

DMX USB PRO

User Manual



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www.enttec.com

Package Contents

Your DMX USB PRO package should contain these items:

- DMX USB PRO (Part No. 70304)
- Driver for Windows™ software on the Enttec CD-ROM (Part No. 79106)
- USB Cable (Part No. 79110)
- This user manual (Part No. 79107)

If any item is missing or damaged, please contact your supplier immediately.

To be sure that you are using the latest revision of the Driver software with your DMX USB PRO, please visit the **Downloads** section of the Enttec website at www.enttec.com to get the current version.

DMX USB PRO

User Manual

Firmware V1.43

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Warranty

ENTTEC warrants that the product that it manufactures will be free from defects in materials and workmanship for a period of one year from the date of shipment from an authorised ENTTEC wholesaler. If the device proves defective within the warranty period, ENTTEC will repair or replace at its sole discretion, the defective hardware. If the failure is due to an operator error, the user accepts the responsibility to pay any costs incurred in the diagnosis of the hardware, parts or shipping from our service facility.

ENTTEC makes no warranty of any kind, express or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose. In no event shall ENTTEC be liable for indirect, special or consequential damages.

Opening the case of the unit voids the warranty as described above.

Contacting ENTTEC

Email: contact@enttec.com
Telephone: +61 3 9819 2433 GMT+10
Facsimile: +61 3 9819 2733
Postal Address: ENTTEC Pty Ltd
PO Box 282
Kew
Vic 3101 Australia

Getting Support

If you require support for the DMX USB PRO or the Driver software, please visit the Support area of our website at www.enttec.com. There you can fill out a support request ticket for prompt assistance with your enquiry.

Typographic conventions used in this manual

Buttons: Software button names and menu command options appear in a special typeface. Eg. The name of the Windows™ "Start" button is printed as ***Start***.

Data boxes: The names of the boxes where data is entered appear in a different typeface. Eg. The name of the "Delay" entry box is printed as ***Delay***.

Getting to know your DMX USB PRO

Thank you for purchasing the DMX USB PRO. At Enttec we are proud of our products and we hope you will enjoy using them as much as we enjoy designing and building them.

The DMX USB PRO is a hardware interface which can convert between a computer, by plugging it into a Universal Serial Bus (USB) and various types of lighting equipment, via the industry standard DMX512 protocol.

The accompanying Driver software allows the computer to control and configure the DMX USB PRO..

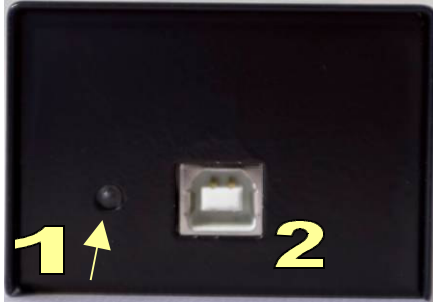
Features

The DMX USB PRO provides:

- Full 512 channel universe of input or output
- Adjustable Frame Rates and empty frames to accommodate non-standard equipment

Layout

The DMX USB PRO case is 1.8" (46mm) in height, 1.6" (40mm) wide and 2.5" (80mm) deep. It is easily stored on a tabletop next to the computer to which it is attached, and can slip conveniently into a laptop carrying case if desired.



DMX USB PRO front panel

- 1 **LED status display**
Indicates operational status
- 2 **USB receptacle**
Universal Serial Bus data connector for connection to computer.



DMX USB PRO back panel

- 3 **XLR 5pin Female**
DMX512 Output. Connects to your DMX512 network of fixtures, dimmers, etc.
- 4 **XLR 5pin Male**
DMX512 Input. Connects to a DMX512 lighting controller.

Fast track guide to the DMX USB PRO

- Install and configure the Driver software on your Windows™, Linux™ or Mac™ computer. (see *Installing Driver* on page 9)
- Connect the DMX USB PRO to your computer and the DMX512 control network. (see *Connecting the DMX USB PRO* on page 11)
- Load the control software of your choice onto the computer. (see *Using the DMX USB PRO* on page 17)
- Run the software and create your show.

Installing DMX USB PRO

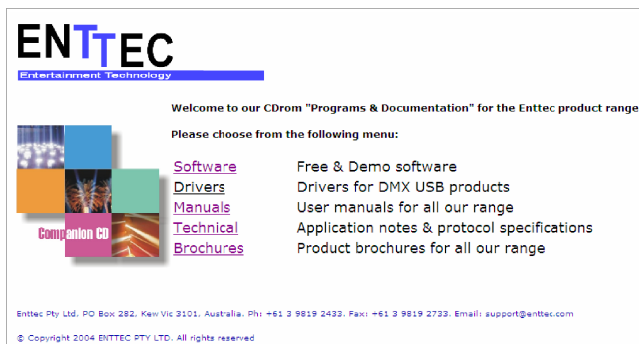
Installing Driver

The DMX USB PRO is supported by drivers for the following Operating Systems:

- Windows 98/ME™
- Windows 2000/XP™ (32 bit)
- Windows XP™ (64 bit)
- Apple OSX™ (Power PC™)
- Apple OSX™ (intel™)
- Linux
- Free BSD

This manual will cover the Windows XP™ installation process, by way of example. Others will be similar, but the particulars of how each operating system works in terms of screen shots have been omitted for brevity.

Before plugging in your DMX USB PRO to your computer, please install the driver. To do this, load the CD which came in the package into your CD-ROM drive or any drive capable of reading it.



The illustration above shows the opening splash screen menu, from which you will want to choose Drivers. That will take you to the next screen.

ENTTEC
Entertainment Technology

Drivers

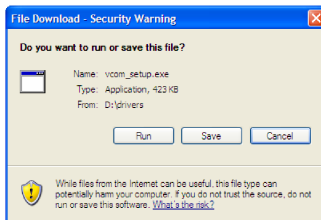
D2XX Driver install This program will install the D2XX drivers **required for the Open DMX USB**. When installing windows will prompt you to overwrite the current drivers, you **MUST** click on "Proceed". [Download](#)

VCOM Driver Install This program will install the VCOM drivers required for the DMX USB Pro. Please note that Windows 2000 & XP should already have the drivers installed. Only run this if windows cannot detect the hardware or is asking for drivers. [Download](#)

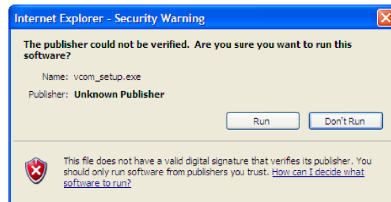
[Explore drivers folder](#)

At this point, since you are installing the Pro device, select the lower option; you will be installing the VCOM

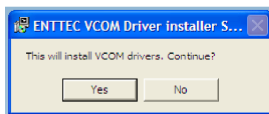
Driver.



A dialogue box will open asking if you want to run, save or cancel this file. Select Run.

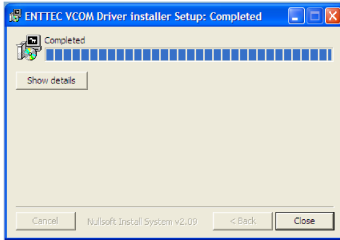


You may then see another dialogue warning you that this driver is not familiar to your Windows Operating System. This is no cause for alarm, and many reputable but small developers skip the red tape involved in getting this warning not to appear. If you wish to continue, select Run.



One more box will come up, asking if you wish to continue to install the VCOM drivers. If you made it this far, and are reading this manual, you probably do, so please click on “Yes”.

This third and final confirmation can be seen as part of a formulaic ritual to be certain you really wanted to go here. Like the three wishes of a fairy tale, or the repetition of the genie in the bottle, after completing this gauntlet, you can expect the driver to grant your every DMX request.



The progress bar will fill up increasingly as the driver install, and when it finishes, you will be able to click on Close, to make the installation window go away.

Congratulations! The driver is now installed. Your next step will be to teach Windows that this driver belongs with the hardware you have purchased.

Connecting the DMX USB PRO

USB

You may now plug in the cable to connect the DMX USB PRO device to your computer. One end, the roughly square shaped plug, will fit the USB port in the DMX USB PRO. The other end, which is wider and almost flat in comparison, goes to any available USB port in your computer. You may also plug it into a USB hub, but when doing so be sure that enough power exists on that hub to provide for the device and all other power-over-USB devices plugged there as well.

When you make the connection to your computer, a few seconds may pass before anything happens. After that, a message should appear saying your computer has detected new hardware.

Power supply

The DMX USB PRO draws its power from the USB connection. There is no external power supply to carry around or to misplace. This does, however, mean you may encounter problems if you have too many USB devices plugged in to the same hub or the same computer. See the troubleshooting guide for further

information on this topic..

By this point you have probably plugged the USB cable in to the computer and the DMX USB PRO, so if you have, leave it that way. If not, now is a good time to do so.

DMX Out

The DMX Out socket is connected to the network of DMX512 devices that are to be controlled by the DMX USB PRO.

It is not necessary to have any connection to the DMX Out socket while programming the DMX USB PRO.

DMX In

The DMX In socket is connected to the DMX512 controller whose output is to be captured by the DMX USB PRO.

Powering up the DMX USB PRO

As there is no power switch, when the DMX USB PRO is plugged in to your computer, and the computer is running, that means the device should be powered on. You can confirm this by noticing that when first connecting it, the green LED status indicator light should blink once. Then, when a program has been initiated which takes control of lights, the LED will blink at a steady rate. The same blinking would occur if you were using it as a DMX input, and a program was receiving DMX signals from an external console.

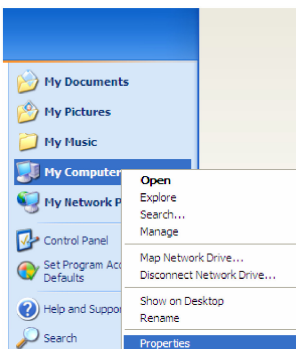
If the LED stays on without blinking, or never comes on at all, those are indicators of a problem, and you should turn to the troubleshooting guide to solve it.

Setting up DMX USB PRO

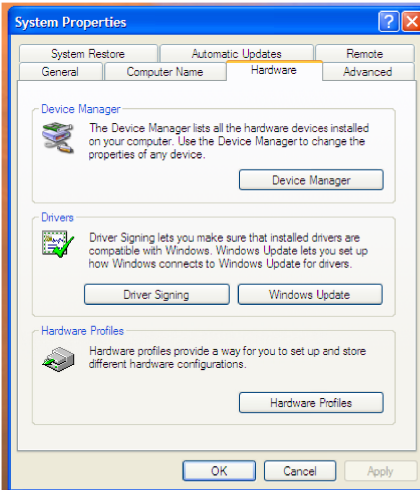
Selecting a COM port

In most cases the USB port you plug the DMX USB PRO into will automatically fall into an acceptable range with respect to the other elements of your computer's communications ports, but if you are having problems or conflicts between the ports, here is what you can do to change the COM port. Before making any changes, it is advisable to keep a record of which serial port has been used in each attempt to configure the hardware and drivers. That way you will be able to retrace your steps should you decide to go back and

try something again but with different settings elsewhere.

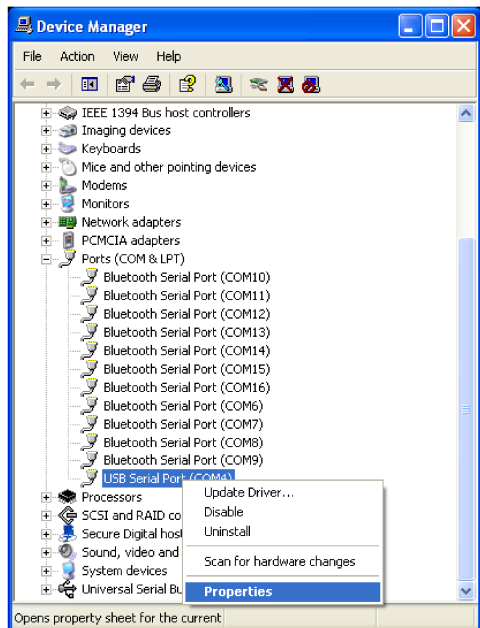


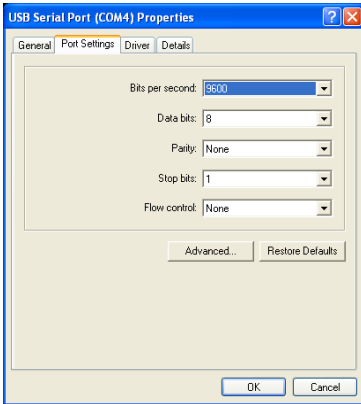
Click on your **Start** Menu, and then right-click on the icon for your computer. Select **Properties**.



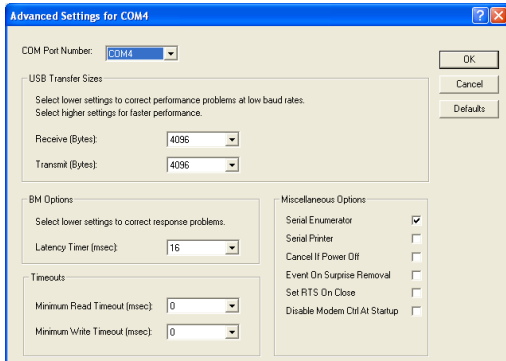
Then choose the **Hardware** tab, and click on the button for **Device Manager**.

Then scroll down to the Ports and select the one which has been assigned to the device. Right click on it and select **Properties**.





This will bring up a box where you can change communications settings for the port.



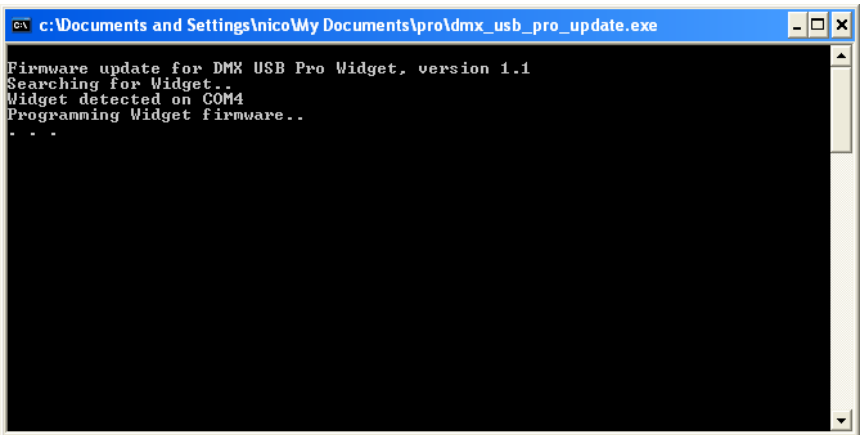
If you click on Advanced, this takes you to a window where you can choose a different COM Port number. Select a different port number and click OK.

Then close all the windows that got you to that point, with **OK** or **Apply**, and try using the device again.

Updating the Firmware in the DMX USB PRO

From time to time new versions of the firmware (internal operating software) for the DMX USB PRO may become available, to add features or fix an operational problem that has been discovered. Updates are made available from the **Downloads** section of the Enttec website at www.enttec.com.

After checking that the firmware available from the Enttec website has a higher version number than that currently installed in the DMX USB PRO (see *Firmware version* footnote below), download the file `dmx_usb_pro_update.exe`. Download it to your desktop, and run it, with your DMX USB PRO plugged in to the USB port while you do so. The screen which results will look like the following illustration.



1

That's all there is to upgrading the firmware.

1 Firmware Version: Use whatever program you normally access the DMX USB PRO with (such as LightFactory, Arkaos, Freestyler, Capture, etc.) and look in it for a notice about the firmware version.

Using the DMX USB PRO

Many software packages are available which use the DMX USB PRO as a means to communicate with devices that control or emit light.

- In output mode you can employ it to interface between a lighting control program and the devices that it affects. Those devices can be dimmers, stepper motors, another computer program, intelligent lighting instruments, or any DMX controlled devices., And the program doing the controlling can emulate the look and feel of a light board or have a more unconventional interface.
- It can also be used (thought not at the same time) in input mode to listen to the DMX signal being put out by another computer or light board. The DMX USB PRO will then give access to that information to some program which needs it to perform a useful task. That may be to control video streams according to the DMX values coming in, to emulate the appearance of a lighting rig for 3D visualization, to listen to an external console's output and make adjustments to lighting levels accordingly, or other features someone has yet to invent.

All of these options are available to you with the DMX USB PRO and software you can download or purchase from a variety of sources. See the list at the Enttec website, by clicking on Products, then the DMXUSBPRO, then links. You can also type in the following URL.

http://www.enttec.com/index.php?main_menu=Products&prod=70304&show=links

Troubleshooting the DMX USB PRO

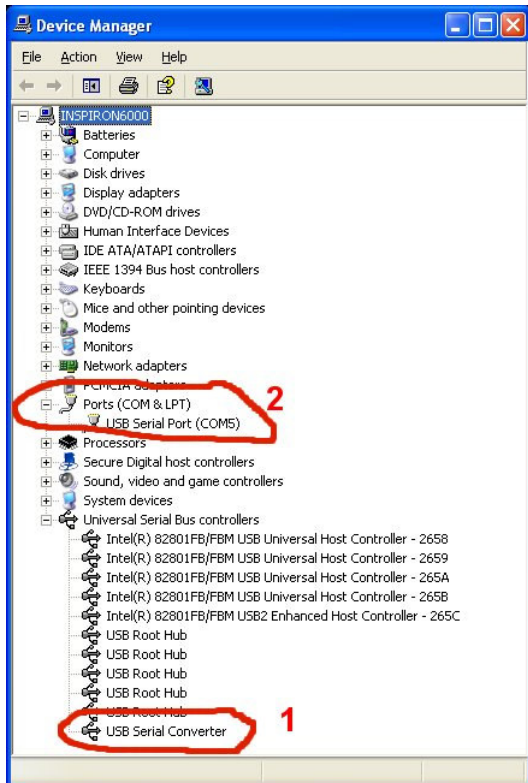
This section will help you troubleshoot any problems with the DMX USB Pro. **Disconnect the DMX USB Pro and reboot your computer. Do not start any programs, and go to step 1**

1-Plug in the DMX USB Pro. If the green light stays on, this usually means that the DMX USB Pro is waiting for new firmware. To confirm, please try unplugging and plugging back into the computer. If that fails to correct your problem, you will need to reflash the firmware. See the section in this manual on Upgrading the Firmware, or to read the latest on this topic at our website, point your browser to http://www.enttec.com/support-center/index.php?x=&mod_id=2&root=5&id=33

2-The green light is off but no programs find it:

Please open the windows device manager and check that you have items 1 & 2 as shown in the image to the right.

3-If items 1 & 2 are not identical (your device might appear on a different COM port eg: COM8) on your system please install the VCOM driver. This can be found on the



ENTTEC website:

http://www.enttec.com/dmx_usb/vcom_setup.exe

4-If item 1 & 2 have a yellow exclamation mark after installing the driver, you will need to force a driver install. Install the driver files by downloading the driver ZIP

http://www.enttec.com/dmx_usb/CDM_2.00.00.zip then unpack its contents into the directory c:\VCOM.

Left-click item 1 and select "**Update Driver**" and follow the screen shots below, the important settings have been circled in RED.

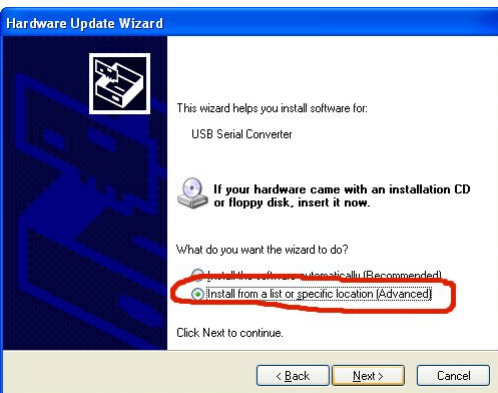


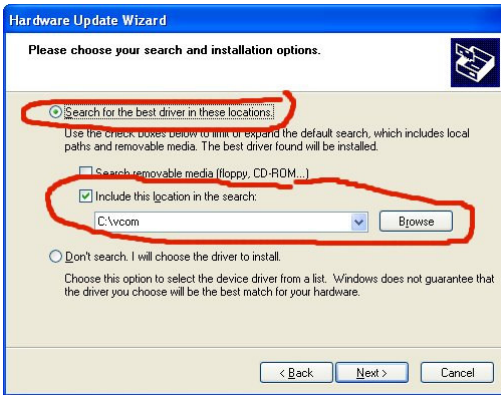
5-If your device manager now looks like the one above for section 1 & 2, the DMX USB Pro is now connected and configured correctly. If you still have problems, please check the software you are using.

6-If you still have the yellow exclamation marks or the items 1 & 2

do not appear in your device manager,

please change/swap the USB cable and/or the USB Port. You can also try installing your DMX USB PRO on another computer, to eliminate all possible causes of the problem.





7-After trying item 6 if the device still does not appear, please open a support ticket.

Appendix 1 - Connector Pinouts

DMX OUT

Pin 1	Ground
Pin 2	Data -
Pin 3	Data +
Pin 4	NC
Pin 5	NC

DMX IN

Pin 1	Ground
Pin 2	Data -
Pin 3	Data +
Pin 4	NC
Pin 5	NC

Appendix 2 - FCC Declaration

Federal Communications Commission (FCC) Declaration of Conformity

Responsible Party: ENTTEC Pty Ltd
PO Box 282,
Kew, Vic, 3101
Australia

declares that the products DMX USB PRO complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit

different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

* In order to maintain compliance with FCC regulations shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and television reception.

Appendix 3 - EEC Declaration

We

ENTTEC Pty Ltd
PO Box 282,
Kew, Vic, 3101
Australia

declare under our sole responsibility that our product DMX USB PRO conforms to the requirements of Council Directives 89/336/EEC and 73/23/EEC and therefore complies with the requirements of Council Directive 73/23/EEC, (The Low Voltage Directive) on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits as amended by Article 13 of Council Directive 93/68/EEC

- EN 55103-1
- EN 50103-2
- EN 60065/AS 3650

Signed Nicolas Moreau

Date: 10/10/2000

Position: Technical Director