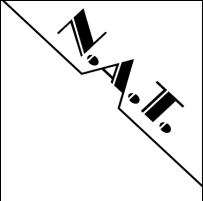


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MCH3 USB Driver Installation

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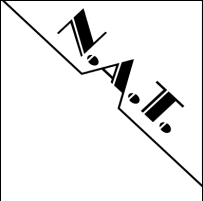
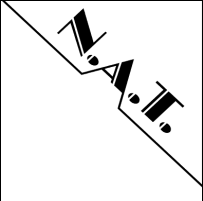
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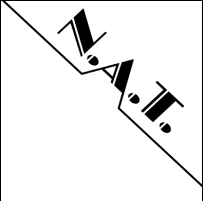
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Document History

Revision	Date	Author	Description
1.0	04.05.2010	Stefan Sperling	Initial version.

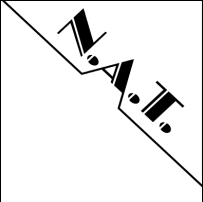
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1 Purpose of this manual

Starting with version 3.0 the N.A.T. MCH is equipped with a USB debugging port. This permits to connect it to a modern personal computer that usually has no serial port anymore. This manual describes the steps that are necessary to configure Windows XP and Windows 7 for use with the N.A.T. MCH 3.x.

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2 Windows XP Installation

The following steps are necessary to configure Windows XP to work with the N.A.T. MCH USB debug port. (Although we have tested this procedure to work with Windows XP Professional it should work without any changes with a Windows Home as well.)

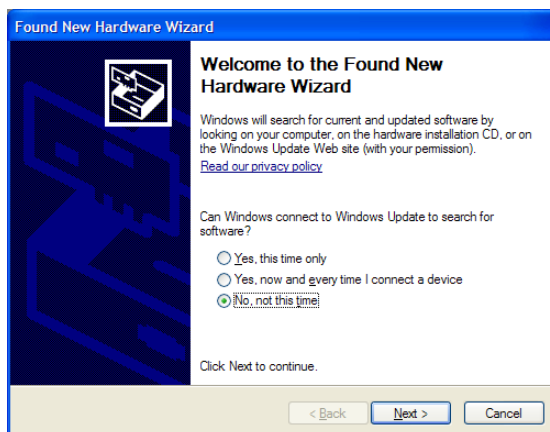
1. Power on your MCH and connect its USB debug port to an unused USB port of your computer.
2. Wait until Windows has finished its installation procedures for the new found device. Windows XP will usually detect the new USB device but will be unable to install the proper **usbser.sys** driver. This is where Windows needs some help from the user.
3. If Windows has opened the **hardware wizard** you can continue with step 4.

To open the hardware wizard manually you need to open the **device manager**. Open the **start menu**, and then click on **Control Panel**. In the category view click onto **Performance and Maintenance**, then onto **System**. If in classic view click on **System**.

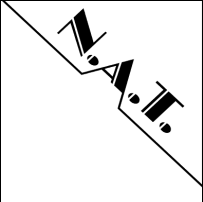
This opens the system dialog. In this dialog click on the register labeled **Hardware**. Finally click on the **Device Manager** button. This will open the device manager.

Inside the device manager look for the **Ports (COM & LPT)** section. Open it by clicking on the plus sign. You should see a device entry with a black exclamation mark inside a yellow circle. Right click on it and select the command **Update driver**. This opens the hardware wizard.

4. The hardware wizard looks like this:

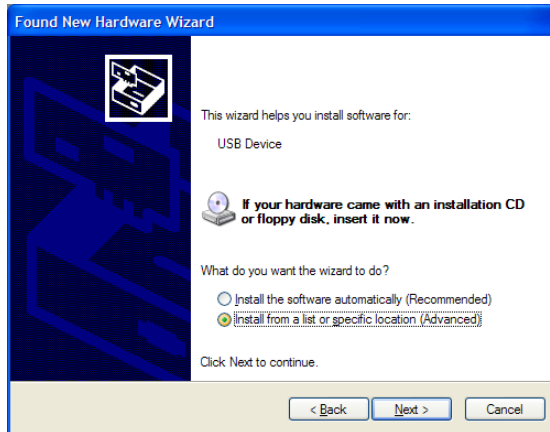


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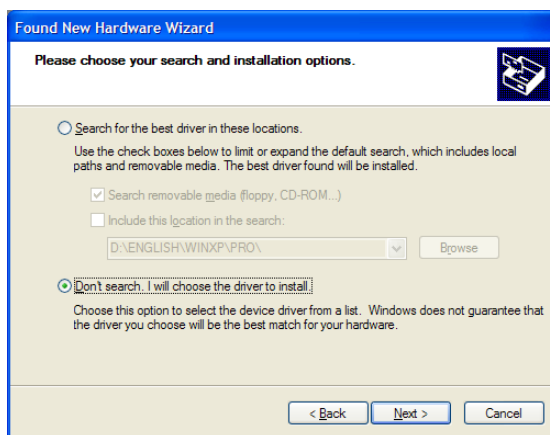
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Select the option **No, not this time** to prevent Windows from searching for the new driver by itself. Continue by clicking on the **Next** button.

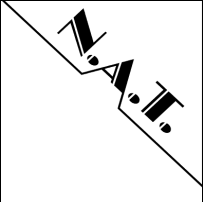
5. Select **Install from a list or specific location (Advanced)**. Continue with the **Next** button.



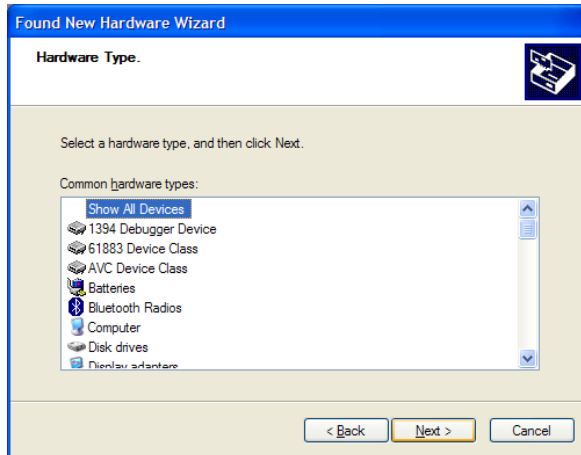
6. Select the option **Don't search. I will choose the driver to install**. Continue with the **Next** button.



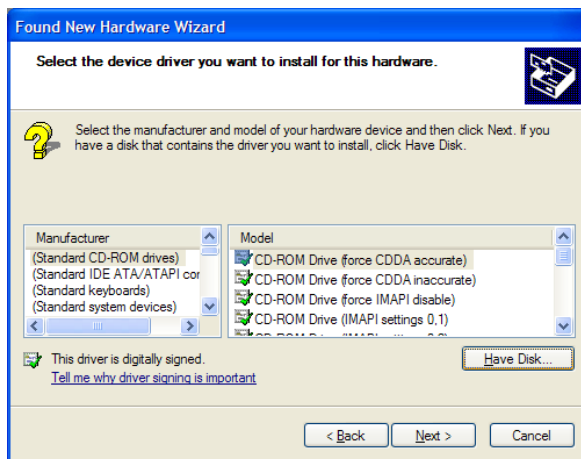
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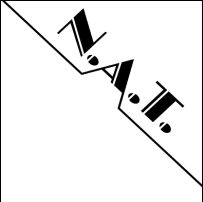
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7. Select **Show all devices** and continue with the **Next** button.

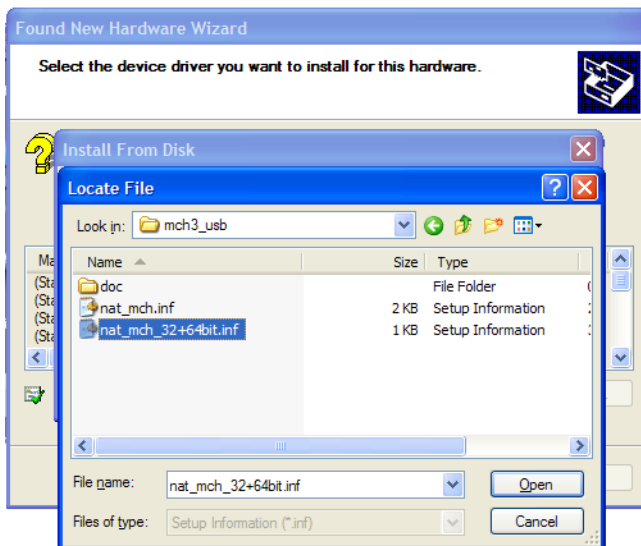


8. Click on the **Have disk** button.

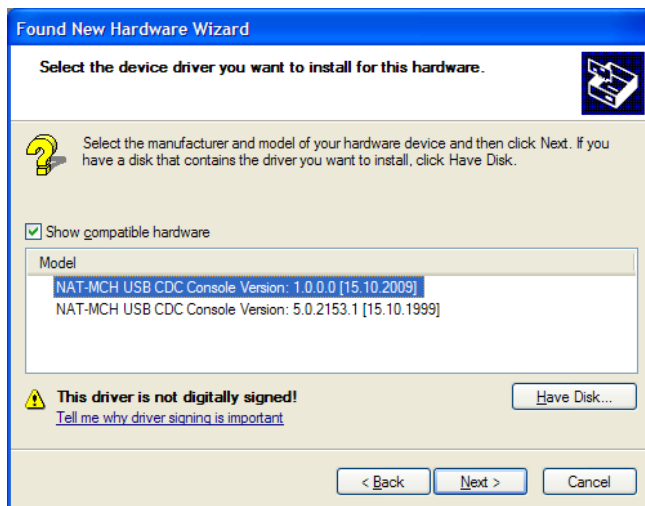


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9. Locate the **nat_mch_32+64bit.inf** file in your file system and open it. Close the **Install from disk** dialog by clicking the **Ok** button.

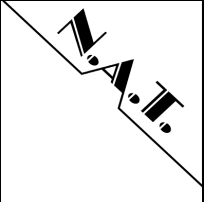


10. From the model list choose the driver called **NAT-MCH USB CDC Console Version: 1.0.0.0 [15.10.2009]**. (If in doubt always try the more recent version first.)

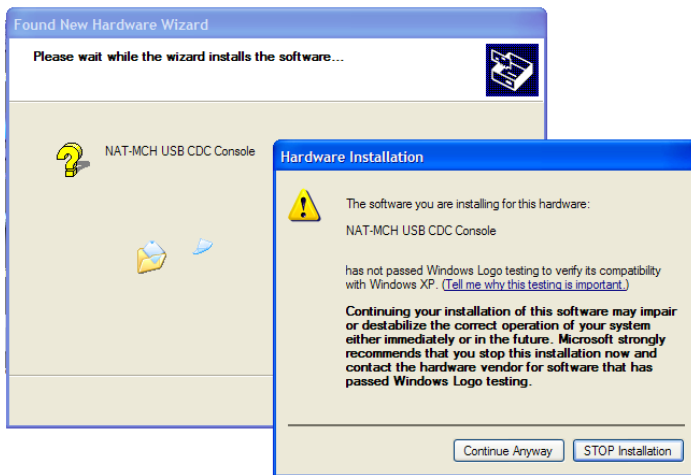


Continue by clicking the **Next** button.

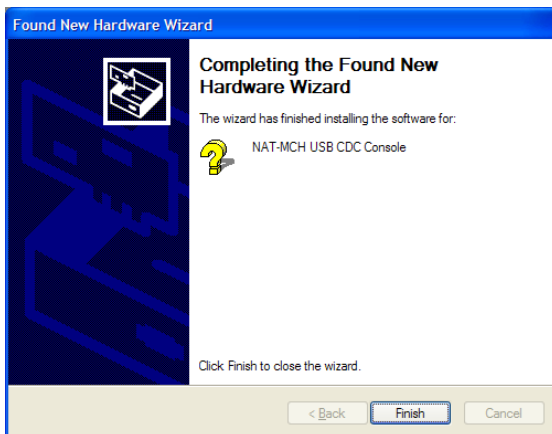
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11. The installation process starts. Once in a while Windows is going to complain about the fact that the driver is not signed by Microsoft. Click on **Continue anyway** with a self confident smile.

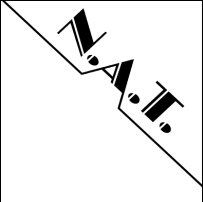


12. After a few moments the installation has been finished. Terminate it by clicking the **Finish** button.



Now the USB debug port can be used. The COM port being assigned to it can be looked up in the device manager. Go back to point 3 if you are unsure about how to start it.

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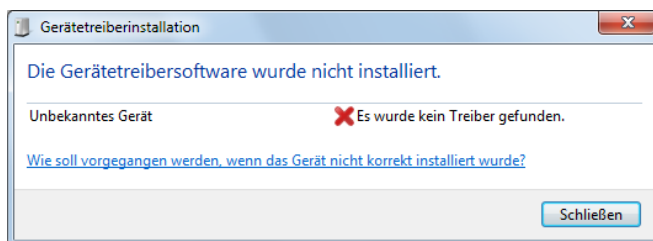
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3 Windows 7 Installation

The following steps are necessary to configure Windows 7 to work with the N.A.T. MCH USB debug port. It shall also work with Windows Vista (but we have not checked it).

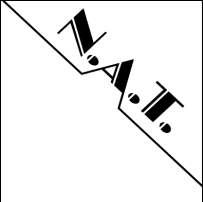
Note: Currently all screenshots show a german Window 7. This shall be changed as soon as possible. To enable non-german to use this documentation the necessary options and commands are described in more detail in the text.

1. Power on your MCH and connect its USB debug port to an unused USB port of your computer.
2. Wait until Windows has finished its installation procedures for the new found device. Windows 7 will usually detect the new USB device but will be unable to install the proper **usbser.sys** driver. This is where Windows needs some help from the user.
3. Our experience is that Windows 7 does not start a hardware wizard (like Windows XP did). Windows 7 will always try to install a new driver on its own. If this fails the only action that is done is to display this message box:

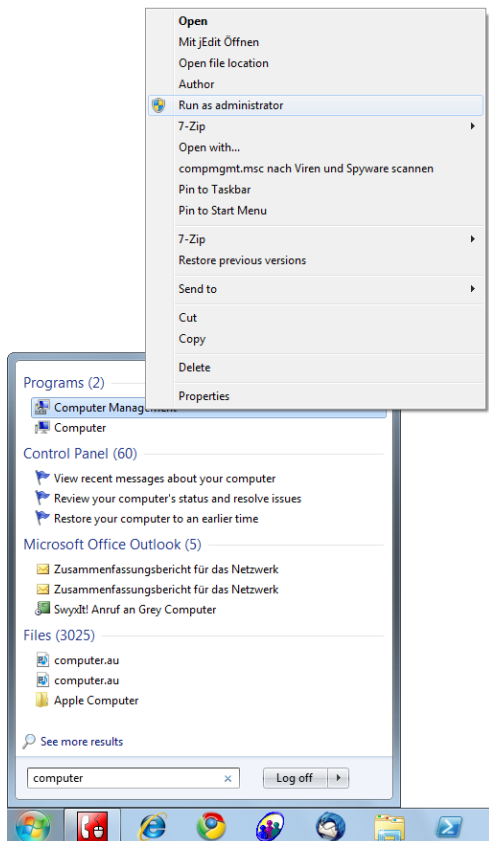


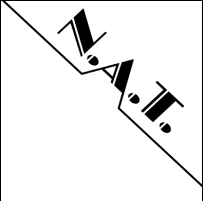
(The german text's meaning is "The device driver software has not been installed. Unknown device. No driver has been found.")

Therefore the user must open the **device manager** and ask Windows to update the device driver.

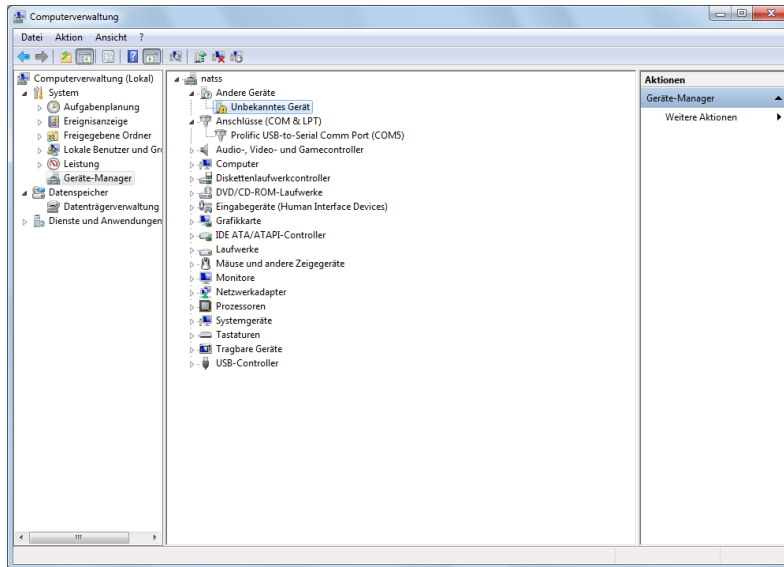
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4. To open the device manager open the **start menu**, and type “computer” into the **search text box**. You should see several hits with one program called **Computer Management**. Right-click on this entry and choose **Run as administrator** from the context menu. Windows will ask for your administrative credentials.



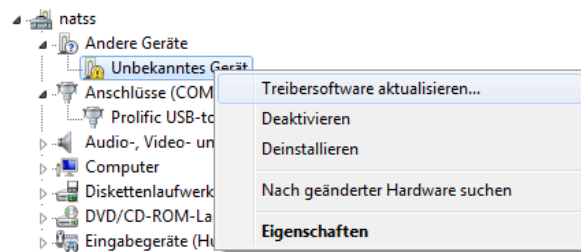
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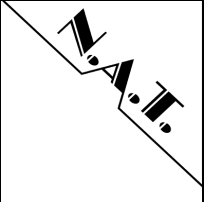
5. The following window will show up: the **Computer Management** application. (The german name for Computer Management is indeed “Computerverwaltung”.)



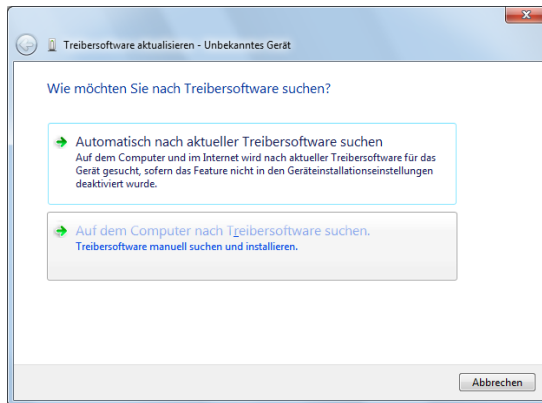
6. Look for a section called **Other Devices** (in german “Andere Geräte” – as the Device Manager sorts its entries alphabetically you will find it more likely at the lower part of the device tree).

Click on the black triangle to open the section which should reveal at least one device entries named **Unknown Device** (in german “Unbekanntes Gerät”). Right-click on it and select **Update Device Driver** (in german “Treibersoftware aktualisieren”). This should start the driver installation process.

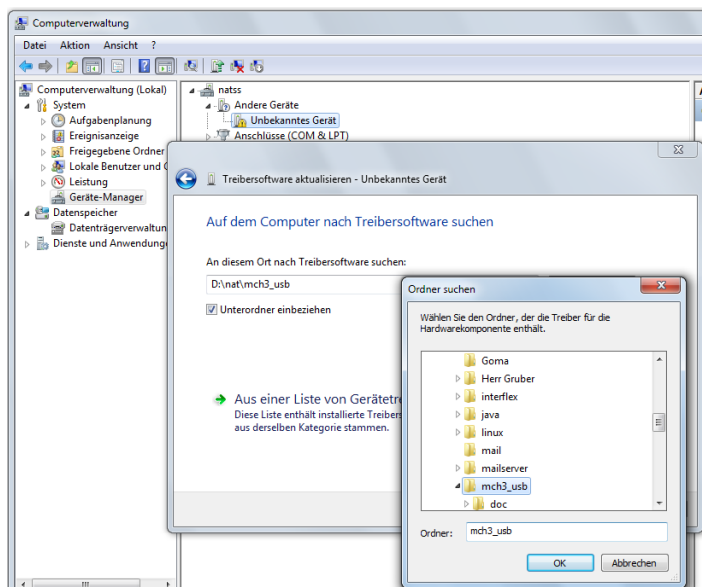


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7. The next step is to advice Windows not to search for the device driver on its own. Select **Search the computer for driver software** (in german “Auf dem Computer nach Treibersoftware suchen” – I guess that this command is always second).



8. Locate the device driver directory that contains the **nat_mch_32+64bit.inf** file. Make sure that the option **Include subdirectories** is selected (in german “Unterordner einbeziehen”).

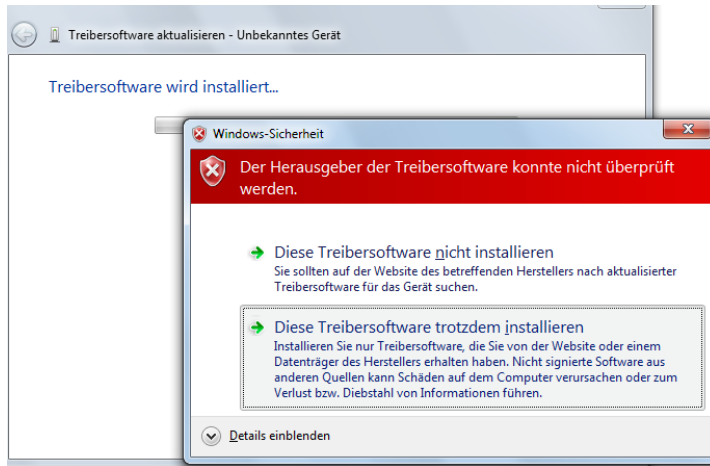


Confirm all boxes to start the installation.

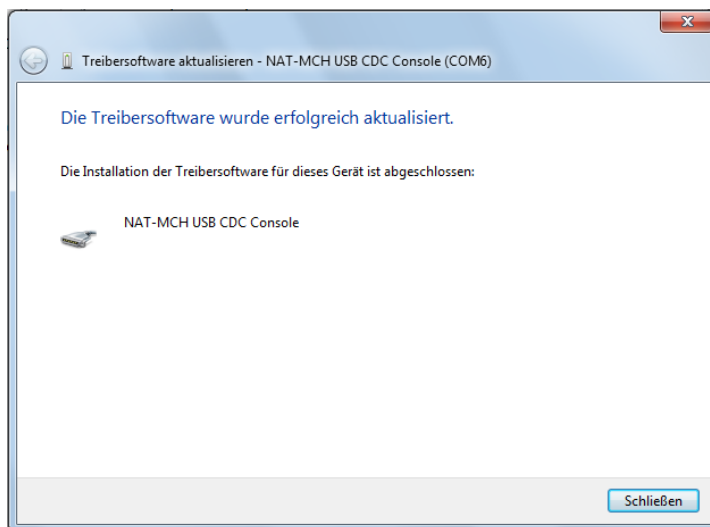
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Ablage: d:\nat\mch3_usb\doc\mch3 usb driver installation.doc			

9. Once in a while Windows will complain about the missing driver certificate (like shown below). Tell Windows to continue the installation anyhow. (I don't know how this is expressed in the english Windows version but it should be the second command in this message box. Simply click on the one that tells Windows to continue its work.)



10. Finally the driver installation is done:



Now the USB debug port can be used. The COM port being assigned to it can be looked up in the device manager.

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