

GraphicsSystem



AGP Graphics Card

English Manual

Version: 25.09.02

CE Declaration

We:

TerraTec Electronic GmbH, Herrenpfad 38, D-41334 Nettetal, Germany

hereby declare that the product:

TerraTec Mystify 4600

to which this declaration refers is in compliance with the following standards or standardizing documents:

1. EN 55022 Class B

2. EN 55024

The following are the stipulated operating and environmental conditions for said compliance: residential, business and commercial environments and small-company environments.

This declaration is based on:

Test report(s) of the EMC testing laboratory



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Introduction

Package content

Your TerraTec graphics board package should contain the following documentation, hardware and software:

- 1 x TerraTec Mystify 4600 VGA graphics board
- 1 x Getting Started guide
- 1 x CD ROM with VGA card drivers, manual, Cyberlink Power DVD 4.0 XP and Acrobat Reader software
- 1 x S-Video In/Out cable (or individual)
- 1 x DVI-I - VGA adapter
- 1 x registration card
- 1 x Service request form

If the package is incomplete or the contents damaged, please contact your retailer as soon as possible.

What can you expect from your new hardware?

With the GeForce4 Ti series, NVIDIA presents a revolutionary graphics system for unparalleled effects and graphics performance on your PC.

It includes leading technologies such as the innovative nfiniteFX™ II engine, sophisticated Accuview Antialiasing™ techniques and the flexible nView™ multi-display technology. So, hang onto your seat, because we're at the threshold of a whole new world of graphics performance.

Chipset

- nVIDIA GeForce4 Ti 4600 multi-display GPU
 - GPU speed: 300 MHz
 - Memory speed: 650 MHz
 - Fill rate: 4.8 billion texels/sec.
 - Triangles per second: 136 millions
 - Memory bandwidth: 10.4 GB/Sec.
 - Maximum memory: 128 MB

Interface

- AGP 2.0 compatible
- AGP 4X /2X and AGP texturing supported

Technologies

- nView Display technology

nView hardware and software technology offers maximum flexibility, especially in multi-display applications. But not only that. It also offers users completely new options to turn their PC graphics into a truly compelling experience. NView supports connections to a variety of output devices such as flat screens, TVs, or analog CRTs in any combination.

The display properties can be controlled using a simple software application with an intuitive user interface.

- Lightspeed Memory Architecture, LMA II Technology

The new LMA II technology increases effective memory bandwidth by up to 300%. Innovative technologies such as Z-occlusion culling, fast Z-clear and auto pre-charge guarantee fluid frame rates even with the latest 2D and 3D applications.

- Accuvie Antialiasing

The Accuvie antialiasing subsystem with multisampling provides a degree of edge smoothing and natural depiction of complex objects previously unreachable on normal PCs.

- MX Memory Crossbar
- Two integrated 350 MHz DACs
- Video Processing Engine (VPE)
- Two 350 MHz DACs
- Integrated two-channel TMDS transmitter

Memory interface

- Supports 32/64 MB DDR SGRAM

TV Output

- Integrated TV encoder
- Supports one S-Video TV output
- Digital NTSC or PAL output
- Supports external digital TV

DVI-I function

- Integrated two-channel TMDS transmitter
- Maximum resolution 1280 x 1024

Miscellaneous

- Optimized support for Microsoft® Windows® XP
- Unified Driver Architecture (UDA)
- Complete OpenGL® 1.3 and OpenGL support
- Optimized for Microsoft DirectX®

System requirements

Computer system

- Intel® Pentium 4/III/II Celeron, AMD® K7/K6 or compatible with AGP 2X or AGP 2X/4X slot
- VGA/Super VGA monitor with a resolution of at least 640 x 480
- 32 MB RAM or higher
- CD-ROM drive

Operating system

- Microsoft® Windows 9x/ME/2000/XP must be installed on your computer to take full advantage of the card's 4 x AGP mode (133 MHz).

Connections

- 15-pin D-SUB female VGA port
- 4-pin female S-Video output
- 29-pin female DVI-I port

S-Video In/Out cable connection

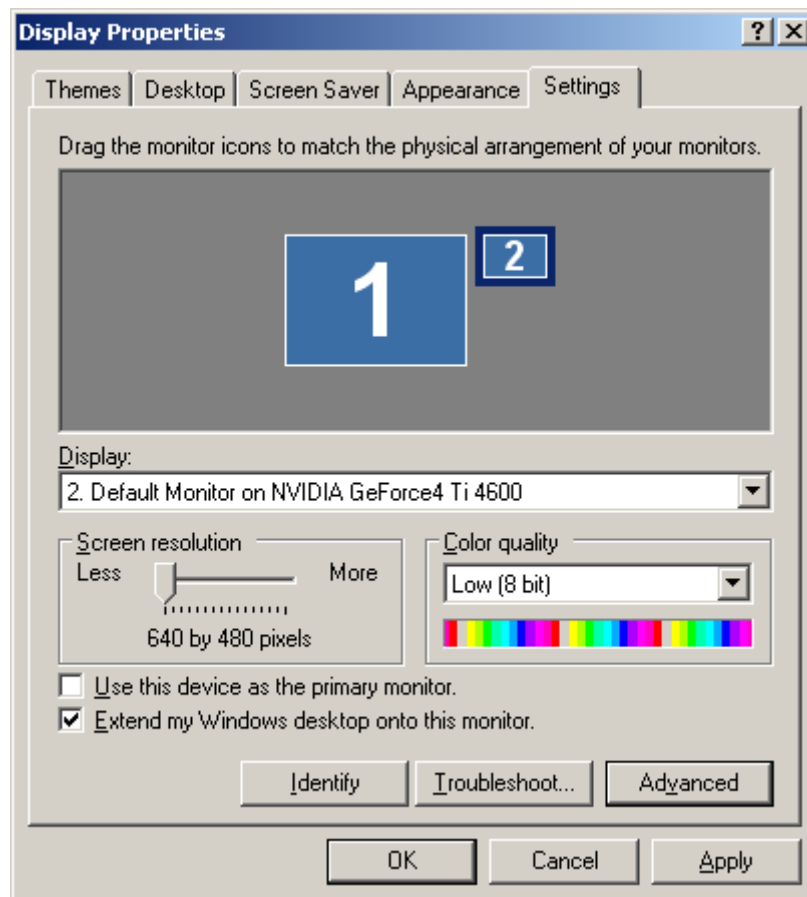
The Geforce4 Titanium Series can easily be connected to TVs via the S-Video output. Simply connect an S-Video cable from the appropriate output of the graphics card to the input of your TV. Please note that some older TVs do not support the S-Video format. (For further information, please check the manual of your TV.)



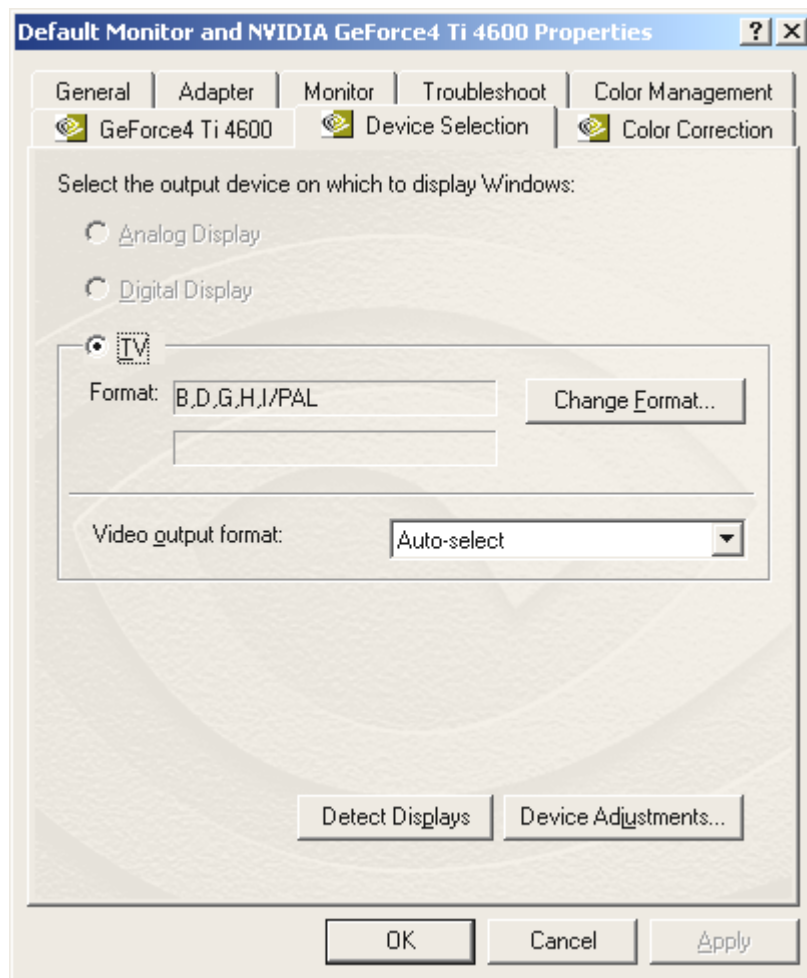
NTSC-PAL switching

If you encounter unexpected problems using your TV as a monitor, this may be due to the NTSC setting. Please follow the description below to switch to PAL.

1. In the Windows Control Panel, open “Display” and click on “Settings”.



2. Click “Monitor 2”.
3. Click “Extend my Windows desktop onto this monitor”.
4. Click the “Advanced” button.
5. Click “Device Selection”.



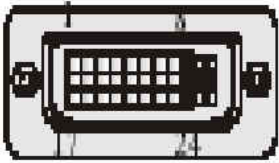
6. “Change Format...”, to “PAL” – “OK” – “Apply” - finished!

Pin assignment

Video connection to monitor

	1	Analog red output	10	Ground
	2	Analog green output	11	Not connected
	3	Analog blue output	12	SDA (DDC)
	4	Not connected	13	TTL horizontal sync
	5-8	Ground	14	TTL vertical sync
	9	Not connected	15	SCL (DDC)

DVI-I connection

	1 T.M.D.S.* Data2-	13 T.M.D.S.* Data3+
	2 T.M.D.S. Data2+	14 +5V
	3 T.M.D.S. Data2/4 Shield	15 GND(for+5V)
	4 T.M.D.S. Data4-	16 Hot Plug Detect
	5 T.M.D.S. Data4+	17 T.M.D.S. Data0-
C1 Analog Red	6 DDC Clock	18 T.M.D.S. Data0+
C2 Analog Green	7 DDC Data	19 T.M.D.S. Data0/5 Shield
C3 Analog Blue	8 N/C	20 T.M.D.S. Data5-
C4 Analog Horizontal Synchronized	9 T.M.D.S.* Data1-	21 T.M.D.S. Data5+
C5 Analog Ground (R,G & B return)	10 T.M.D.S.* Data1+	22 T.M.D.S. Clock Shield
	11 T.M.D.S. Data1/3 Shield	23 T.M.D.S. Clock+
	12 T.M.D.S. Data3-	24 T.M.D.S. Clock-

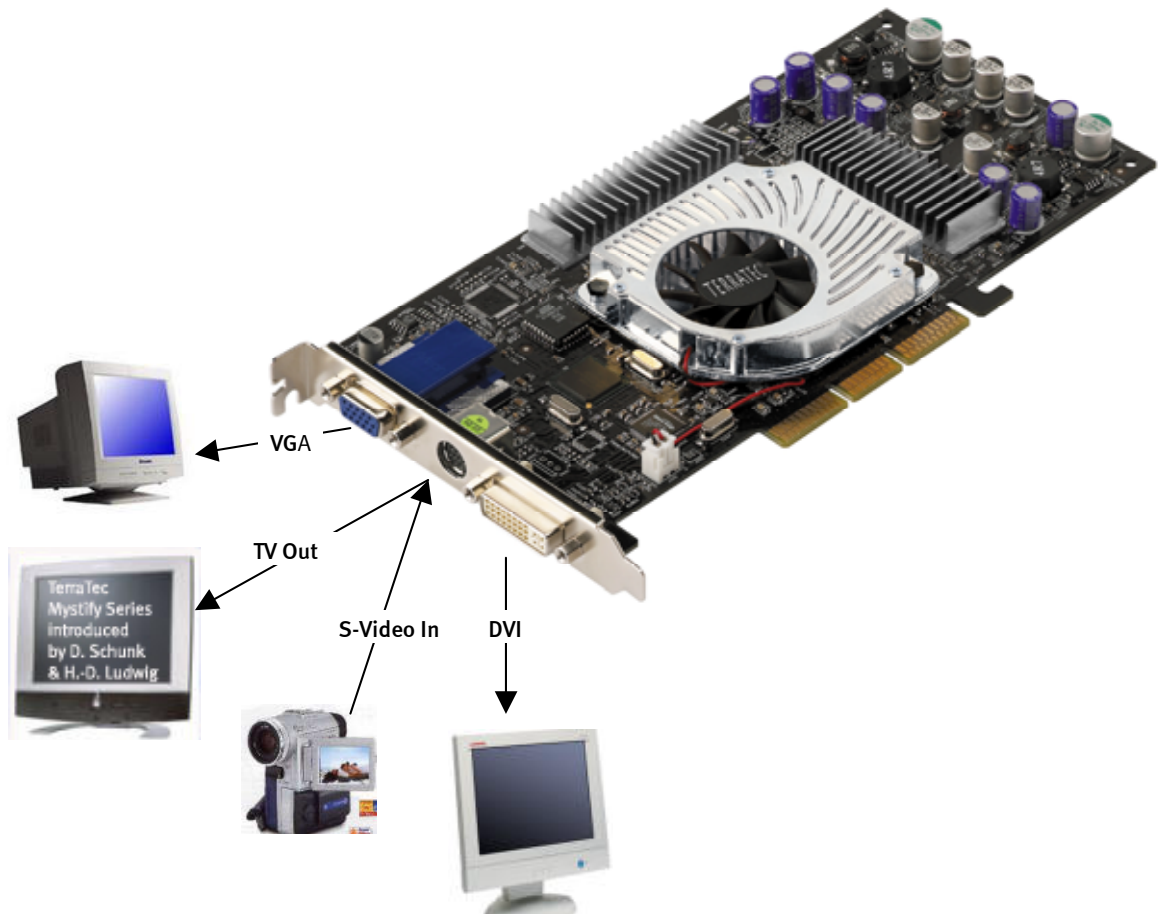
*T.M.D.S. Technology

Graphics signals sent to the monitor through the board are encoded using T.M.D.S. technology which converts the 8-bit data stream to 10-bit data. This ensures the highest possible performance and reduced EMI when using copper cables. In addition, the TDMS algorithm provides robust clock stability for optimal picture quality even when using unusually long, old, or low-quality cables.

Hardware installation

The board and its connections at a glance

Please note: This illustration is intended as a typical example. The appearance of your graphics board may vary!



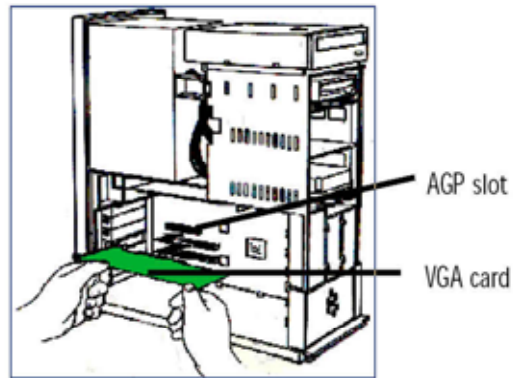
Preparing your computer

Please set your operating system to operate with a standard VGA graphics board. In Windows, you can find this function in the Control Panel.

Please note: Beware of electrostatic discharge. It can cause severe damage to sensitive computer components. When installing the graphics board, be sure to ground yourself by wearing an antistatic wrist strap or touching metal parts of the PC before touching electronic components.

Installing the card

1. Switch the computer off (leave the power cable connected, however, to ensure that the computer is grounded) and remove the monitor plug.
2. Open the case. Don't forget to ground yourself before touching the old or new graphics board.



3. Remove the old graphics board if present. First, remove the screw holding the slot plate of the card to the case. Grasp the card by the edges and carefully pull it out of its slot. Next, carefully insert your TerraTec Mystify 4600 into a free AGP slot and gently press it into the slot until completely seated.
4. Replace the screw in the case to retain the graphics board and close the case.
5. Reconnect the monitor cable and switch on your PC and monitor.

Installing the TerraTec Mystify graphics board driver software

Introduction

In this chapter we'll briefly explain how to install the drivers for your TerraTec Mystify graphics board. A setup program can be found on the included driver CD.

Here's how: installing the drivers

The driver software on your CD includes the following components:

- Windows 9x/ME/2000/XP drivers
- Microsoft DirectX 8.1

Driver installation

The setup program

The installation of the drivers in Windows 9x/ME and Windows 2000/XP is child's play thanks to the user-friendly setup program.

Installing the drivers under Windows 9x/ME/2000/XP

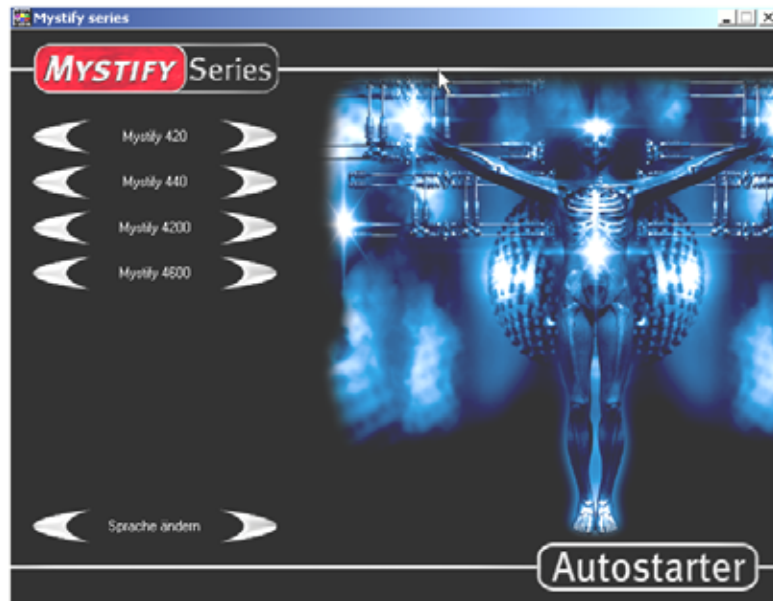
1. Install the TerraTec Mystify graphics board on your mainboard (see previous chapter)
2. Start your computer
3. Boot your Microsoft Windows operating system
4. Insert the TerraTec CD in your CD-ROM drive. If the CD does not launch automatically, double-click "**autorun.exe**" of the CD. This will launch the autostarter of the Mystify series.

Please note: DirectX 8.1 or higher must be installed before installing the driver software. To install DirectX 8.1, click on a Mystify 4xxx button on the welcome screen. Next, click the "DirectX" button, then "DirectX" again. Follow the instructions which will then be displayed. Next, install the drivers, as explained below starting with item 5. For more information on DirectX, see section Reference, page 16.

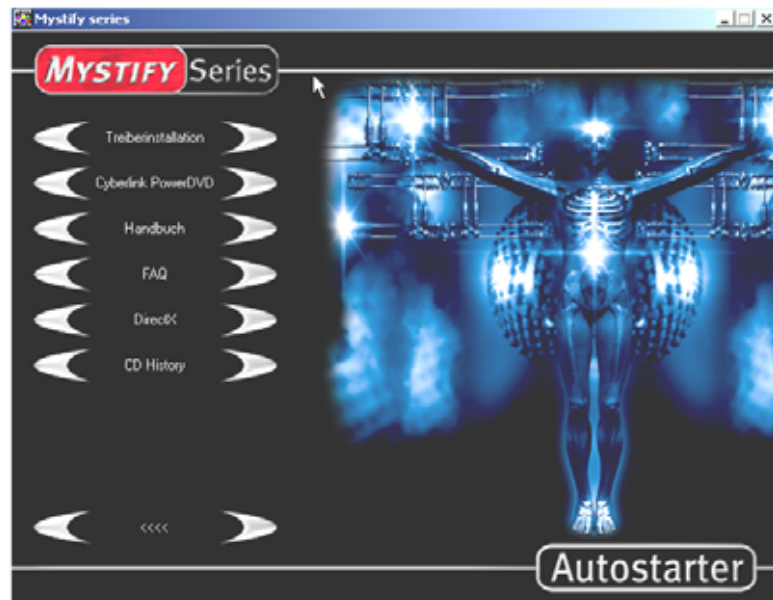
If DirectX does not launch automatically, double-click dxsetup.exe on the CD.

5. Please select the correct button for your graphics board.

* When installing the card in Windows for the first time, you will generally be prompted to install the drivers when Windows boots. We recommend canceling this process (simply click the "Cancel" button).

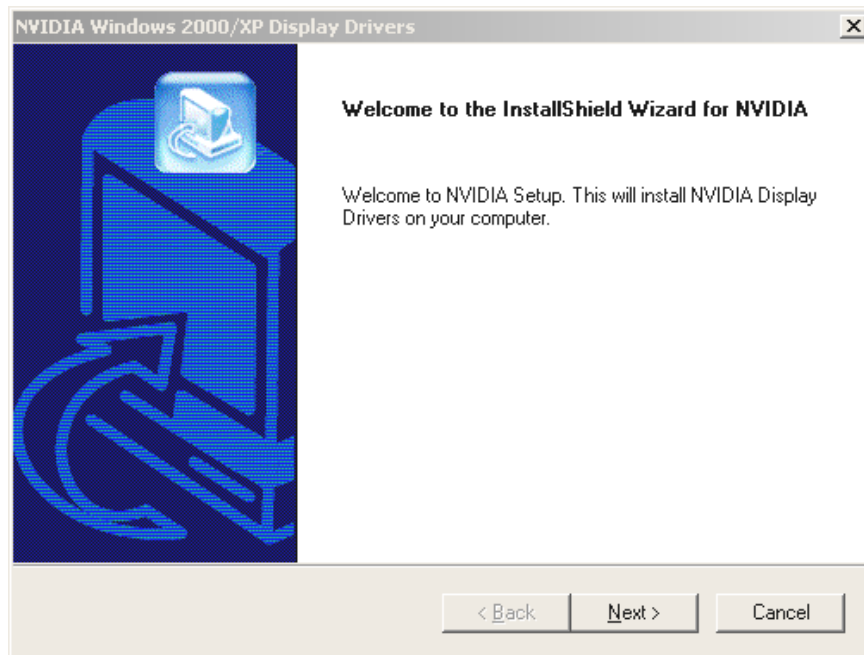


6. Next, click on the “Driver installation” button.



Windows will now automatically launch and display the setup program. If you have disabled the autorun function of your CD drive, please launch the nVidia setup file manually.

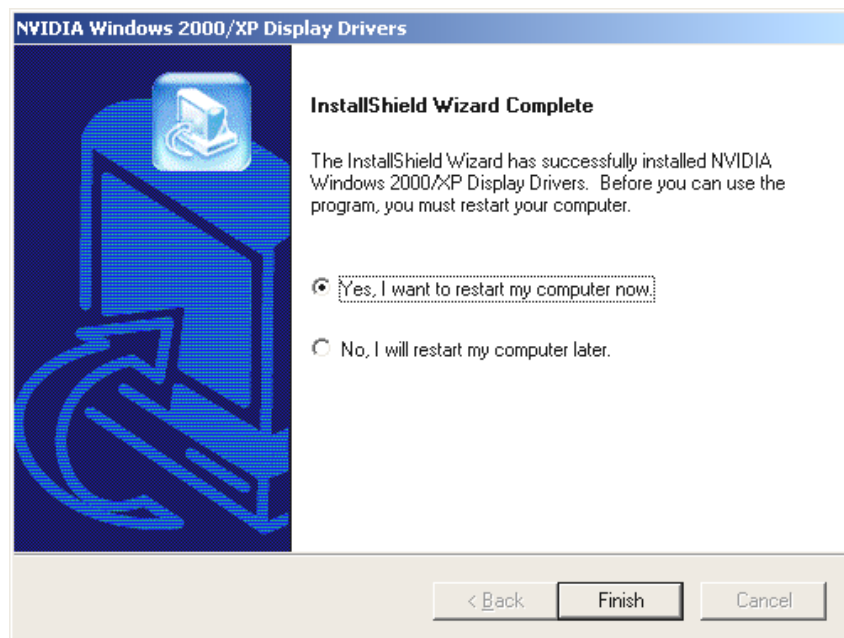
7. The following window will now appear on your monitor.



8. Click “Next” to start the installation.

9. Follow the instructions which will then be displayed.

10. Click “Finish” to restart your PC. The driver configuration will then be updated automatically.



After restarting your computer, set the screen resolution of your monitor under “Properties/Display Properties/Settings”.

Advanced users who would like to install the drivers manually should proceed as follows:

Important! In the following, D: stands for a CD-ROM drive. Replace D: with the actual drive letter of your CD-ROM as required.

Under Windows 9x/ME

In the Control Panel, open “Display” and click SETTINGS/ADVANCED.../ADAPTER/CHANGE. Here you will find an option for the manual installation of drivers. Specify the file **NVAML.INF** for installation. You can find this file in the Drivers folder of the included CD. Replace the drive letter “D:” with the actual drive letter of your CD-ROM drive. Follow the additional instructions which will then be displayed.

Under Windows 2000/XP

In the Control Panel, open “Display” and click SETTINGS/ADVANCED.../ADAPTER/CHANGE. Here you will find an option for the manual installation of drivers. Specify the file **nv4_disp.inf** for installation. You can find this file in the Drivers folder of the included CD. Replace the drive letter “D:” with the actual drive letter of your CD-ROM drive. Follow the additional instructions which will then be displayed.

Via CD, selection of nVidia setup

On the Mystify CD, open the folder for your operating system and launch the file **Setup.exe**. Follow the additional instructions which will then be displayed.

Software

Cyberlink Power DVD XP 4.0

PowerDVD XP 4.0 is a powerful DVD application for maximum audio and video performance and a range of features that will turn your PC into a versatile entertainment center. The PowerDVD user interface is intuitive and easy to use, letting you concentrate on the essentials: a first-class visual and audio experience.

Reference

DirectX TM

DirectX is a set of APIs (application programming interfaces) developed by Microsoft. It forms the foundation for sophisticated audio and graphics on Windows-based systems.

The performance of graphics-intensive software (generally games) is optimized significantly by the use of DirectX. That also applies to sound effects and even for input devices such as joysticks and mice. As a constant, shared interface, DirectX offers hardware developers and software programmers a shared standard for the development of ever more sophisticated and fascinating technologies. It also simplifies the installation and configuration of software. DirectX consists of several components: DirectDraw, DirectSound, DirectPlay, Direct3D and DirectInput.

Direct3D TM

Direct3D is the next generation of interactive real-time 3D applications for standard PCs and the Internet. Direct3D offers software-based rendering with the full range of options (transformation, lighting and rasterization) as well as direct access to hardware rendering. This permits some or all of the software rendering to be transferred to the hardware, resulting in a significant acceleration thanks to the reduced CPU load. The TerraTec Mystify 420 supports and accelerates Direct3D.

Declaration of compliance with FCC standards

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. This equipment generates, uses, and can radiate radio-frequency energy. Incorrect use may lead to radio-frequency interference. However, there is no guarantee that interference will not occur in a particular installation. You can determine whether this device is causing interference by turning it off. If the device does cause interference, try to correct it by using one or more of the following measures: Turn the television or radio antenna until the interference stops.

- Move the device farther away from the receiver.
- Plug the device into an outlet that is on a different circuit from the receiver.
- Consult your retailer or an experienced radio/television technician for additional suggestions.

Only devices designated as Class B may be connected and must feature shielded satellite cables. Changes or modifications to this product not authorized by the group responsible for the adherence to the regulations could void the FCC certification and negate your authority to operate the product. This device complies with the specifications in Part 15 of FCC rules. Its operation is subject to the following rules: 1.) The device must not emit dangerous radiation. 2.) The device must accept interference, including interference that may lead to faulty operation.

Limited warranty

TerraTec Electronic GmbH (hereinafter: “TerraTec”) guarantees the first buyer (hereinafter: “buyer”) the product's freedom from defects in materials and workmanship for a period of 24 months if used as intended, installed in the original system under the conditions specified below. This warranty does not cover problems of compatibility with hardware, software or alternative configurations used with the device. In the event of damage covered by this warranty, TerraTec shall repair or replace the device free of charge at its own discretion.

TerraTec reserves the right to replace the device with a comparable or superior model. Such replacement devices may be reconditioned or may contain reconditioned parts. Repaired or replaced products shall be subject to the same terms of warranty.

This limited warranty does not cover incorrect use, misuse, improper handling, accidents, improper installation or other reasons not related to defects in materials or workmanship. TerraTec reserves the right to invoice repairs performed for any of the reasons specified above as appropriate. This shall also apply to the return of equipment which is in good operating condition. Memory or other components that were not originally supplied with this product are not covered by this warranty.

In the event of warranty claims, please contact TerraTec technical support. You must have spoken to one of our services staff members before returning a device to us. You will be given an RMA (return material authorization) number and information on how to proceed with the return of your damaged product. No TerraTec product will be accepted for repairs without an RMA number and proof of purchase. The sales slip or invoice shall suffice as proof of purchase. The costs for shipping of the product to be repaired by TerraTec shall be borne by the sender.

No other warranties are made, express or implied, including but not restricted to warranties with regard to suitability for a specific purpose or commercial viability. TerraTec shall under no circumstances be held liable for damages arising from the deployment or installation of a TerraTec product or from the infringement upon an express or implied warranty. TerraTec's liability toward the buyer shall be limited to the purchase price of the device in the event that damages arise from the use of the device or negligence by TerraTec. TerraTec reserves the right to investigate and verify damage to any and all products or components. This warranty does not apply to software components.