SoundSystem

AUREON 5.1 *Sky*

Digital Audio Solution

English Manual

CE Declaration

We:

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

hereby declare that the product:

SoundSystem Aureon 5.1 Sky

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

1. EN 55022 Class B

2. EN 55024

The following are the stipulated operating and environmental conditions for said compliance:

residential, business and commercial environments and small-company environments.

This declaration is based on:

Test report(s) of the EMC testing laboratory

Contents

Welcome!

We're pleased that you have chosen a TerraTec SoundSystem and would like to congratulate you on this decision. You've purchased a sophisticated product representing the state of the art of audio technology, and we're convinced that our product will prove extremely useful to you in the coming years and provide you with a great deal of entertainment.

This manual covers the SoundSystem Aureon 5.1 Sky and its uses in great detail.

But first, here's a quick overview:
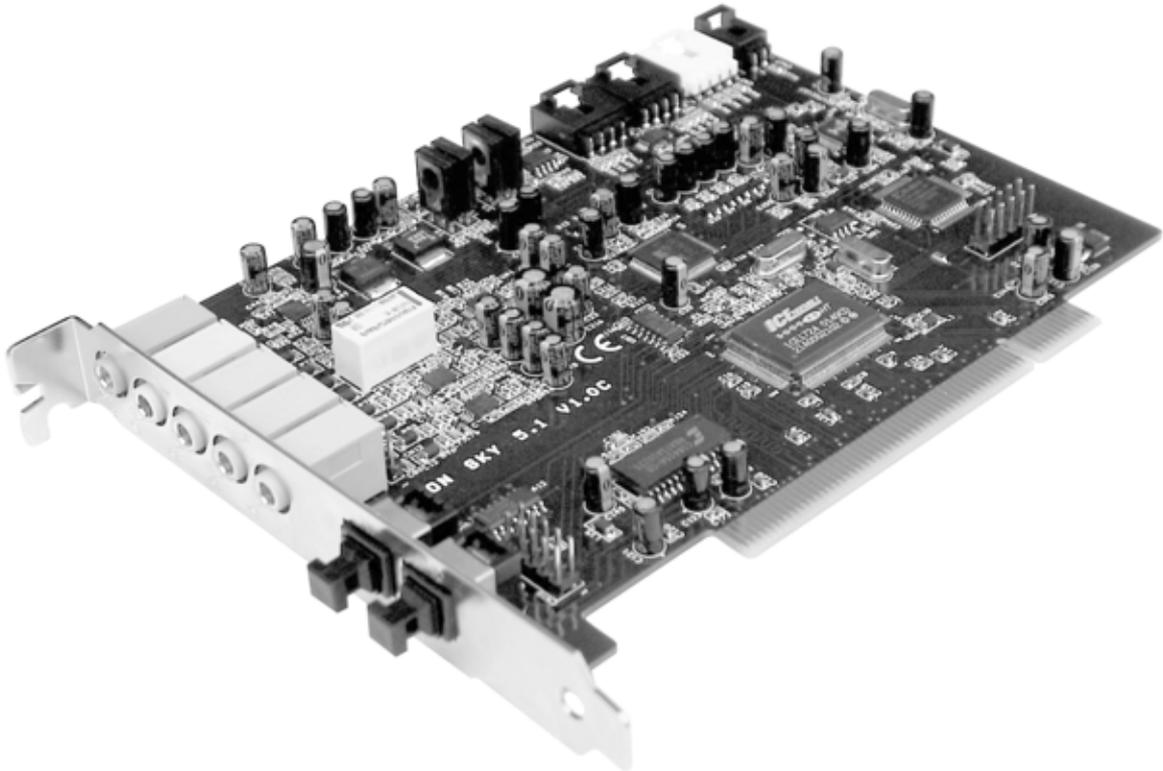
SoundSystem Aureon 5.1 Sky PCI card

A broad range of connections.

 The SoundSystem Aureon 5.1 Sky is the result of our many years of experience in the PC audio sector and reflects the continuous evolution of audio and multimedia software for the PC. The SoundSystem Aureon 5.1 Sky offers you a wide range of interconnection options with other audio devices such as hifi surround systems, MiniDisc or CD players with analog or digital outputs, headphones and microphones.

High-quality audio characteristics.

The SoundSystem Aureon 5.1 Sky provides extremely high quality for analog recording and playback of analog material. The card features studio-quality 24-bit/96 kHz technology. Using Windows XP with Service Pack 1, playback at no less than 24-bit/192 kHz becomes possible.

As a result, the Aureon 5.1 Sky achieves a S/N ratio of well over -100 dB(A) on its analog inputs and outputs!

Recording and playback of audio material at the purely digital level.

The SoundSystem Aureon 5.1 Sky features an optical input and output in 24-bit S/PDIF format. You can therefore transfer already digitized recordings from a CD, DAT or MiniDisc player (or recorder) to the PC without losses. In addition, you have the choice of all commonly-used sampler rates, as well as access to settings such as copy protection. The interface can even be used for raw data streams such as AC-3 and DTS.

Software à la carte.

The software side features a generous package, including Cyberlink PowerDVD with Dolby Digital EX, the Wavelab Lite 2.0 audio editor, the Emagic Logic Fun composing application, and Musicmatch Jukebox for your MP3s.

WDM drivers for Windows 98SE / ME / 2000 and XP quietly do their job behind the scenes. The control panel gives you convenient access to configure the card's broad range of functions. Its carefully thought-out user interface and intuitive control of all card settings will make your day-to-day work with the SoundSystem a breeze.

Last but not least.

We hope you enjoy your SoundSystem Aureon 5.1 Sky and would like to suggest that you browse this hopefully entertaining manual when you get the chance. In addition to the important information about its technology, we have outlined a number of typical applications wherever appropriate. We're convinced that even experienced users will profit from this guide.

Thanks for your attention—enjoy!

...your TerraTec Team

From opening the package to installation.

Before installing the sound card in your computer, please note the details of your computer's configuration. Also refer to the manual of your computer and other expansion cards for their settings.

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

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

If you are still having problems, please call our service hotline. The phone numbers and hours of the hotline can be found in the Appendix of this documentation.

Start by making sure that nothing is missing.

The scope of delivery of the SoundSystem Aureon 5.1 Sky includes at least the following:

- 1 PCI sound card TerraTec SoundSystem Aureon 5.1 Sky

- 1 installation and driver CD

- 1 Quick reference

- 1 customer service card

- 1 TerraTec registration card with the serial number

Please return the registration card to us at the earliest possible opportunity or register online at **http://www.terratec.com/register.htm.** This is important for support and hot-line services.

Note!

Even if you're a seasoned pro, you should still at least skim the The software. chapter starting on page 26. The information on drivers and the first sections on the ControlPanel are important for your overall understanding of the system. Thank you.

Short and to the point for busy pros.

- The SoundSystem Aureon 5.1 Sky is a PCI card that supports Busmastering. Please choose a PCI slot which is far away from the graphics card(s) or SCSI/RAID controllers—i.e. as close to the "bottom" as possible in most installations.

- You will also need a number of free address ranges (generally no problem).

- The driver installation under Windows (98SE to XP) follows the Microsoft guidelines. The drivers can be found on the included CD-ROM.

- After installing the drivers, open the Device Manager and check for yellow exclamation marks. If you find any, please see the Appendix (page 38) for our suggested solutions.

- You **must** install the ControlPanel. The full functionality of the SoundSystem cannot be controlled using the Windows Mixer.

- So much for the summary. The following is a detailed, illustrated description of the installation.

The connectors of the Aureon 5.1 Sky PCI card
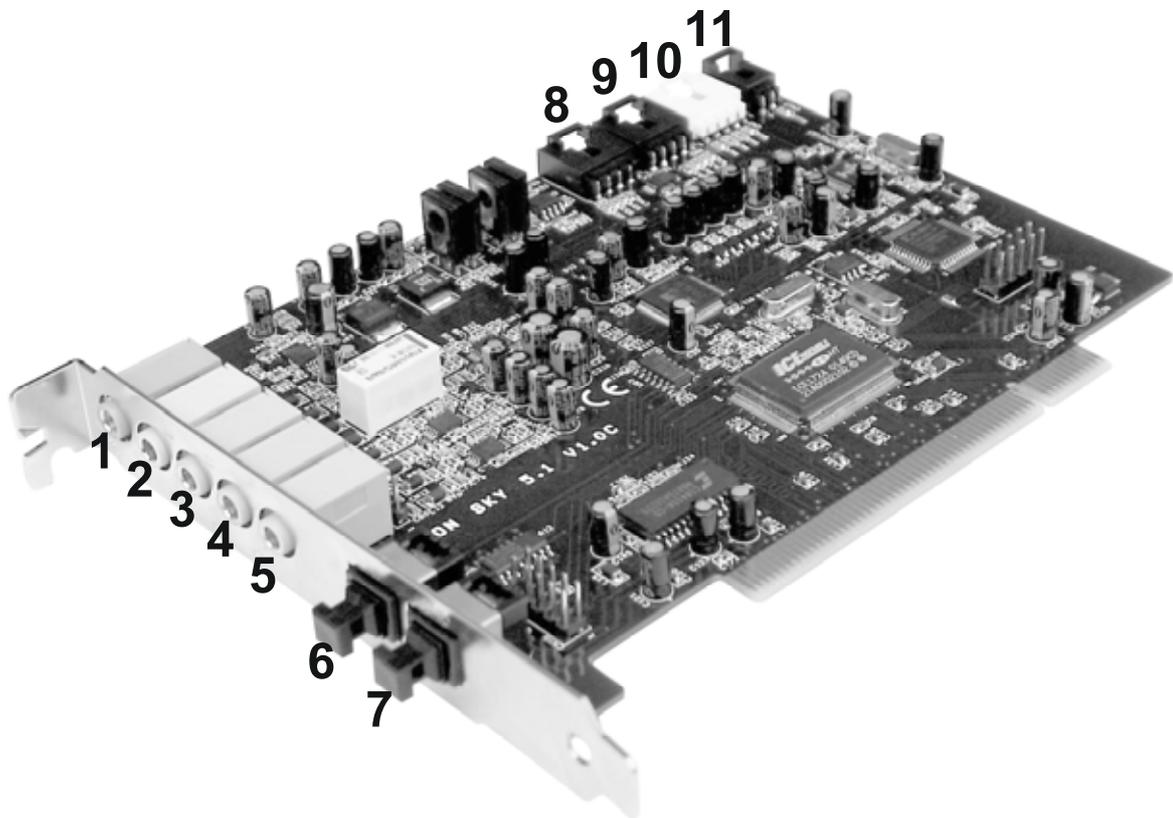
1. Analog microphone audio input (3.5 mm jack)

2. Analog stereo audio input (3.5 mm jack)

3. Analog stereo audio output "Front" (3.5 mm jack)

4. Analog stereo audio output "Rear" (3.5 mm jack)

5. Analog stereo audio output "Center-LFE", Left = Center, Right = LFE/Subwoofer (for 3.5 mm mini-jack)

6. Optical digital input

7. Optical digital output

8. Onboard CD-audio input 1 (stereo)

9. Onboard CD-audio input 2 (stereo)

10. Onboard audio input (AUX, stereo)

11. Onboard CD-ROM digital audio input (TTL)

Installation - step by step.

- Switch off your PC and all connected peripheral devices such as your printer and monitor. Leave the AC cable connected for the time being, so that your computer is still grounded.

- Touch the metal chassis at the rear of the PC to ground and to discharge static. Now unplug the cord from the AC socket.

- Remove the cover from the case of your PC.

Installing the PCI card.

- Find a free PCI slot, remove the screw securing the metal cover over the slot and remove the cover itself. Should it be necessary to break a plate out of the case, do so with great care to avoid injury.

- To ensure the optimal function of your SoundSystem, look for an expansion slot that is not immediately next to an already-installed card. Some cards, such as video or SCSI/RAID adapters, can send out signals which can interfere with the sound card.
We also recommend a slot as close to the bottom of the computer as possible, as you can connect up to 7 audio cables directly to the card itself. Due to certain physical properties of our planet, it is very likely that these cables will dangle downward. ;-)

- Carefully remove the PCI card from its packaging. 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 (no joke) via your computer without affecting the card. Please do not touch the components of the board.

- Next, connect the internal cables (e.g. from the CD drive). For further information on the various connections, please see page 8.

- Align the audio card so that the strip with the golden connector pins is located exactly over the PCI slot. Insert the card into the slot. You might have to press the card firmly into the slot to make good contact. Take care to ensure that the contacts are precisely in line in order to avoid damaging the audio card or the motherboard in your PC.

- Secure the card with the screw from the slot blanking plate (these screws are generally also included with PC cases).

Finishing up.

- Reinstall the cover of your PC case.

- Connect your audio peripherals (hifi amp, active speakers, mixer, etc.) to the Aureon 5.1 Sky (also see chapter "The connections and their uses." starting on page 24).

- Reconnect the AC power cable as well as all other cables and turn your PC on. Make sure that your speakers or hifi system is set to low volume.

- Start your computer. The installation of the driver software is the next step.

Installing the driver software.

The SoundSystem Aureon 5.1 Sky currently comes with drivers for Windows 98 SE, Windows ME, Windows 2000 and Windows XP. The card cannot be used under Windows 95 and Windows NT 4. You should therefore determine which operating system you are using before installing the card.

For information on your operating system and its version number, please check the "System" dialog in the Windows control panel.

Here you can see which Windows Service Pack version you are using, for example.

In the following driver installation descriptions, `<CD>` stands for the drive letter of the CD-ROM drive containing the driver CD of the SoundSystem Aureon 5.1 Sky .

Driver installation under Windows 98 SE

After the SoundSystem Aureon 5.1 Sky is installed, Windows 98SE recognizes the card as a new hardware component and displays the following window.

Click "Next".

Select here the "Search for the best driver for my device (Recommended)" item and click "Next".

Enter the path **`<CD>:\Drivers\WDM\`** *and click "OK". Alternatively, you can also select the path to the best driver of your Aureon 5.1 Sky using the mouse by clicking "Browse...".*

At the conclusion, click "Finish".

Windows now performs the driver installation and acknowledges the process with several windows that can be viewed. Nothing else should be required at this time. If contrary to all expectations a request should appear for you to perform some action and you are not sure about it, then pressing the Enter key is generally a safe action.

If Windows requests a second driver file, please refer to the aforementioned directory on the Aureon 5.1 Sky CD-ROM. It is also possible (e.g. if this is the first sound card installation in your system) that some additional Windows extensions have to be installed. Please have your Windows CD ready for this purpose.

Once the drivers have been installed successfully, install the ControlPanel via the autostarter, then the bundled software.

To do so, execute **`<CD>:\autorun.exe`**

Follow the instructions of the individual installation programs, and there's not really a lot that can go wrong. A particular bundled software can also easily be removed from your system. For this purpose, call up "Control Panel -› Software" and locate the programs to be removed. Select the various programs and click "Add/Remove Programs...".

Installed drivers should look like this.

After a successful driver installation, you should verify the correct condition of your Windows 98SE system. The Device Manager presents an overview of installed and recognized hardware components of your computer. The Device Manager can be found on the Control Panel under "System".
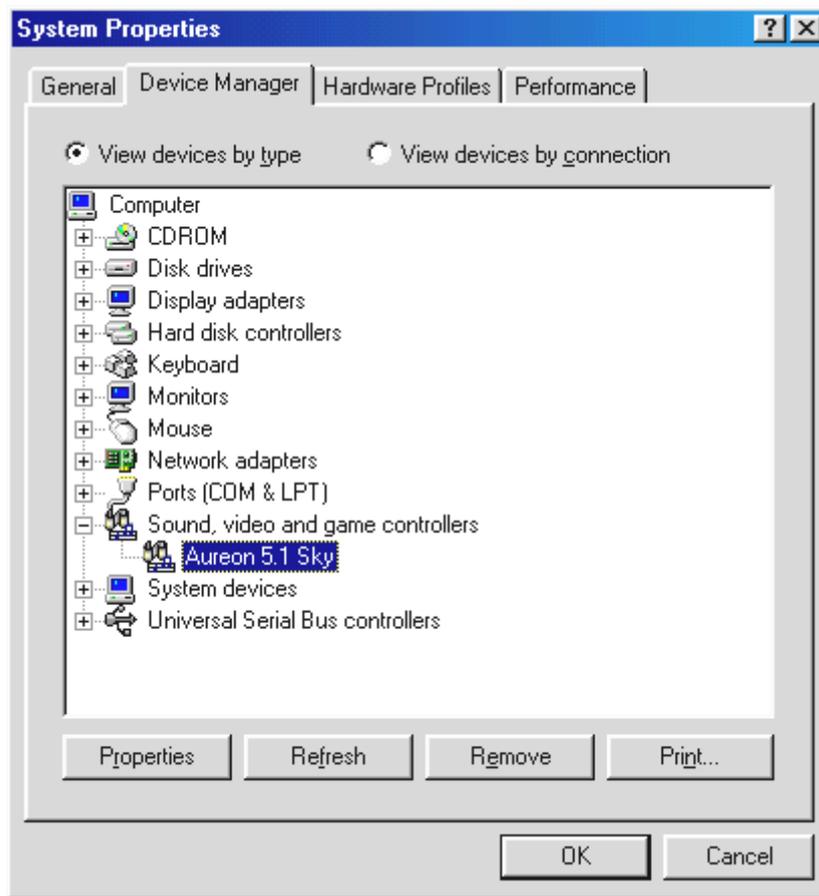
If everything is correctly set up, the window should look like this. The figure shows the expanded view of the "Sound, video and game controllers" branch. To obtain this view, simply click the "+" symbol on the left side.

Driver installation under Windows ME.

After the computer restarts and Windows ME detects the new hardware using the Add New Hardware Wizard, the following window displays.

Select "Specify the location of the driver (Advanced)" and click "Next".

Activate the checkbox "Specify a location:", enter the path ***<CD>:\Drivers\WDM*** *and click "Next".*
Alternatively, you can change to the respective directory by clicking on "Browse...".

This screen should be acknowledged by clicking on "Next".

At the conclusion, click "Finish".

Once the drivers have been installed successfully, install the ControlPanel via the autostarter, then the bundled software.

To do so, execute **`<CD>:\autorun.exe`**

Follow the instructions of the individual installation programs, and there's not really a lot that can go wrong. A particular software can also easily be removed from your system. For this

purpose, call up "Control Panel -› Software" and locate the programs to be removed. Select the various programs and click "Add/Remove Programs...".

Installed drivers should look like this.

After a successful driver installation, you should verify the correct condition of your Windows ME system. The Device Manager presents an overview of installed and recognized hardware components of your computer. The Device Manager can be found on the Control Panel under "System" › "Hardware". Then click the "Device Manager" button.
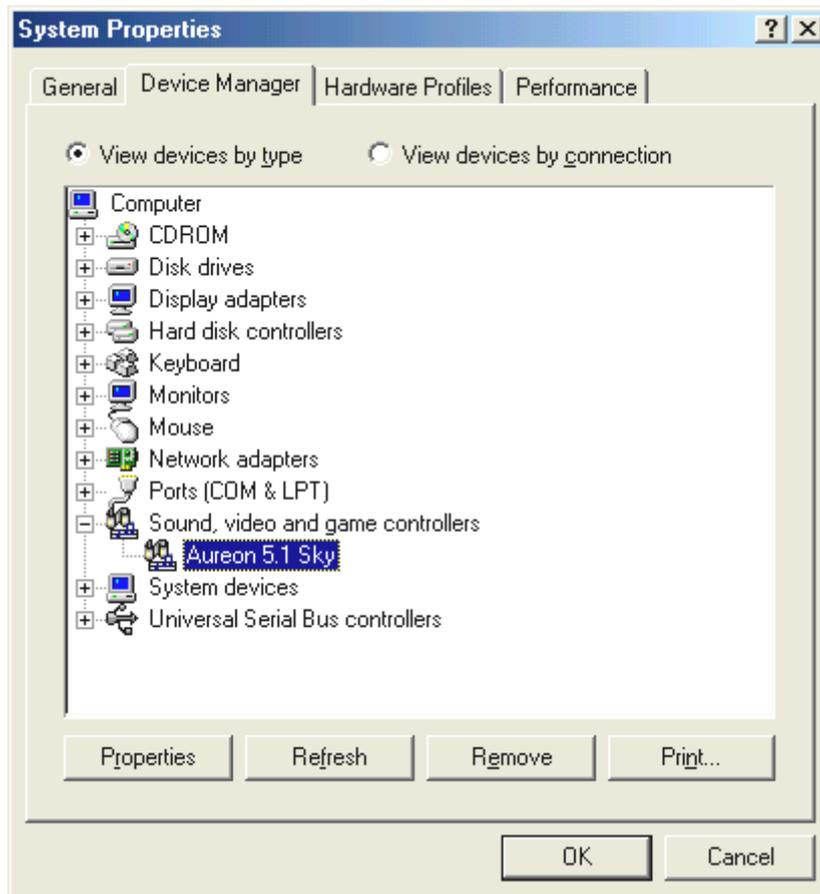
If everything is correctly set up, the window should look like this. The figure shows the expanded view of the "Sound, video and game controllers" branch. To obtain this view, simply click the "+" symbol on the left side.

Installation under Windows 2000.

Caution:
Service Pack 3 is required for 24-bit playback.

Once the computer has been restarted, you have logged on as the administrator and the new hardware has been detected by the Windows 2000 hardware wizard, the following window will appear.

Click "Next".

Select the "Search for a suitable driver for my device (Recommended)" item and click "Next".

Activate the checkbox "CD-ROM drives" and click "Next".
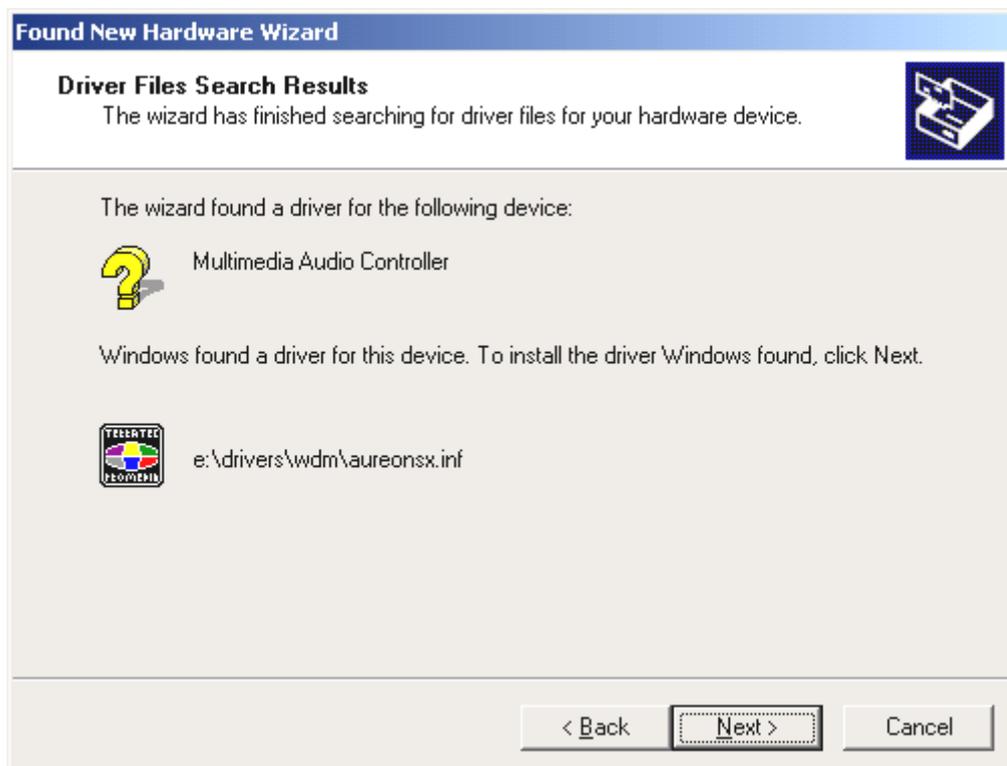
This screen should be acknowledged by clicking on "Next".
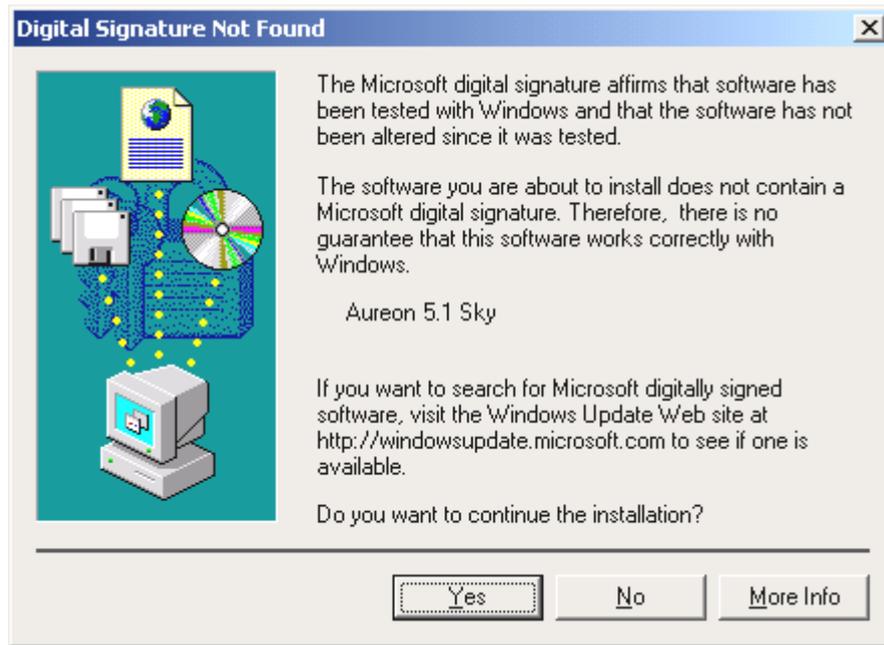
Continue the installation by clicking on "Yes".

It is possible that such a dialog window appears again in the course of the installation. If this is the case, simply click "Yes".

Windows now performs the driver installation and acknowledges the process with several windows that can be viewed. Nothing else should be required at this time. If contrary to all expectations a request should appear for you to perform some action and you are not sure about it, then pressing the Enter key is generally a safe action.

If Windows requests a second driver file, please refer to the aforementioned directory on the Aureon 5.1 Sky CD-ROM.

Once the drivers have been installed successfully, install the ControlPanel via the autostarter, then the bundled software.

To do so, execute **`<CD>:\autorun.exe`**

Follow the instructions of the individual installation programs, and there's not really a lot that can go wrong. A particular software can also easily be removed from your system. For this purpose, call up "Control Panel -› Software" and locate the programs to be removed. Select the various programs and click "Add/Remove Programs...".

Installed drivers should look like this.

After a successful driver installation, you should verify the correct condition of your Windows 2000 system. The Device Manager presents an overview of installed and recognized hardware components of your computer. The Device Manager can be found on the Control Panel under "System" › "Hardware". Then click the "Device Manager" button.
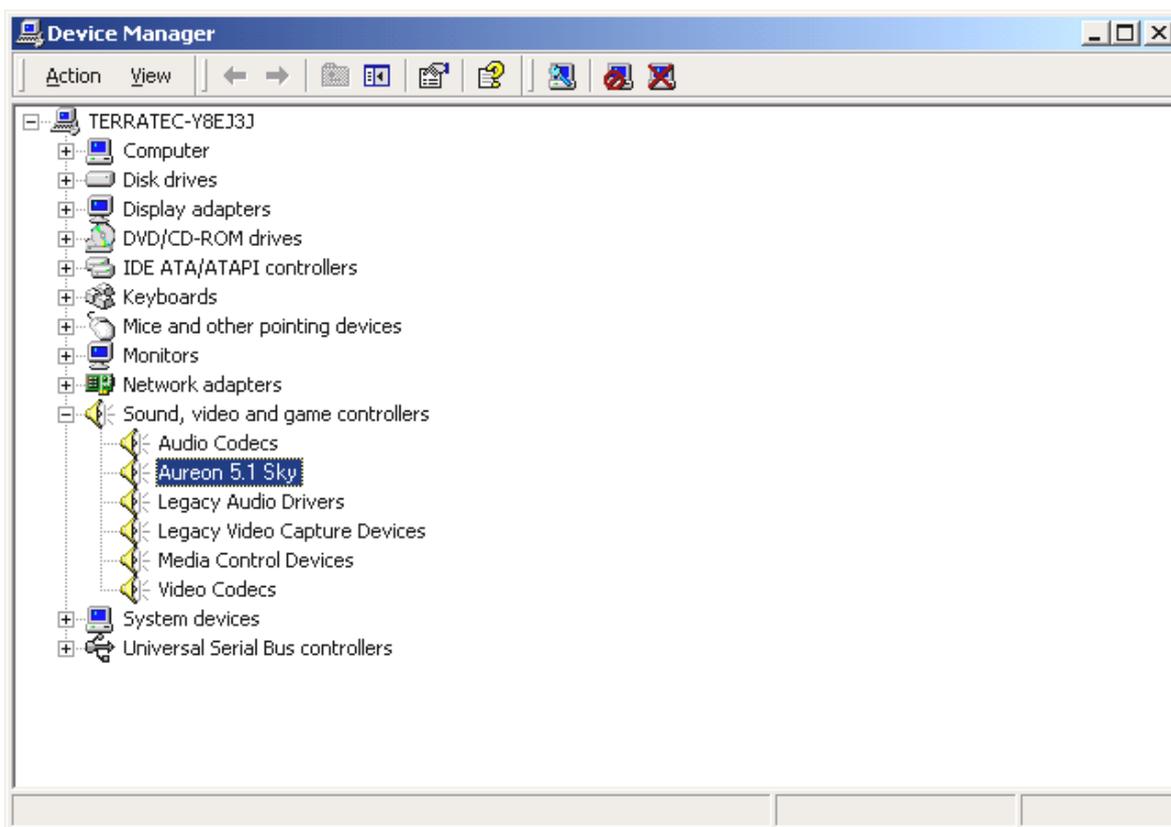
If everything is correctly set up, the window should look like this. The figure shows the expanded view of the "Sound, video and game controllers" branch. To obtain this view, simply click the "+" symbol on the left side.

Installation under Windows XP.

Caution:
Service Pack 1 is required for 192-bit playback.

Once the computer has been restarted, you have logged on as the administrator and the new hardware has been detected by the Windows XP hardware wizard, the following window will appear.

Select "Specify a location (advanced)" and click "Next".
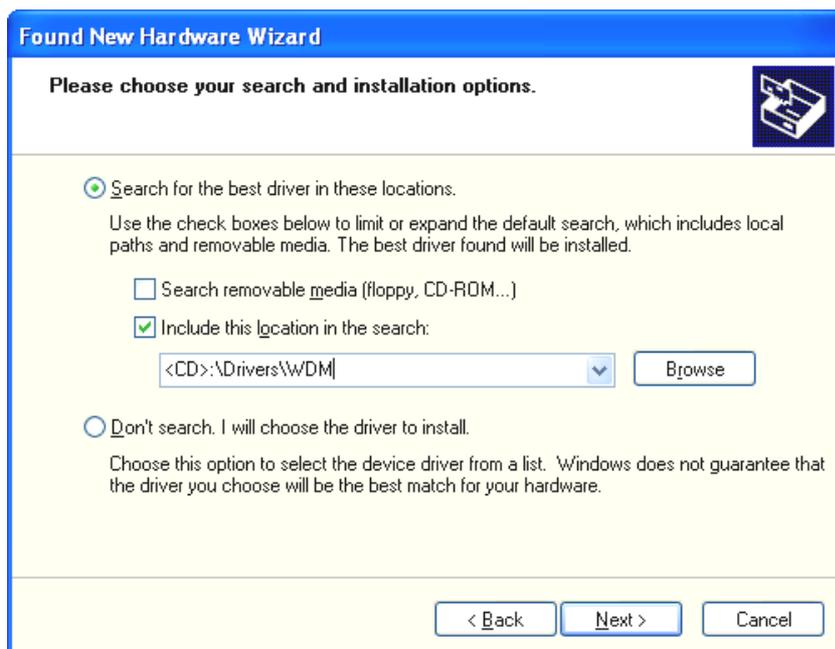
Select "Search this path" and enter "<CD>:\Drivers\WDM". Now click "Next".

Don't panic, everything's going to be fine:

this message is displayed for all hardware and software components that have not been certified by Microsoft. It has no bearing whatsoever on the quality of the components, however. In some cases, 100% compliance with Microsoft's criteria may even result in a loss of performance. In addition, a new certification is necessary every single driver update, so they can't simply be made available on the Internet as soon as it's finished.

We therefore do not recommend canceling the installation at this point. We subject all of our products to a rigorous test program, so all functions have been tested in all of the supported operating systems. You can therefore continue the installation with absolute peace of mind.
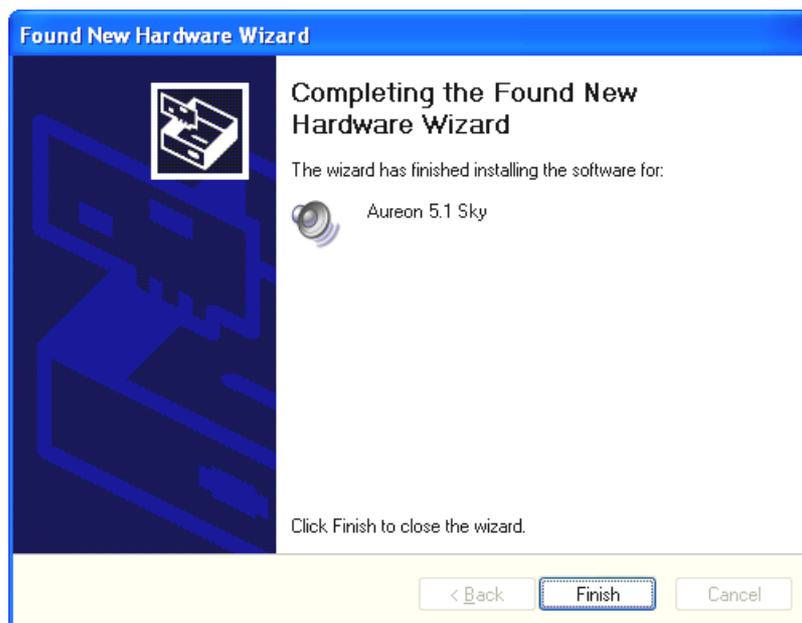
Click "Finish".

It is possible that such a dialog window appears again in the course of the installation. If this is the case, simply click "Yes".

Windows now performs the driver installation and acknowledges the process with several windows that can be viewed. Nothing else should be required at this time. If contrary to all expectations a request should appear for you to perform some action and you are not sure about it, then pressing the Enter key is generally a safe action.

If Windows requests a second driver file, please refer to the aforementioned directory on the Aureon 5.1 Sky CD-ROM.

Once the drivers have been installed successfully, install the ControlPanel via the autostarter, then the bundled software.

To do so, execute **`<CD>:\autorun.exe`**

Follow the instructions of the individual installation programs, and there's not really a lot that can go wrong. A particular software can also easily be removed from your system. For this purpose, call up "Control Panel -› Software" and locate the programs to be removed. Select the various programs and click "Add/Remove Programs...".

Installed drivers should look like this.

After a successful driver installation, you should verify the correct condition of your Windows XP system. The Device Manager presents an overview of installed and recognized hardware components of your computer. The Device Manager can be found on the Control Panel under "System" › "Hardware". Then click the "Device Manager" button.
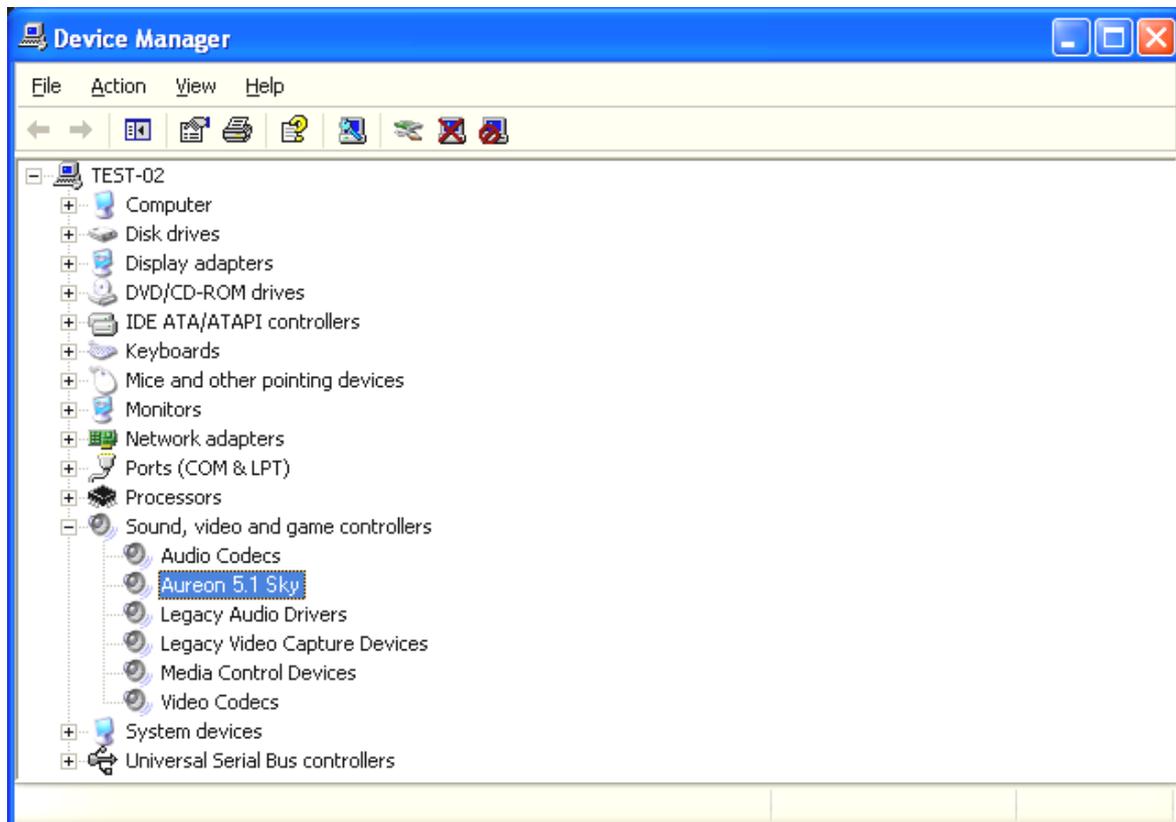
If everything is correctly set up, the window should look like this. The figure shows the expanded view of the "Sound, video and game controllers" branch. To obtain this view, simply click the "+" symbol on the left side.

The connections and their uses.

After the successful installation of your sound card, we are now coming to the most important part: the connection of external devices and appropriate software settings for the devices.

Safety note.

When connecting analog devices, ensure that the power is off to protect your speakers and your hearing from sudden peaks. For digital devices, be sure to at least reduce the volume of your playback equipment.

Overview.

The SoundSystem Aureon 5.1 Sky is blessed with a wealth of internal and external connection options. We would like to introduce them to you briefly below:

Internal, onboard: CD audio, AUX and TTL. The PC board of the Aureon 5.1 Sky features three plug connectors for analog connections to CD-ROM drives (CD1 and CD2), or other cards such as TV or video expansion modules (AUX). The required cables and plugs are standardized and are generally included with branded products.

An internal digital input is also available. An external S/PDIF signal with a so-called TTL level (+5 V), as provided by most CD-ROM drives, can be applied to the connector marked CN11.

The analog CD-ROM connections are electrically independent (decoupled) and can be used simultaneously. The Aureon ControlPanel software represents both CD signals as a single source, however.

From the back, analog: 3 out, 2 in. Five sockets reside on the golden slot plate of your SoundSystem, each waiting for a 3.5 mm stereo mini-jack. The first three (green; F, R, C/W) are the outputs for six audio channels and are designed for use with a suitable (surround) amplifier or an active speaker system.

The outputs are laid out in the format that you probably already know from 5.1 hifi applications:

F   for the two front speakers (Front, Left and Right)

R   for the two rear side speakers (Rear, Left and Right)

C/W   for the center speaker (mono) and the subwoofer signal, the so-called LFE channel (also mono). The left channel hereof is the Center signal (usually a white or black plug on the cable).

An amplifier can also be activated in the ControlPanel for the front output (F), allowing it to be used as a headphone output!

Next, the blue socket (Line In) on the slot plate. This input is designed for recording from sources with a normal, so-called line level. This is the input for connecting devices such as cassette decks, mixers, dictaphones, studio effects devices, the record output of your hifi system, etc. A signal applied to this input can later be selected for recording in the Aureon ControlPanel.

Rounding out the analog connections there's the pink socket (Mic In) on the slot plate. This is the microphone input of the SoundSystem Aureon 5.1 Sky . This connection is suitable for condenser microphones.

From the back, digital – 1 out, 1 in.
The two sockets (TOS-Link) positioned next to one another are the digital input and output (Digital In and Digital Out) of the system. The output complies with the S/PDIF standard; an AC3 or DTS signal can also be transferred. A variety of additional information can be added to the signal or filtered out during recording (or when looping a signal through the system). An optical fiber cable (optical waveguide) is used here to connect digital equipment (many Mini-Disc players use this connection type). A cable of this type is included with the Aureon 5.1 Sky, so you can get started right away.

Connecting a joystick.

Maybe you still remember: sound cards have always accommodated joysticks, steering wheels, and the like. Why this should necessarily be the case is a completely different question—after all, nobody expects to find a printer port on a graphics card, no matter how sophisticated it might be. Modern joysticks tend to use the faster USB port, which has the additional advantage of accommodating multiple input devices.

Having said that about tradition, we're choosy about the traditions to which we're obligated— and after all, somebody had to make the first step. We're certain that you'll see other manufacturers drop the joystick ports from their sound cards as well in the near future as a result. Viva la Innovación! ;-)

The software.

Your TerraTec Team spared virtually no expense and left no mountains unmoved to present you a truly stunning software package. It contains programs with which you can:

- set up and control the SoundSystem Aureon 5.1 Sky,

- listen to all major (and a couple of minor) audio file formats,

- edit recorded and imported audio data,

- do professional-quality sequencing, and have fun in many other ways as well.

- enjoy DVDs in certified Dolby and DTS multichannel sound, and much more.

One could say it's complete. And the best thing about it: the programs are powerful enough to deliver professional results in all areas. Solid tools, no frills. Well, almost: if it's goodies you're looking for, you'll also find them on the SoundSystem Aureon 5.1 Sky CD. We've filled the "HOTSTUFF" folder—a TerraTec tradition—with a collection of what we consider to be the choicest audio shareware and freeware programs. It'll keep you busy for hours, at work and at play.

But let's get back on track. After you've installed the software—and assuming you've selected all programs for installation—you'll find the following programs on your system, which we'll be covering in the following overview. For further information, please see the help files of the individual applications. Enjoy!

The Aureon ControlPanel.

The appearance of the Aureon ControlPanel can vary slightly from the following illustrations depending on your operating system, color depth and other selections.

The "Playback" window.

Here you can set the levels of the individual speakers. The fader marked "Front" is likely to see a lot of wear and tear. It sets the levels of the front speaker pair. Each speaker can be muted individually by clinking on its MUTE button.

Adjust the position of the stereo image with the balance faders below the level faders.

The "Sources" window.

Here you can set the levels of the individual signal sources.

Each signal source can be muted individually by clinking on its MUTE button. Mutes playback sources are recorded nevertheless. The settings in the Record window affect whether or not a source is recorded. Adjust the position of the stereo image with the balance faders below the level faders.

The "Record" window.

Use this window to select the signal sources to be recorded by an application via the Aureon 5.1 Sky Record driver. The "Mix" source supports the simultaneous recording of all analog sources in, as the name says, stereo mix. If you have selected "Analog In" as the source for the digital output in the "Digital" window, the analog source selected in the "Record" window will be used.

The "Digital" window.

The "Digital" window contains the settings for the digital input and output.

The Master Clock.

Here we're dealing with the sample rate used by your SoundSystem Aureon 5.1 Sky. This is—depending on the application—a very important point, as the card can be (and in some cases, must be) controlled by an external signal (from a MiniDisc recorder, for example), or it can

specify a rate for itself internally and can share this signal via the digital interfaces with other devices being used for recording.

If a valid S/PDIF signal is being applied to a digital input, its sample rate will be displayed in the Aureon ControlPanel, and the SoundSystem can and should be set to this external sample rate (**External**). If you forget this step, audible errors such as dropouts and clicks may occur during recording—and already when monitoring the signal.

Naturally, you should also pay attention to the settings of your periphery in the reverse situation (synchronizing an external device with the Aureon). In that case, set the Aureon Control-Panel to "Internal", as it also would be when you are not using external digital devices. If the devices are to be permanently connected to one another in both directions, you must decide which device will provide the clock signal.

The digital interfaces of the Aureon 5.1 Sky support all bit resolutions between 8 and 24 bits, as well as all sample rates between 8 and 96 kHz. 192 kHz can even be used in Windows XP with Service Pack 1. Please note that not all devices can process sample rates higher than 48 kHz. For example, if you would like to transfer a signal recorded at 96 kHz to a MiniDisc player, you will need to convert the file(s) to 44.1 kHz or 48 kHz first. You can use the included WaveLab 2.0 Lite for this.

S/PDIF Out.

The Aureon ControlPanel lets you choose from a variety of sources for digital audio output. The following source settings are available in the "S/PDIF Source" field:

- **Digital In** sends the signal applied to the **digital input** directly to the digital output without losses.

- **Analog In** sends the signal of the analog source you have selected in the "Record" window.

- **Wave Playback** delivers the signal output of an **audio application** directly to the digital output. This setting is necessary to transfer audio data or raw data such as an AC-3 or DTS stream. The audio signal is "bit-true".

In addition, the following parameters can be selected in all three positions:

- **Copyright** adds a copy-protection ID to the signal or filters it out when deactivating copy protection. This function sets the so-called "copy protection bit" which ensures that *no* digital copies can be made of the signal.

- Non-Audio sets a flag in the data stream as a signal to the recipient that it is receiving raw data. Activate the "Non-Audio" mode when transferring AC3 or DTS streams from a software DVD player - such as the included Cyberlink PowerDVD - to an external audio device for further processing.

SPDIF Input.

- **DigIN Monitor** lets you monitor the signal applied to the digital input using the front speakers.

- **Opt. Input** selects the external optical digital input as the digital input source.

- **Dig. CD Input** selects the internal digital CD input as the digital input source.

AC3 and DTS.

It is also possible to use the interfaces independently of the S/PDIF standard. The included Cyberlink PowerDVD application supports the transfer of AC-3 or DTS streams via the digital output. The following points must be observed in this regard:

- "Digital" tab:
  "S/PDIF active" must be enabled and "Wave Playback" must be selected as the source for the digital output. The "Non-Audio" flag may be required depending on the audio component used to process the AC-3 or DTS signal.

- In Windows98SE, Sensaura must also be disabled. If Sensaura is active, it must be disabled in the Speaker" window. You must restart your system after changing the Sensaura support setting. A message will be displayed to this effect under the button.

The "Speaker" window.

The "Speaker" window lets your configure the 3D capabilities of your Aureon 5.1 Sky.

Important!
In Windows 98SE, AC3 or DTS streams can only be looped with Sensaura disabled. You must restart your system after changing the Sensaura support setting. A message will be displayed to this effect under the button.

The correct speaker configuration is especially important. It is essential to guarantee that the applied 3D algorithm delivers optimum results. The selected speaker configuration can be tested immediately. Click on a speaker in the display on the right. The speaker icon will change color and a continuous test tone will be sent to the speaker on that channel. Click again to turn the test signal off.

Output Front (1/2) Regardless of the selected speaker configuration, the front output can be used as a line or headphone output. Thanks to the ControlPanel and state-of-the-art electronics, there's no need for fiddling around with jumpers on the card ☺.

3D Sound Support Enable and disable Sensaura 3D audio here. You must restart your system after changing the Sensaura support setting. A message will be displayed to this effect under the button.

The "Misc" window.

The "Misc" window contains a number of functions not directly related to the Aureon 5.1 Sky, but which affect the ControlPanel itself. These include the loading and saving of mixer presets, the display of the taskbar icon, as well as the colors and language of the ControlPanel.

"Load" and "Save".

"Load" and "Save" give you a convenient way of saving and reproducing configurations. You could, for example, to save special settings for the digital inputs and outputs on an application-specific basis and load them whenever you need them.

WaveLab Lite 2.0

WaveLab, Steinberg's sample editor, has received many awards and is especially suitable for recording and editing large audio files. Recordings in 24-bit/96 kHz format, or even 192 kHz in Windows XP with Service Pack 1 are no problem for this application.

Precise zoom functions and a wide range of tools for fast editing do an excellent job of rounding out the software side of your SoundSystem.

As WaveLab will probably be the program you'll use the most, here's a quick-start guide for your own first recording:

- Start the program.
- Open the "Options" menu, select "Preferences" and go to "Sound Card" on the settings page (you can also press CTRL+P).
- Select the Aureon 5.1 Sky recording and playback driver: "Aureon Wave"
- Close the dialog with "OK".
- Press the red record button or the " * " key on your numeric keypad to open the recording dialog.
- Select a sample rate (this must correspond to the card's clock—see ControlPanel) and bit rate and start the recording.
- The application will continue recording to the hard drive until you stop the recording or the system indicates that the drive is full.
- Next, you can edit and save your new file.

MusicMatch Jukebox.

Just as all beginning programmers have their first programs greet them the line "Hello World", all sound cards traditionally come with so-called media players in their software bundles. :-) The MusicMatch Jukebox is much more, however—and that's why it's included in the TerraTec package: in addition to playing a variety of audio file formats, the program supports simple, digital ripping of audio CDs. If desired, it writes the data to the hard drive in MP3 format, including title information, using the original Fraunhofer codec for the highest-quality MP3 results.

Cyberlink PowerDVD

This application is a further highlight in the package. Use it with your DVD ROM drive to play DVD movies and send multichannel audio (e.g. Dolby Digital) to the analog outputs of your Aureon 5.1 Sky.

For a detailed description of the application, please see the online documentation.

Emagic Logic Fun.

With Emagic Logic Fun, we're proud to present a modern, powerful audio/MIDI sequencer as a part of our package. It supports the recording and convenient editing of MIDI and audio files. In addition, Logic offers you a musical notation view, a range of MIDI and audio editors, and the integration of videos for dubbing purposes.

Here you can set the levels of the individual signal sources.
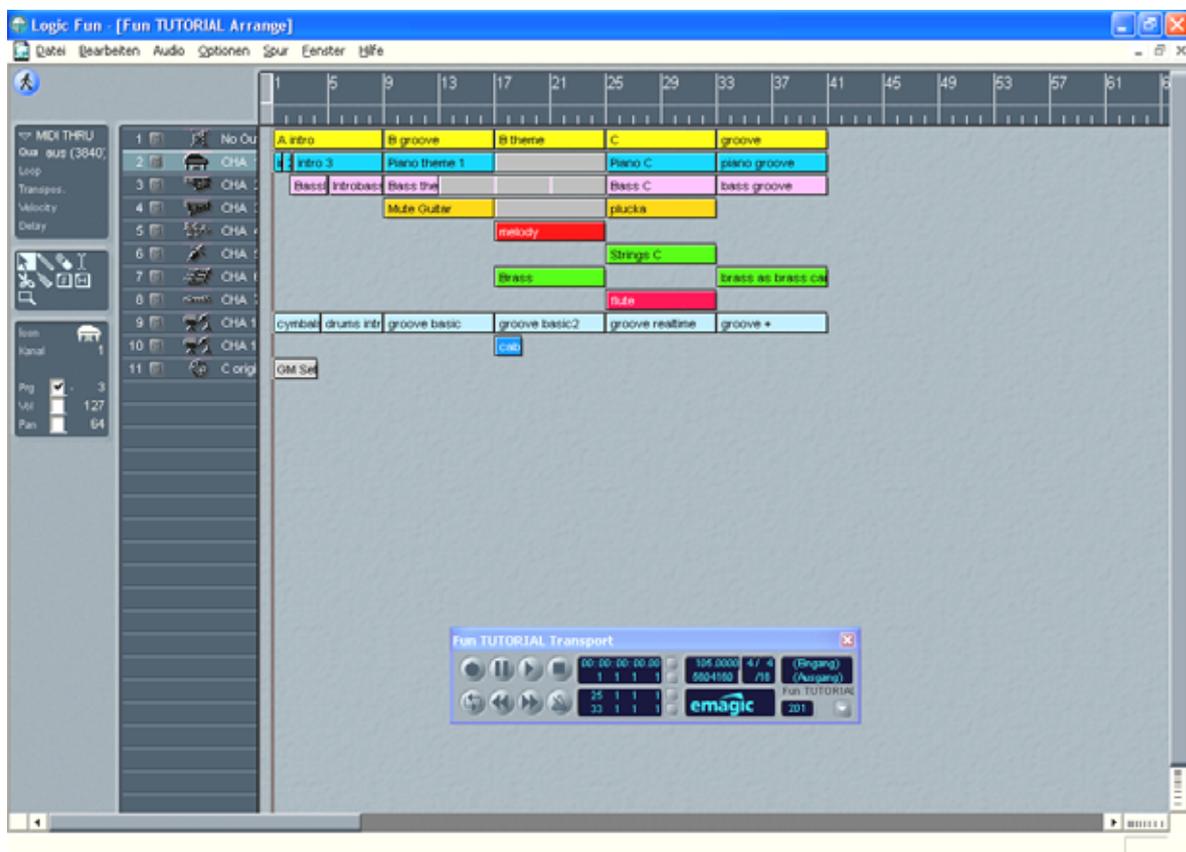
For a detailed description of the application, please see the online documentation.

The HOTSTUFF folder.

We've put together quite a collection of additional programs, tools and files on the SoundSystem Aureon 5.1 Sky CD-ROM. This folder is definitely worth a closer look.

Many of the programs in the folder are shareware. Please support the shareware principle and pay the authors for the programs you enjoy and use regularly. Thank you.

Practice.

The digital interfaces of the Aureon 5.1 Sky.

Devices that send or receive the S/PDIF protocol can be connected to the optical interfaces of the Aureon 5.1 Sky. These include DAT and MiniDisc recorders, for example. The interface supports the bit-true transfer of digital signals in all relevant resolutions. In addition, it supports raw data streams such as AC-3 or DTS.

Connections and ControlPanel settings.

Use the digital interface of your Aureon 5.1 Sky to transfer music digitally from your computer to other devices, or to record audio data with your PC. One socket each is available to connect optical waveguides (optical fiber) for recording and playback. A cable of this type is included with the Aureon 5.1 Sky. As a rule, the devices to be connected will have one input and output socket (IN and OUT) each. Optical OUT sockets can be identified—in addition to the label—by the red light visible inside them. Simply connect the S/PDIF input of the Aureon 5.1 Sky with the S/PDIF output of the desired device - and vice versa, if required.

The "Digital" window of the Aureon ControlPanel lets you choose from a variety of sources for digital audio output. The "SPDIF Out" field contains the following options:
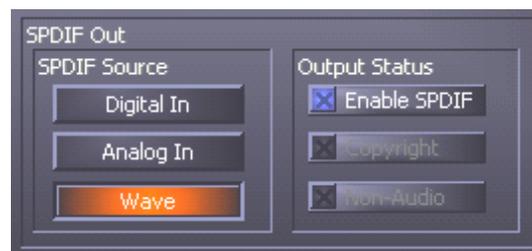
At the click of the mouse: signal sources and S/PDIF filters.

Digital In sends the signal applied to the **digital input** directly to the digital output without losses.

Analog In sends the signal of the analog source you have selected in the "Record" window.

Wave Playback delivers the signal output of an **audio application** directly to the digital output. This setting is necessary to transfer audio data or raw data such as an AC-3 or DTS stream. The audio signal is "bit-true".

In addition, the following parameters can be selected in all three positions:

Copyright adds a copy-protection ID to the signal or filters it out when deactivating copy protection. This function sets the so-called "copy protection bit" which ensures that *no* digital copies can be made of the signal.

Non-Audio sets a flag in the data stream as a signal to the recipient that it is receiving raw data. Activate the "Non-Audio" mode when transferring AC3 or DTS streams from a software DVD player - such as the included Cyberlink PowerDVD - to an external audio device for further processing.

AC3 and DTS.

It is also possible to use the interfaces independently of the S/PDIF standard. The included Cyberlink PowerDVD application supports the transfer of AC-3 or DTS streams via the digital output. The following points must be observed in this regard:

- "Digital" tab: "S/PDIF active" must be enabled and "Wave Playback" must be selected as the source for the digital output. The "Non-Audio" flag may be required depending on the audio component used to process the AC-3 or DTS signal.

- In Windows98SE, Sensaura must also be disabled. If Sensaura is active, it must be disabled in the "Speaker" window. You must restart your system after changing the Sensaura support setting. A message will be displayed to this effect under the button.

Stuff worth knowing.

Digital cables.

Even when transmitting audio data via optical fibers, a few, usually inaudible, errors may occur. You should therefore be sure to use high-quality cables that are not too long: flexible plastic cables should have a maximum length of 1.5 m, the less-flexible glass fiber cables may be up to 5 m long.

Audio differences with digital cables seem improbable at first glance, but they can happen nevertheless. This is due to the fact that error correction algorithms are obviously used more frequently at some times than at others to compensate for quality differences between individual cables. However, these audio changes are usually so minimal that you need to be careful not to mix up the myth with the reality. If you're interested, there are a number of somewhat entertaining militant newsgroups dealing with this subject on the Internet ;-).

AES/EBU.

Devices with AES/EBU interfaces cannot normally be used on S/PDIF interfaces—ambitious tinkering with simple adapter plugs will not get you anywhere. As 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 a bit of soldering.

Appendix.

FAQ—frequently asked questions and their answers.

An FAQ (Frequently Asked Questions) for initial problem-solving can be found on the installation CD and on the Internet at **`www.terratec.net/ttus/support.htm`**.