

Optical Probes

Installing ABACUS ELECTRICS USB Optical Probes under Windows Vista

AN15d

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.

Using Windows Update to install the Optical Probe driver files - Recommended

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.

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.

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



Select 'Locate and install driver software (recommended)'.





select 'Yes, search online this time only'.

Windows Update locates and installs the driver files – this may take several seconds.

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

Do not stop the wizard now !

The second/final part of the installation follows on directly.

ABACUS ELECTRICS

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llo	w Windows to search online for driver software for your USB Serial Port?
•	Yes, <u>a</u> lways search online (recommended)
	Windows will automatically search for the latest drivers and applications for your hardware and download them to your computer.
•	⊻es, search online this time only
	Windows will search for the latest drivers and applications for this device and download them to your computer.
•	Don't search online
	Your device may not function properly until you get the latest software.
eas	e read Microsoft's privacy statement

Again select 'Yes, search online this time only'.

Then ...



and finally select 'Close'.

The USB Optical Probe should now be successfully installed.

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.

Then..

Alternatively the drivers may be downloaded from <u>http://www.abacuselectrics.com/usbsoft.htm</u>. 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.

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



Select 'Locate and install driver software (recommended)'.

	w Windows to search online for driver software for your ABACUS CTRICS Optical Probe?
•	Yes, <u>a</u> lways search online (recommended) Windows will automatically search for the latest drivers and applications for your hardware and download them to your computer.
•	Yes, search online this time only Windows will search for the latest drivers and applications for this device and download them t your computer.
+	Don't search online Your device may not function properly until you get the latest software.
Pleas	se read Microsoft's privacy statement

select 'Don't search online'.

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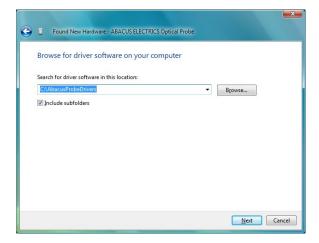
•	Found New Hardware - ABACUS ELECTRICS Optical Probe	
	Insert the disc that came with your ABACUS ELECTRICS Optical Probe If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.	
	➔ I don't have the disc. Show me other options.	
	Next	Cancel

If installing from CD select 'Next'.

If installing from downloaded drivers select 'I don't have the disk. Show me other options'.

Found New Hardware - ABACUS ELECTRICS Optical Probe	
Windows couldn't find driver software for your device	
Check for a solution Windows will check to see if there are steps you can take to get your device working.	
Browse my computer for driver software (advanced) Locate and install driver software manually.	
	Cancel

Select 'Browse my computer for driver software (advanced)'.



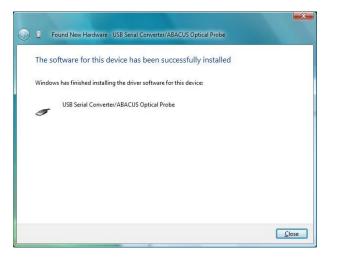
Browse to the sub-directory into which the driver files were unpacked. The default directory is C:\AbacusProbeDrivers\. Select 'Next'.

Installing from CD the wizard will locate and automatically install the software.





Windows copies the driver files to the system directories.



Select 'Close'.

This completes the first part 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 which should follow on automatically.



Select 'Don't search online'.

Then...



If installing from downloaded drivers select 'I don't have the disk. Show me other options'.

If installing from CD select 'Next'.



Optical Probes

Installing from CD the wizard will locate and automatically install the software.

Win	dows couldn't find driver software for your device
*	⊆heck for a solution Windows will check to see if there are steps you can take to get your device working.
•	Browse my computer for driver software (advanced) Locate and install driver software manually.
<u>.</u>	

Select 'Browse my computer for driver software (advanced)'.

Found New Hardware - USB Serial Port	
Browse for driver software on your computer	
Search for driver software in this location:	
C:\AbacusProbeDrivers	Browse
Search for driver software in this location:	
	Next Cancel

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



Select 'Close'.

The USB Optical Probe should now be successfully installed.

Note that the assigned COM Port number (COM4 in this case) is shown at the top of the window.



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 under Device Manager of the System Properties screen.

Start -> Control Panel -> System -> then select System Device Manager (top left of window).

Entries for the Optical Probe should be seen in two sections (click the [+] box 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 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.

Device Manager	
ile <u>A</u> ction <u>V</u> iew <u>H</u> elp	
• 🔿 📅 🛛 📅 🛛 😡	
🗄 🐙 Batteries	
🗄 🚛 Computer	
🗈 👝 Disk drives	
🕀 📲 Display adapters	
DVD/CD-ROM drives	
🗈 🥽 IDE ATA/ATAPI controllers	
🕀 🖗 IEEE 1394 Bus host controllers	
🖅 🛲 Keyboards	
🗈 📺 Memory technology driver	
🖅 🖄 Mice and other pointing devices	
🕀 🔚 Modems	
😨 🜉 Monitors	
😥 💽 Network adapters	
PCMCIA adapters	
🖨 🦃 Ports (COM & LPT)	
USB Serial Port/ABACUS Optical Probe (COM4)	
🕀 🛄 Processors	
🛓 💐 Sound, video and game controllers	
🗄 🔄 Storage controllers	
🕀 🕵 System devices	
🖮 🏺 Universal Serial Bus controllers	
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C8	
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C9	
🚽 🖣 Intel(R) 82801 G (ICH7 Family) USB Universal Host Controller - 27CA	
Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CB	
🚽 🖣 Intel(R) 82801G (ICH7 Family) USB2 Enhanced Host Controller - 27CC	
USB Root Hub	
🚽 🖳 USB Root Hub	
🔲 🖣 USB Serial Converter/ABACUS Optical Probe	
1993 - 1995 - 1993 - 19	

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.



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General	Port Settings	Driver	Details		
		<u>B</u> its pe	er second:	9600	•
			<u>D</u> ata bits:	8	•
			Parity:	None	•
			Stop bits:	[1	•
		Elo	w control:	None	•
			<u>A</u> dr	vanced	Bestore Defaults
				0	Cance

Select Advanced.

Τł	hei	n.	

anced Settings for COM4		8
OM Port Number: COM4		ОК
USB Transfer Sizes		Cancel
Select lower settings to correct performance problems at lo Select higher settings for faster performance.	w baud rates.	Defaults
Receive (Bytes):		
Transmit (Bytes):		
BM Options	Miscellaneous Options	
Select lower settings to correct response problems.	Serial Enumerator	
Latency Timer (msec):	Serial Printer	
	Cancel If Power Off	
Timeouts	Event On Surprise Removal	
Minimum Read Timeout (msec):	Set RTS On Close Disable Modem Ctrl At Startup	
Minimum Write Timeout (msec):		

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.



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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.

Start -> Control Panel -> System -> then select System Device Manager (top left of window).

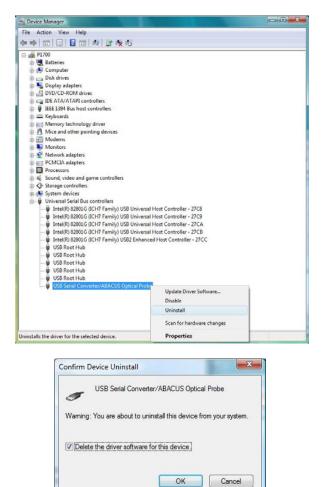
Driver removal is managed in two parts, first the Ports entry and then the Universal Serial Bus controllers entry.

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'.

🚔 Device Manager		
File Action View Help		
E 2 P1700		
Batteries		
⊕ - 4 Computer ⊕		
Disk drives		
Display subpress		
IDE ATA/ATAPI controllers		
E IEEE 1394 Bus host controllers		
🖶 🛲 Keyboards		
🕀 📺 Memory technology driver		
Mice and other pointing devices		
💮 🧱 Modems		
🕀 🌉 Monitors		
Network adapters		
PCMCIA adapters		
USB Serial Port/ABACUS Optical Probe (COM4)		
Processors	Update Driver Software	
Sound, video and game controllers	Disable	
Storage controllers		
🖶 🜉 System devices	Uninstall	
😑 🏺 Universal Serial Bus controllers	Scan for hardware changes	
Intel(R) 82801G (ICH7 Family) USB Universal H	Properties	
Intel(R) 82801G (ICH7 Family) USB Universal Hos		
Intel(R) 82801G (ICH7 Family) USB Universal Hos		
 Intel(R) 82801G (ICH7 Family) USB2 Enhanced He USB Root Hub 	ost Controller - 2/CC	
USB Root Hub		
USB Root Hub		
USB Root Hub		
🗑 USB Root Hub		
USB Serial Converter/ABACUS Optical Probe		
Uninstalls the driver for the selected device.		-
Confirm Device Uninstall		
	IC O-II I D L- (COMI)	
USB Senal Port/ABACU	JS Optical Probe (COM4)	
and the second s		
Warning: You are about to uninsta	all this device from your system.	
Delete the driver software for the driver software	pis device	
Delete the diversion where for a	is device.	
ſ	OK Cancel	

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

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...



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