

SoundSystem



English Manual

Version 1.0, Status 05.07.01

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CE declaration

We:

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

hereby declare that the product:

SoundSystem SiXPack 5.1 +

to which this declaration refers complies with the following standards or standardizing documents:

1. EN 55022

2. EN 50082-1

The following are the stipulated operating and environmental conditions for the 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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## **Welcome.**

We are pleased that you have chosen a sound card from TerraTec. We also congratulate you on your decision because the SiXPack 5.1 + represents our commitment to high-quality, state-of-the-art sound card technology. With this product you have acquired a powerpacked 3D audio accelerator that also knows where to "aim to please" when it comes to digital I/O's and MIDI. We're sure that your new SoundSystem is just the ticket to bring a whole new dimension of fun to your upcoming movie watching session, as well as offering comfortable and flexible functionality.

## **Ultimate 6 channel audio acceleration and digital I/O.**

Whatever you want, Surround-Sound on 2, 4 or 6 (5.1) loudspeakers made possible with the combination of SiXPack 5.1 + and WinDVD. Alternatively experience an incomparable 5.1 sound through your headphones, in the interest of neighborhood relations ;-) If you already have a digital decoder then the SiXPack 5.1 + awaits your command to send the digital signal over the optical digital output.

## **Listen! Wonder! Inspire!**

For hardcore gamers the SiXPack 5.1 + offers A3D, EAX 1.0/2.0 and co., letting itself be heard over headphones or 2 or 4 speakers. The Sensaura 3D Technology guarantees maximum sound from any loudspeaker configuration thanks to its state-of-the-art DSP routines. The Sensaura core technologies of Multidrive, MacroFX and EnviromentFX accelerate DirectSound3D, A3D and EAX 1.0/2.0 to supersonic speeds, allowing uncompromising gaming to become more than just a pipe-dream - your CPU will thank you. MacroFX, for instance, make sounds in their immediate surroundings more pronounced than has ever been possible before.

## **Digital. In. Out.**

The optical digital input of the SiXPack 5.1 + can be synched to 32, 44.1 and 48kHz and automatically recognizes what's up. The ControlPanel readily gives you information about the current status of the digital input, such as pre-emphasis and copy-protection.

The digital output remains connected to the outside world at 48kHz and lets you connect to DAT recorders, MiniDisc recorders and other equipment. Flexibility is shown when the AC3 stream (e.g. Dolby Digital) from WinDVD is sent over the digital output unpunished.

## **MIDI DLS.**

More than a thousand voices - 1024, to be exact - are available to the MIDI conductor. 8MB and not a sample less await your arrangements, and the support of DLS 1.0 enables you to replace the original sound set with your very own individual lineup. Even the trumpets from Jericho will resound again if they are available in the form of a DLS sound set. Load it. And get started.

---

### **Hardware. Extras. Details.**

It's no secret that two CD inputs(e.g. for Burner and CD-ROM) with integrated distortion suppression, a headphone amplifier and wavetable connector are cherished extras, and you wont be going without them. A Signal-to-Noise Ratio well over -97dB and taut frequency drive provide for peace and quiet, which alone the equalizer can manipulate.

### **Control Panel. Software. Etc.**

With the comprehensive, intuitive Control Panel we place the tool to hand that lets you configure the SiXPack 5.1 + just the way you wish - easily. Once you have chosen your settings, you can save them readily and load them again easily when needed.

With the supplied software you can get started immediately in a way that suits you and your interests. WinDVD lets the movie theater atmosphere come home, Musicmatch Jukebox burns, decodes and encodes!! MP3 files, and professional music editing can be achieved with the audio and MIDI sequencer Emagic Logic Fun.

2 year guarantee, telephone and email support, and direct hardware exchange in case of a defect are of course included in the price.

TerraTec's **SoundSystem SiXPack 5.1 +**. Feel the Power of Sound.

*... Your TerraTec Team!*

---

## ***Installation.***

The SoundSystem SiXPack 5.1 + installation should be no problem thanks to the newest PCI and Plug&Play technology. If you already have experience with installing hardware and software components in Windows, you can proceed with the installation of this card without any worries.



### ***Short Overview***

For the professionals who want to get started ASAP, here is a short overview:

- The SoundSystem SiXPack 5.1 + is a PCI card (as you probably already noticed) and it and the accompanying slot cover with the MIDI /Gameport should be placed as far as possible away from graphic cards or SCSI controllers.
- Don't worry: the poles of the connecting cable for the onboard digital input cannot be connected incorrectly.
- You need at least 1 IRQ.
- You need a few free address ranges (usually not a problem).
- The driver installation under Windows follows the standard routine, and the drivers can be found on the accompanying SiXPack 5.1 + CD-ROM.
- After installing the driver, take a look at the Device Manager and see if there is an exclamation mark.

Tip. A good alternative: software first and then hardware!  
We recommend a special installation variant that is particularly suited to the installation of the SiXPack 5.1 + in a Windows system.



**BEFORE** installing the card in your PC, run the driver setup program: This can be accessed in the Autostarter menu (the file **AUTORUN.EXE** in the root directory of the SiXPack 5.1 + CD-ROM) over the menu point "Driver Installation" or the old fashion way using the following path:

For Windows 2000 / Me / 98SE :

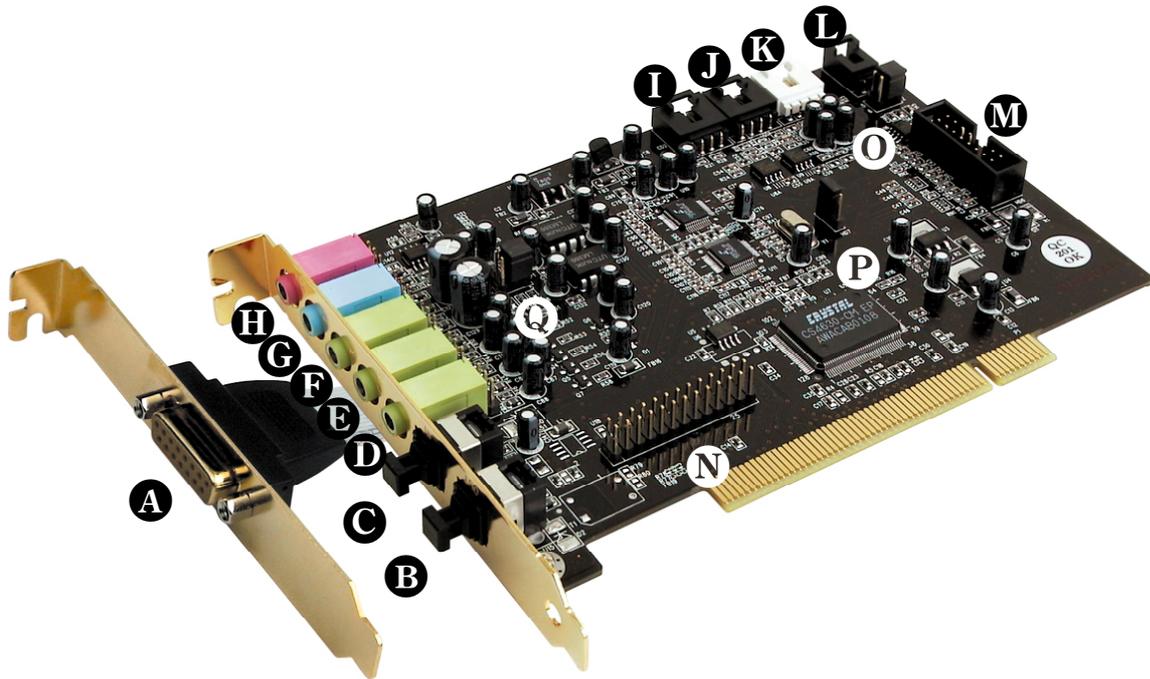
**<CD>: \Drivers\Wdm\SETUP.EXE**

Only after this is complete do you actually install the card.

So much for the short version. A detailed description of the installation in text and pictures is given below.

---

## Card Diagram



- |                                  |                             |
|----------------------------------|-----------------------------|
| <b>A</b> Game/MIDI port          | <b>B</b> Digital In         |
| <b>C</b> Digital Out             | <b>D</b> Line Out 3         |
| <b>E</b> Line Out 2              | <b>F</b> Line Out 1         |
| <b>G</b> Line In / Headphone Out | <b>H</b> Mic IN             |
| <b>I</b> CD In 1                 | <b>J</b> CD In 2            |
| <b>K</b> Aux In                  | <b>L</b> Digital In         |
| <b>M</b> Gameport connector      | <b>N</b> Wavetable Xtention |
| <b>O</b> Jumper JP2              | <b>P</b> Jumper JP3         |
| <b>Q</b> Jumper JP1              |                             |

---

## ***Connecting a Wavetable Daughterboard.***

If you own a wavetable module, like TerraTecs WaveSystem for example, a module from an older TerraTec card (e.g. Maestro Series) or a Yamahas DB50-XG, you can use it on the SoundSystem SiXPack 5.1 + . To do that simply attach the 26 poled connector to the pin row marked "CN2" (Wavetable Xtention) on the SiXPack 5.1 +. **Pay attention that all of the pins are connected with the wavetable module.** Both connector rows must be correctly aligned.

### ***Important:***

The signal from an attached wavetable daughterboard is routed together with the AUX signal. These are not separated electronically from one another. Therefore, simultaneous operation should be avoided where possible. If you connect two devices to "one line", you will experience considerable signal loss in both devices. In addition, we cannot guarantee that this will not have a long-term negative effect on both devices.



The volume of the wavetable module is controlled at a later stage in the ControlPanel using the "AUX" controller.

Further information can be found in the section "The Wavetable Connector and the Internal Synthesizer." (page 47).

---

## ***Installing the card.***

Be sure to connect any extras like wavetable modules before you install the card (further information can be found on page 47). Adding these modules at a later stage makes the process more complicated.

Before installing the sound card, please take note of any special points pertaining to the configuration of your computer. Also refer to the manual for your computer and other expansion cards for their settings.

Please observe the following instructions to ensure trouble-free installation.

If difficulties still arise, carefully reread the relevant chapter in this manual.

Please call our service hotline if you are still having problems. The telephone number and the hotline hours are given on the accompanying service card.

First check to ensure that the package is complete.

The delivery includes at least:

- 1 PCI TerraTec SoundSystem SiXPack 5.1 + soundcard
- 1 slot cover for MIDI / Gameport - connection
- 1 installation & driver CD-ROM
- 1 audio cable (2-pin CD-ROM digital cable)
- 1 registration card with product serial number
- 1 customer service card

Return the registration card to us at the earliest possible opportunity or register online at <http://www.terratec.net/register.htm>. This is important for support and hotline services.

### **Safety Instructions**

Before opening the case, unplug the power plug from the wall socket as well as from the PC.



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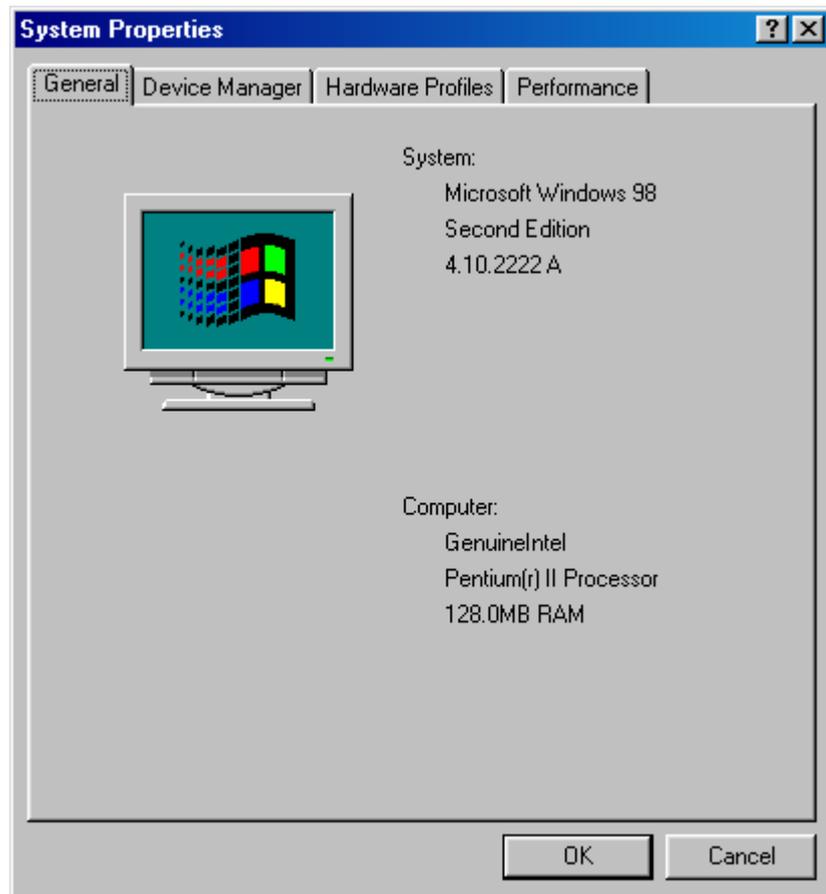
***And here's what to do, step by step:***

- Switch off your PC and all connected peripheral devices, such as printer, monitor and so on. Leave the AC cord connected for the time being, so that your computer is still grounded.
- Touch the metal chassis at the rear of the PC to ground yourself and discharge static. Now unplug the cord from the AC mains socket.
- Remove the cover from the case of your PC.
- Search for two parallel free slots, where at least one of them is PCI format. Remove the screw that holds the slot cover in place and remove the cover. In order to ensure that your soundcard works optimally, choose, when possible, two slots that are not directly next to any other installed cards, as some cards like graphic cards can emit signals that could have a distorting effect on your soundcard.
- Carefully remove the sound card from its packaging and pick it up by the edges with one hand while your other hand is resting on the metal of the PC case. This will ensure that your body is completely discharged via your computer without affecting the sound card. Do not touch the components of the card under any circumstances.
- Connect the MIDI/Gameport extension (as well as any wavetable daughterboards and other internal audio devices) with the soundcard. Please follow the corresponding installation instructions.
- Align the holder at the rear of the sound card in the expansion slot in such a way that the card's gold-colored connectors are directly in line with the slot's socket.
- Carefully seat the card in the slot. You might have to press the card firmly into the slot to make a good contact. Take care to ensure that the contacts are precisely in line in order to avoid damaging the sound card or the motherboard in your PC.
- Insert and tighten the screw from the slot cover to secure the sound card in its slot.
- Now connect the MIDI/Gameport extension in the second free slot and fasten it with the free screw from the old slot cover.
- Then connect the analog or - if you have one - the digital audio Out from the CD-ROM drive(s;-) to the appropriate connector on the soundcard (a cable for connecting the digital In from the soundcard with the digital Out of the CD-ROM drive is included). (Also read the section "The Analog CD Audio Connectors." on page 45 and "The Digital In." on page 41.)
- Reinstall the cover of your PC case.
- Connect the speakers or your stereo system to the soundcard (Also read the section "The Card Connections and their Usage." on page 30).
- Reconnect the mains and all other cables. Make sure that your speakers or hifi system are set to a low volume. Start your computer.
- Then proceed to the section "The Driver Installation." (page 13).

---

## ***The Driver Installation.***

The SoundSystem SiXPack 5.1 + is currently provided with drivers for the operating systems Windows 98SE, ME and Windows 2000. Before installing, you must determine which operating system you are using. The operating system and version number can be found in the Control Panel under "System Properties".



*For example, this is how you recognize Windows98 SE.*

In the following description of the driver installation <CD> stands for the drive letter that Windows has assigned your CD drive where the SiXPack 5.1 + CD is.

---

## Installation under Windows 98 SE.

Once you have installed the SoundSystem SiXPack 5.1 + card in your PC, Windows 98SE recognizes the card as a new hardware component and displays the following screen.



Click "Next".



Choose "Search for the best driver for your device (Recommended)" and click "Next".



*Enter the path <CD>:\Drivers\Wdm\ and then click on "OK". Alternatively, you can select the path to the SiXPack 5.1 + per mouse by clicking on "Browse..."*



*You should also click "Next" when this screen is reached.*



*To complete the installation click "Finish".*

Windows now installs the driver for you, documenting the process with several installation screens. At this point nothing else should occur. If during this process you are unexpectedly prompted to do something and you are unsure how to proceed, it is usually best to just press the Enter key.

Should Windows again ask for driver files point to the same path on the SiXPack 5.1 + CD-ROM given above. It may also be the case that a few other Windows features need to be installed along with the card (e.g. if this is the first sound card installation for your system). For this eventuality, please have your Windows CD handy.

After the driver has been successfully installed, it is easy to add the other bundle software via the autostarter.

**<CD>: \autorun.exe**

Follow the instructions on the screen. There shouldn't be any problems. Continue reading on page 18.

---

## Uninstalling the driver under Windows 98SE

If you want to remove the driver from the system, it is best to do this *before* you remove the card using the setup program that you also used when installing the driver.

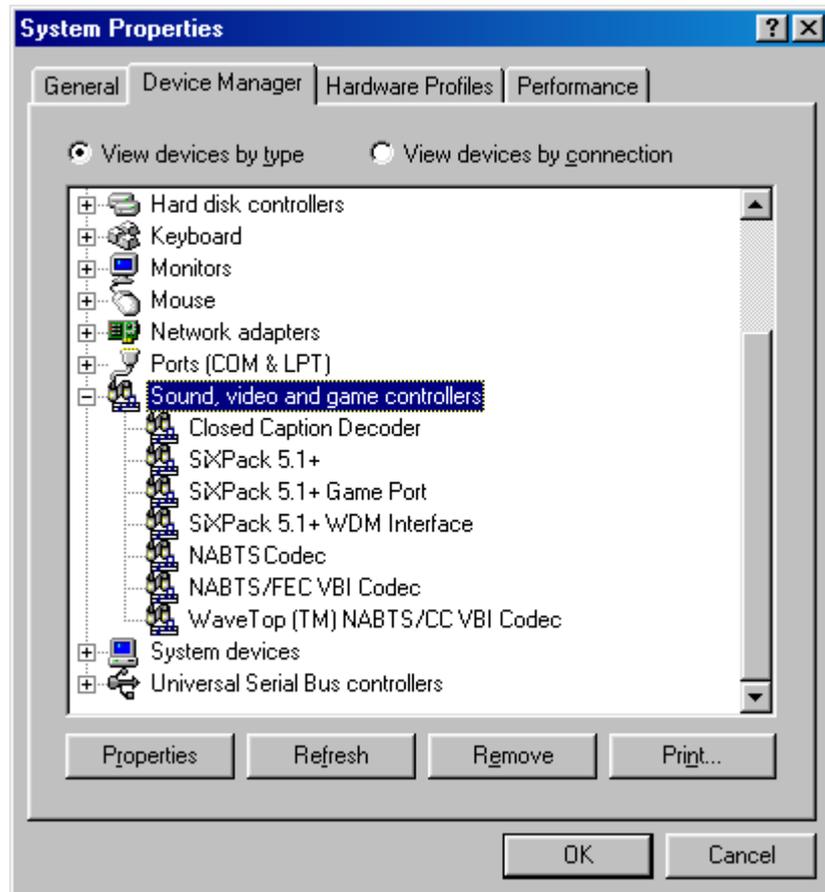


*Choose "Uninstall SiXPack 5.1 + driver".*

The accompanying bundle software can be removed as simply as well. Call up "Add/Remove Programs" in the Windows Control Panel and locate the programs that are to be deleted. Select them one after the other and each time click "Add/Remove...".

**Driver installed – this is what it looks like.**

After the driver has been successfully installed, you should verify that everything is configured properly with your Windows 98 SE system. In the Device Manager you can check the status of recognized or installed hardware components. The Device Manager is found in the Windows Control Panel under "System".



*This is how the window should look if everything has been installed properly. In the picture, the item "Sound, video and game controllers" is opened. You can do this by clicking the small "+" symbol on the left hand side.*

---

## Installation under Windows ME.

Once you have installed the SoundSystem SiXPack 5.1 + in your PC, Windows Me automatically loads generic drivers for the SiXPack 5.1 +. After this installation is completed start **AUTORUN.EXE** in the root directory of the SiXPack-CD and choose the menu point "Install Driver". This will start the setup program.

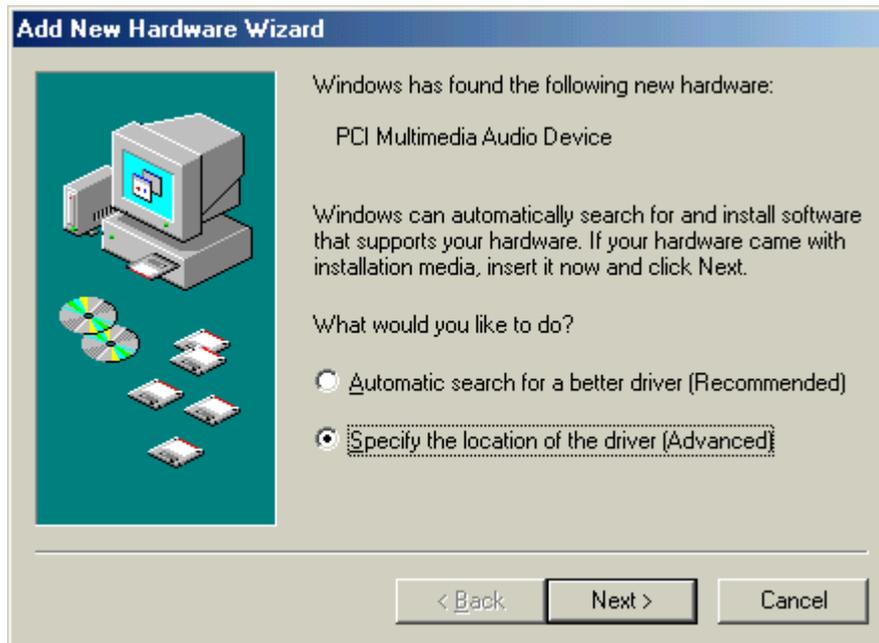


*Select "Install SiXPack 5.1+ driver".*



*Select "Restart".*

After the computer has restarted and the new hardware has been found by the Windows hardware wizard the following window is displayed.



*Choose "Specify the location of the driver (Advanced)" and click on "Next".*



*Check the box "Specify a location:", enter the path <CD>:\Drivers\Wdm\ and click on "Next". Alternatively, you can select the path by clicking on "Browse".*



*You should also click "Next" when this screen is reached.*



*To complete the installation click "Finish".*

After the driver has been successfully installed, it is easy to add the other bundle software via the autostarter.

**<CD>: \autorun.exe**

Follow the instructions on the screen. There shouldn't be any problems.

Read further on page 23.

---

## Uninstalling the driver under Windows ME.

If you want to remove the driver from the system, it is best to do this *before* you remove the card using the setup program that you also used when installing the driver.

Start **AUTORUN . EXE** in the root directory of the SiXPack CD and choose the menu point "Install driver".

This will start the setup program.



*Choose "Uninstall SiXPack 5.1 + driver".*



*Select "Shut Down".*

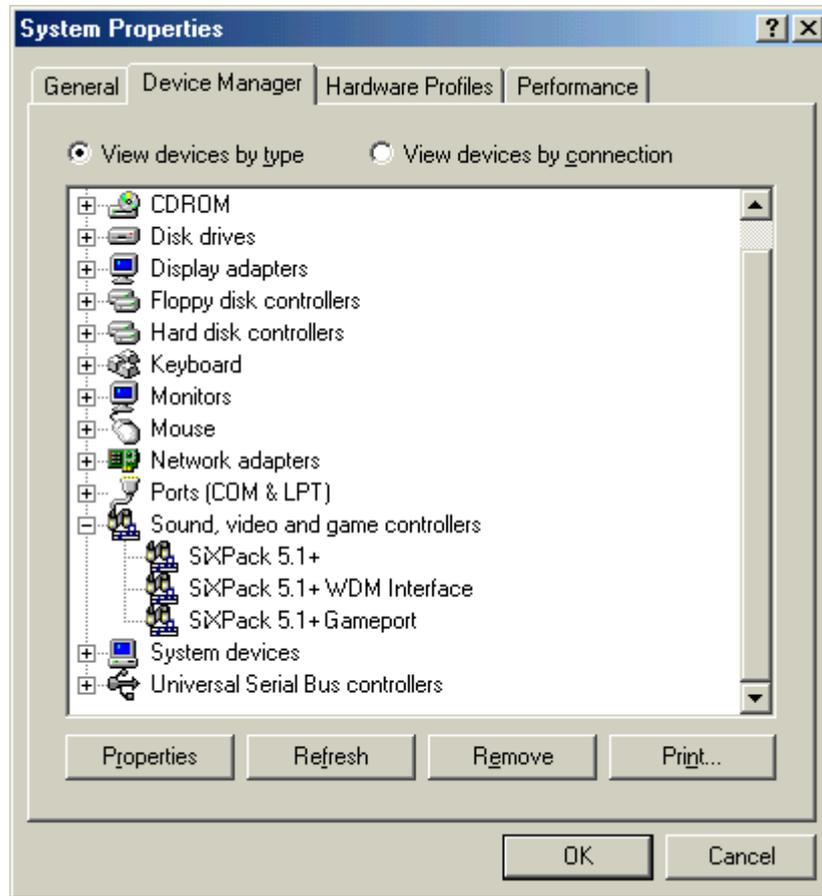
Then you can remove the card when the PC is turned off or completely reinstall the driver if this were necessary.

The accompanying bundle software can be removed as simply as well. Call up "Add/Remove Programs" in the Windows Control Panel and locate the programs that are to be deleted. Select them one after the other and each time click "Add/Remove...".

---

**Driver installed – this is what it looks like.**

After the driver has been successfully installed, you should verify that everything is configured properly with your Windows ME system. In the Device Manager you can check the status of recognized or installed hardware components. The Device Manager is found in the Windows Control Panel under "System" > "Hardware". Then click on the "Device Manager..." button.



*This is how the window should look if everything has been installed properly. In the picture, the item "Sound, video and game controllers" is opened. You can do this by clicking the small "+" symbol on the left hand side.*

---

## Installation under Windows 2000.

Once you have installed the SoundSystem SiXPack 5.1 + in your PC, Windows 2000 automatically loads generic drivers for the SiXPack 5.1 +. After this installation is completed start **AUTORUN.EXE** in the root directory of the SiXPack -CD and choose the menu point "Install Driver". This will start the setup program.



*Select "Install SiXPack 5.1+ driver".*



*Select "Restart".*

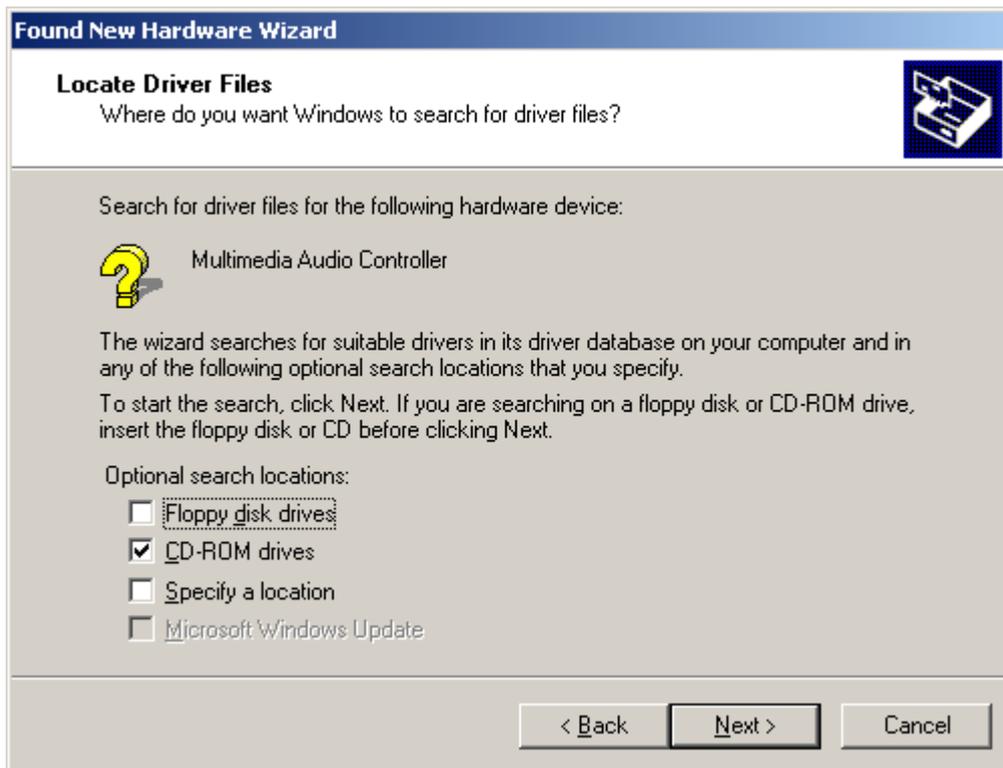
After the computer has restarted and the new hardware has been found by the Windows 2000 hardware wizard the following window is displayed.



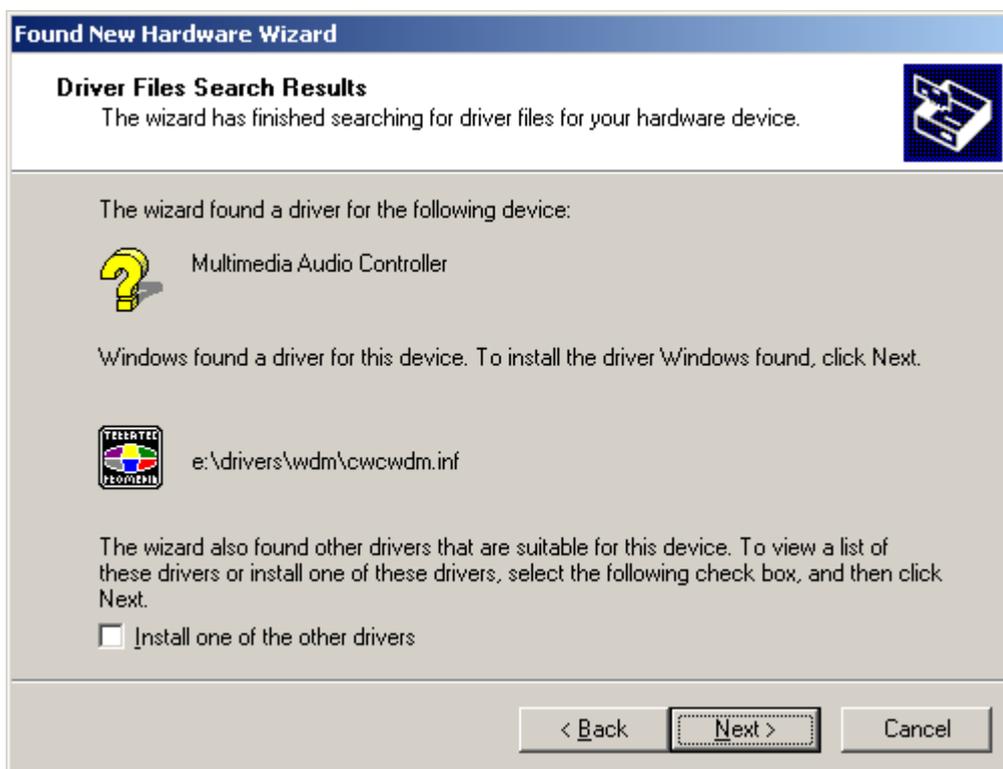
Click "Next".



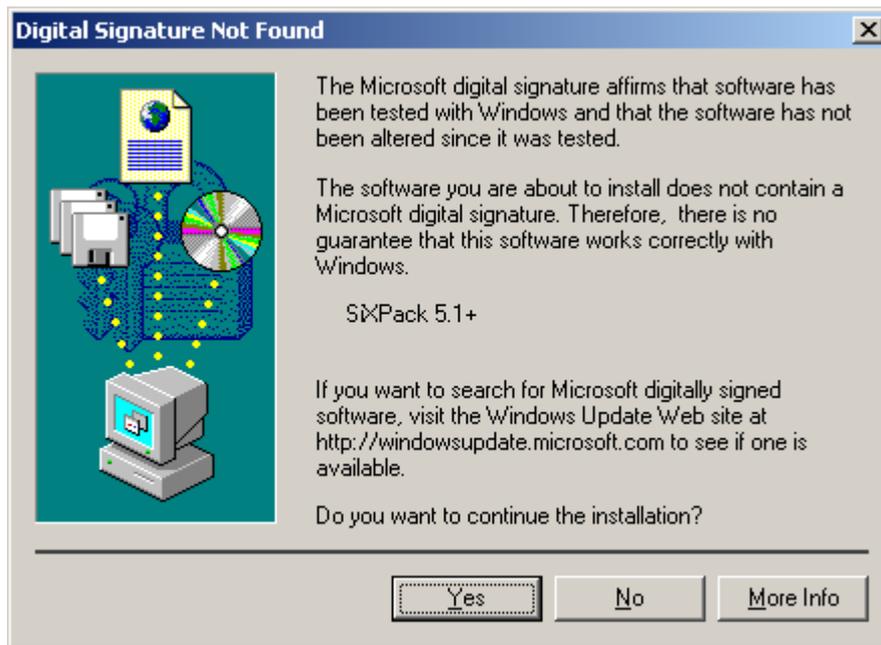
Choose "Search for a suitable driver for my device (recommended)" and click "Next".



Select the "CD-ROM drives" check box and click "Next".



You should also click "Next" when this screen is reached.



*Proceed with the installation by clicking "Yes".*

Later in the course of the installation, a window of this kind may appear again, stay calm and collected and proceed carefully by clicking "YES".

Windows now installs the driver for you, documenting the process with several installation screens. At this point nothing else should occur. If during this process you are unexpectedly prompted to do something and you are unsure how to proceed, it is usually best to just press the Enter key.

Should Windows again ask for driver files point to the same path on the SiXPack 5.1 + CD-ROM given above. It may also be the case that a few other Windows features need to be installed along with the card (e.g. if this is the first sound card installation for your system). For this eventuality, please have your Windows CD handy.

After the driver has been successfully installed, it is easy to add the other bundle software via the autostarter.

**<CD>:\autorun.exe**

Follow the instructions on the screen. There shouldn't be any problems. Read further on page 28.

---

## Uninstalling the driver under Windows 2000

If you want to remove the driver from the system, it is best to do this *before* you remove the card using the setup program that you also used when installing the driver.

Start **AUTORUN . EXE** in the root directory of the SiXPack CD and choose the menu point "Install driver".

This will start the setup program.



*Choose "Uninstall SiXPack 5.1 + driver".*



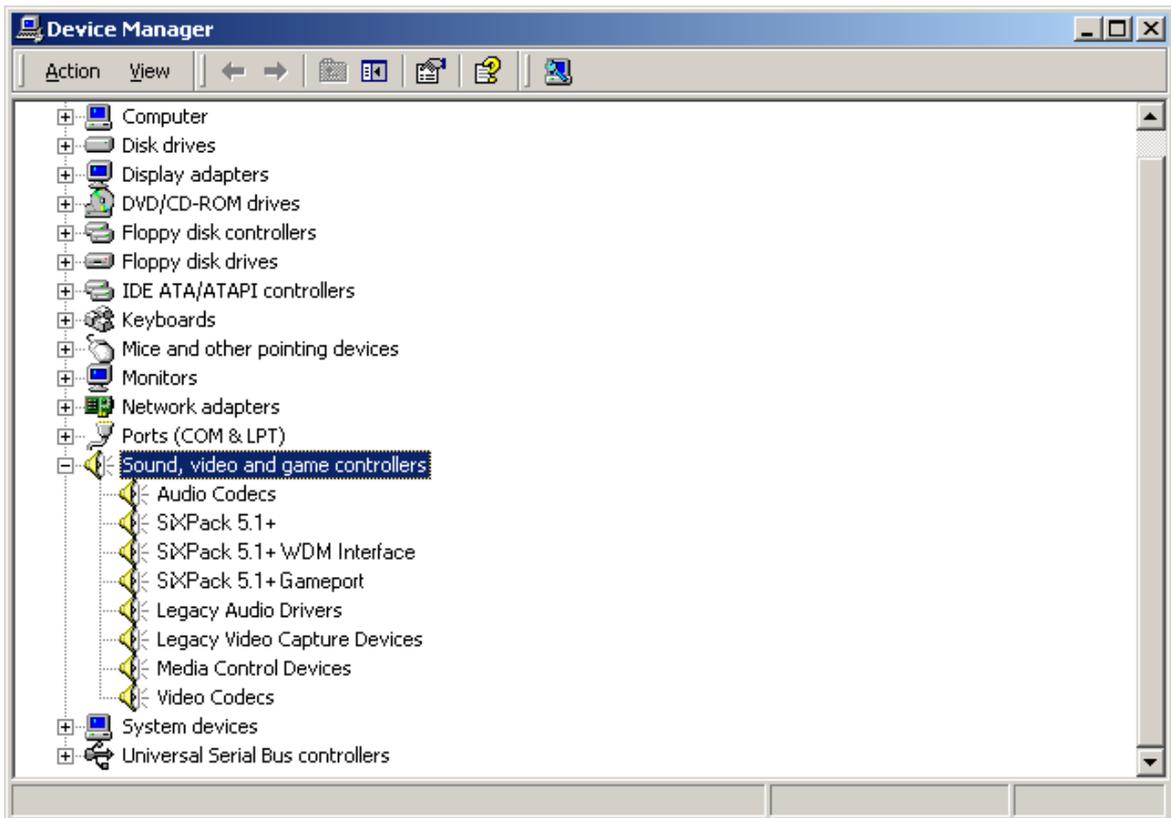
*Select "Shut Down".*

Then you can remove the card when the PC is turned off or completely reinstall the driver if this were necessary.

The accompanying bundle software can be removed as simply as well. Call up "Add/Remove Programs" in the Windows Control Panel and locate the programs that are to be deleted. Select them one after the other and each time click "Add/Remove...".

## Driver installed – this is what it looks like.

After the driver has been successfully installed, you should verify that everything is functioning properly with your Windows 2000 system. In the Device Manager you can check the status of recognized or installed hardware components. The Device Manager is found in the Windows Control Panel under "System" > "Hardware". Then click on the "Device Manager..." button.

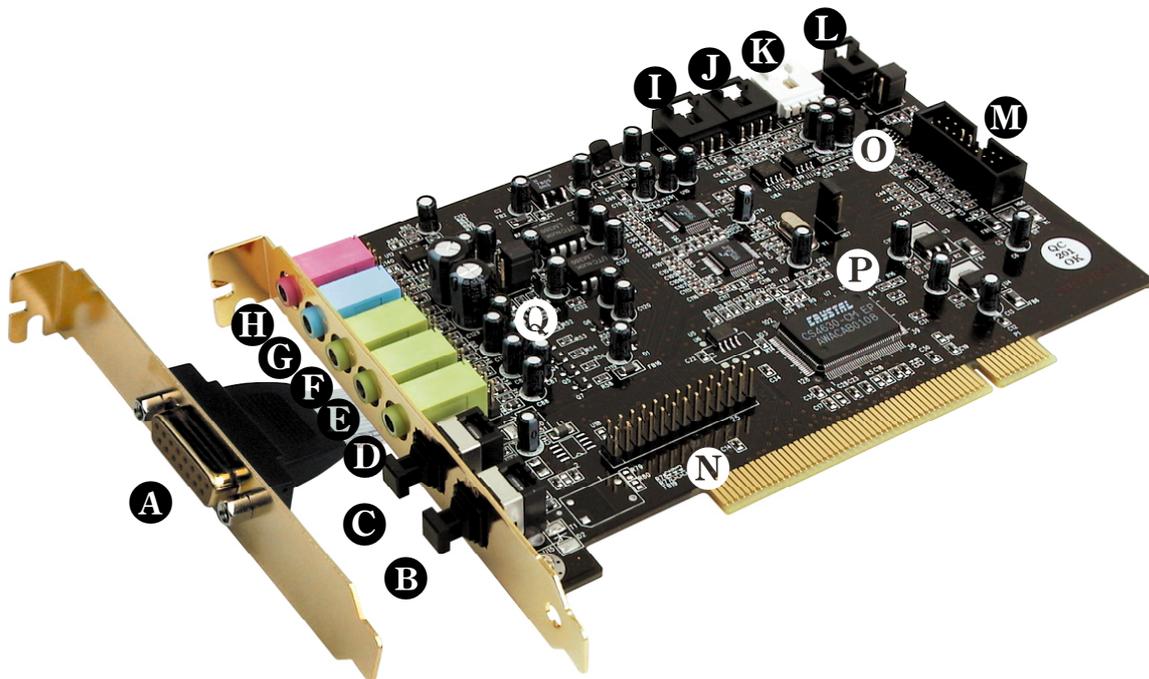


*This is how the window should look if everything has been installed properly. In the picture, the item "Sound, video and game controllers" is opened. You can do this by clicking the small "+" symbol on the left hand side.*

## The Card Connections and their Usage.

The connection possibilities of the SiXPack 5.1 + are plentiful. Nearly everything that can be used with a PC in respect to sound can be connected to the card and used without a problem. In the following section we would like to show all the options that allow you to correctly configure your SiXPack 5.1 + to accomplish the task at hand. You will also find tips for the frequently used applications. Please be sure to read the explanation of the SiXPack 5.1 + Control Panel in the section "The SiXPack 5.1 + Control Panel." (page 51).

### Card Diagram



- |                                  |                             |
|----------------------------------|-----------------------------|
| <b>A</b> Game/MIDI port          | <b>B</b> Digital In         |
| <b>C</b> Digital Out             | <b>D</b> Line Out 3         |
| <b>E</b> Line Out 2              | <b>F</b> Line Out 1         |
| <b>G</b> Line In / Headphone Out | <b>H</b> Mic In             |
| <b>I</b> CD In 1                 | <b>J</b> CD In 2            |
| <b>K</b> Aux In                  | <b>L</b> Digital In         |
| <b>M</b> Gameport Connector      | <b>N</b> Wavetable Xtension |
| <b>O</b> Jumper JP2              | <b>P</b> Jumper JP3         |
| <b>Q</b> Jumper JP1              |                             |

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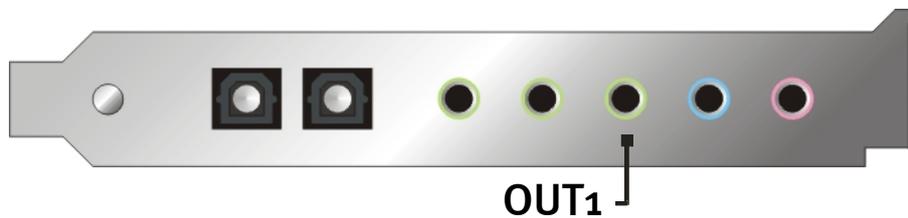
## The Line Outputs.

The line outs operate with a normal "HiFi signal". Use Out 1 to connect your amplifier or your active speakers.



### The Basics.

The most important connection option for a sound card - the experts all agree on this - is the playback system. The SoundSystem SiXPack 5.1 + offers you three such outputs, for example to position the sound in a 5.1 loudspeaker system. The connectors are three mini-jack plugs (3,5mm stereo), whereby at least the first out should be connected to a HiFi amplifier or active loudspeakers. The output plug marked Out 1 delivers a "normal line level".



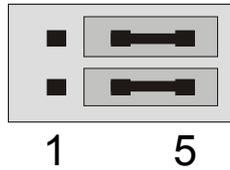
On HiFi amplifiers there are several inputs that can be used to connect the card. So you can, for example, keep an eye out for a connector labeled AUX, TAPE (Play), CD, or VIDEO. However, a phono input cannot be used.

If your amplifier has a digital input in S/PDIF format (optical (TOS-Link) port with a black cap) you can of course use this as well. Keep in mind, however, that only the signal from the first analog out is sent to the digital out of the SiXPack 5.1 +. You will find more information on this subject on page 39 and following.

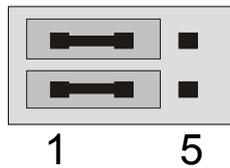
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## Headphone Operation.

Instead of using an amplifier system, you can also use headphones. The Line In is alternatively useable as a headphone output by activating the onboard (60mWatt an 32 Ohm) amplifier by changing the position of Jumper (JP1). Carefully, move the small plastic jumper from position A to position B.



Position A - headphone amplifier deactivated... (Line In mode)



Position B - ... and activated. (headphone operation)

### ***Safety Instruction***

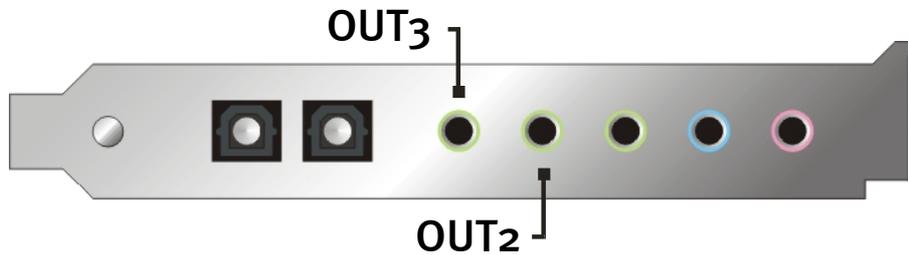
Please remember to switch off all (analog) devices before connecting them. This is to avoid the danger of an electric shock - even a weak one - it also protects your speaker membranes and your hearing from sudden signal spikes. For digital devices, the volume of your playback system should at least be turned to low.



---

## 6 Speakers.

In order to totally enjoy the sound over 6 (5.1) speakers, connect the Out 1, Out 2 und Out 3 to a 5.1 speaker system.

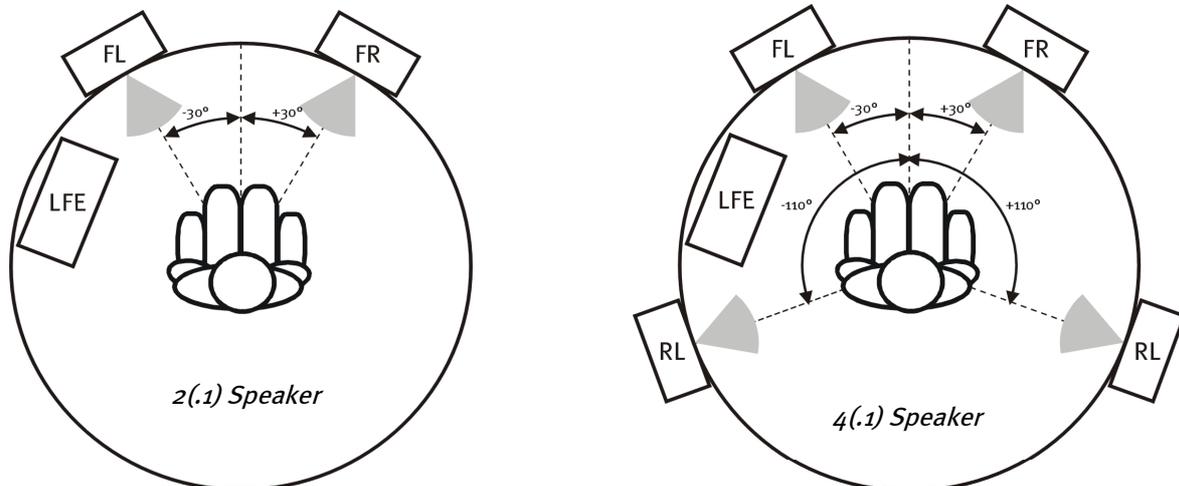


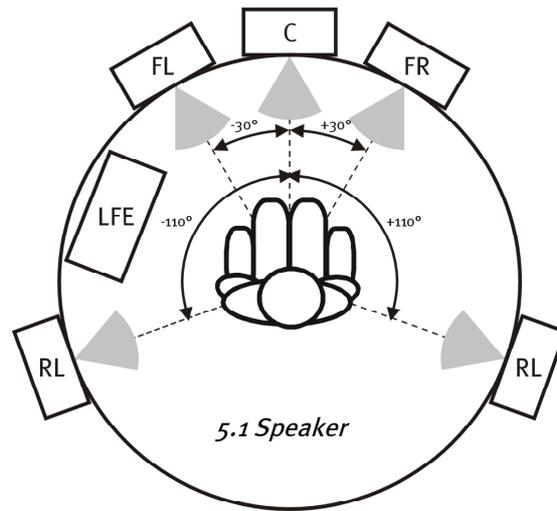
Don't worry if the signal is not quite as loud when you switch to the 4 or 5.1 speaker mode. This is perfectly normal for this setting.

### Position the speakers for optimal 3D sound.

As with processor-controlled room simulation over the speakers, the correct positioning of the speakers is also important since - as opposed to using headphones - the position of the ears is always slightly different.

The following images should help you to find the optimal positioning for the speakers.





Obviously, you don't have to hold your head at the exact angle relative to the system, that would be too uncomfortable in the long run. This is only a guide so that you can find the best position suitable for you.

The included SiXPack 5.1 + 3D sound software and the Control Panel offer you the option to switch between three different playback modes, which you should of course pay attention to. The exact position of basic algorithms differs greatly depending on the application. Therefore: setting the playback to 5.1 speakers and then putting on headphones is pointless.

#### **Internal access to the input port.**

Last but not least, we would like to bring your attention to the internal pins located behind the input jack. These can be used to divert the audio signal from the jack and *alternatively* for internal connections. There are, for example, front modules with control options on the front of the PC which make use of these connections.

---

## The Line In.

### The Basics.

Recording from audio sources like cassette players, video recorders, or record players can be routed through the port SiXPack 5.1 + labelled Line In.



The port format is mini-jack (3,5mm stereo) which can, for example, be connected to the TAPE deck RECORD output on your amplifier or with the AUX SEND port of a mixer. The input sensitivity can be regulated, and is so designed that by a signal level of about  $2V_{RMS}$  maximal level is reached when the appropriate recording slider in the Control Panel is set to 0 dB.

To record go to the SiXPack 5.1 + Control Panel under "Record" and choose the source "Line In".

### **Safety Instructions**

Please remember to switch off all (analog) devices before connecting them. This is to avoid the danger of an electric shock - even a weak one - it also protects your speaker membranes and your hearing from sudden signal spikes.

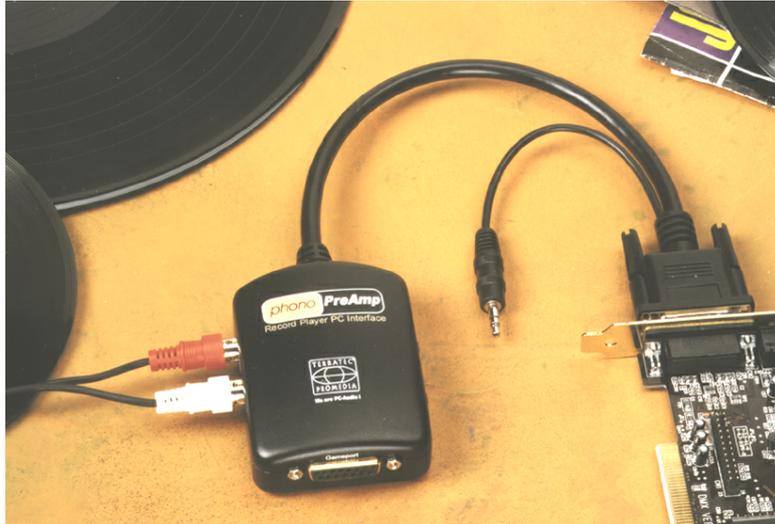


### Connecting and recording from a record player.

At the moment the restoration and archiving of old records is very popular. With the SoundSystem SiXPack 5.1 + you are equipped for a high quality recording. In order to connect a record player there are certain things to take into consideration.

A direct connection between a record player and a soundcard like the SiXPack 5.1 + is not possible, because record players – due to their pick-up system – deliver a signal that is too weak and irregular. Therefore it is necessary to use a phono amplifier (HiFi amplifier with Phono input or a special Phono amplifier with an integrated signal equalizer). In the case of a HiFi amplifier there is typically a TAPE Record output that you can connect to the SoundSystem SiXPack 5.1 +.

For those cases where no phono input exists on the amplifier, we recommend the TerraTec phonoPreAmp, a high quality phono amplifier that is ready to be connected to the Line In on your SiXPack 5.1 +.



You can find more information at [www.terratec.net](http://www.terratec.net).

Software to digitalize and edit your recordings is included: The program WaveLab Lite from Steinberg is optimized for editing large files and due to its intuitive user interface is also appropriate for beginners. However, customary audio software alone is not completely suitable for tasks related to sound restoration. In addition to the normal functions like cutting, equalizing, and level adjustment other options are often needed like "de-hiss", "de-click", or "normalization" as well as expanders or softeners to complete the restoration process. Last but not least, a CD burning function would also be nice. All of these functions are contained in specialized software which you can obtain, for example, from the following leading manufacturers:

<b>Algorithmix</b>	<a href="http://www.algorithmix.com">www.algorithmix.com</a>
<b>Dartech</b>	<a href="http://www.dartech.com">www.dartech.com</a>
<b>Diamond Cut Productions</b>	<a href="http://www.diamondcut.com">www.diamondcut.com</a>
<b>Sonic Foundry</b>	<a href="http://www.sonicfoundry.com">www.sonicfoundry.com</a>
<b>Steinberg</b>	<a href="http://www.steinberg.net">www.steinberg.net</a>

#### Internal access to the input port.

Last but not least, we would like to bring your attention to the internal pins located behind the input jack. This can be used to divert the audio signal from the jack and *alternatively* for internal connections. There are, for example, front modules with control options on the front of the PC which make use of these connections.

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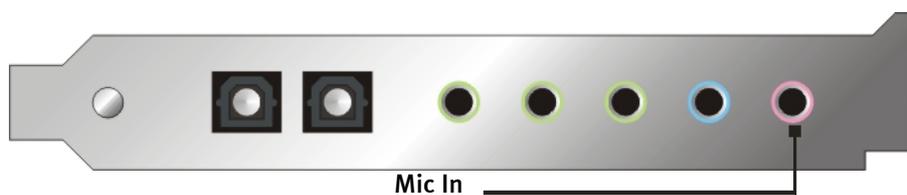
## ***The Microphone Input.***

The MIC In is for connecting a normal condenser Mic (with or without a battery). The input capacity is approximately  $0.1V_{RMS}$ .



### **The Basics.**

Microphone recordings, for example for voice recognition or Internet telephony, can be made through the port marked Mic In on your SoundSystem SiXPack 5.1+. Use a standard condenser microphone or headset with a mono mini-jack (3,5 mm mini-jack).



The sensitivity can be regulated in the Control Panel of the SiXPack 5.1+. A switch for the Mic input amplifier is also included. The button marked "Boost" strengthens the input signal by about +20dB, but of course also raises the background noise level as well.

### ***Safety Instructions***

When using the microphone, unpleasant feedback can occur suddenly (loud whistling) which can be bad for your speakers as well as your hearing. Always reduce the volume when first using a microphone and increase the volume carefully if necessary.



---

## Misunderstandings

To avoid misunderstandings: quality miracles should not be expected from a "sound card" microphone input – not even one from TerraTec ;-). Please note that the microphone input does not support microphones with integrated amplifiers (48V with extra power supply). These devices, which are usually found in professional studios or used for live shows usually have a 6,3mm jack or 3 poled XLR jack– so save your time and money trying to build your own adaptor for the mini-jack. If you are planning to make a recording of professional quality (e.g. for voice, song or instrumental recordings), there's no getting around professional auxiliary peripherals. Dedicated microphone boosters or mixing units with the corresponding inputs and AUX Send paths (or subgroups) can be purchased at any music store.

Please also keep in mind that the microphone input on the SoundSystem SiXPack 5.1 + is mono - not stereo.

## Internal Microphone Input Pins.

Last but not least, we would like to bring your attention to the internal pins located behind the microphone jack. This can be used to divert the audio signal from the jack and *alternatively* for internal connections. There are, for example, front modules with control options on the front of the PC which make use of these connections.

---

## The Digital Output.

The digital output supplies a standard S/PDIF signal at 48 kHz for consumer devices. These include, for example, digital amplifiers, MiniDisc recorders or DAT recorders.



### The Basics.

If you want to digitally send music from your PC to another device you will want to use the optical digital output (often called TOS-Link).



In the Control Panel under "Digital" > "Digital Output" there are two different modes for the digital transfer over the digital output at your disposal.

- Digital In Source Direct – permits you to forward 1:1 data present at the digital input to the digital output, i.e. in this mode, the frequencies 32 kHz and 44.1 kHz are also output at the digital output. It is not possible to adjust the volume.
- Digital Mix / DVD – with this setting all the digital sources (Wave, MIDI, Digital In) are played over the digital output at 48kHz. This setting can also be used to route an encoded AC-3 data stream to an external decoder.

### Tip.

Devices like MiniDisc recorders work with a samplerate of 44.1kHz. The digital Out on the SiXPack 5.1 + with the setting "Digital Mix" functions at 48kHz, however. In order to obtain a "Drop Out" free recording your MiniDisc device must have its own samplerate convertor (SRC- Sample Rate Conversion).



The volume for the digital signal can be regulated using the appropriately marked slider in the "Sources" menu of the Control Panel – when you want to adjust the Wave playback volume use the WAVE slider. Note that this controller not only audibly affects the playback volume (in monitoring), it also changes the digital signal.

---

A digital recording *with* the SoundSystem SiXPack 5.1 + is not affected by the settings mentioned above.

### **The Copy Protection.**

It is possible to place a copy protection onto recordings during transfer to another device. This makes sense if, for example, you record a composition on DAT or MiniDisc as a demo but do not want further (digital) copies to be made. To do this, activate the "Copyright Bit" button for the digital output in the Digital menu of the Control Panel.

### **Backup.**

The digital interface of the SoundSystem as well as the accompanying software cannot be used for data backup on DAT. In principle, this can be done, however - cheaper backup options such as CDs are common today and are less time intensive.

Further valuable information about the digital interface and the use of digital cable can be found in the next section "The Digital In."

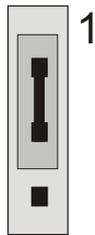
Therefore, keep reading if you please ... ;-)

## The Digital In.

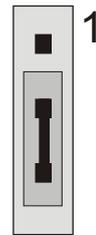
### The Basics.

The SiXPack 5.1+ offers you two possible digital inputs. In addition to the external optical digital In there is an internal coaxial In. Which one is activated is controlled by the Jumper 3 (JP3) as indicated in the following diagram:

Jumper 3 (JP3).



Position A – internal input



Position B – external input

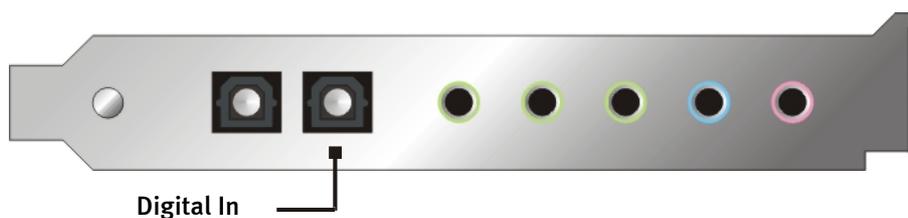
### The External Digital In

The digital input can receive standard S/PDIF signals at 32/44.1/48kHz from normal consumer devices. CD players, MiniDisc or DAT players fall into this category.



### The Basics.

If you want to digitally receive music from another device to your PC you will want to use the optical digital input (often called TOS-Link).

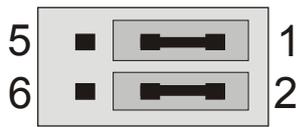


### The Internal Digital In

The internal digital input can be set to support two different formats by adjusting the Jumper 2 (JP2). In the jumper position S/PDIF In, the digital input corresponds to the S/PDIF standard known from consumer devices, such as MiniDisc or DAT recorders. The jumper position TTL is intended for connecting the digital output of most CD-ROM drives because these usually operate with TTL levels.



Jumper 2 (JP2).



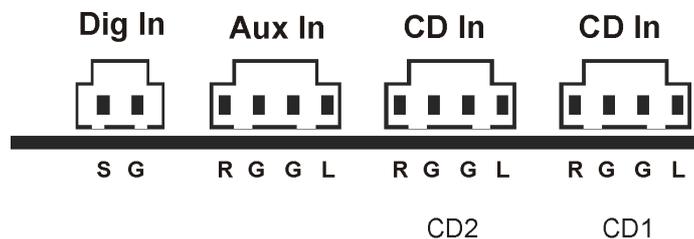
Position A - TTL-In (standard)



Position B - S/PDIF In

### The Basics.

Should you want to connect an internal digital device to the SoundSystem SiXPack 5.1 +, use the two-poled connector as shown in the following diagram next to the Aux In. To connect the digital output of your CD-ROM drive, use the supplied connection cable which ensures correct polarity.



### General Information to the Digital Inputs

The digital interface on the SiXPack 5.1 + works with all standard frequencies with 16Bit resolution, i.e. 32, 44.1 and 48kHz.

To be able to work with the digital input, you should first ensure that this has also been activated. Go to the "Digital" menu in the Control Panel and in the field "Digital input" select either **"Always on"** – in this case, the digital input is always active, regardless of whether or not a signal is actually present.

or

**"Automatic sensing"** – the signal input is only activated when data is actually present.

**For digital recording.** The signal on the digital input can be recorded using the option "S/PDIF" in the SiXPack 5.1 + Control Panel. In your recording software choose the recording driver "SiXPack 5.1 + Wave". Pay attention when recording that all the sources you don't want to record are muted in the "Sources" menu of the SiXPack 5.1 + Control Panel. By the way: Any previously set copy protection (the so-called SCMS or Copy Protection Bit) will be ignored and not recorded.

### Stuff Worth Knowing

Even when transferring audio data over an optical cable - small, normally not hearable, errors can occur. You should therefore pay attention to use a high quality cable that is not too long (optical fiberglass cable up to aprox. 2m). Ensure that the cable is free of kinks.

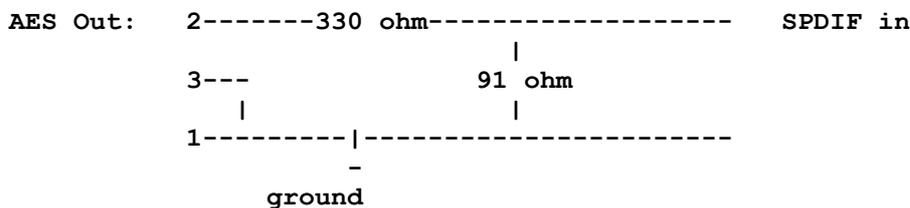
Differences in the sound reproduction from different digital cables sounds crazy at first glance, but they can occur. This is proven, among other things, by the fact that error correction algorithms are obviously used more frequently at some times than at others to correct cables of differing qualities. In any case these audio changes are usually so minimal that you need to be careful not to mix up the myth with the reality. If you are interested: there are many somewhat entertaining militant newsgroups dealing with this subject on the Internet ;-).

Last but not least some information about the transfer protocol: Only data following the S/PDIF (Sony/Philips digital interface) standard is transmitted over the optical interface. The connection of ADATs or compatible devices is not supported.

Also devices with AES/EBU interfaces normally can't be used - the ambitious attempt to build an adaptor will get you nowhere. Because the AES/EBU protocol is nearly identical to S/PDIF and the transmission essentially only differs in the signal strength, you can make your own converter with just a little soldering.

A small diagram and further information can be found in the Internet or in the following diagram as well:

AES/EBU to S/PDIF





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## The Analog CD Audio Connectors.

The SoundSystem SiXPack 5.1 + offers two separate connectors for the analog output of your CD drive(s). In the SiXPack 5.1 + Control Panel the controller is marked "CD".

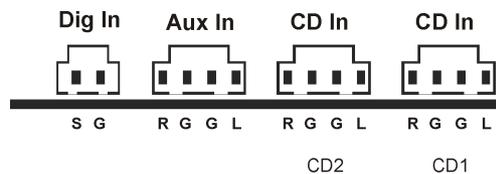


### The Basics.

A particularly nice feature of the SoundSystem SiXPack 5.1 + is the possibility to connect two CD drives (e.g. your CD ROM drive and a Burner) to the card without any loss in the signal strength. The inputs CD1 and CD2 are electrically separated from one another and combined in the mixer. The volume control for both is labeled "CD".

When recording from a CD drive, select the "CD" setting in the ControlPanel under "Record".

The connector jacks are compatible with the widely available MPC<sub>3</sub> standard. The pin configuration of the signal and ground circuit is shown in the following:



Appropriate cables can normally be found included with your CD drive or in a PC shop.

If you need an independent controller for each drive you can use the AUX In on the SiXPack 5.1 +. In any case, the input sensitivity here is pretty much the same: approx.  $1.5 V_{RMS}$  for the CD inputs, approx.  $1 V_{RMS}$  for the AUX input. To record from both of these sources choose the setting "Stereo Mix" in the SiXPack 5.1 + Control Panel under "Record".

---

## The AUX In.

The SoundSystem SiXPack 5.1 + is equipped with an internal audio input e.g. for video cards. You could also connect a CD drive here. In the SiXPack 5.1 + Control Panel there is an AUX controller.

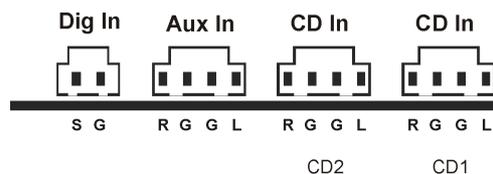


### The Basics.

The SoundSystem SiXPack 5.1 + has another input for extra PC devices. A video/grabber card or the analog audio output of a DVD card can be connected at the internal AUX input, for example. It is also possible to connect another CD drive, but the input sensitivity for the AUX connection is slightly higher than for the CD inputs (approx.  $1 V_{RMS}$  for the AUX input, approx.  $1.5 V_{RMS}$  for the CD inputs).

The volume can be controlled in the SiXPack 5.1 + Control Panel using the slider marked "AUX". When recording, select the setting "AUX" under "Record".

**Important:** The signals of a daughter board docked with the wavetable connector flow together with the AUX signal. Contrary to both CD inputs, these are not electrically separated from one another. Therefore, simultaneous operation should be avoided where possible. If you connect two devices to "one line", you will experience considerable signal loss in both devices. In addition, we cannot guarantee that this will not have a long-term negative effect on both devices.



The connector jack is compatible with the widely available MPC<sub>3</sub> standard. The pin configuration of the signal and ground circuit is shown above.

Appropriate cables can normally be found included with your product or in a PC shop.

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## *The Wavetable Connector and the Internal Synthesizer.*

The SoundSystem SiXPack 5.1 + is also equipped with a connector for a wavetable daughterboard. Installation information can be found on page 10 in the section "Connecting a Wavetable Daughterboard.". The volume control is found on the Control Panel under the controller labeled "AUX".



The installation of a wavetable daughterboard is as easy as ready further on page 10 in the section "Connecting a Wavetable Daughterboard.". The volume control is found in the Control Panel under the controller labeled "AUX". To record go to the SiXPack 5.1 + Control Panel under "Record" and choose the source "AUX".

**Important:** Like mentioned in the section "The AUX In", the signal from a connected wavetable is routed together with the AUX signal. Contrary to both CD inputs, these are not electrically separated from one another. Therefore, simultaneous operation should be avoided where possible. If you connect two devices to "one line", you will experience considerable signal loss in both devices. In addition, we cannot guarantee that this will not have a long-term negative effect on both devices.

### **Information on the integrated wavetable and the future of sound synthesis.**

The SoundSystem SiXPack 5.1 + plays MIDI files using a wavetable synthesizer (hardware with 64 voices) integrated in the chipset. The future of (General MIDI) wavetable technology lies, according to the experts, definitely in host based software synthesis. Sound synthesis should regain in popularity with the introduction of DirectMusic because it will enable music and MIDI to take on an interactive form in applications such as games. The DLS format for the sample sets is supported completely by the SiXPack 5.1 +. Some applications are already using the new versions of DirectSound integrated GS soundset from the cherished SoundCanvas series licensed by Roland.

Please note that no system exclusive parameters can be processed.

And finally, on this card there is a connection for an additional wavetable daughter board. The WaveSystem series is available as an option for this purpose. Modules from other manufacturers – like Yamahas DB-50 XG or Rolands SCD-10/15 – can be used with the SiXPack 5.1 + without problems.

---

### **The MIDI Driver.**

A separate driver is available for the playback of MIDI information via an external wavetable module. This driver is named "SiXPack 5.1 + External MIDI" and can be chosen where it is appropriate. In the sequencer programs like Logic (Fun), Cubase or Cakewalk, next to the driver "SiXPack 5.1 + MIDI" for the internal synthesizer the driver for the wavetable module can be chosen. This driver is also used when externally connected devices are played from the GAME Port. If your MIDI files are to be played over the Windows media player – or if you are using a program that doesn't allow any other MIDI settings – then you should go in the Windows Control Panel, open the Multimedia Properties menu and choose the appropriate driver.

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## *The Joystick/MIDI Interface.*

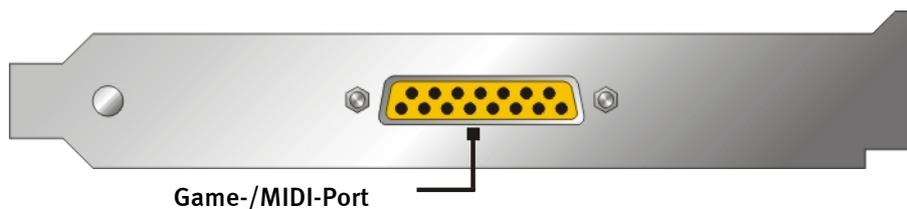
On the GAME/MIDI port of the SoundSystem SiXPack 5.1 + analog and digital joysticks as well as - over an optional adaptor – MIDI devices can be connected. The interface is controlled via a DirectInput-compatible driver.



### **The Basics.**

The SoundSystem SiXPack 5.1 + offers a combined connector for old game controllers as well as for modern devices– ForceFeedback joysticks, gamepads, flightsticks, wheels and all those other things you can't live without.

With an optional adaptor cable more than just one device can be connected to the gameport. The driver support under the Microsoft Direct Input specification allows for a quicker access to the hardware as well as extra features like ForceFeedback steering signals to be transferred.

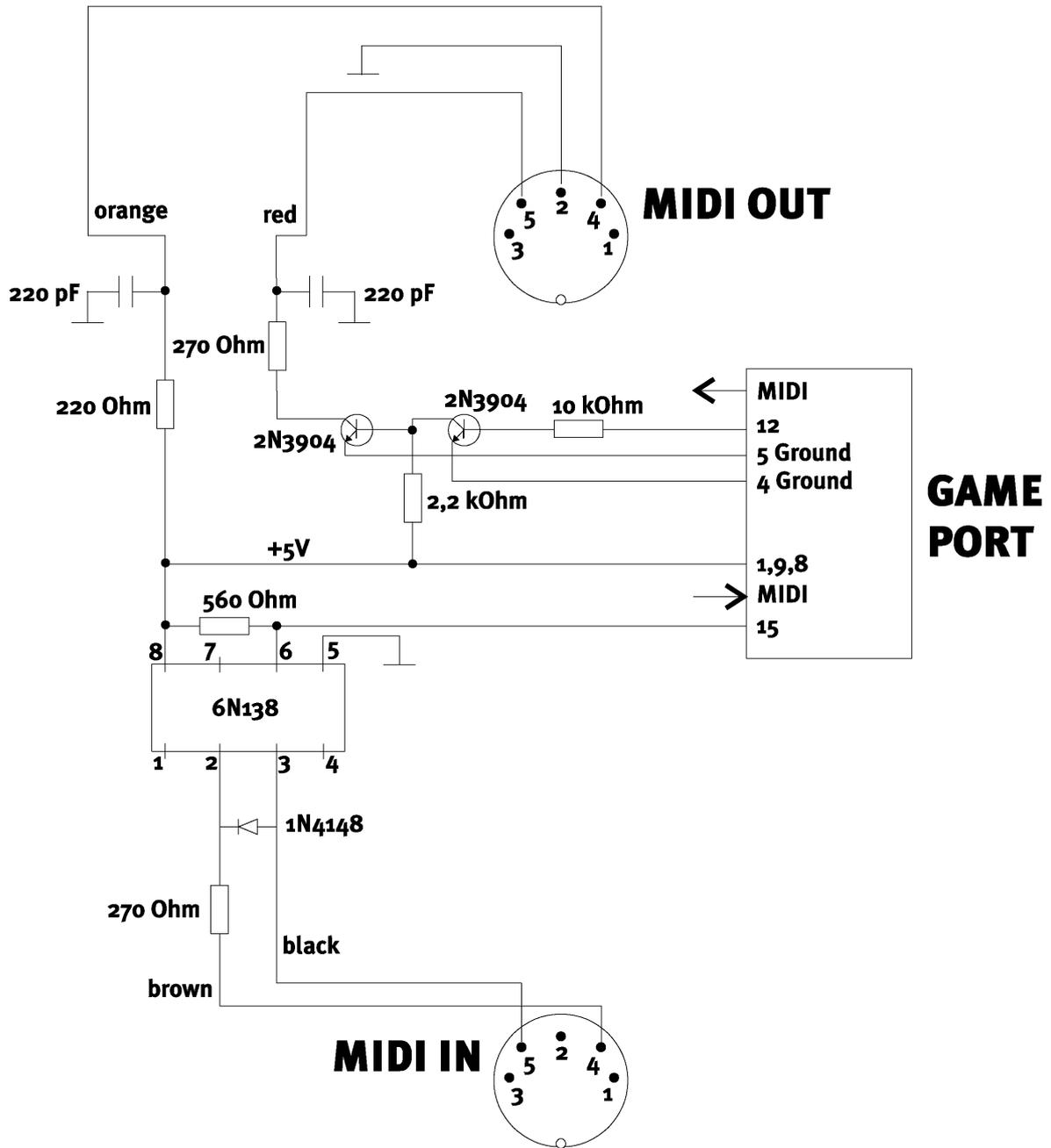


### **MIDI**

Also MIDI devices can be connected to the SiXPack 5.1 + over the adaptor cable. This cable is available as an optional extra in specialty stores or directly from TerraTec. Please visit our On-line Shop at <http://www.terratec.net/>.

Because we are often asked for a diagram for just such an adaptor cable, we have included the necessary information here. As you can see, it is a GAME Port / MIDI adapter and not just a simple cable. You will require additional components such as optocouplers and transistors. For this reason, we suggest that you acquire the parts from an electronics store – they don't cost the earth.

## The Circuitry of the MIDI Interface



*Please note.* We do not guarantee in any way the safety or the functioning of this circuit. Nor can we give any technical support for its implementation.



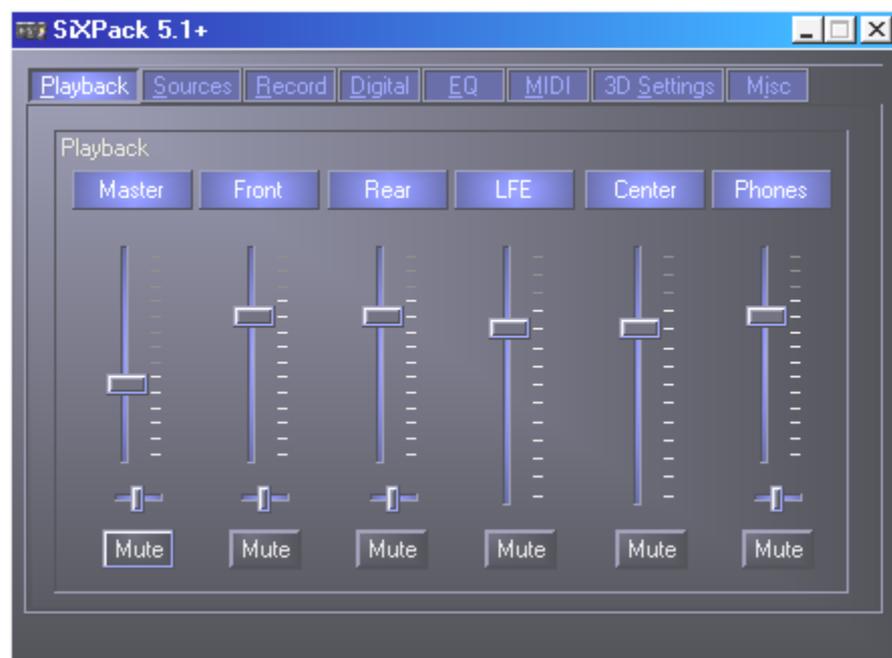
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## ***The SiXPack 5.1 + Control Panel.***

The description of the SiXPack 5.1 + Control Panel applies to the Control Panel that is installed under Windows 98Se, Windows Me and Windows 2000.

### ***The Playback Window.***

Here you can set – who would have thought? – the volume for the various speakers. This is pretty self-explanatory– the front slider is the one that usually wears out the fastest from being used so much ;-) and controls the front speakers, etc... All speakers can be muted immediately by clicking on the MUTE option.



---

## *The Sources Menu.*

Here you can set the volume for the specific source signals.



All sources can be muted immediately by clicking on the MUTE option. These sources will still be recorded when chosen for recording, as we are in the source - and not the recording menu. The stereo positioning can be adjusted using the panorama controller located under the volume sliders.

---

## ***The Record Menu.***

In the Record menu you can choose which source the SiXPack 5.1 + recording driver will be recorded in an application.

The microphone input has two other additional functions:

### ***AEC***

This is an abbreviation for 'Acoustic Echo Cancellation' and suppresses echoes. It is particularly practical for use with voice recognition and Internet telephony applications.

### ***Sorry, what was that? Boost!***

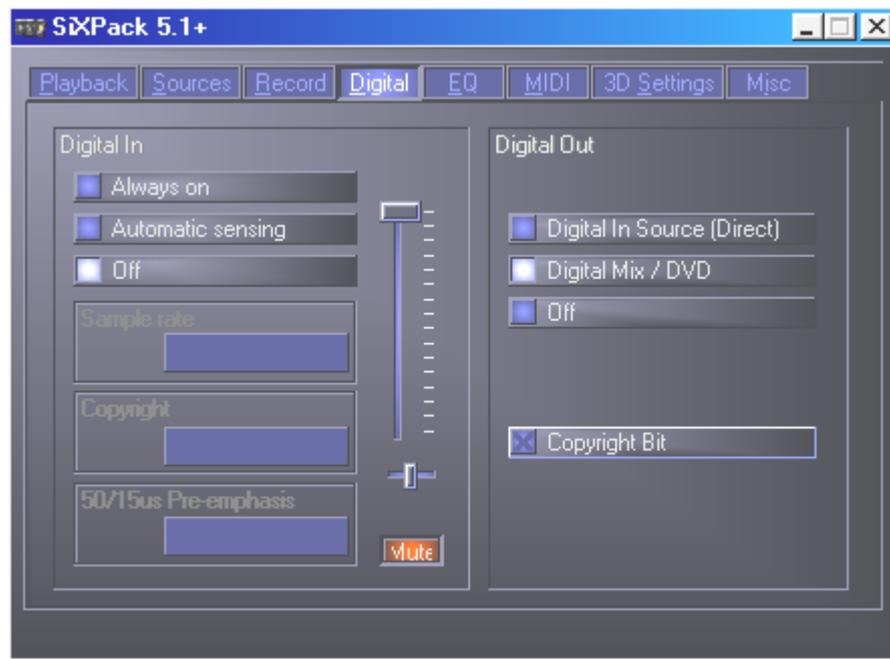
A weak signal level can be raised by activating the "Boost" function, which raises the signal level +20dB.



---

## The Digital Menu.

In the digital menu you can set the parameters for the digital In and Out.



To be able to work with the digital input, you should first ensure that this has also been activated. In the field "Digital Input" choose either:

**"Always on"** – in this case, the digital input is always active, regardless of whether or not a signal is actually present or

**"Automatic sensing"** – the signal input is only activated when data is actually present.

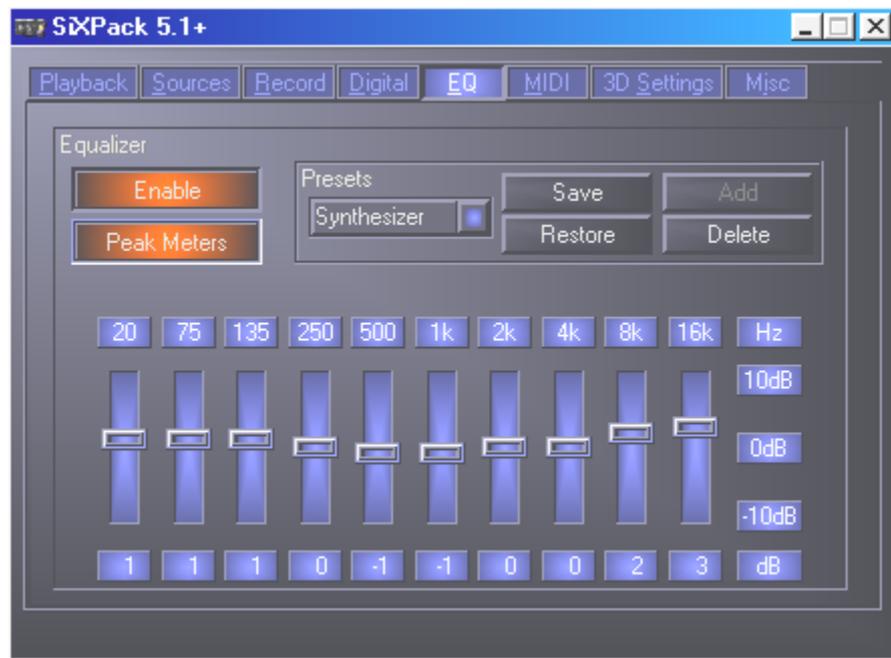
The boxes "Sample rate", "Copyright" and "Pre-emphasis" show the current status of the digital input.

For the digital Out there are three modes to choose from.

- Digital In Source Direct – permits you to forward 1:1 data present at the digital input to the digital output, i.e. in this mode, the frequencies 32 kHz and 44.1 kHz are also output at the digital output. It is not possible to adjust the volume.
- Digital Mix / DVD – with this setting all the digital sources (Wave, MIDI, Digital In) are played over the digital output at 48kHz. This setting is also used when you want to send encoded AC3 streams to an external decoder– please pay attention that the DVD software documentation should clearly state its compatibility to the SiXPack 5.1 +: either explicitly as "SiXPack 5.1 +", as "Crystal Soundfusion" or also as "CS4624 / CS4630".

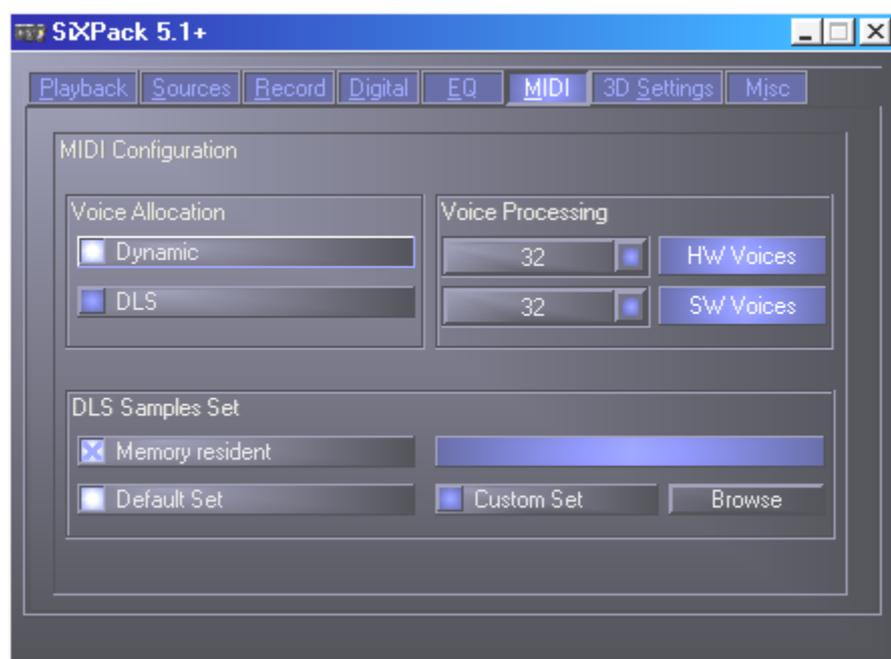
## The Equalizer Menu.

In the equalizer window, you can switch the equalizer on and off, load or overwrite predefined settings or save your own settings.



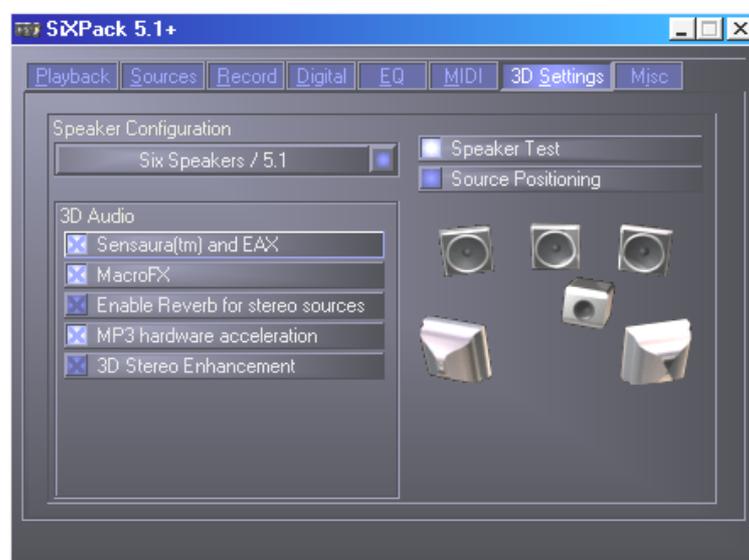
## The MIDI Menu.

Under "MIDI" we have organized all the relevant functions for the SiXPack 5.1 + synthesizer. You can determine the number of voices to be processed in the hardware and/or software and whether these voices should be allocated dynamically (recommended) or according to the DLS specification. Furthermore you have the option of loading the sample-set into RAM (recommended) and you have the possibility to load your own DLS 1.0 compatible sample-sets instead of the included standard set, but no larger than 8MB!

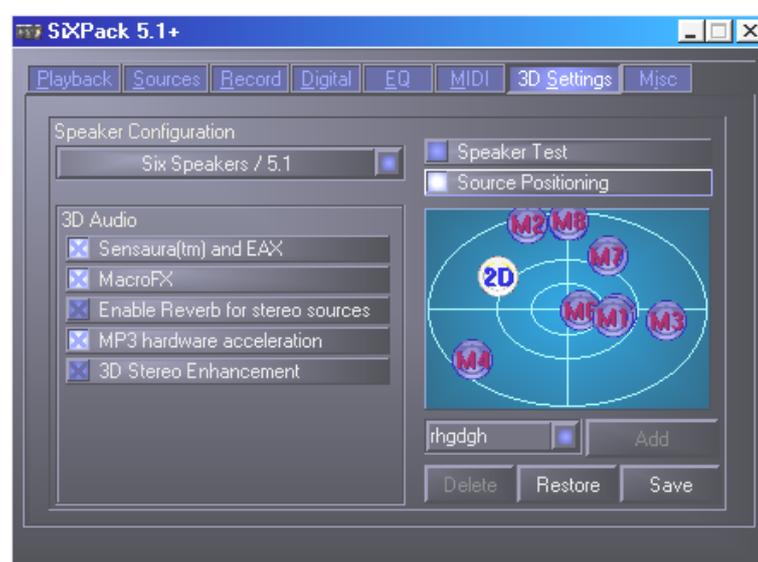


### 3D Settings.

Under "3D Settings" you will find the options for 3D support using the SiXPack 5.1 +. Particularly important is the speaker configuration, as only a proper speaker configuration will guarantee that the correct 3D algorithms are used. In addition, there is the option of deactivating DirectSound hardware acceleration. This is useful for some games which allocate any number of hardware buffers without any prior check, which may sometimes cause the game to crash. You can also prevent the use of "Sensaura and EAX", switch "MacroFX" on/off or put a simple "Stereo Enhancement" on the output signal. If a 3D-sound application is running (DirectSound 3D, EAX or A3D), you should ensure that the "3D Stereo Enhancement" has been deactivated. Another option offered here is the possibility to test all the speakers independently (Speaker Test) by clicking on them in the shown menu (The activated speakers are represented differently than the deactivated speakers by their color). By clicking again the test is stopped.



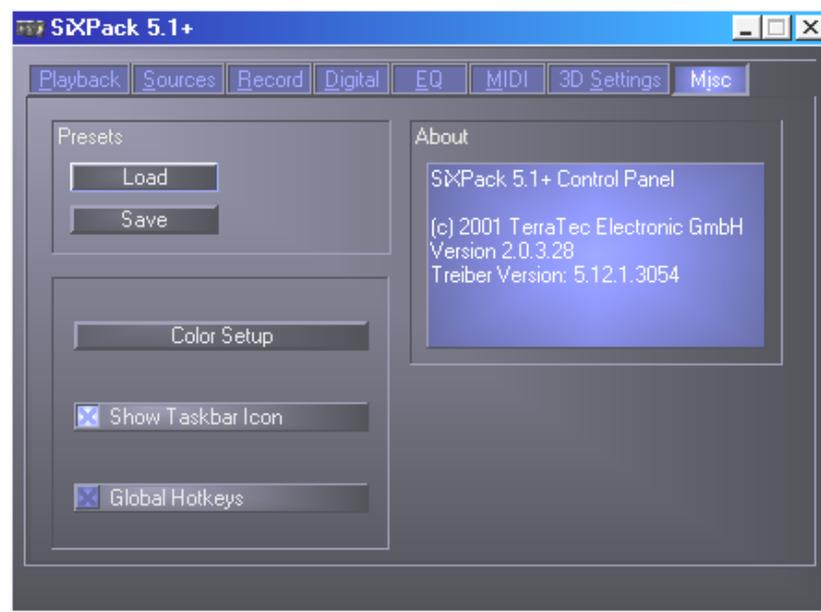
The next option that we would like to introduce you to is the positioning - "Source Positioning". You can position one stereo source and up to 16 MIDI voices wherever you want in the room. A cathedral orchestra can easily be realized in this way.



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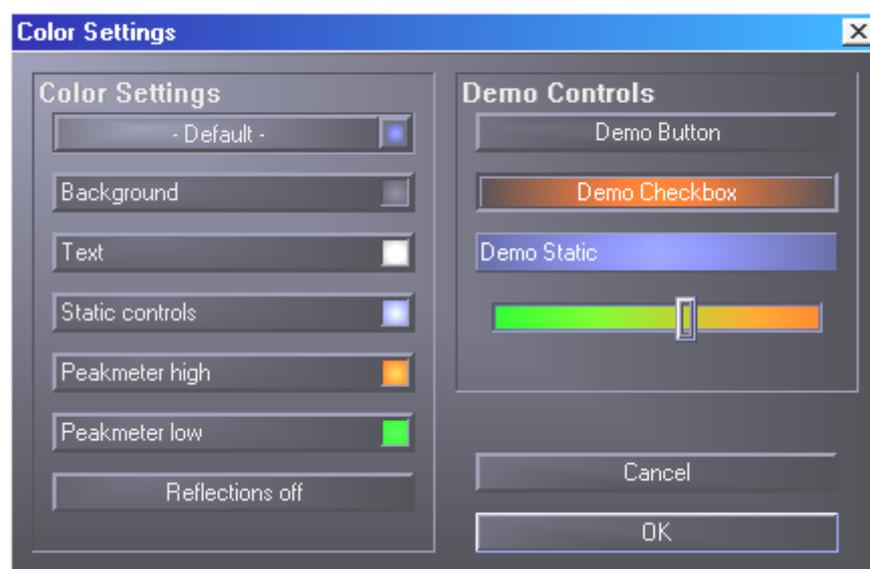
## Miscellaneous.

Under "Misc." (Miscellaneous) we have organized the functions that don't have any direct connection to the SiXPack 5.1 +, rather options that control the Control Panel. Loading and saving mixer settings belong in this category, as well as activating the global hotkeys and the display of the taskbar Icon, and the option to change the colors.



### Loading and Saving.

You can conveniently save and correspondingly restore settings that have already been made via Load and Save. For example, it is possible to save specific settings for the digital inputs and outputs based on an application and then to load them accordingly in the application. The settings are saved with the file suffix \*.msp. If you call up the "Color Setup", you are faced with a new menu where you can adjust the colors of the Control Panel to please your individual taste.



But be careful not insult your own taste.....;-)

---

## ***Ouch!– the Hotkeys.***

For you specialists, we have assigned a shortcut key (hotkeys) to nearly all functions to enable quicker navigation through the software. However, this is not the case if you use voice-recognition software for control purposes.

### ***Volume Control.***

Ctrl + space = front volume up

Ctrl + Shift + space = front volume down

Ctrl + R = rear volume up

Ctrl + Shift + R = rear volume down

### ***Muting (playback).***

Ctrl + Alt + space = master (front/rear) un/mute

Ctrl + Alt + R = rear un/mute

Ctrl + Alt + W = Wave un/mute

Ctrl + Alt + S = MIDI un/mute

Ctrl + Alt + A = AUX un/mute

Ctrl + Alt + L = Line un/mute

Ctrl + Alt + C = CD un/mute

Ctrl + Alt + M = Mic In un/mute

Ctrl + Alt + D = Dig In un/mute

Ctrl + Alt + G = Mic Boost on/off

### ***Change recording source.***

Ctrl + Shift + L = select Line In

Ctrl + Shift + C = select CD In

Ctrl + Shift + A = select Aux In

Ctrl + Shift + M = select Mic In

Ctrl + Shift + X = select Stereo Mix

### ***Other functions.***

Ctrl + Alt + E = equalizer on/off

Ctrl + Alt + o = headphone mode

Ctrl + Alt + 2 = 2 speaker mode

Ctrl + Alt + 4 = 4 speaker mode

Ctrl + O = load mixer settings (Control Panel must be open and active)

Ctrl + S = save mixer settings (Control Panel must be open and active)

By using the F5-F11 keys, or the key combination Alt + "x", where "x" is the letter underlined in the tab, you have direct access to the desired page of the Control Panel.

---

## ***The Bundle Software.***

The TerraTec Team has spared no expense or effort to bring you a software package that really has something going for it. It gives you a program which allows you to ...

- configure and control your SoundSystem SiXPack 5.1 +,
- listen to all important (and a few unimportant) audio file formats
- explore 3D audio sound worlds yourself,
- create your own pieces of music,
- decode and even encode MP3s.

You could say a complete package. And the best of all: The program is powerful enough to give you professional features and options for all your needs. No gimmicks and (almost...) no superfluous gadgetry. In the directory "HOTSTUFF" – a TerraTec tradition – you'll find some of the best and most useful (in our humble opinion) audio shareware and freeware programs. There's enough stuff there to keep you busy with hours of work and fun.

Now on to it: After you have installed the software via the autostarter – and provided you have installed the entire bundle software – you will find the following programs which we would briefly like to describe here for you. You can find more detailed information in the respective software's help files. Have fun!

- Intervideo WinDVD
- Musicmatch Jukebox
- Emagic Logic Fun (only in Windows 95/98)
- The Sensaura 3D Player
- The Sensaura 3D demos

---

## ***Crash Course in Intervideo WinDVD.***

### **Using WinDVD**

#### ***Viewing a DVD Title***

To view a DVD title, put the disc into the DVD drive. WinDVD will automatically begin playing the disk.

To launch WinDVD manually:

1. Select **Start > Program Files > WinDVD**, or if you have created one, click the WinDVD desktop shortcut.
2. Make your selections from the menu within the WinDVD window, or click  (the **Play** icon) on the control panel.

#### ***Creating a Playlist***

1. With the disk in the drive, click  (the **Playlist** icon)
2. The Playlist window opens. Select **File** from the lower right set of options (File or Disc). Move to the drive and directory in which the files are stored. Select the first file to be played.
3. Click **Add**. Repeat this procedure with as many files as you want. Remember that these files will now play in the order in which they appear. Delete and replace files to create the correct order, if needed.
4. Click **Save** to save your playlist for future use. Click **Close** to close the window. When you click **Play**, the playlist automatically plays the files in the order specified. You can play .mpg, .vob, and .ac3 files.

#### ***Loading a Previously Saved Playlist***

1. With the disk in the drive, click the **Playlist** icon.
2. The Playlist window opens. Click **Load Playlist**.
3. The list of saved playlists appears. Select the playlist to load.
4. Click **Close** to close the window. When you click **Play**, the playlist automatically plays the files in the order specified. You can play .mpg, .vob, and .ac3 files.

#### ***Changing Your Settings***

You may want to enable or disable certain features of your WinDVD. To change any properties and features of your WinDVD:

1. Launch WinDVD and view the main control panel.
2. Click  (the **Properties** icon). The **Properties** window appears.

- 
3. Tab to the desired properties to be changed. Select from General properties, Audio properties, Parental Control properties, and Display properties.
  4. Select the properties you want. If you are unsure about what a particular property means, see the online help for that properties property page, or check the glossary. You can change these properties at any time.
  5. Click **OK** again to accept your changes.

### ***Setting Parental Control***

Parents may want to set the parental controls, allowing only those movies and titles that are age-appropriate to be viewed. (In some cases, movies can be shown in modified form to allow different ratings for the same movie.) To set movie rating limits on your WinDVD:

1. Launch WinDVD and view the main control panel.
2. Click (the **Properties** icon. The **Properties** window appears.
3. Tab to the desired properties to be changed. Select Parental Control Properties.
4. Select the desired age-appropriate level. This will be the highest level allowed. No titles with movie ratings higher than the one selected will be viewable. You can change this again at any time.
5. If you have set a password, enter the password now, then click **OK**. You can change your password at any time.
6. Click **OK** again to accept your changes. The parental control feature will now use the new settings.

### **Ejecting a Disk**

To eject a disk from the player, click  (the **Eject** button) from the video viewing window or the toolbar.

### ***Hiding and Viewing the Player***

You can choose to only see the Video Viewing window. To hide the Player:

1. Open the Properties page.
2. Tab to General. Disable (remove the checkmark) **View Player**.
3. The player is now hidden. Enable the option again to view the player. You can open the properties page from the right-click menu or from the toolbar on the video viewing window.

---

### ***Enabling the Toolbar and Status bar***

You can choose to include a toolbar and a status bar when using the Video Viewing window.

1. Open the Properties page.
2. Tab to General. Enable **View Toolbar** to see the toolbar in the video viewing window, and **View Statusbar** to see the status bar on the window.
3. You can remove the toolbar or status bar from the video viewing window by disabling the selected feature.

### ***Viewing a DVD Movie or Video CD***

Insert the Title into the DVD Drive. WinDVD reads the format of the disk and starts automatically.

### ***Playing a DVD Interactive Title***

Interactive DVD or MPEG2 video based titles require no special action from the user. Just install the application and it should properly call the WinDVD drivers to playback the DVD or MPEG2 video files embedded in the application.

### **Zooming In**

1. Position the mouse cursor over the top left-hand corner of the desired zoom region.
2. While holding the mouse button down, drag the cursor to the opposite end of the zoom region. This creates a dotted line rectangle, the outline of the desired zoom region.
3. Release the mouse button. WinDVD automatically fills the window with this zoom region.

### **Capturing a Still Image**

WinDVD now allows users to capture a static image during movie playback. Press the "P" key at any time to capture a BMP file of a moving or static image. Capture does not work on zoomed regions and on some hardware motion compensation graphics chips. If you are having a problem, try disabling hardware motion compensation and capturing again.

Captured bitmaps are stored in the Capture subdirectory of the WinDVD directory on your hard drive. Captured files are number cap001.bmp, cap002.bmp, etc.

### ***Vocal options***

When you insert a karaoke or other vocal disc into the DVD drive, WinDVD automatically reads and correctly decodes the type of disc. The audio output is determined by the Vocal Options properties you have selected.

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### ***Changing the Parental Control Password***

To create a new password:

1. From the Parental Control window, click **Change Password**.
2. Type your desired password directly into the **New Password** text area.
3. Type the same password again in the **Confirm New Password** text area. Be sure to type it exactly the same both times, or it will not be accepted.

To change your password:

1. From the Parental Control window, click **Change Password**.
2. Type your current password in the **Old Password** text area.
3. Type your desired password directly into the **New Password** text area.
4. Type the same password again in the **Confirm New Password** text area. Be sure to type it exactly the same both times, or it will not be accepted.

### ***Closing WinDVD***

To close WinDVD:

1. Stop any DVD disc in the DVD drive.
2. Click the **Close** icon.

---

## The WinDVD Controls

Once WinDVD is launched and active, use the controls shown on the WinDVD panel to navigate through the DVD Title. The WinDVD controls are designed to look like controls on a standalone DVD player, so they may seem familiar to you. Keep in mind that not all options are available with all DVD Titles. Only the author of a title can include features. If a feature is not available with a particular title, it will be grayed out and inaccessible. Below is a description of each portion of the full WinDVD control panel.

### *Start/Preferences*



Opens the Playlist window, letting you select a specific order and group of files. Select from .vob, .dat, .mpg, and .ac3 files. You cannot select a file while a movie is playing.



Open the Properties window.



In order: minimize, maximize, and close the WinDVD video window.

### *Directional Buttons*



Eject.



Stop.



Start playback of the disk.



Pause the current playback.



Single frame advance while in Pause mode.



Loop current title or chapter.



Jumps to previous chapter.



Jump to next chapter.



Play the disk in fast reverse mode.



Play the disk in fast forward mode.



Expanded view for additional controls.



Resume playback of video from a menu screen.



Opens the Audio and Video adjustment window.



Opens the online help system.

---

### Sliders



Move to a specific time in the title.



Increase or decrease the brightness of the video output.



Increase or decrease audio output.



Color Control Bar 1. Adjust the relative strength (balance) between video colors blue and yellow.



Smooth rewind and smooth fast forward.

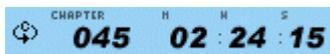


Color Control Bar 2. Adjust the relative strength (balance) between video colors red and green.



Adjust the volume.

### Counter



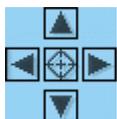
The counter shows the chapter currently being played, and how much time has elapsed since the Title began playing.

### Mute



Mute if it is checked.

### Directional Arrows



Use the directional buttons just as you would the mouse button or Tab key.

The arrows represent (clockwise from top): Navigate up, Navigate right, Navigate down, Navigate left. Center: Select or Enter.

### Numeric Keypad



The numeric keypad provides you with a method of selecting numbers. This is more likely to be used while playing a Video CD than a DVD disc. Any time that you enter a numeric value, click the corresponding key on the numeric keypad and then click the checkmark to accept that number.

---

### *Menu Items*



Displays all of the menus available (Root, Audio Language, Subtitles, etc.) on the DVD disc currently being played and allows you to select a menu to navigate.



Opens a submenu showing you all of the titles available on the DVD disc currently being played and allows you to select a new title to play back.



Opens a submenu showing you the chapter currently being played. You can select another chapter from this menu.



Displays the current DVD discs audio track options. If multiple audio tracks or language are available, use this menu to select your choice.



Displays the subtitle menu. If multiple language subtitles are available, use this menu to select your choice.



When available, select the angle to view from a list of optional angles.

### *Zoom/Unzoom/Pan*



If Zoom is already active, returns to normal view.



Pan the view around the screen to change the view.

### *Bookmarks*



WinDVD automatically remembers the last viewed location of a DVD.

### *Web Button*



Links to Internet website.

### *WinCinema Manager*

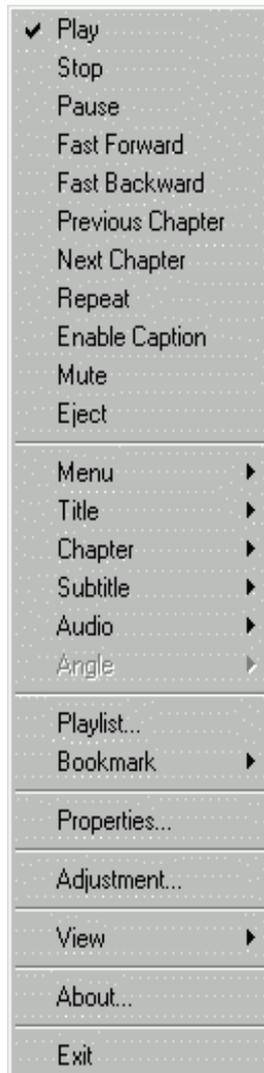


Launch application of WinCinema family.

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## The Right-Click Menu

While you are viewing a movie, you can put the cursor on the display window and right-click to see a "video menu". The commands on this menu are the same as those in the regular menu. You can also use this window to show the main WinDVD control panel when it has been hidden by viewing full-screen video, or as set in the Properties section. The Video menu is shown below.



**Play** - plays the current title, restores play after a pause.

**Stop** - stops the current playback.

**Pause** - pauses the current playback.

**Fast Forward** - plays the disk in fast forward mode.

**Fast Backward** - plays the disk in fast reverse mode.

**Previous Chapter** - jumps to the previous chapter.

**Next Chapter** - jumps to the next chapter.

**Repeat** - repeats the disk play.

**Enable Caption** - enables the line 21 caption

**Mute** - mutes the sound on the disk currently playing.

**Eject** - ejects the disk from the drive.

**Menu** - shows menu selections.

**Title** - shows title information.

**Chapter** - shows chapter selections.

**Subtitle** - shows subtitle selections.

**Audio** - audio selections.

**Angle** - shows angle selections.

**Bookmarks** - WinDVD automatically remembers the last viewed location of a DVD.

**Properties** - opens the Properties window.

**Adjustment** - opens panel to adjust the volume, brightness, and Color Control 1 and 2.

**View** - views tool bar, status bar and player.

**About** - shows version and copyright information.

**Exit** - closes WinDVD.

---

## Video Viewing Window

The main viewing window for displaying video output. If you have selected View Toolbar in the General Properties tab, the toolbar appears at the top of the viewing window. If you have selected View Statusbar, the status bar is displayed at the bottom of the viewing window.

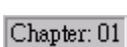


## Status Bar

When you are viewing a DVD disc and select **Show Status Bar** from the Properties menu, WinDVD displays the status bar across the bottom of the screen.



The following controls are available to you from the Status Bar:

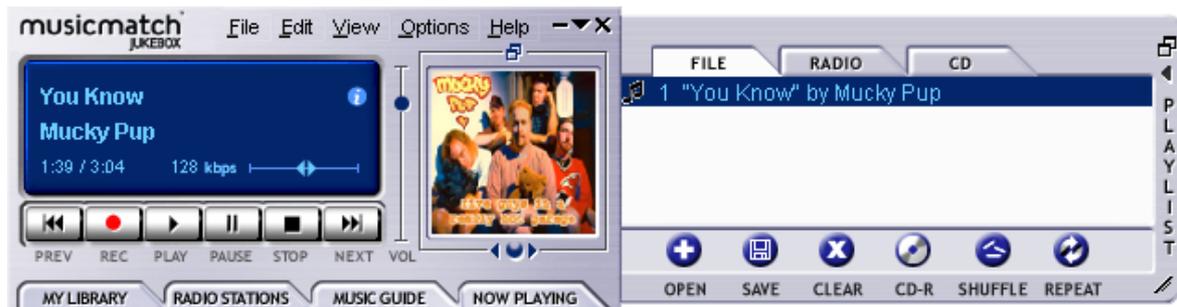
- |   |   |
|---|---|
|  | Move to a different time in the title   |
|  | Smooth Slow motion or fast forward  |
|  | Shows the current chapter.  |
|  | Shows the elapsed time  |
|  | Shows the disk type   |
|  | If "Repeat" function has been enabled, the appropriate character will appear in the far right of the status bar. - "C" represents repeat chapter<br>- "T" represents repeat title |

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## Crash Course in Musicmatch Jukebox.

With the program Musicmatch Jukebox from the firm Musicmatch, you can not only play various formats, but also create your own MP3 files, archive them and burn them to CD. Actually, the program and its cleverly designed graphic interface are by and large self-explanatory, but still, we would like to give you a brief introduction so that you can achieve your goals quickly and efficiently.

### The Player



Whether MP3 or Windows Media files - simply “drag n' drop” them into the playlist or player window or over “File” -> “Open”. For playback on the PC a soundcard is of course required. Coincidentally, TerraTec can also help you in this regard.

### The Recorder



Clicking on the record button in the player will bring you to the recorder. With the recorder you can for example read audio CDs and directly save them in MP3 format onto your hard disk. In the recorder options you can adjust the quality (bit-rate), activate the support for variable bit-rates and make other configuration changes. Important for insiders: Obviously, the original Fraunhofer MP3 algorithm is used to ensure the best possible quality. You can also record a signal from your soundcard (for example the Line In signal) into MP3 format directly in real time. These and more settings can be found in the “Options” menu (see photo above, the player).

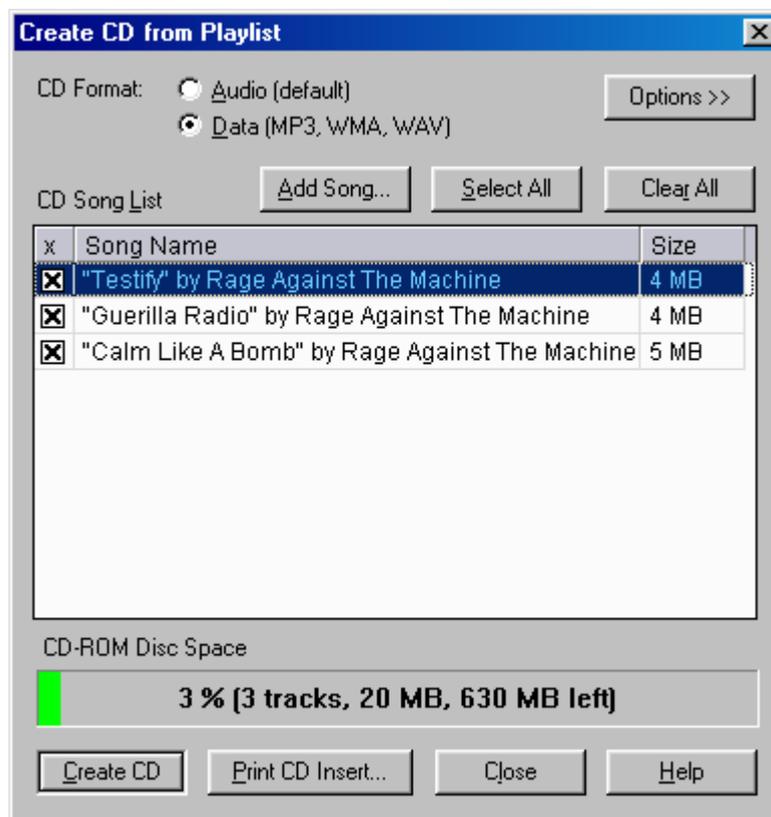
If you want to transform an audio CD into MP3 format then follow these steps:

If you can, you should connect to the Internet so that Musicmatch Jukebox can access CDDB (Compact Disc Database) – then the titles, artist, and album info are automatically saved as ID tags in the MP3 file. Otherwise handwork is required, but even that is incredibly easy. Load a MP3 file per drag n' drop into the playlist window of the player. A simple right mouse click on

the title and the familiar context menu appears. Choose “Edit Track Tags” and enter the info. But now let's get back to our audio CD.

Insert an audio CD in the CD ROM drive of your PC, stop the automatic playback if it starts. When the Cddb request was successful you should already have artist and title info displayed. Click on the red record button in the player to start the recording process. Choose the title(s) that you wish to encode – by default all titles are selected. Start the read and encode process by clicking on the record button in the recorder. And now you need a little patience or a fast PC. When the read and encode process is finished you will find a freshly ripped MP3 file(s) on your hard disk. Should you belong to the group of people without Internet access, you can edit the ID3 tags manually like mentioned previously. Information as to the exact location of the file(s) can be found under “Options” --> “Recorder” --> “Settings” --> “Songs Directory “. Afterwards you are ready for the MP3 CD recording and the next chapter.

Burn Baby, Burn!



With the integrated CD burning program you can easily capture your personal favorites on one CD. One good feature: Clear display of the amount of space remaining on the CD. In the playlist window select “CD-R” and choose “Create CD from Playlist”. Pay attention to select “Data (MP3, WMA, WAV)” for MP3 files and then click on “Add Song”, maneuver to the song path location determined as stated in the previous chapter and click on “Create CD”. That's it – really.

Must burners are supported straight from the factory, a comprehensive and up-to-date list of the models that have been checked can be found on the Musicmatch web page under <http://www.musicmatch.com/jukebox/player/cdr.cgi>.

Keep in mind: In order to use the M3PO go comfortably and easily navigate through your MP3 CD's, before you burn a CD you should take a second look at the functionality of the EDA system (Chapter “Fehler! Verweisquelle konnte nicht gefunden werden.” on page Fehler! Textmarke nicht definiert.). Dedicated burner software is also recommended, as Musicmatch Jukebox doesn't offer any option to create folders.

### Not just for hunters, for collectors too



Organize your music archive and sort according to a wide range of categories, including album, artists, title, genre or mood. If you want you can add your own. The “Find Music” function enables you to find your favorites quickly and easily (CTRL+F).

### Always the same, yet different.

Another feature of this software is its option of providing the interface with a new skin – they like to use the word skins. In the VIEW menu under VISUALISATIONS and SELECT VISUALISATION you can switch between installed skins.

If you want to download other skins or find out more information, we recommend the MusicMatch homepage. The address (it couldn't be simpler): <http://www.musicmatch.com>.

## Emagic Logic Fun – The Sequencer.



A flaunted audio and MIDI sequencer in a superior class with all the fun elements: from notation including printing music, various editing options to an excellent mixer with installed effects – everything is there.

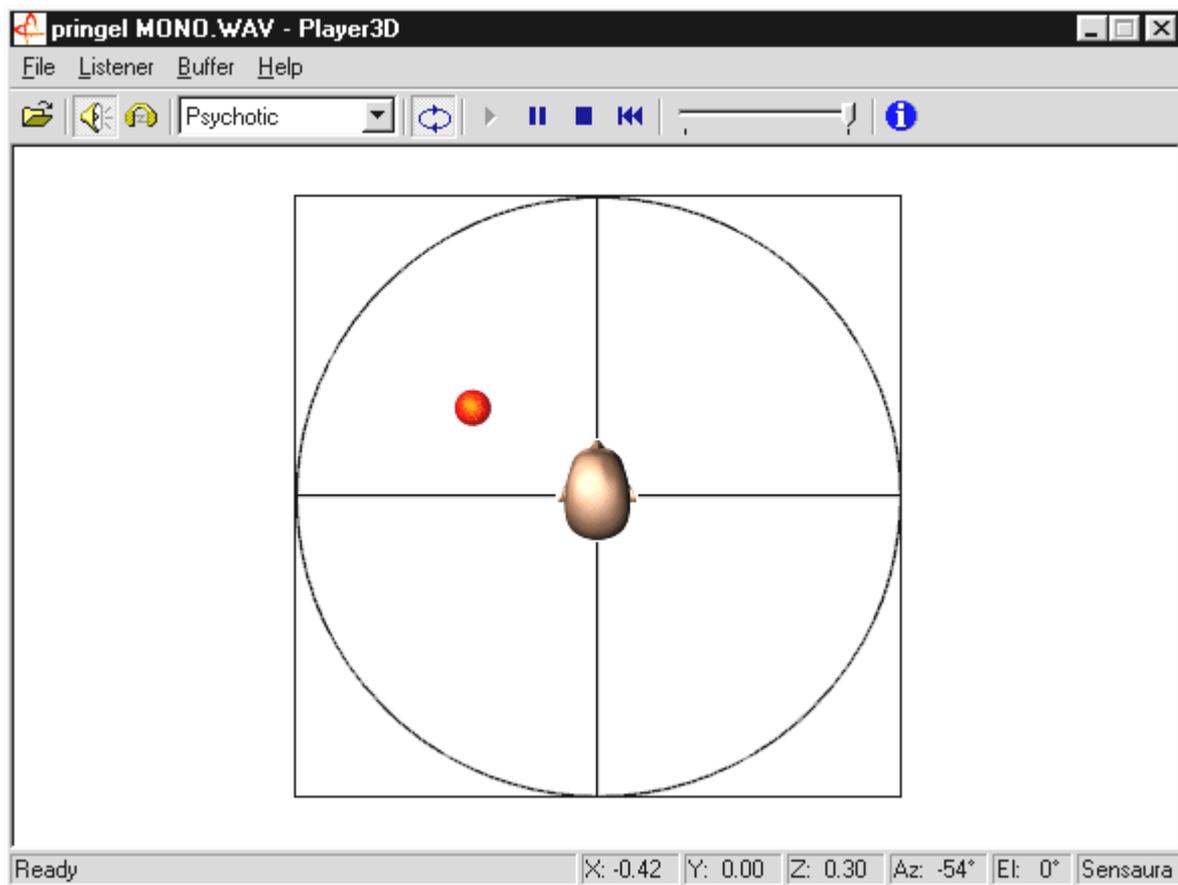
After installation, you will also find extensive documentation in the Logic Fun program group as a PDF file which you should scour through not just when you have questions.

To be able to read this PDF document, you will need Acrobat Reader. This can be found on your DMX XFire driver CD as an installation version.

Go and make a start on your compositions ...

## *The 3D Player – listening in the 3rd dimension.*

Listen like you feel. The 3D player lets you position your own sounds around your own head. The menu is in English and operation is extremely straightforward.



For example: Using drag&drop, move a WAV file of your own choosing to the 3D player and press the Play button. Now you can compare the supported 3D capabilities with one another in the “Listener” menu:

Headphones: adjusts the 3D positioning of the headphones

Speakers: adjusts the 3D positioning of 2 and 4 speakers

Hardware 3D: 3D functions over the DMX XFire hardware.

Software 3D: The main processor (Host) tries to imitate the 3D functions.

Stereo Pan: normal stereo picture

MacroFX Enable: activates the MakroFX functions (important: set the WAV volume on the XFire ControlPanel to approx. 70% less to get the full enjoyment of this function)

Reverb: You can listen to various room simulation algorithms here: either EAX 1.0, EAX 2.0 or even ID3L2 – or switch it off via None.

The path of a sound object in a three-dimensional room can be set through the subpoint path in the Buffer menu:

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Horizontal Circle: describes an object's horizontal circular movement relative to the listener. Recommended for experiencing the “back-front” syndrome.

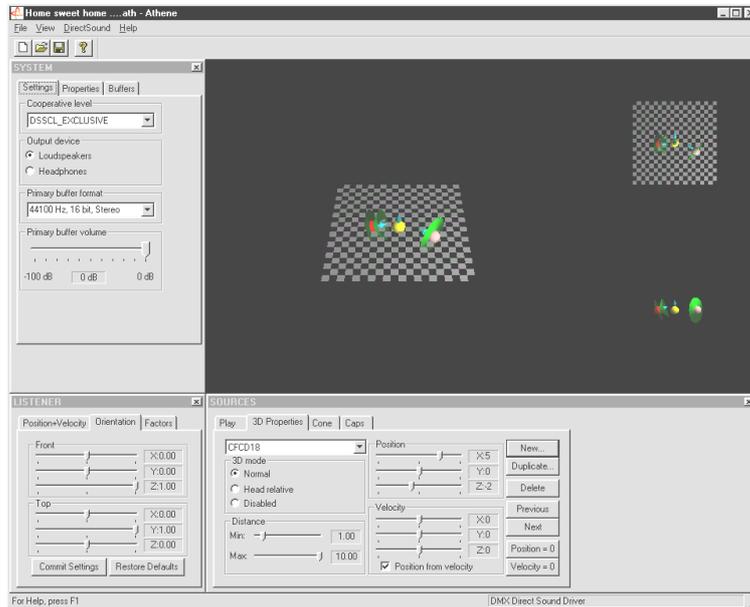
Vertical Circle: describes an object's vertical circular movement relative to the listener. Recommended for experiencing the “up-down” syndrome.

Flyby: the object flies towards the listener from a distance, passes by the face and disappears again.

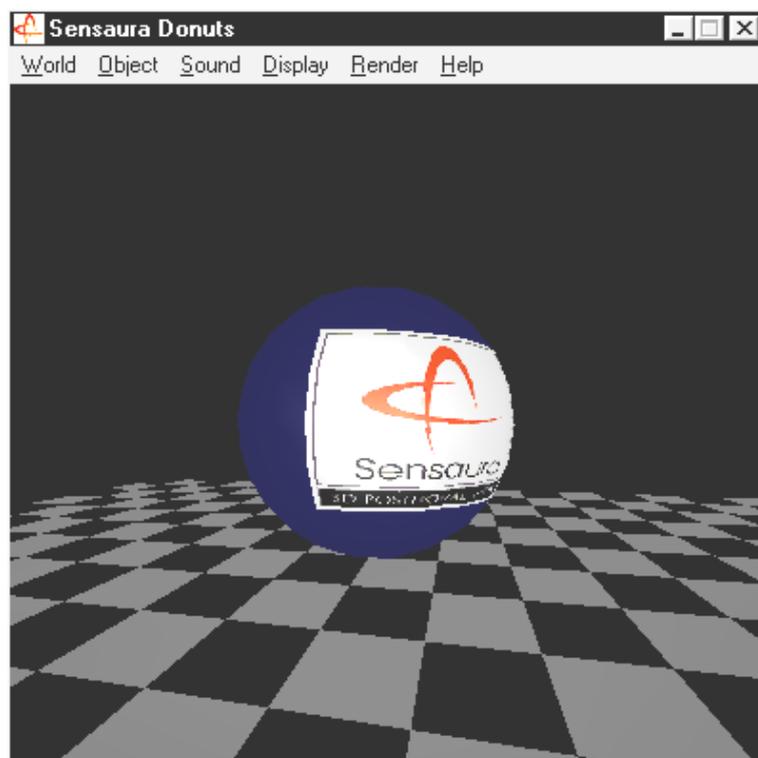
Manual: this lets you manually select the position of the objects with your mouse.

## The 3D Demos.

The DMX XFire 1024 software comes with different demos which demonstrate the 3D audio characteristics of the card:



*Athene – development tool for creating your own sound world  
(for more info, see the README file for the program).*



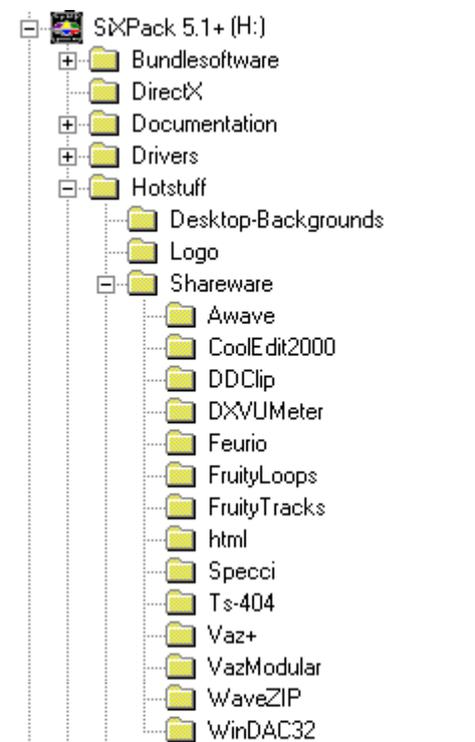
*Donuts – sweet sounds fly around you in an abstract 3D environment.*

You can listen to and see all these programs with the friendly assistance of Sensaura Ltd.  
(<http://www.sensaura.co.uk>).

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## *The HOTSTUFF Directory.*

On the CD-ROM for the SiXPack 5.1 + we have collected together a large number of other programs, tools and files. It's well worth a look.



Many of the programs we present here are shareware. Please support the shareware principle and pay the amount that the authors ask if you like the programs. Thank you

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## Appendix.

### FAQ – Frequently asked questions and their answers.

#### *Do I have to move jumpers and change dip switch settings before I install the sound card?*

The following jumper settings are possible:

Jumper	Position A	Effect	Position B	Effect
JP1	3 - 5 4 - 6	In this position the Line IN is active	1 - 3 2 - 4	In this position the Line In is converted to Headphone Out
JP2	3 - 5 4 - 6	TTL ( CD IN )	1 - 3 2 - 4	S / PDIF IN
JP3	1 - 2	External digital In active	2 - 3	Internal digital In active

\* The default position is position A.

#### *I can't change the IRQ for the SiXPack 5.1+ in the Device Manager.*

PCI cards are configured automatically via the Bios, Plug & Play or ACPI of the operating system. These mechanisms do not allow for the manual alteration of the IRQ via the Device Manager. If it were necessary to assign another IRQ to the card, it is possible to install the card into another PCI slot, possibly swapping PCI slots with another card. In addition, one BIOS or another offers the option of permanently assigning IRQs to individual PCI slots. In any event, get advice from the manual for your motherboard.

#### *There is no sound coming from the sound card.*

- Pay attention that when using only one speaker set you need to use the first line output (Line Out 1).
- Check the connections between sound card and loudspeakers.
- Are the active speakers or Hifi system turned on?
- Check the level controllers in the SiXPack 5.1+ Control Panel. Ensure in particular that none of the mute switches have been activated because this would turn off the sound output.

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### ***How do I record from my hi-fi system?***

- Connect the line Out socket on your hi-fi system to the line In socket on the sound card.
- Use the Record Out socket or the Tape Play socket on the tape section of your hi-fi amplifier.
- Then go to the SiXPack 5.1 + Control Panel under "Record" and choose the source "Line In".
- Now you can open your recording software, like the included Wavelab Lite or the sound recorder from Windows.

### ***The digital input cannot be synchronized to the digital output of the CD-ROM drive.***

- First ensure that you have properly connected the supplied cable to the CD-ROM drive.
- The digital output on the CD-ROM drive only outputs pure audio information, therefore it is essential that there is an audio CD in the drive and not an MP3 collection that you have burned yourself, for example.
- As standard, the SiXPack 5.1+ digital input is set to TTL signal level via the jumper (JP2), which usually corresponds to the level of most CD-ROM drives. However, there are exceptions which mean that changing the jumper JP2 to S/PDIF level will result in success in these cases.
- If this was also no help, ensure that the digital output of the CD-ROM drive is in fact supplying a signal.
- Set the JP3 jumper to internal.

### ***Background noise is continuously coming over the speakers, what can I do?***

When the sound card was being designed, value was placed on incorporating the best audio properties. Nevertheless, it is still possible that in certain computer configurations inserting graphics and video cards, hard drive controllers or even power supply units can have an effect on the audio signal. Generally, the built-in amplifier is very sensitive to this. Use active speakers or your hi-fi system on the line output. When installing the sound card in your computer, try to place it as far away as possible from the sources of interference mentioned above. Switch the microphone input to Mute when it is not to be used.

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***Ever since I connected my sound card to my stereo system, I can hear a constant hum.***

The hum (50 Hz) comes from the 220 V power supply. It is caused by a ground loop. This loop is created when two devices are grounded by a ground wire or other wire ( e.g. antenna cable), and are also connected to an audio cable. The humming will disappear if the direct conducting connection is removed – either with a sheath current filter that is connected into the antenna line (in specialty stores, approx. USD 10), or with an audio transmitter that eliminates the direct coupling of the audio output (PC) and the input (HiFi amplifier) (e.g. Conrad, Order No. 31 14 05 and in car HiFi stores). If you remove the antenna cable from the receiver/tuner and the hum disappears, then the sheath current filter will help. If the hum is audible even without the antenna cable, the cause of the problem is a doubled ground on the mains plugs and can be resolved using an isolating transformer.

***Is the MIDI port on the sound card compatible with the Roland MPU-401 standard?***

The sound card supports both the Sound Blaster MIDI mode as well as the MPU-401 UART mode (not the SMART mode, this does not affect performance since most programs support MPU-401 UART mode). Programs which are set up for MPU-401 mode directly support your sound card when a wavetable is being used.

***I can't get the MacroFX effect to work.***

Check the settings in the SiXPack 5.1+ Control Panel. MacroFX operates with a volume increase. If you have set the controller to maximum, the card cannot increase the volume further and the effect is barely perceivable.

***Wave files played with the SiXPack 5.1 + sound distorted.***

Check the settings for the wave slider in the SiXPack 5.1+ Control Panel. If this controller is at the upper stop, this may cause the signal to be distorted. To reach 0dB the slider only needs to be set to about 70%.

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***A keyboard connected to the sound card does not react when I hit a key.***

- First, make sure that the driver for communicating with the keyboard has been installed. The driver for this card is called 'SiXPack 5.1+ External MIDI' and should be found in the Windows Control Panel under System, then Device Manager. If it is not there, reinstall the current drivers.
- If the driver is installed, it must be selected as the MIDI input device in the respective sequencer software. Please see your sequencer manual for details on this. Most sequencer programs have a menu item labeled "Setup/MIDI Devices", where you can select MIDI input and MIDI output devices.
- If both these conditions are satisfied and the problem persists, in other words the software does not react when you hit a key or no sound is audible, the MIDI connecting cable is almost certainly the cause of the trouble. Experience has shown that there's an enormous number of different MIDI connector cables which unfortunately are all identical in appearance. These cables should contain a so-called optocoupler suitable for the sound card's levels. As it's not possible to check this from the outside, always use the sound card manufacturer's MIDI cable. As a result of this problem, our product range includes such a cable which you can obtain from your equipment retailer.

***Where can I get new drivers and utilities for my sound card?***

You can always obtain current drivers and software versions from the ReActor BBS at +49 2157-817924 (analog) and +49 2157-817942 (ISDN). You also have access to them through our Internet sites (<http://www.terratec.net>). Here, you can obtain current information about our products and hot new tools for your sound card.

***The force feedback of a ForceFeedback joystick connected the SiXPack 5.1+ does not work.***

The MIDI lines for ForceFeedback transmission are usually used for another purpose. Ensure that the SiXPack 5.1+ Game Device interface is given its own IRQ and always use the most up-to-date software for your ForceFeedback joystick.