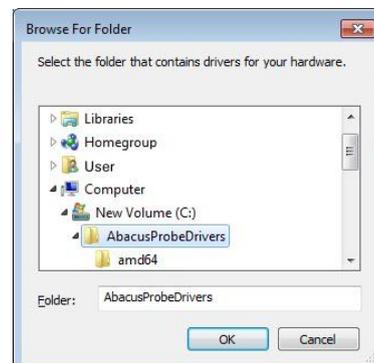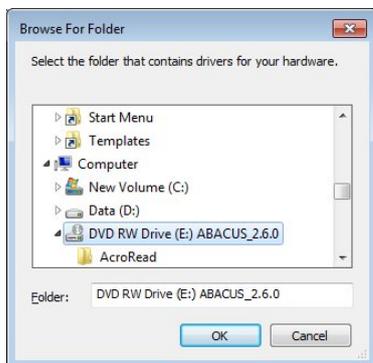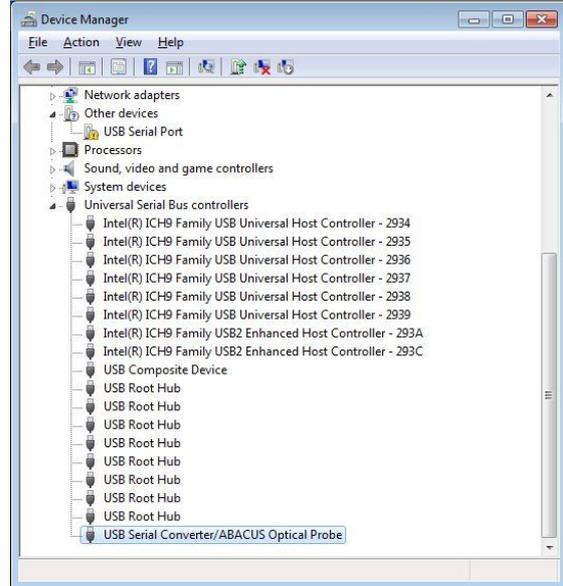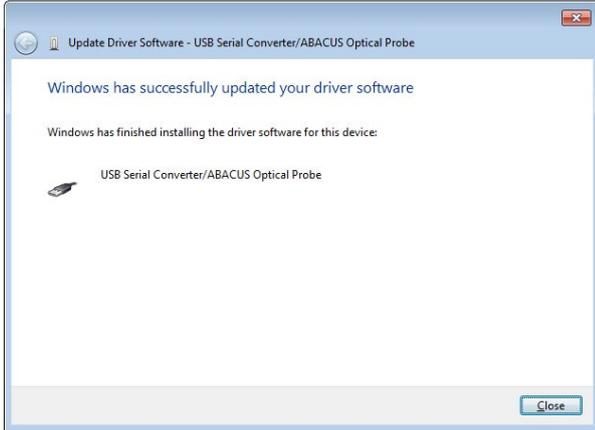Select "Update Driver Software…"

Then …

Select 'Browse my computer for driver software'.

If installing from CD browse to the CD-ROM drive containing the ABACUS CD.

If installing from downloaded drivers browse to the sub-directory into which the driver files were unpacked. The default directory is C:\AbacusProbeDrivers\.

Select 'Next'. Windows will locate and automatically install the software.

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This completes the <u>first part</u> of installation - the USB Serial Converter/ABACUS Optical Probe is now installed.

Do not stop now !   Proceed with the second/final part of the installation.

The Optical Probe is now shown under Other Devices as a USB Serial Port - still with a yellow warning symbol as all the drivers are not yet installed.

Right click on the USB Serial Port entry to bring up a menu.
Select "Update Driver Software…"

Then …

Select 'Browse my computer for driver software'.

If installing from CD browse to the CD-ROM drive containing the ABACUS CD.

If installing from downloaded drivers browse to the sub-directory into which the driver files were unpacked. The default directory is C:\AbacusProbeDrivers\.
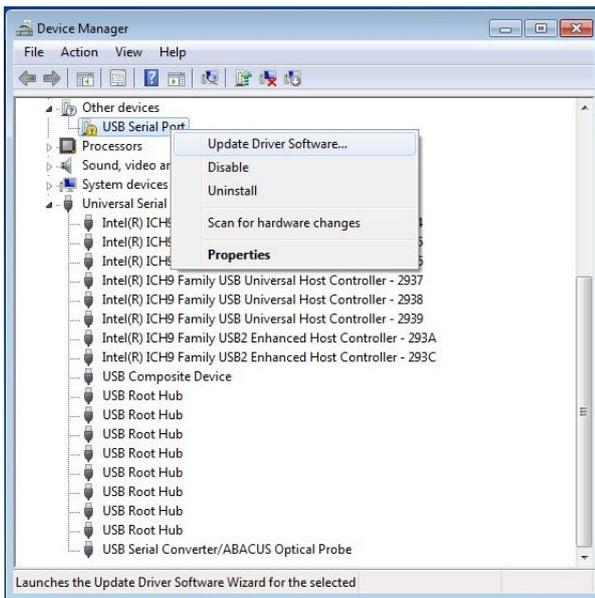
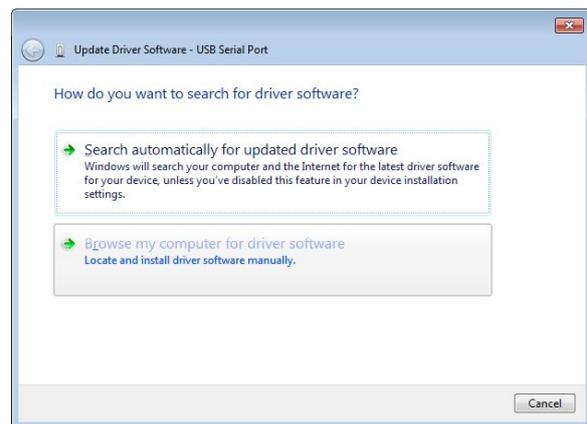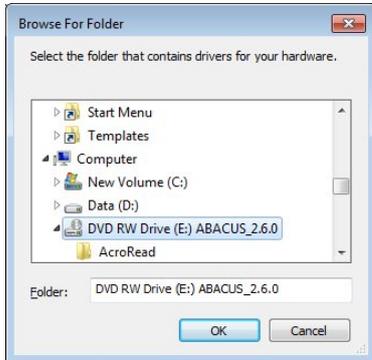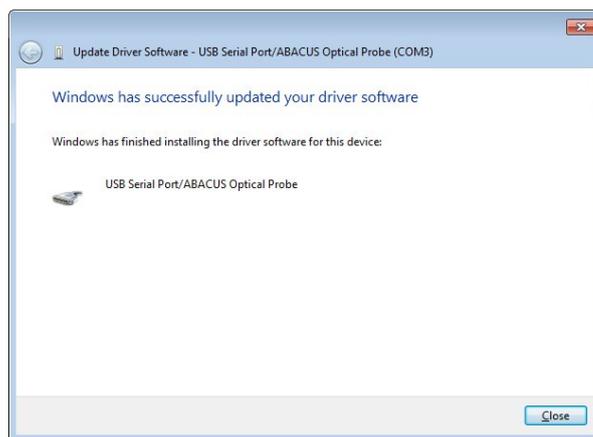Select 'Next'. Windows will locate and automatically install the software.

The USB Optical Probe should now be successfully installed.

Checking or changing the assigned COM Port number

Once successfully installed the probe will appear to Windows as a Virtual Serial Port. During installation the probe drivers will have automatically selected a COM port, usually the next available. In order to use the USB probe the meter-reading application program must be set to use the COM port assigned to the probe.
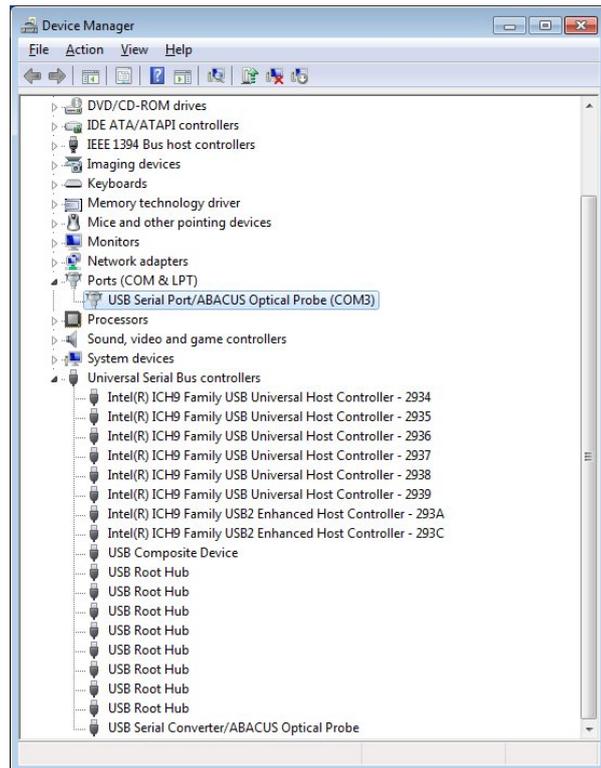
To confirm that the installation has completed successfully, and to find which COM port the probe is installed as, look in the Ports (COM & LPT) section of Device Manager.

Click Start, then enter device manager in the search box - then select Device Manager from the list.

Entries for the Optical Probe should be seen in two sections (click the ▷ to expand the branch).

Under Ports (COM & LPT) the probe will be shown as a USB Serial Port/ABACUS Optical Probe (COMx) where x is the 'virtual' serial port number assigned to the probe. For the computer shown below two COM ports were already present, COM1 and COM2, and so the USB probe was assigned COM3.

In the Universal Serial Bus controllers section the probe will be shown as a USB Serial Converter/ABACUS Optical Probe.
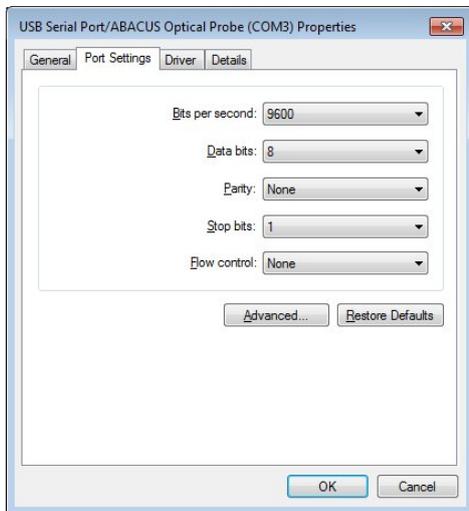
In some circumstances the Virtual Serial Port COM number automatically assigned will not be suitable for the meter-reading application program. For example, COM5 may be assigned to the USB probe but only COM1 or COM2 are selectable in the application program.

To change the virtual COM port assigned first open Device Manager (as above).
Expand the Ports (COM & LPT) branch then select the USB Serial Port/ABACUS Optical Probe (COMx) entry.
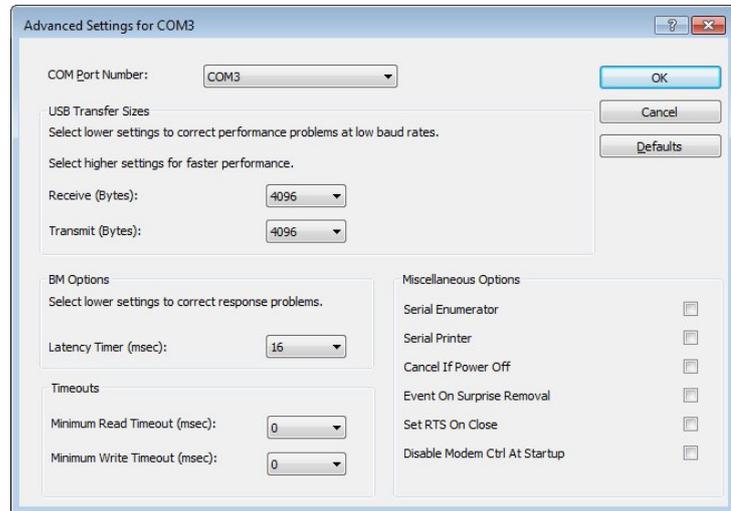Right-click to get the context menu and then select Properties.

Select the Port Settings tab.

Although the serial port properties such as baud rate, data bits etc. may be changed the application program will handle these so leave them in their default state.

Then…

Select Advanced.

The Advanced Settings window allows the COM port number assigned to the probe to be changed.

To change the COM port to which the probe has been assigned click the drop down arrow on COM Port Number and scroll to the required COM port. Then select 'OK'.

Do not select a COM port that is in use. If you wish to select a COM port where a physical COM port already exists then the physical COM port must first be disabled in the computer BIOS.

When you return to the Device Manager Screen click the 'Scan for hardware changes' button and the USB Serial Port/ABACUS Optical Probe (COMx) assignment will update if changed.

Now close the Device Manager and then reboot the computer.

Setting the meter-reading application program to use the USB Optical Probe

Determine the Virtual Serial Port COM number assigned to the USB probe. In the meter-reading application program select this COM port for the optical probe.

With the A9U ANSI Type 2 probe the Virtual Serial Port supports the DTR software switch. It is important that the application program handles the DTR software switch correctly. If the application program set-up procedure allows particular types of probe to be selected then choosing the ABACUS A9U, ABACUS A7Z, ABACUS A8R, or GE SmartCoupler will be satisfactory as all of these probes have a DTR software switch.

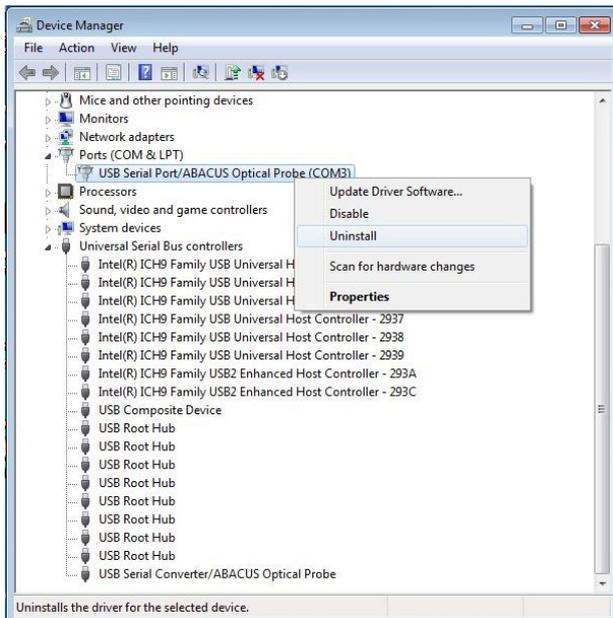The F9U IEC probe does not contain a DTR software switch.

Appendix - Uninstalling the Optical Probe drivers

The probe must be plugged into the computer so that it is displayed in the Device Manager.
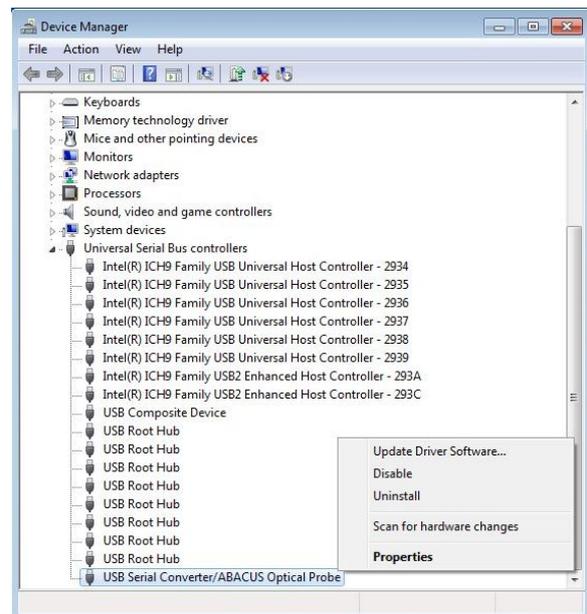Open the Device Manager.

Click Start, then enter device manager in the search box - then select Device Manager from the list.

Driver removal is managed in two parts, first the Ports entry and then the Universal Serial Bus controllers entry.

First click the ▷ to expand the Ports (COM & LPT) branch then select the USB Serial Port/ABACUS Optical Probe (COMx) entry. Right-click to get the context menu and then select 'Uninstall'.

Next click the ▷ to expand the Universal Serial Bus controllers branch then select the USB Serial Converter/ABACUS Optical Probe entry. Right-click to get the context menu and then select Uninstall…

Ensure the box for 'Delete the driver software for this device' in selected then press 'OK'.

Ensure the box for 'Delete the driver software for this device' in selected then press 'OK'.

Now unplug the Optical probe.