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Title:

USB Driver Installation instructions for PPM4-MK1 and ISPnano programmers

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Abstract:

This application note describes how to install the USB Drivers for the PPM4-MK1 and ISPnano Series II programmers.

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1.0 Introduction

1.1 Overview

The Equinox PPM4-MK1 and ISPnano Series II programmers feature on-board hardware USB Ports. This allows them to communicate with a host PC via USB. It is possible to set the communications speed to 230,400 baud when using USB which gives significantly faster **'Project Upload'** and programming when operating under PC control.

This application note describes how to install the USB Drivers for the on-board hardware USB Port of these programmers.

1.2 Programmers supported

This USB Driver is only compatible with the programmers listed in the table below. These programmers have an on-board USB Port which allows for a direct connection between the programmer USB port and a spare USB port on the PC.

A list of compatible programmers is detailed in the table below.

Programmer	On-board USB Port
ISPnano Series II	YES
PPM4-MK1	YES

2.0 USB Driver Installation

2.1 Overview

The following instructions detail how to install the USB drivers for on-board USB port of the PPM4-MK1 and ISPnano Series II programmers. The USB drivers are installed into Windows as a 'USB Device' which can then be viewed in 'Device Manager'.

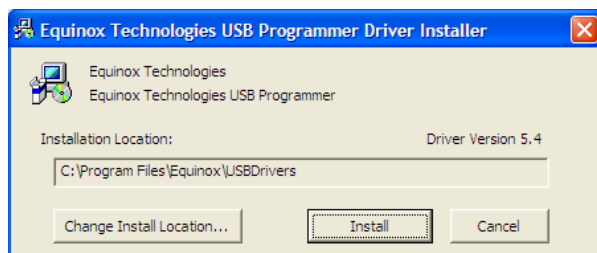
Please note:

- You must be logged in as the '**Administrator**' of the PC or as a '**Local Administrator**' in order to install the USB Drivers.
- Make sure that the '**USB Cable**' is **NOT** connected to the PC during the USB Driver installation process.

2.2 Installation instructions

- Make sure that the '**USB to Serial Cable**' is **NOT** connected to the PC
- Download the the ***EquinoxVCPInstaller.exe*** file from the Equinox website.
- Double-click the ***EquinoxVCPInstaller.exe*** file to start the installation

→ The following screen is displayed:



Please note:

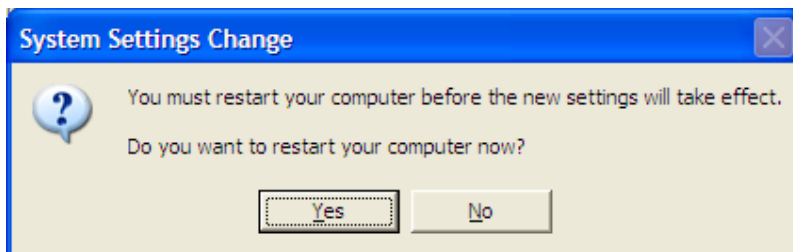
It is possible to change the default installation path of the drivers by clicking the **<Change Install Location>** button.

→ The following Windows warning message box (or similar) will be displayed:



- Click the **<Continue Anyway>** button
→ The USB Driver files will now be copied to the specified installation directory on your PC.

At the end of the installation, you will be asked to re-start your computer.



- Click **<Yes>** to restart your computer
- The installation of the USB Drivers is now complete.

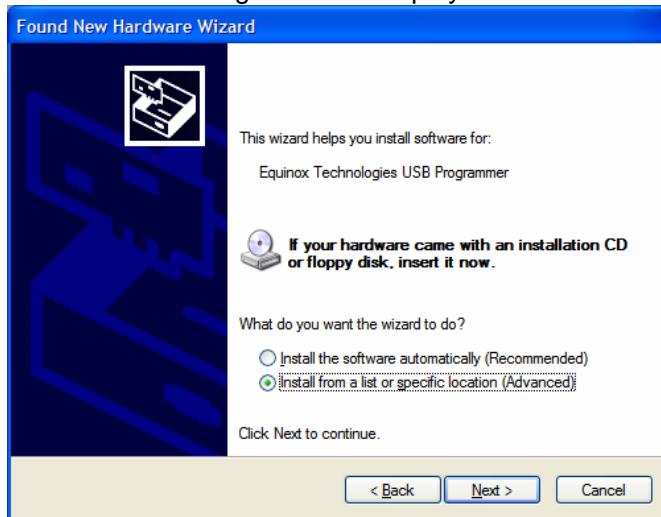
2.3 Found new Hardware wizard

- Plug the mini USB connector end of the USB cable into the programmer USB Port.
- Plug the larger USB connector end of the USB cable into a spare USB port on your PC.
- Apply power to the programmer
- If you are using a PPM4-MK1 programmer, make sure the DIP Switch is set to 'USB'.
→ The PC should now detect that new hardware has been attached and will display the following screen:



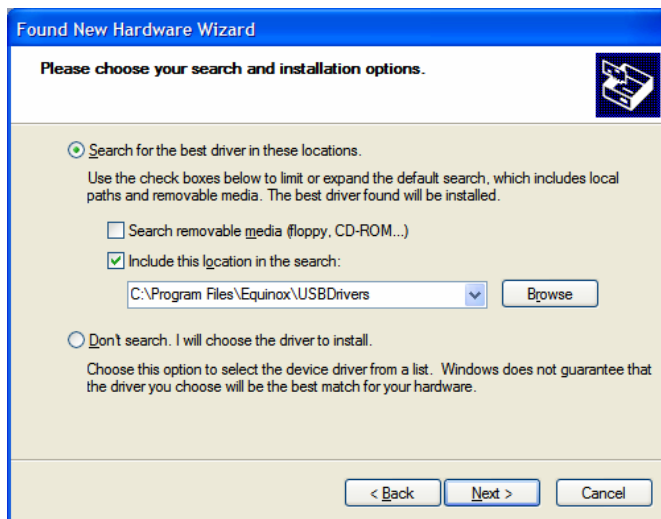
- Select "No, not at this time" and click **<Next>**

→ The following screen is displayed:



- Select ***“Install from a list or specific location (Advanced)”***
- Click **<Next>**

→ The following screen is displayed:

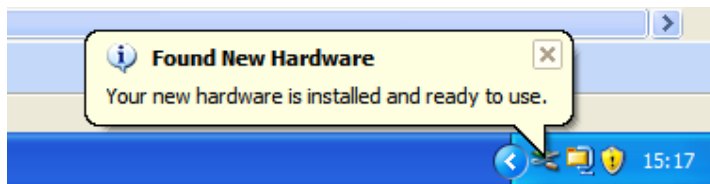


- Browse to: ***c:\Program Files\Equinox\USBDrivers*** folder
- Click **<Next>**

The following warning will then be displayed...



- Click **<Continue Anyway>**
- The USB Driver is then installed for the device found on the specified USB port
- Once the installation is complete, you should see the following message displayed near the clock on the bottom-right of your desktop.....



- Installation of the USB Driver for the attached programmer is now complete.

2.4 Using Device Manager to check the USB Port status

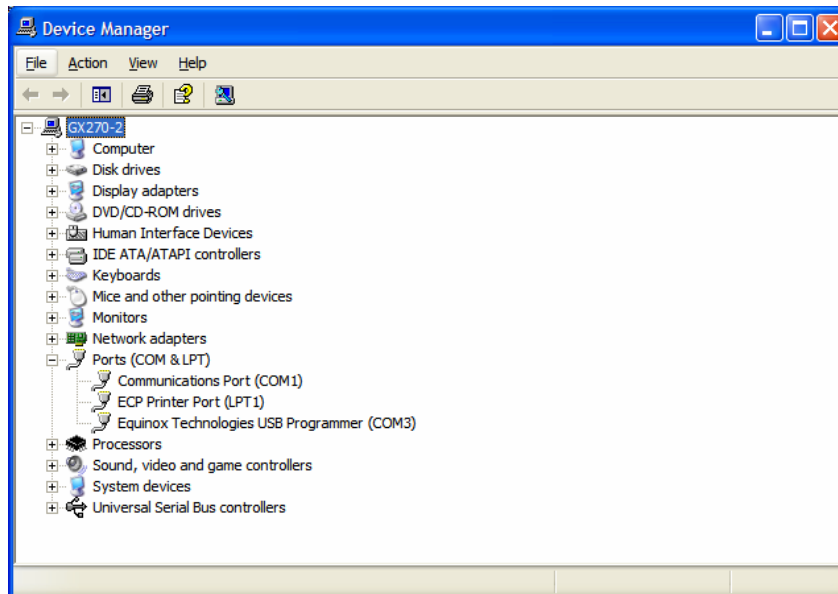
This USB Driver installation creates a VCP (Virtual COM Port) on your PC which is used by the Equinox applications eg. EQTools to communicate with an attached Equinox Programmer via USB. This VCP is automatically created by Windows when the programmer is plugged into a USB port on your PC. When the programmer USB cable is removed, the USB VCP will disappear.

You can check the status of the VCP (Virtual COM Port) on your PC by using Device Manager.

- Right-click on the <My Computer> icon
→ The 'System Properties' screen will be displayed.



- Click the <Device Manager> button
→ The 'Device Manager' screen will be displayed.



- If the Equinox VCP has installed correctly, then you should see an entry under the heading '**Ports COM & LPT**' for '**Equinox Technologies USB Programmer**'
- It will also specify which COM port has been allocated to the Equinox VCP e.g. COM3 in this case.

3.0 Testing the USB Connection

3.1 Connecting the cable

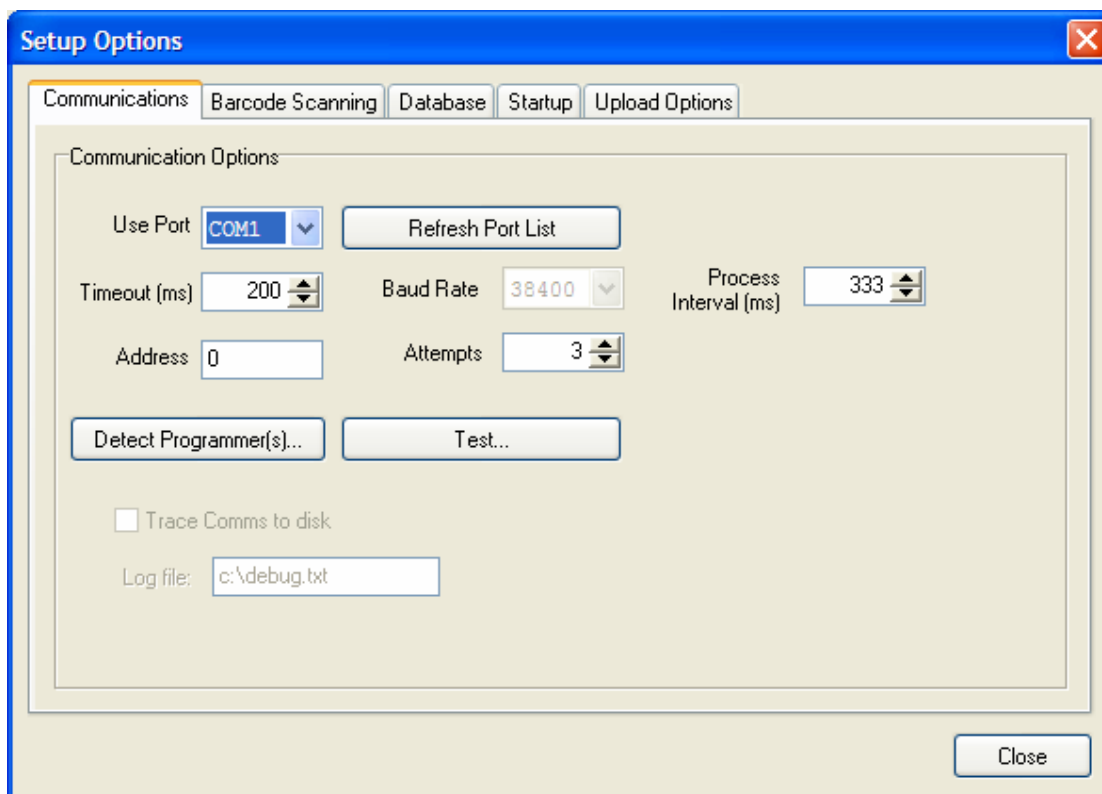
- Connect the larger USB end of the '**USB Cable**' to a spare USB port on the host PC.
- Connect the miniature USB connector end of the cable to the USB port on the programmer.
- Switch on power to the programmer

3.2 Testing with EQTools

The following instructions detail how to get EQTools to detect a programmer which is connected to the host PC via the '**USB Port**'.

Instructions:

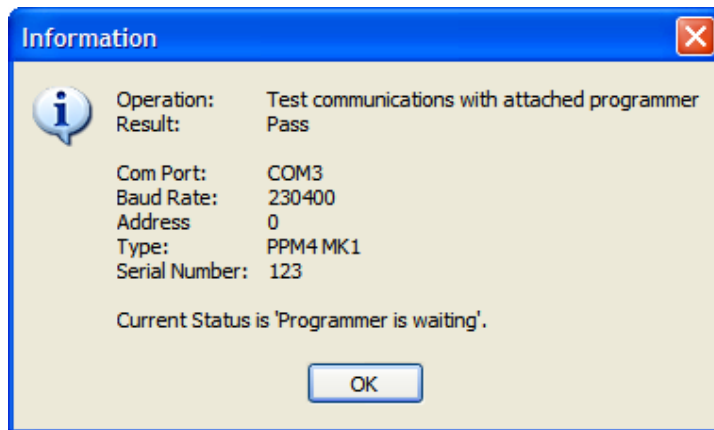
- If you have not already installed the Equinox EQTools software, please install it now
- Launch the EQTools software
- Select **<Programmer><Communications and Scripting Setup>**
→ EQTools will display the following screen



- Click the down arrow next to the '**Use Port**' field
→ A list of the available '**COM Ports**' on the host PC is displayed.
- If your PC does not have a physical '**Serial Port**', then it is likely that there is only one '**COM Port**' now displayed in the list. This will be the COM port to which the '**USB Cable**' is connected.

- If your PC has multiple '**Serial Ports**' listed, then it could be that you have an internal modem or other serial devices installed in your PC. The '**USB Cable**' is likely to be the last '**COM Port**' in the list.
 - Select the correct '**COM Port**' to which the '**USB Cable**' is connected.
 - Click the **<Test>** button
- EQTools will attempt to communicate with the attached programmer via the '**USB Cable**'.

If EQTools communicates OK with the attached programmer, you should receive a message similar to the one below.....



→ The installation procedure is complete and you can now use EQTools as you would normally.

If EQTools cannot communicate with the attached programmer:

- Try selecting a different COM port
- Make sure the '**USB Cable**' is connected to the programmer
- Make sure the attached programmer is powered on
- Try clicking the **<Refresh Port List>** button and then reselect the correct COM port to which the programmer is attached. This will refresh the list of available COM ports detected on your PC.