

## Installing ABACUS ELECTRICS USB Optical Probes under Windows 2000

AN09e

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.

There are three stages to installing an ABACUS ELECTRICS Optical Probe.

1. Obtaining and preparing the Windows driver files.
2. Installing the USB Optical Probe using the driver files.
3. Setting the meter reading application program to use the USB Optical Probe.

### Stage 1 Obtaining and preparing the Windows 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/ussoft.htm>. Download and save the zip file to the desktop or somewhere convenient; then extract the contents. The default extract location is C:\AbacusProbeDrivers.

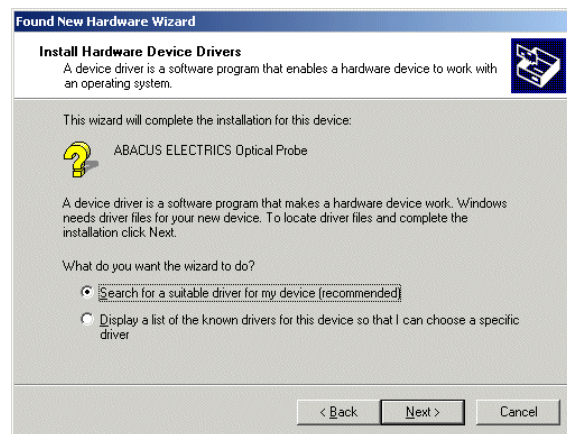
### Stage 2 Installing the USB Optical Probe using the driver files

Plug in your Optical Probe. This should bring up the "Found New Hardware Wizard" window.



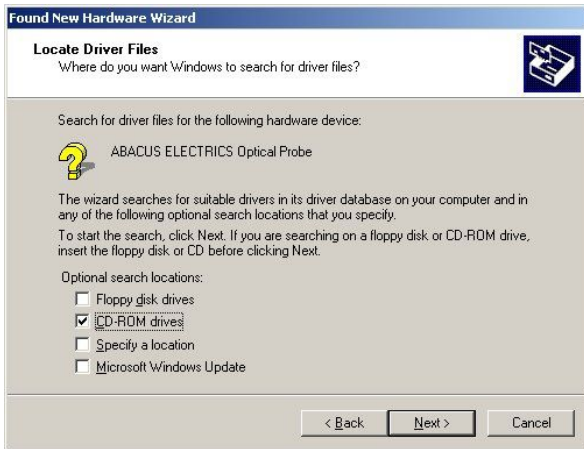
Select 'Next'.

Then...

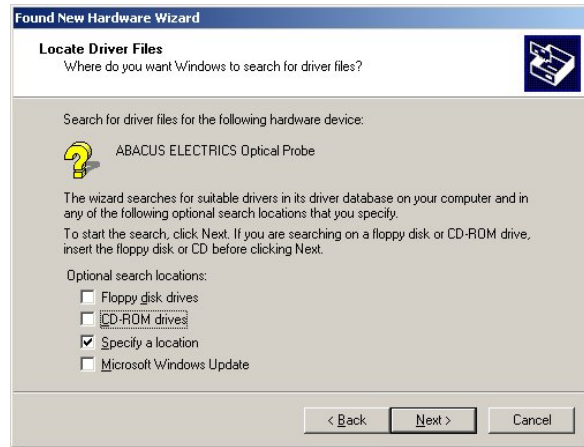


Select 'Search for a suitable driver for my device (recommended)' - then click 'Next'.

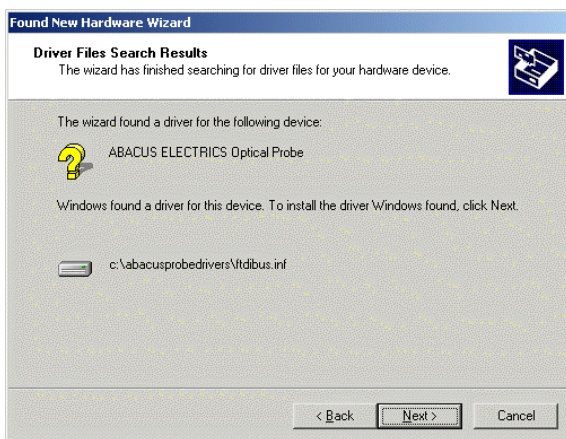
If installing from CD then just select 'CD-ROM' and click 'Next'.



Or, if installing from downloaded drivers just select 'Specify a location'.

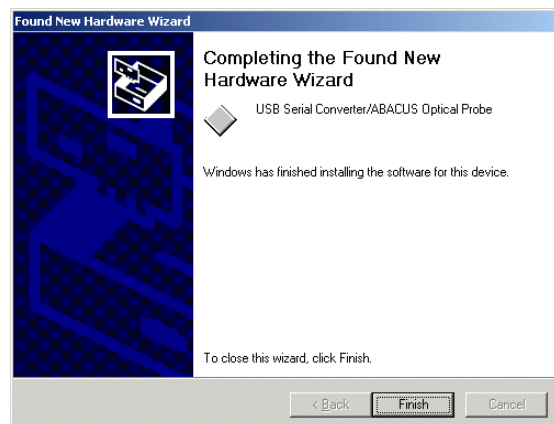


Browse to the sub-directory into which the driver files were unpacked. The default directory is C:\AbacusProbeDrivers.



Select 'Next'.

Then...



Select 'Finish'.

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

**Do not stop now !**

Proceed to the second/final part of the installation.

The second part involves the installation of a serial port. This should follow on automatically once the USB Serial Converter/ABACUS Optical Probe installation is complete.



Select 'Next'.

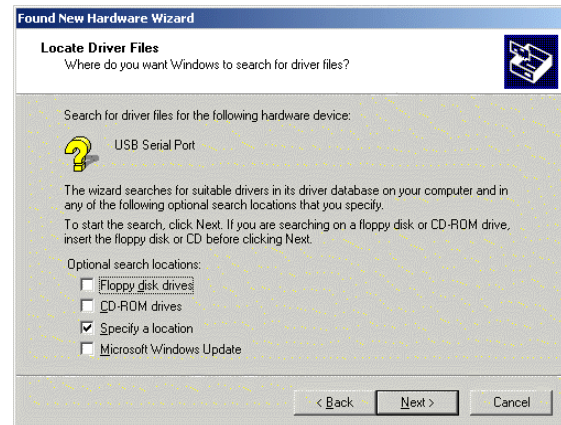
Then...



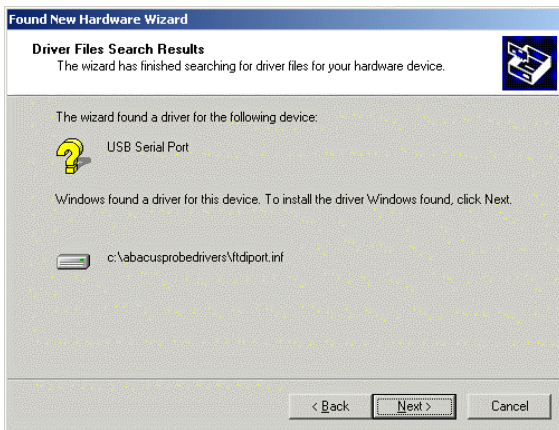
Select 'Next'.

If installing from CD then just select 'CD-ROM' and click 'Next'.

Or, if installing from downloaded drivers just select 'Specify a location'.

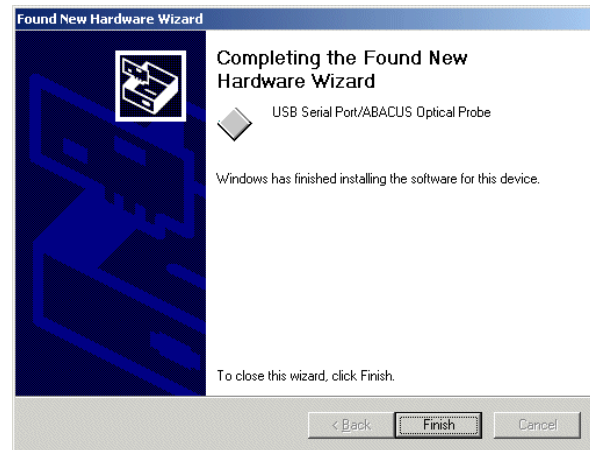


Browse to the sub-directory into which the driver files were unpacked. The default directory is C:\AbacusProbeDrivers.



Select 'Next'.

Then...



and finally select 'Finish'.

The USB Optical Probe should now be 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.

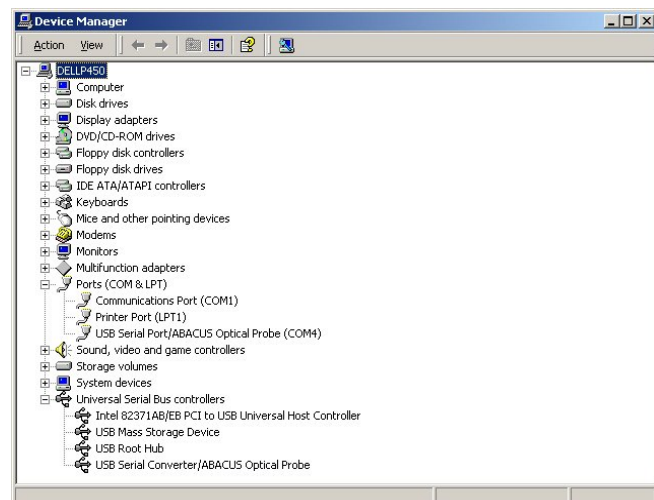
To confirm that the installation has completed successfully and to find which COM port assigned to the probe look under Device Manager of the System Properties screen.

Start → Settings → Control Panel → System, Hardware tab, then select Device Manager.

Entries for the Optical Probe should be seen in two sections (click the [+ ] boxes to expand the branches).

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 two COM ports were already present, COM1 and COM3 (the modem), and so the USB probe was assigned COM4.

In the Universal Serial Bus controllers section the probe will be shown as a USB Serial Converter/ABACUS Optical Probe.



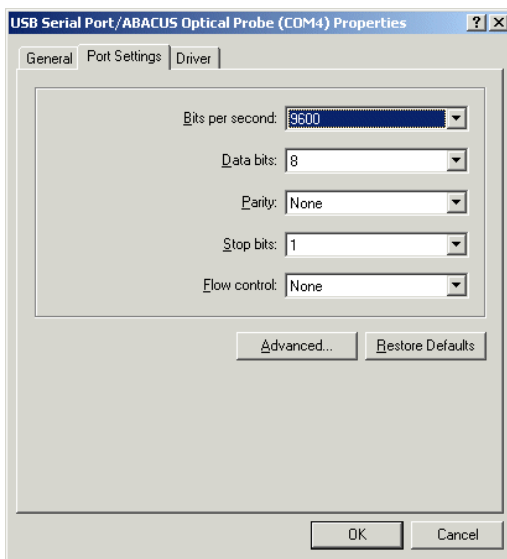
## Changing the assigned COM Port Number

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.

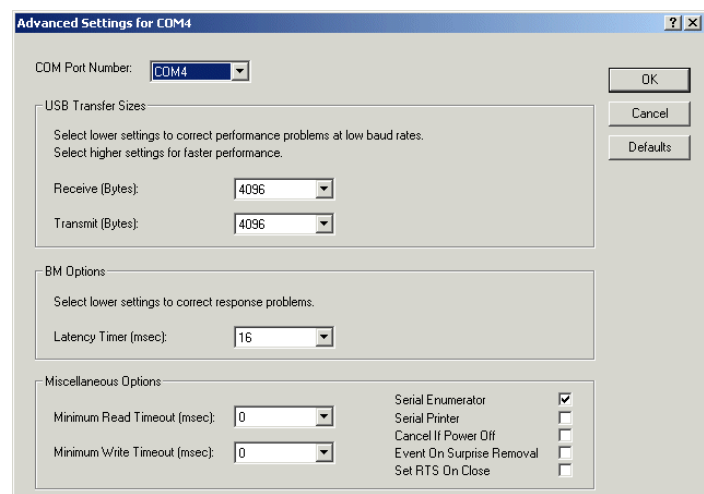
Select the Port Settings tab.

Leave the serial port properties such as baud rate, data bits etc. in their default state. The application program will automatically over-ride these settings.



Select Advanced.

Then...



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 you will see that the USB Serial Port/ABACUS Optical Probe (COMx) assignment has changed.

Now close the Device Manager and then reboot the computer.

## Stage 3 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

Uninstalling the probe drivers is achieved through the Device Manager. (Uninstalling may not be carried out using the Add/Remove Software under the Control Panel).

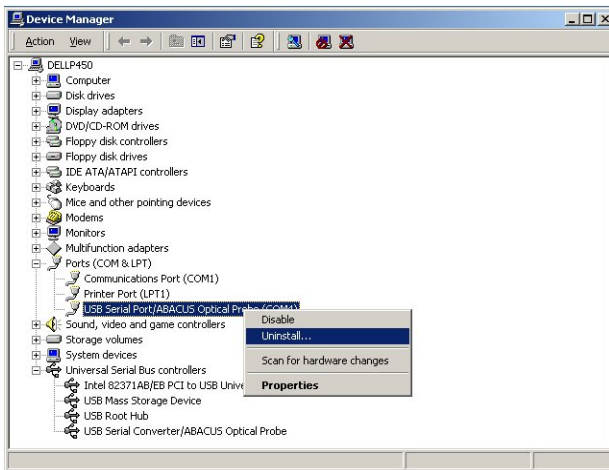
The probe must be plugged into the computer so that it is displayed in the Device Manager.

Start → Settings → Control Panel → System, Hardware tab, then select Device Manager.

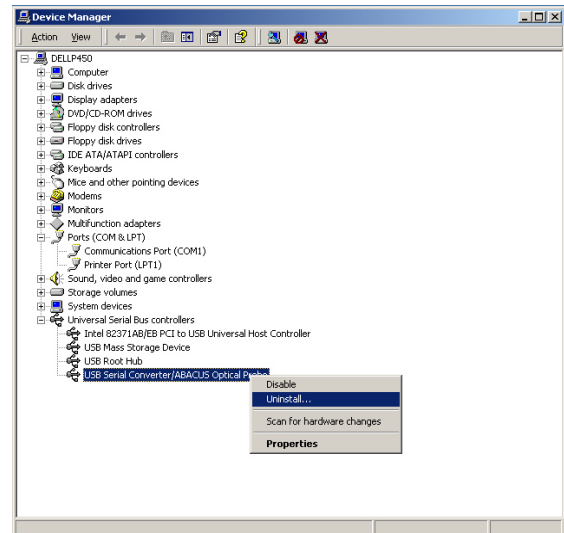
Driver removal is managed in two parts, first the Ports entry and then the Universal Serial Bus controllers entry.

First click the [+] box 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'.

Confirm device Removal.



Then...



Next click the [+] box 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'.

Confirm device Removal.

Now unplug the Optical probe.