Correctly Installing PCI Soundcards

First...

This document is designed for users who want to check their knowledge of PCI card installation routines and possibly even learn something new along the way :-)
This document will follow a step-by-step installation for a soundcard. This is of course applicable for TV cards or other PCI hardware as well.

Please be aware, TerraTec cannot be held responsible for possible damage that may result from using this information.

Before the Installation

Even if you already have itchy fingers to get cracking on your new audio composition, it pays to remain calm and keep your wits about you. The few minutes before installing the new card will determine the success of the installation and quite possibly affect the quality of the newly installed product.
Because soundcards are particularly sensitive to improper configurations, we recommend you take the following steps:

Open the package and check the contents

In particular, the PCI card itself should be checked for mechanical integrity. It is also recommended to check the contents list from the manual to make sure all the components are   present.

Driver CD version/age verification – driver update

Unlike the common handbook allergy many suffer from, an allergy against old driver CDs can generally be viewed as positive :-) This „condition" leads one to always demand the newest driver/software versions and update CDs.
This is not strictly necessary, but it is generally recommend to use the newest drivers and software available for your devices. These are best downloaded directly from our website under www.terratec.com and installed according to the following instructions.

Uninstalling old soundcards

This is particularly important for onboard soundcards, which are commonly integrated directly on newer mainboards. It is likely because the quality and functionality of these chips is often less than desirable that you are holding a new PCI soundcard in your hand at this very moment :-).

Best is to uninstall the old soundcard drivers and then remove the old card before you even open the anti-static bag on the new card.

Should you have questions about the proper method of achieving this goal please contact your mainboard or soundcard manufacturer, who should be very familiar with every last detail of their components.

Due to the fact that modern mainboards come in many flavors and revisions, it is impossible for TerraTec to provide you with adequate information regarding proper deactivation of integrated devices. Consult your mainboard manual or contact the manufacturer for specific information.

RTFM (read the f… manual :-)

Commonly decreed in a somewhat louder tone, this desperate pleading to pay attention to the documentation should not be ignored. Sometimes a brief glance at the handbook can provide insight into unresolved issues.

Step One: Preparing the Driver

Many manufacturers, us included, tend to view their hardware as lovable new additions to the PC family - and like a newborn they require an adequately prepared nest to develop properly. The simplest manner of fulfilling these obligations is to install or prepare the driver before actually installing the soundcard.

WinZip Self-Extractor	**WinZip Self-Extractor - DMX6fire2496_App_Drv_...**	**WinZip Self-Extractor**
TerraTec DMX 6fire 24/96	To unzip all files in this self-extractor file to the specified folder press the Unzip button.	8 file(s) unzipped successfully
WDM Treiber Version 5.0.2000.128	Unzip to folder:	
WDM ControlPanel Version 1.00.00.128	C:\TerraTec\DMX6fire2496\ Browse...	OK
for Windows 985E, ME, 2000 und XP	☑ Overwrite files without prompting	
TerraTec Electronic GmbH	☑ When done unzipping open: notepad	
http://www.terratec.com	Unzip / Run WinZip / Close / About / Help	
OK		

Start message from update.exe with version info. | Main window with target menu for decompressing files. Action confirmed with „Unzip" | Unzip confirmation with the number of successfully unpacked files.

We are assuming here that you have downloaded the newest driver from our website. This is generally „update.exe" or two *.exe files with two essential components :

Driver (Short DRV)	The driver is the most important part of the installation process. Without the driver nothing is possible. The card cannot be integrated into the system, will not function, and cannot be used in conjunction with any software.

Control Panel or Software (Short APP or software)	This software compliments the driver implementation in your system. It communicates with the driver and regulates the basic hardware configuration (i.e. volume, digital ports, frequency, or shoe size :)

This type of software must be installed in the aforementioned order: software -> driver. Run the update.exe or DRV files. The so-called SFX (Self – Extracting – Executable) will appear, much like an executable ZIP file, and ask for an extraction destination. Using „c:\driver\soundcard" as example, make note of the path and start the decompression, which is typically achieved by pressing the „OK", „Unzip", or „Install" button.

After having successfully run update.exe, access the folder used above in Explorer and start the software installation waiting in the Control Panel/Software/Application folder. As soon as the installation is finished, shut the PC off completely.

Step Two: All Aboard!

First a warning. Your PC runs on electricity, and even though the critical components are well shielded, do not forget that playing with electrical devices can be dangerous.

Even when the freaks swear by it, leaving the power supply cable connected to the PC as a ground cannot be recommended, particularly not for beginners. It is in any case a much better idea to completely disconnect the PC and place it on a flat surface such a table. Take a moment to impress yourself with the technology :). This time can be used to prepare yourself for a safe installation process.

Be careful to discharge any static electricity by first touching a grounded part of the PC case or some other well grounded metal object such as a heating system radiator.

The right PCI Slot

Although the PCI slots all look the same, there are invisible differences in the electrical and electronic properties. The slots are usually bound physically to a so-called IRQ (Interrupt Request), a technology that regulates the communication timing between PCI cards and the processor.

It often takes two or three tries to find the optimal slot, but a basic rule is to avoid the last slot (from the top) as well as the slot right below the graphic card (PCI slot 1).

This is because soundcards don't like being installed in slots that must share IRQs as soundcards are particularly sensitive to distortion.

> Tip: Further information on this theme can be found in the *Audio Tweaks* tutorial available at www.terratec.com.

After the installation the PC's IRQ allocation should be checked for conflicts in the Windows Device Manger or the BIOS PCI Device Listing (important for 2000/XP), which is displayed briefly during boot-up.

Windows 98SE/ME	Device Manger -> Computer -> Model by Connection -> Interrupt Request (IRQ)
Windows 2000 / XP	Device Manger -> View-> Resources by Type -> IRQ

After removing the card from the ESD (Electro-Static-Device) bag simply insert it as shown above in the chosen PCI slot and screw it down. The PC is **not** running during any of this of course :).

The First Test Run

In general after installing a new device, only the necessary peripheral devices should be re-connected to the PC before restarting it. As soon as the system boots it should announce that new hardware has been found.
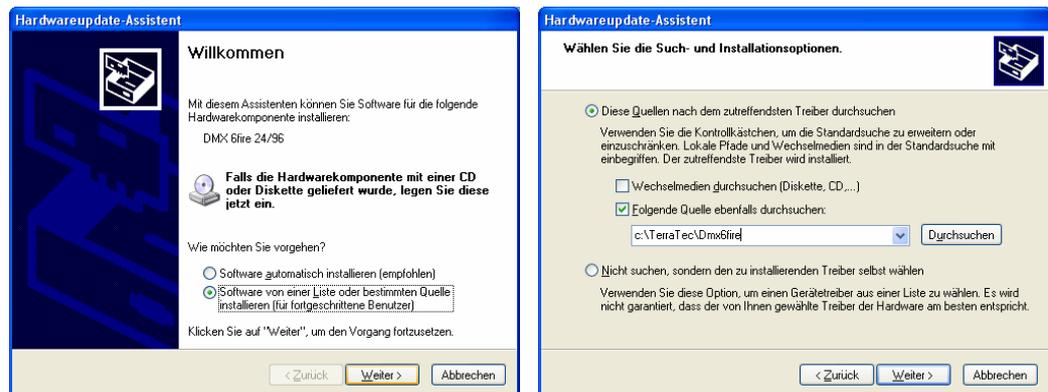
Select to choose the driver yourself, which is normally the second option „Install from a list or specific location (Advanced)" or „No, I want to select the hardware from a list ". In the dialogue that follows choose the path in which you unpacked the DRV file(s). By „update.exe" packets point to the driver sub-folder inside the destination   folder.
This is best done using the „Browse" function.

> **For Windows 2000 or XP Users**
> A window may appear warning you that the driver indicated

lacks a digital signature from Microsoft (LOGO-Test) and the installation is not recommended by Microsoft.

Driver signatures are a Microsoft innovation that many hardware manufacturers - having devices with short driver lives, undergoing constant functional improvement, - simply cannot fulfil due to technical, economic, and organizational reasons.

Accordingly, this message is likely to appear regularly when installing devices and can be overridden by pressing the „Continue Anyway" button without worry :).

The installation routine may cycle through several times as many soundcards are designed as multi-function cards and require additional drivers. The TerraTV cards, for example, are quite complex – requiring a total of four drivers to be installed before the card can be used correctly. Buy 1, get 3 free! :-).

After the installation it should be possible to start the card's control panel (which was installed within the framework given above) and use the soundcard.

The same of course applies for TV cards, etc…

And if it doesn't work?

In such cases the error can usually be localized according to the parameters given in the steps above. Typically one would continue as follows:

a. Is the card listed in the Device Manager?

The Device Manager is a practical tool to install hardware and check its functionality. It can be accessed through the Windows Control Panel under the System icon. Under Windows 2000/XP the tabs Hardware -> Device Manager must be selected additionally.
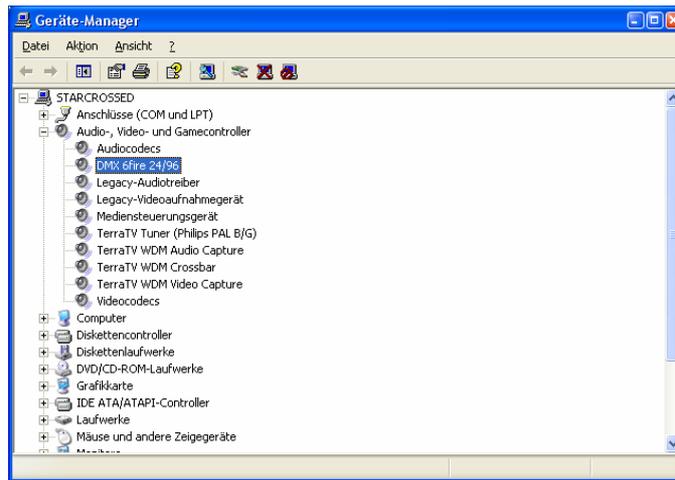
Only when the card appears here without any question or exclamation marks is it fully functional. In case the card should display errors here the software installation should be checked.
Should the card not appear in the Device Manger, check if there is a menu listing called „Unknown Device" or „Other Component" directly under the computer name at the top of the list. If the sub-menu listing here is labelled „Audio controller for Multimedia" (by soundcards),then the driver is not properly installed. Here one should carry out the installation routine again by right-clicking on the device and selecting to reinstall the driver.

b. Is the card included in the PCI Device Listing menu?

If the card is not displayed in the Device Manager, the PCI Device Listing should be controlled. This is displayed by the PC BIOS directly, and *very briefly*, after the POST (Power On Self Test i.e. RAM test, HDD detection, etc...) and can be paused on screen by using the pause button. The right moment is quite difficult to hit, as it is usually less than one second long. Here, manufacturer and configuration information is displayed for all installed devices. Should a Multimedia Controller be listed here, make note of the manufacturer and device ID as well as the IRQ number reported and contact the technical support department.

Should the card not appear in this list then the physical mounting should be checked. If no error is found here (i.e. card fell out, crooked, etc...)
the technical support should be contacted as well.

And that successfully concludes the TerraTec card installation, after which you may begin exploring the many functions and Easter eggs :). Furthermore, we invite you visit our website at www.terratec.com where you can find further information about your hardware.

Enjoy!