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## Uninstalling Incorrect USB Device Drivers

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### RECOMMENDED UNINSTALL METHODS

When using Microchip development tools, trouble may be experienced as a result of incorrect device drivers being installed. If the Windows® OS installs its default USB device drivers for a Microchip development tool, the tool will not function properly, if at all.

It is recommended that each uninstall method be attempted in order. If one does not work, proceed to the next uninstall method.

1. Automatic Uninstall Method (Clean) – For Windows 2000/XP Systems
2. Simple Uninstall Method – Delete from Device Manager
3. Complex Uninstall Method – Edit Registry

Also, for Windows 2000 users:

- Windows 2000 Installation Issues – Solving problems when installing the drivers

**Note:** If you have installed the drivers and been able to communicate without errors initially, but then have experienced communication problems, reinstalling the drivers may not solve your problems. Please refer to the MPLAB® ICD 2 on-line help for possible software solutions before attempting to uninstall/reinstall the drivers.

### AUTOMATIC UNINSTALL METHOD (CLEAN)

For Windows 2000/XP, please attempt to automatically “clean” your system using the clean utility (MPUsbClean.exe) found, by default, in:

C:\Program Files\Microchip\MPLAB IDE\Utilities\MPUsbClean

For instructions on the use of this utility, see the *Drivers* subfolder of the tool for which you need to remove the USB drivers, e.g., ICD2. The instructions will be named *clntool.htm*, where *tool* is an abbreviated tool name, e.g., *clnicd2.htm*.

If this does not work, or if you have a different Windows OS, follow the other manual uninstall instructions listed in this document.

### SIMPLE UNINSTALL METHOD

If the automatic method did not work or was not applicable, try this simple method before using the complex method of uninstall.

First remove the reference to the USB device from the Device Manager. Then install the correct Microchip USB device drivers.

## Removing the Incorrect USB Drivers

At this time, the PC system should be booted up and idle. Also, the development tool should be plugged into a PC USB port.

1. Right click (right mouse button) on the "My Computer" icon on the PC desktop. Select "Properties" to bring up the System Properties dialog.
2. Open the Device Manager.
  - For Windows 98/ME: Click on the **Device Manager** tab.
  - For Windows 2000/XP: Click on the **Hardware** tab and then click on the **Device Manager** button to open the Device Manager window.
3. Click on the "+" to expand either "Other Devices" or "Universal Serial Bus controllers" and find a "?" with a yellow "!" or red "X" through it. It should say "USB Device" or something similar.

**Note:** If unsure which device listed is the tool being used, unplug the tool and see which one disappears. Then plug the tool back in to see it reappear.

4. Click once on this device to select it, and then right click on this device and select "Uninstall" from the drop-down menu. Click **OK** on the warning.

**Note:** DO NOT unplug the tool from the USB port at this time. Leave it plugged in.

## Installing the Correct USB Drivers

1. Go to **Start** on the menu bar, select "Settings", and then the "Control Panel".
2. In the Control Panel, double click on "Add/Remove Hardware".
3. On the "Welcome" screen, click **Next**. Then click on the **Add** button and again click **Next**.
4. At this point (after the system does some searching), it should say that it found new hardware, i.e., the Add New Hardware wizard should appear.
5. Click **Next** on the Add New Hardware wizard. Then select the "Search" option and again click **Next**.
6. Uncheck all the boxes and then check only the one that says "Specify a location". Click **Next**.
7. The opportunity will then be given to **Browse**. For the standard MPLAB IDE install, find the following directory and click **OK**:  
C:\Program Files\Microchip\MPLAB IDE\Tool\Drivers  
where *Tool* = development tool (e.g., ICD2.)
8. Click **Open**. The wizard should say that it found a driver. Click **Next**.
9. Click **Finish** on the next screen. The wizard should say that it found the Firmware Loader or Firmware Client, depending on which was missing.
10. Once this is done, a prompt may ask for an indication where the appropriate .SYS file (*ToolNameWinVersion.Sys*) is located. Browse to the directory in step 7, which contains that file. Then click **Next** or **OK** and follow any other instructions until "Finished".
11. Now, look in the "Device Manager" under either "Microchip Tools" or "Universal Serial Bus controllers" and the "Microchip *ToolName* Firmware Client" should be listed.

# Uninstalling Incorrect USB Device Drivers

## COMPLEX UNINSTALL METHOD

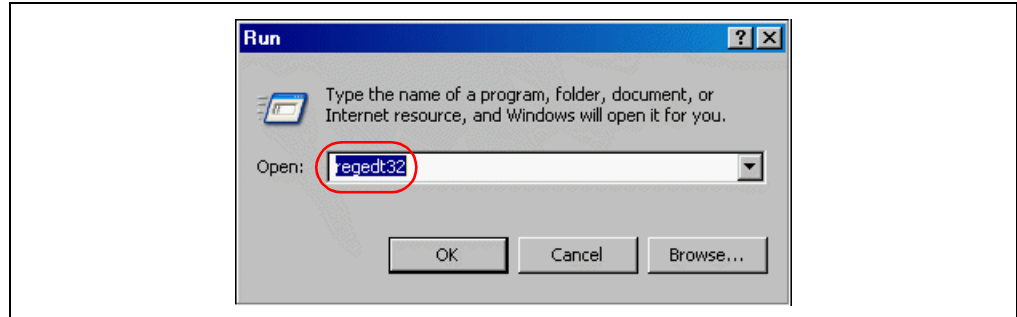
If the simple uninstall method did not fix the communications problem, the PC register will have to be edited.

First, the registry file needs to be backed up, then the Windows default USB drivers need to be uninstalled so that the correct Microchip tool USB drivers may be installed.

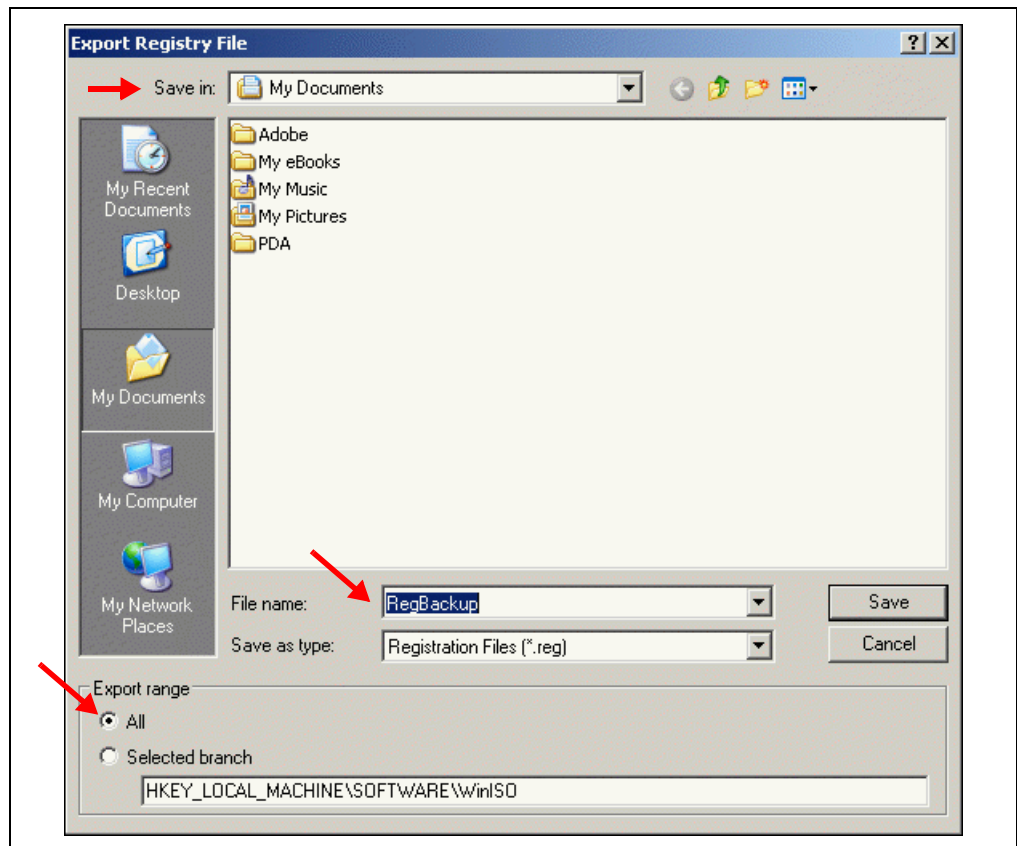
### Backing Up the Registry

To back up the registry, administrative login privileges are necessary (Windows 2000/XP) so that REGEDT32 (or REGEDIT) can be run.

1. From the PC desktop, select Start>Run and enter REGEDT32.



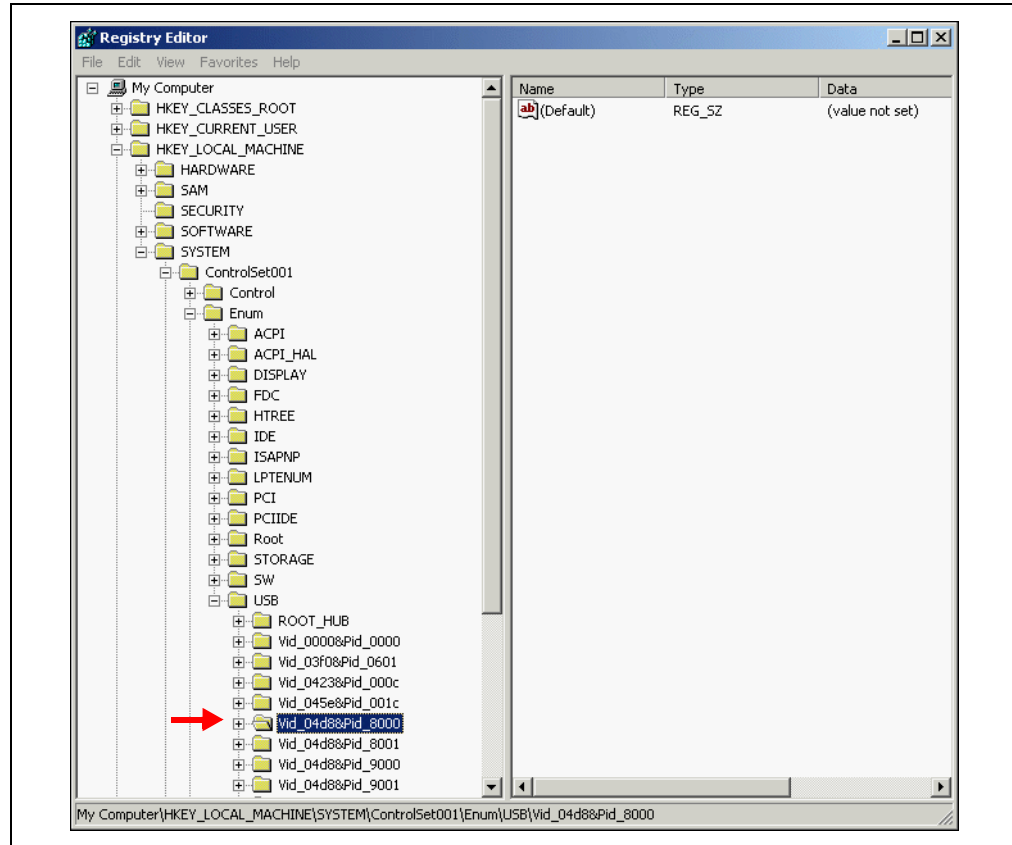
2. In REGEDT32, select File>Export (or Registry>Export Registry File) to open the Export Register File dialog.
3. Find a location for the registry file. Then enter a File name. Ensure that "All" is selected in the export settings. Click **Save**.



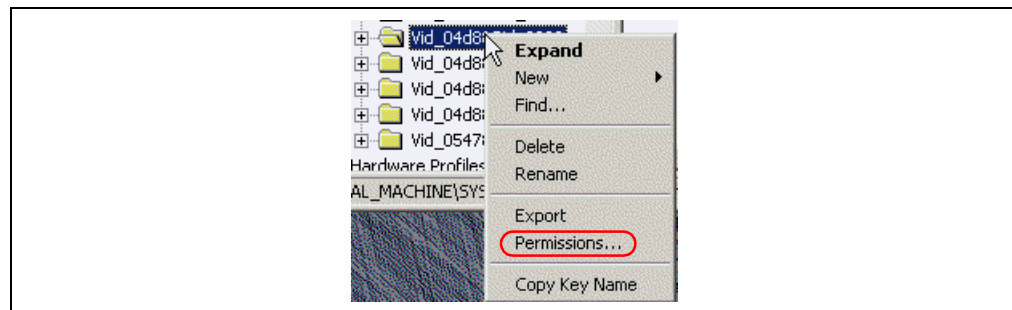
# Development Systems

## Removing the Incorrect USB Drivers

1. Unplug the tool from the USB port.
2. In REGEDT32 (or REGEDIT), go to HKEY\_LOCAL\_MACHINE>SYSTEM>CONTROLSET001>ENUM>USB. Highlight the following key, depending on the tool being used:
  - VID\_04D8&PID\_8000 – MPLAB ICD 2
  - VID\_04D8&PID\_9000 – MPLAB ICE 4000
  - VID\_04D8&PID\_9002 – MPLAB ICE 2000
  - VID\_04D8&PID\_9004 – MPLAB REAL ICE™ In-Circuit Emulator
  - VID\_04D8&PID\_a001 – MPLAB PM3

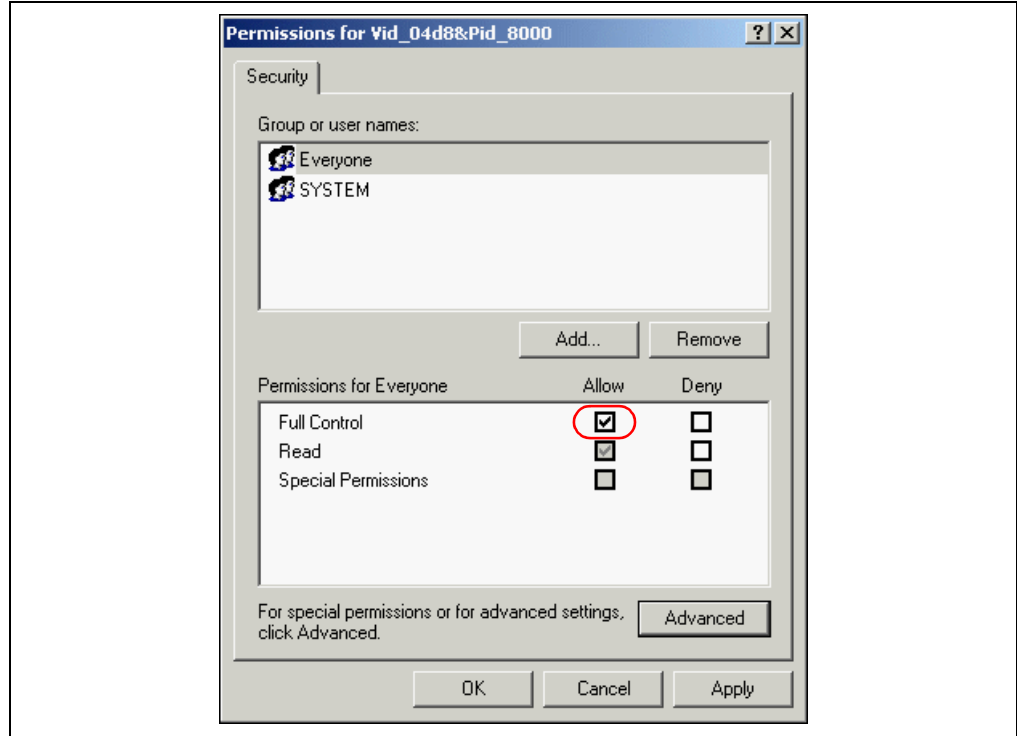


3. For Windows 2000/XP, the permissions will need to be changed before the key can be deleted.
  - a) Right click on the key and select “Permissions” (or select Security>Permissions.)

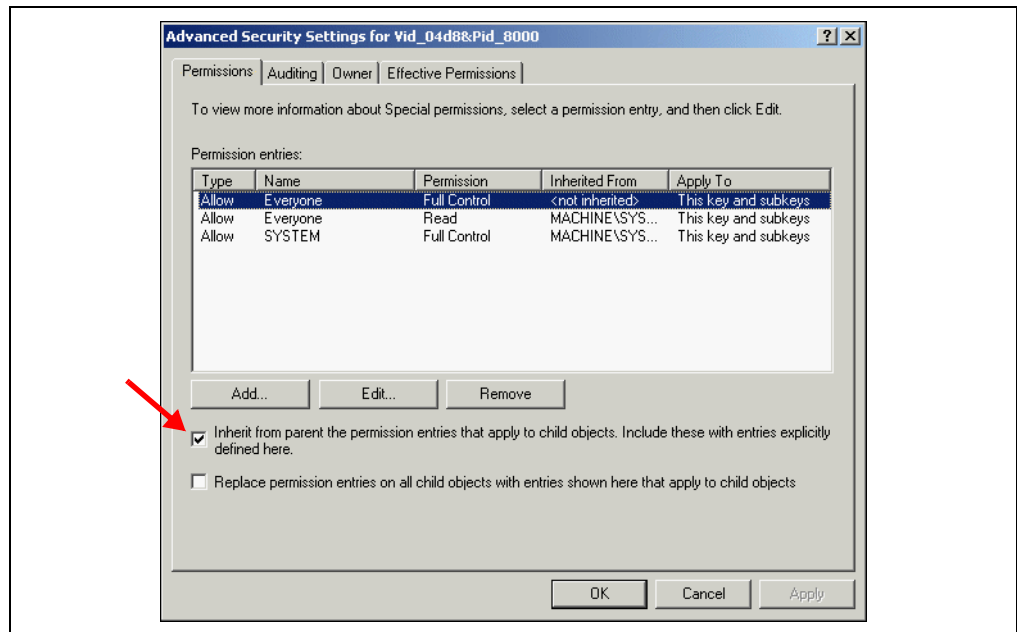


# Uninstalling Incorrect USB Device Drivers

- b) In Permissions for the key, ensure that “Everyone” is selected to Full Control.



- c) Ensure that the checkbox to allow inheritable permissions from parent to propagate to this object is checked. This check box may be on the Advanced Security Settings dialog (click the **Advanced** button) or may be on the main Permissions dialog.



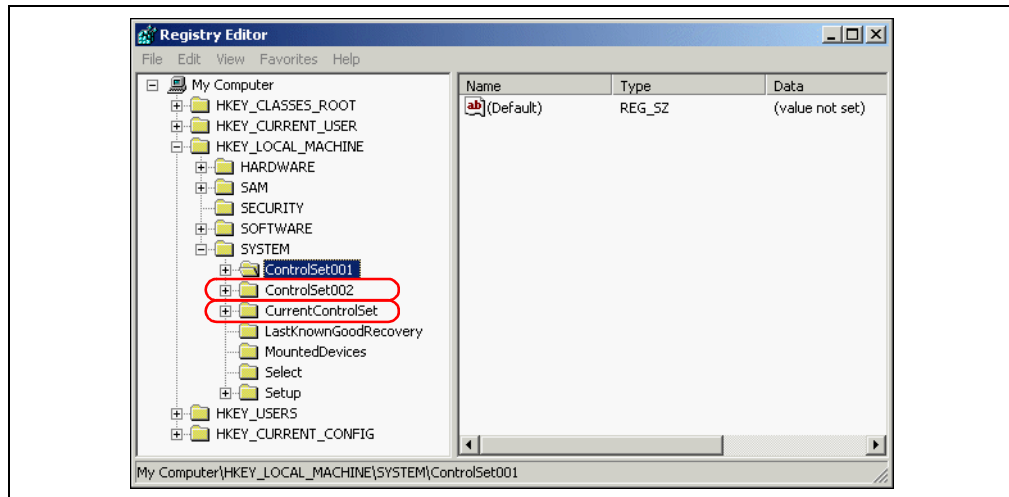
- d) Click **OK** to set the new permissions.

# Development Systems

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4. Delete the highlighted key.
5. For some tools, an additional key needs to be removed. Highlight the following key, depending on the tool being used:
  - VID\_04D8&PID\_8001 – MPLAB ICD 2
  - VID\_04D8&PID\_9001 – MPLAB ICE 4000
6. For Windows 2000/XP, repeat step 3.
7. Delete the highlighted key.
8. Select the keys from step 2 and step 5 from directories Controlset $nnn$  and CurrentControlset, i.e., repeat steps 2-7 for Controlset $nnn$  and CurrentControlset (where  $nnn$  is a number).

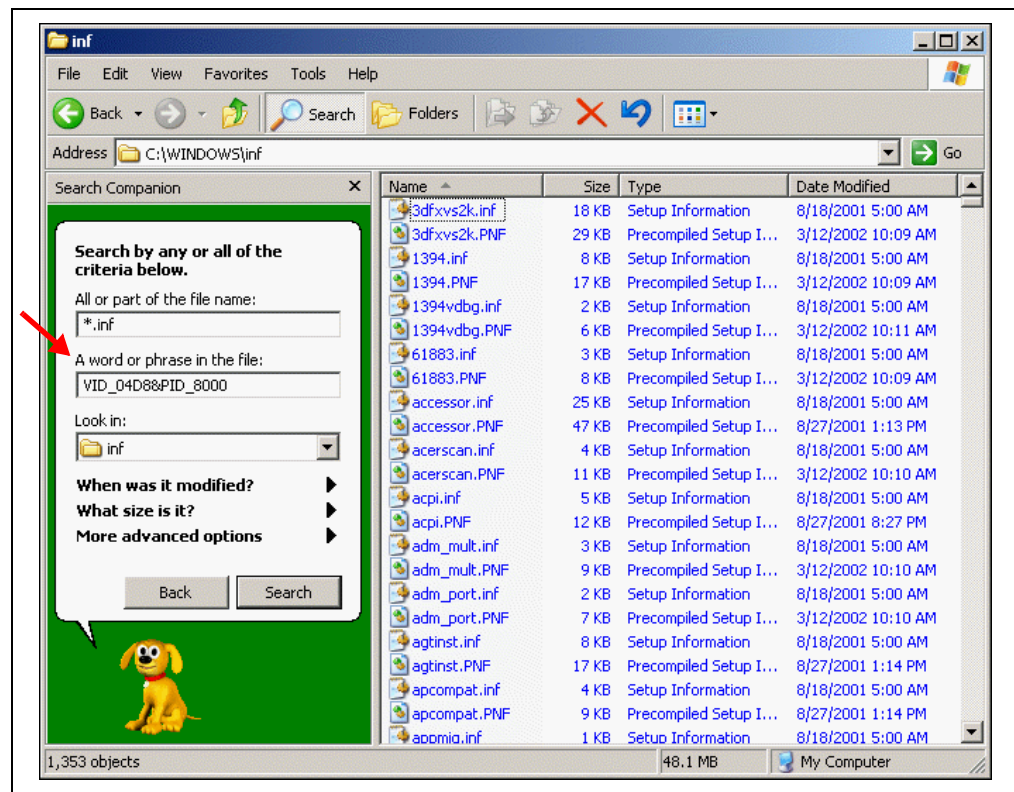
Under Win98, these keys may be located under different folders. All instances of these keys must be removed from the registry.



9. Exit REGEDT32 and open Windows Explorer.

# Uninstalling Incorrect USB Device Drivers

- Go to Windows\INF (or Winnt\INF.) Use the File Search to search this directory, and all subsequent subdirectories, for all .INF files that contain reference to the following:
  - The keys specified in step 2 and step 5



Delete these files.

**Note:** Keep track of the INF file names that are deleted, because the corresponding files with PNF extensions will have to be deleted as well. For example, if OEM26.INF is deleted, OEM26.PNF will also need to be deleted, if it exists. PNF files are not text files and cannot be searched like INF files.

Go to Windows\system32\drivers (or Winnt\system32\drivers) and delete the *ToolNameWinVersion\*.Sys* files, where *ToolName* = abbreviated name of the tool and *WinVersion* = abbreviated name of Windows version. Under Windows XP, *WinVersion* = 2k.

**Example:** For MPLAB ICD 2 on a Windows 2000 system:

- icd2w2k.sys
- icd2w2kL.sys

- Reboot the system.

## Installing the Correct USB Drivers

Before plugging in the tool to a USB port, check/do the following:

1. Install the latest MPLAB IDE so that the latest device drivers and INF file are in the MPLAB IDE drivers subdirectory.
2. Install the latest service packs for the OS.
3. Ensure that the administrator mode is active, with all rights and privileges turned on for the system and registry (Windows 2000/XP).
4. Disconnect from any networks.

Plug the tool being used into a USB port. This port should be one of the following:

- The primary USB port on the system.
- An add-in card, which acts like a motherboard USB port
- A powered hub

The Add New Hardware wizard should come up, the INF file should be accessible and the loader and client drivers should come up OK.

## WINDOWS 2000 INSTALLATION ISSUES

A patch on the Microsoft windows update site may help if you are experiencing a problem with loading the MPLAB ICD 2 USB drivers. The patch is applicable to those who have updated to Windows 2000 SP4. Here is the comment from Microsoft:

"Some driver installation programs don't work on Windows 2000 (W2K) after you install either Critical Update QFE 813044 or W2K Server SP4. The installation does not succeed and you receive an incorrect error that no drivers are available for the device."

The patch can be found at:

<http://www.microsoft.com/downloads/details.aspx?displaylang=en&familyid=7C896E82-4B50-44C8-A634-3227C0E71293>



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