Getting Started

Creative Sound Blaster Live!
Creative Audio Software

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Version 1.00
August 1999

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ATTENTION: Ce carte est destiné à être installé par l'utilisateur, dans un ordinateur compatible certifié CSA/TUV/UL ou listé IBM AT, à l'intérieur de la zone définie par le fabricant. Consulter le mode d'emploi ou le fabricant de l'appareil pour vérifier ou confirmer si l'utilisateur peut y installer lui-même des cartes périphériques.

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FCC Part 15: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this notice is not a guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:

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- ❑ Increase the distance between the equipment and receiver.
- ❑ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- ❑ Consult the dealer or an experienced radio/TV technician.

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Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

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This product conforms to the following Council Directive:

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According to the FCC96 208 and ET95-19

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Compliance Manager
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Introduction

The #1 Audio Solution for Internet Entertainment and Gaming

Sound Blaster Live! is the top audio solution for your games, movies, CDs, MP3 songs and other internet entertainment. With its support for today's leading audio standard—Environmental Audio—Sound Blaster Live! creates real-life, multidimensional sound and multi-textured acoustical environments for the most realistic 3D audio experience. Its powerful EMU10K1 audio processor delivers audio at optimum CPU performance with the highest fidelity and absolute clarity. Combine it with a four-speaker setup and you'll experience realistic 3D audio, Environmental Audio in supported games, and enjoy your movies with true surround sound. The Live!Ware upgrade program will keep your Sound Blaster Live! card up to date with continual upgrades supporting future technologies, functionality, and features.

If wish to create your own music or audio content in the future, your Sound Blaster Live! card also offers you many upgrade options which will allow you to connect multiple digital and analog devices simultaneously, including keyboards and other music gear, as well as optical connection to MiniDisc and DAT recorders.

System Requirements

For Creative software, your card requires at least:

- ❑ Genuine Intel® Pentium® class processor:
  133 MHz for Windows 95/98, 200 MHz for Windows NT 4.0
- ❑ Intel or 100% compatible motherboard chipset
- ❑ Windows 95, 98 or Windows NT 4.0
- ❑ 16 MB RAM for Windows 95/98 (32 MB RAM recommended),
  32 MB RAM for Windows NT 4.0

- ❑ 65 MB of free hard disk space
- ❑ Open half-length PCI 2.1 compliant slot
- ❑ Headphones or amplified speakers (available separately)
- ❑ CD-ROM drive required for software installation

Sound Blaster Live! Value gives you an estimate of the hard disk space required when you select it on the installation screen. Included applications may need higher system requirements or microphone for basic functionalities. Refer to the documentation for individual applications for details.

Live!Ware Benefits

Your Investment Is Protected as you have less of a likelihood of finding your audio card obsolete shortly after purchasing it. Through Live!Ware, new features and applications are always made available for you to experience the latest technology and to extend the life of your card.

The Value and Experience Increases Over Time as Live!Ware continues to deliver new capabilities and enhancements. Each upgrade will "rejuvenate" your audio card, allowing you to experience new functionality. It is as if your audio card is "reborn".

Your Card Is Up To Date because the latest Live!Ware upgrades are only a download away. When new standards and capabilities emerge, your hardware is ready for it—just download the functions and the card becomes up-to-date!

Getting More Information

See the online *User's Guide* for MIDI specifications and connector pin assignments, as well as instructions on using the various applications in your audio package.

Where To Go From Here ...

- ❑ Installation instructions: Chapter 1, "Knowing and Installing Your Card"
- ❑ Connectivity reference diagrams: Chapter 1, "Knowing and Installing Your Card"
- ❑ Learning about the bundled applications:
  - Chapter 4, "Using Sound Blaster Live!"
  - Refer to the accompanying leaflet for your Sound Blaster Live! package.

Other Recommendations

- ❑ For an overview of the features of your card, launch the Sound Blaster Live! Experience program.
- ❑ View the contents of the Demo CD for additional demonstrations, libraries and other software.
- ❑ Visit the *www.sblive.com* site for more information, content and Live!Ware updates.

Document Conventions

The following typographical conventions are used throughout this document:

bold	Text that must be entered exactly as it appears.
italic	Title of a book or a placeholder, which represents the information you must provide.
UPPERCASE	Directory name, file name, or acronym.
	The notepad icon indicates information that is of particular importance and should be considered before continuing.
	The alarm clock designates a caution or warning that can help you avoid situations involving risk.

1 Knowing and Installing Your Card

This chapter is organized as follows:

- ❑ Your Audio Card
- ❑ Installing the Card and Related Peripherals
- ❑ Positioning Your Speakers
- ❑ Enhancing Your Sound Blaster Live! Experience

Your Audio Card

Your audio card has these jacks and connectors which allow you to attach other devices:

A jack is a one-hole connecting interface whereas a connector consists of many pins. Some connectors here may not be available on your card. Refer to the online *User's Guide*, "Hardware Information", for details on connector pin assignments.

Line Out and Rear Out jacks can be used simultaneously to power 4.1 channel speaker systems, for example, FourPointSurround™ speaker systems from Cambridge SoundWorks.

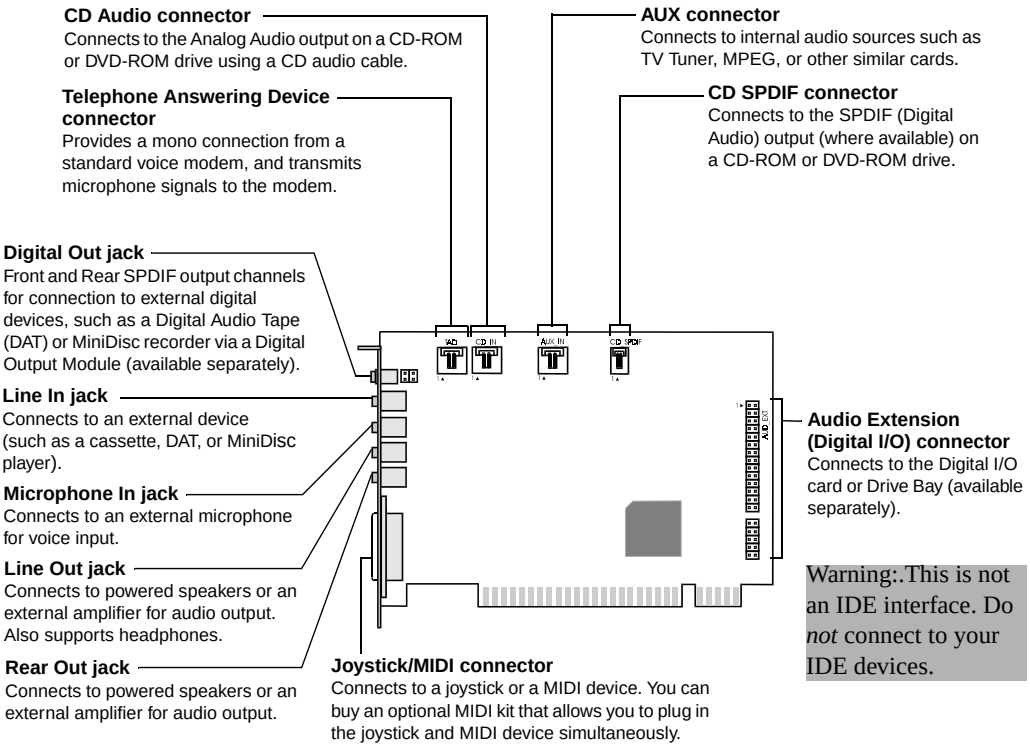


Figure 1-1: Jacks and connectors on the Sound Blaster Live! card.

Installing the Card and Related Peripherals

Do not force the audio card into the slot. If it does not fit properly, gently remove it and try again.

The joystick connector on your audio card is identical to that on a standard PC game control adapter or the game I/O connector. You can connect any analog joystick with a 15-pin D-shell connector or any device compatible with the standard PC joystick. To use two joysticks, you need a Y-cable splitter.

1. Switch off your system and all peripheral devices.
2. Touch a metal plate on your system to ground yourself and to discharge any static electricity, and then unplug the power cord from the wall outlet.
3. Remove the cover from your system.
4. Remove the metal plates from two unused PCI expansion slots in your system and put the screws aside, to be used later.
5. Align the Sound Blaster Live! card with the vacant PCI expansion slot. Press the card gently and evenly into the slot as shown in Figure 1-2. Ensure that the card is seated firmly inside the PCI expansion slot.
6. Secure the card to the expansion slot with a screw.
7. To learn how to connect to other devices, see Figure 1-3.
8. Replace the cover onto your system.
9. Plug the power cord back into the wall outlet, and switch on the system.

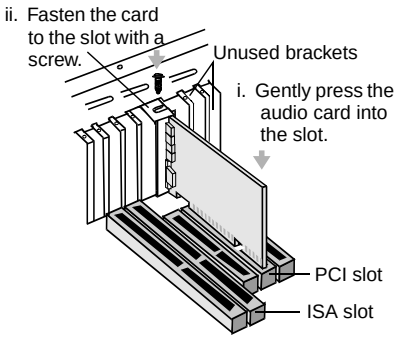


Figure 1-2: Securing the audio card to the PCI expansion slot.

- If you are playing games in Windows 95/98 MS-DOS mode (pure DOS mode), you must:
  - Make sure the CD In connector and the Analog Audio connector of the CD-ROM or PC-DVD drive are connected.
  - In addition, if you get distorted audio, do not connect the CD SPDIF connector to the Digital Audio connector of the CD-ROM or PC-DVD drive.
- If you connect to the Digital Audio and Analog Audio connectors of the same CD-ROM or PC-DVD drive, do not unmute CD Audio and CD Digital at the same time in Surround Mixer.

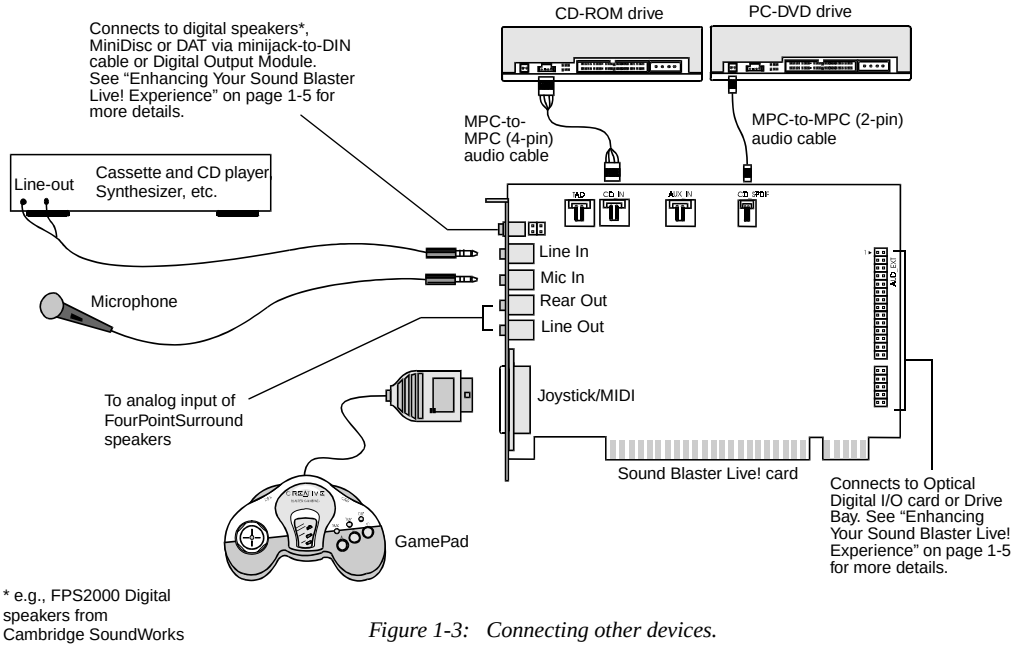


Figure 1-3: Connecting other devices.

Positioning Your Speakers

If you are using four speakers, place them so that they form the corners of a square with you exactly in the center (as in Figure 1-4) and that they are angled toward you. Make sure the computer monitor is not blocking the path of your front speakers. You may want to adjust the relative positions of the speakers until you get the audio experience you like best. If you have a subwoofer, place the unit in a corner of the room for the best bass experience.

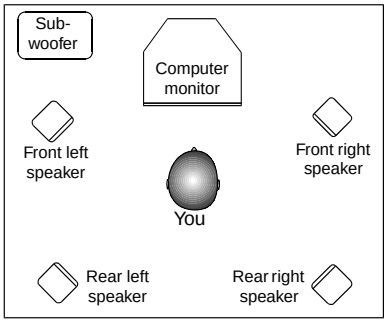


Figure 1-4: Recommended speaker positions for the 4-speaker configuration.

Enhancing Your Sound Blaster Live! Experience

The Sound Blaster Live! card alone will most undoubtedly give you endless hours of listening pleasure. To further enhance your SB Live! experience, there are several upgrade options (available separately) depending on your needs. The following provides some information on the available options to consider. The diagrams on the next two pages show how these options can be connected to your SB Live! card.

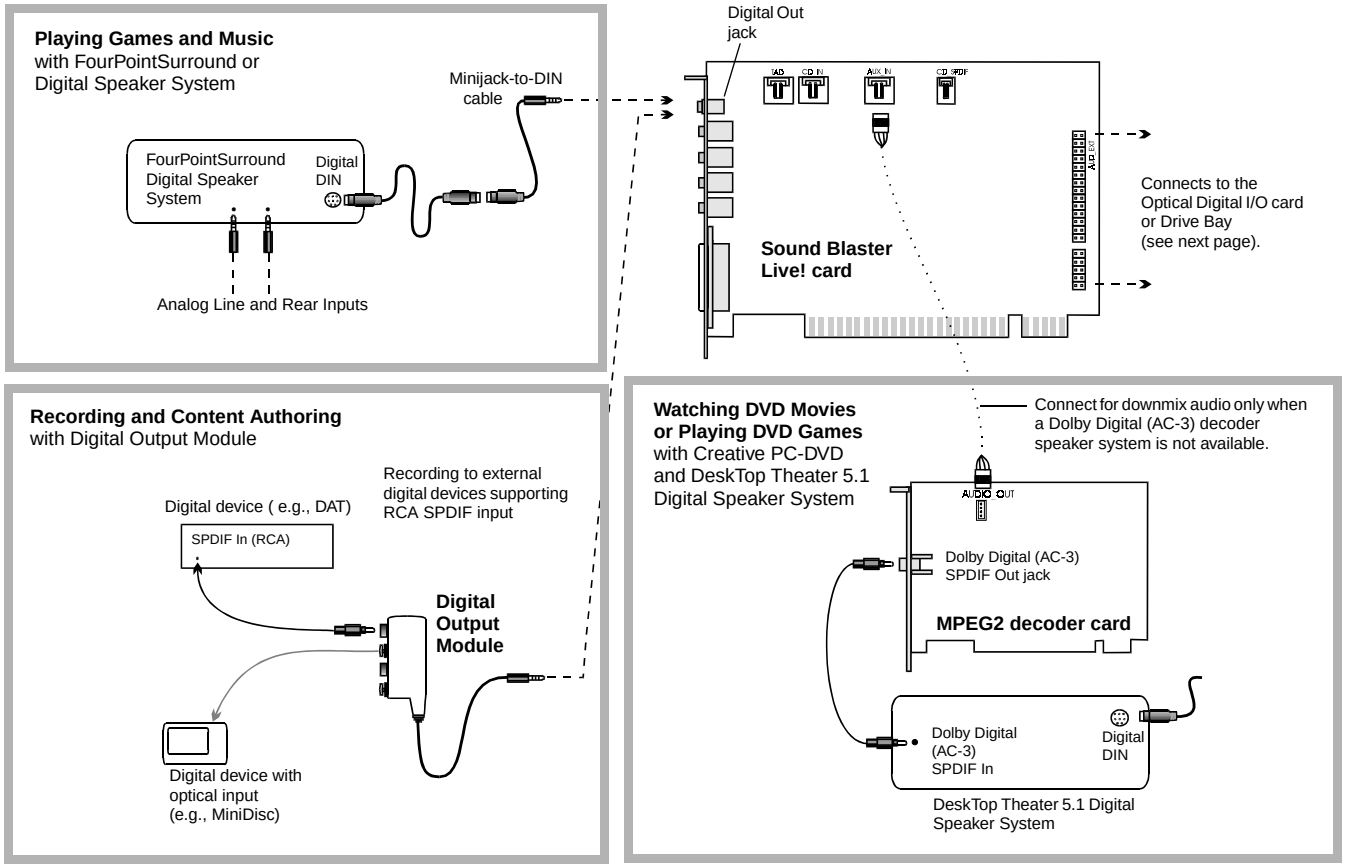
Playing Games and Music

- ❑ With FourPointSurround or DeskTop Theater 5.1 Digital speaker systems from Cambridge SoundWorks, you can experience crystal clear gaming sequences or music from the Digital DIN connection. A minijack-to-DIN cable is bundled with the speaker set for this connection.

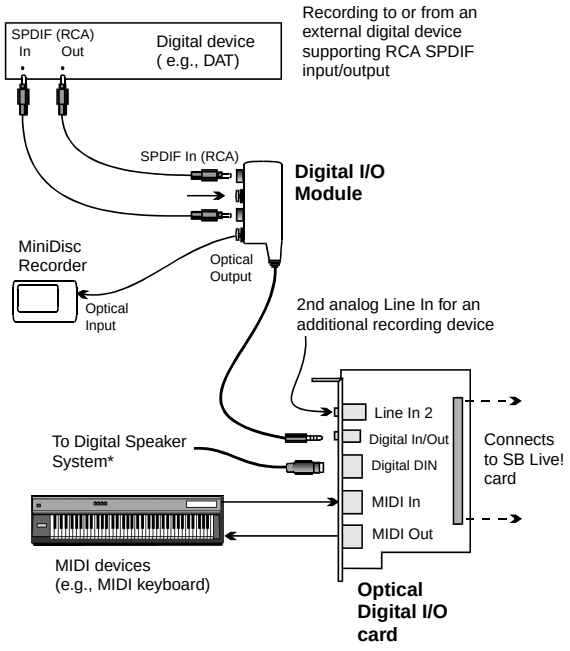
Watching DVD Movies or Playing DVD Games

- ❑ To watch DVD movies on your PC, why not get Creative's PC-DVD kit which comes with a PC-DVD drive and Encore MPEG2 decoder card? You can connect your Encore Dxr2, Encore Dxr3 or MPEG2 decoder card to an external Dolby Digital (AC-3) decoder such as DeskTop Theater speaker systems and disconnect the Sound Blaster Live! card's Aux In connector from the decoder card's Audio Out connector. However, if an external Dolby Digital (AC-3) decoder speaker system is not available, this connection is necessary.

* Information continues on page1-8.

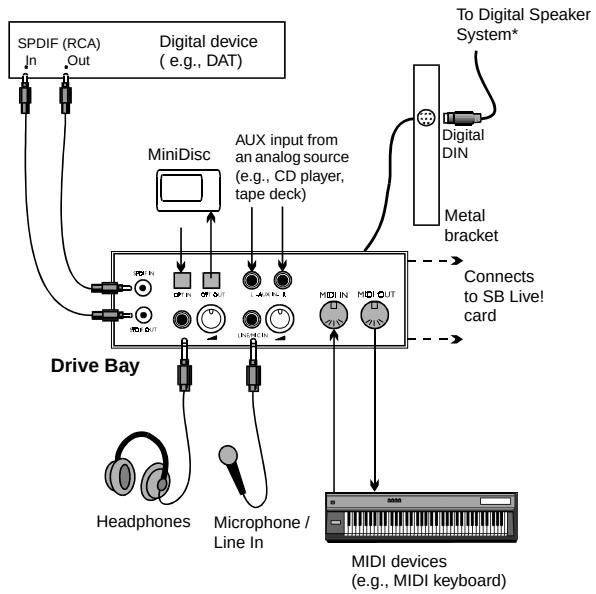

Playing Games and Music
with FourPointSurround or
Digital Speaker System
Minijack-to-DIN
cable
FourPointSurround
Digital Speaker
System
Digital
DIN
Analog Line and Rear Inputs
Digital Out
jack
Sound Blaster
Live! card
Connects to the
Optical Digital I/O card
or Drive Bay
(see next page).
Recording and Content Authoring
with Digital Output Module
Digital device (e.g., DAT)
SPDIF In (RCA)
Recording to external
digital devices supporting
RCA SPDIF input
Digital
Output
Module
Digital device with
optical input
(e.g., MiniDisc)
Watching DVD Movies
or Playing DVD Games
with Creative PC-DVD
and DeskTop Theater 5.1
Digital Speaker System
Connect for downmix audio only when
a Dolby Digital (AC-3) decoder
speaker system is not available.
Dolby Digital (AC-3)
SPDIF Out jack
MPEG2 decoder card
Dolby Digital
(AC-3)
SPDIF In
Digital
DIN
DeskTop Theater 5.1 Digital
Speaker System

Recording and Content Authoring
with Optical Digital I/O card and
Digital I/O Module



*e.g., FourPointSurround
or DeskTop Theater 5.1 Digital
Speaker Systems*

Recording and Content Authoring
with Drive Bay



Note: The Optical and AUX input jacks are available only in certain models of the Drive Bay.

Recording and Content Authoring

- With the Digital Output Module connected to the Digital Out jack of the Sound Blaster Live! card, you get two sets of SPDIF (RCA) and Optical outputs which allow you to connect and record to external digital devices like MiniDisc or DAT recorders.
- If you are a musician with semi-professional requirements, you may want to upgrade your Sound Blaster Live! card with either the Optical Digital I/O card (plus Digital I/O Module), or the Drive Bay.
- For either options, you will be given:
  - A set of SPDIF (RCA) and Optical input/output jacks for recording to and from external digital devices;
  - Standard MIDI input/output connectors for connection to MIDI devices;
  - A Digital DIN connector for connection to digital speakers such as the FourPointSurround or DeskTop Theater 5.1 Digital Speaker Systems;
  - A second analog Line In allows you to connect to an additional input device (e.g. a CD player) for recording.
- The Drive Bay fits into the standard 5¼" drive bay of your computer and thus allows you easy access to these connectors from its front panel. The Headphones and Microphone utilizes ¼" jacks for high-quality connectivity.

2

Installing Software in Windows 95/98

This chapter shows you how to install the audio software in Windows 95/98 after installing your card. It consists of the following sections:

- ❑ Setting Up the Audio Drivers
- ❑ Installing the Applications
- ❑ Using Sound Blaster Live!
- ❑ Uninstalling the Applications
- ❑ Reinstalling the Audio Drivers From the Installation Disc
- ❑ Playing Legacy Games

Setting Up the Audio Drivers

You need device drivers to control the components on your audio card. After you have installed the card and switched on your system, Windows 95/98 automatically detects the components, and then either installs the drivers automatically or prompts you for the drivers. You may encounter the following messages, which may not be in the sequence shown.

- ❑ If a message similar to Figure 2-1 appears, just take note of it and wait for the next message.

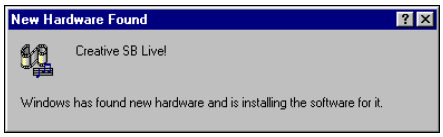


Figure 2-1: Message box indicating the detection of a device.

- ❑ If a dialog box similar to Figure 2-2 appears, click the **Driver from disk provided by hardware manufacturer** option, and then click the **OK** button.
- ❑ If the **Install From Disk** dialog box or a dialog box similar to Figure 2-3 appears:
  1. Insert the installation disc into your CD-ROM drive and select the drive.
  2. If there is a **Specify a location** check box, make sure it is selected and clear the other check boxes.
  3. Click the **Browse** button and select the folder **AUDIO***Language***WIN9XDRV** where *Language* is the language of the software that you want to install.
  4. Click the **OK** button.
     The required files are copied to your hard disk.

Figure 2-2: Driver installation dialog box where the Windows default driver option is not available.

Figure 2-3: Windows 98 Add New Hardware Wizard dialog box.

❑ If a dialog box similar to Figure 2-4 appears:

1. Click the **Other Locations** button.
2. At the **Select Other Locations** dialog box, click the **Browse** button and select the folder **AUDIO***Language***WIN9XDRV**
   where *Language* is the language of the software that you want to install.
3. Click the **OK** button, and then click the **Finish** button.
   Some of the required files are copied to your hard disk. However, an error message stating that a file (2GMGSMT.SF2 or otherwise) cannot be found also appears.

Figure 2-4: Update Device Driver Wizard dialog box when driver cannot be found.

4. Click the **OK** button.
5. At the **Copying Files** dialog box, click the **Browse** button and select the folder **AUDIO***Language***WIN9XDRV**
   where *Language* is the language of the software that you want to install.
6. Click the **Open** button, and then click the **OK** button twice.
   The file is copied to your hard disk.

- ❑ If a dialog box similar to Figure 2-5 appears, click the **Next** button, and follow the instructions on the screen to complete the installation of the driver.
- ❑ If a Version Conflict message box appears about VJOYD.VXD and MSJSTICK.DRV, click the **Yes** button to keep the files.

Figure 2-5: Update Device Driver Wizard dialog box at start of installation.

Installing the Applications

1. If your installation disc is already in your CD-ROM drive, eject the disc and insert it again. The disc supports Windows AutoPlay mode and starts running automatically. If not, see “Problems Installing Software” on page D-1.
2. Follow the instructions on the screen to complete the installation.

Using Sound Blaster Live!

Congratulations! You have successfully installed Sound Blaster Live! For more information on how you can get the most out of your audio card, refer to Chapter 4, “Using Sound Blaster Live!” .

Uninstalling the Applications

Use the following steps to cleanly remove applications before you reinstall them to correct problems, change configurations, or make version upgrades.

To uninstall the applications:

1. Close the audio card's applications if they are open. This includes Creative Launcher and the SB Live! icon on the taskbar. Applications that are still running during the uninstallation wil not be removed.
2. Click **Start** -> **Settings** -> **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. In the **Add/Remove Programs Properties** dialog box, select **Sound Blaster Live!**, and then click the **Add/Remove** button.
5. In the **Creative Uninstaller** dialog box, select the check boxes of the items you want to delete and then click the **Next** button.
   The selected applications will be uninstalled.
6. Click the **OK** button to close the **Add/Remove Programs Properties** dialog box.
7. Restart the computer if prompted.

Reinstalling the Audio Drivers From the Installation Disc

You may want to reinstall only the audio drivers if you think they have been corrupted.

1. Insert the installation disc into your CD-ROM drive.
2. Run the UPDDRV95.EXE program from the **AUDIO***Language***WIN9XDRV** folder of your CD-ROM drive, where *Language* is the language of the software that you want to install. The updating process may take a while. When the progress indicator box disappears, the update is complete.

Playing Legacy Games

For more information, see Appendix B, "SB Emulation in MS-DOS/ Windows 95/98".

3

Installing Software in Windows NT 4.0

This chapter shows you how to install the audio software in Windows NT 4.0 after installing your card. It consists of the following sections:

- ❑ Installing the Software
- ❑ Setting Up Joystick Drivers in Windows NT 4.0
- ❑ Using Sound Blaster Live!
- ❑ Reinstalling the Audio Drivers From the Installation Disc
- ❑ Uninstalling Sound Blaster Live!

You cannot install more than one Sound Blaster audio card of the same type on your computer.

Installing the Software

The software installation in NT 4.0 includes the installation of audio drivers.

1. Insert the installation disc into your CD-ROM drive.
   The AutoPlay screen appears.
2. Follow the instructions on the screen to complete the installation.

Setting Up Joystick Drivers in Windows NT 4.0

1. Log on to your computer as Administrator.
2. Click **Start** -> **Settings** -> **Control Panel**.
3. Double-click the **Multimedia** icon, click the **Devices** tab, and then click the **Add** button.
4. In the List of Drivers box of the **Add** dialog box, select **Unlisted Or Updated Driver**, and then click the **OK** button.

5. Insert the Windows NT 4.0 CD-ROM into the CD-ROM drive.
6. In the **Install Driver** dialog box, type
   E:\DRVLIB\MULTIMED\JOYSTICK\X86
   if E:\ is the CD-ROM drive letter, and then click the **OK** button.
7. In the **Add Unlisted Or Updated Driver** dialog box, click **Analog Joystick Driver**, and then click the **OK** button.
8. In the **Microsoft Joystick Configuration** dialog box, click the **OK** button.
9. Restart your computer when prompted.

Using Sound Blaster Live!

Refer to Chapter 4, “Using Sound Blaster Live!” . They also apply in Windows NT 4.0.

Reinstalling the Audio Drivers From the Installation Disc

You may want to reinstall the audio drivers if you think they are corrupted.

1. Insert the installation disc into your CD-ROM drive.
2. Run the UPDPCINT.EXE program from the **AUDIO***Language***NT4DRV** folder of your CD-ROM drive, where *Language* is the language of the software that you want to install.
3. Restart your computer when prompted. You may be prompted to restart more than once.
4. If a Windows NT 4.0 Service Control Manager error message appears,
   see “Resolving I/O Conflicts” on page D-6.

Uninstalling Sound Blaster Live!

To uninstall the Sound Blaster Live! software, follow the steps listed in the section “Uninstalling the Applications” on page 2-5. They also apply in Windows NT 4.0.

4 Using Sound Blaster Live!

Sound Blaster Live! is supported by a full range of applications to help you get the absolute most from the audio card. The software most important to the operation of your audio card is the Sound Blaster Live! group:

- ❑ Sound Blaster Live! Experience
- ❑ Creative EAX Demo
- ❑ Creative Diagnostics
- ❑ Creative Launcher
- ❑ Surround Mixer
- ❑ AudioHQ
- ❑ Wave Studio
- ❑ Creative PlayCenter
- ❑ Creative Keytar
- ❑ Creative LAVA!
- ❑ Creative Keytar
- ❑ Creative Rhythmania

Sound Blaster Live! Experience

Sound Blaster Live! Experience presents an interactive introduction to Sound Blaster Live!. It demonstrates the many wonderful experiences Sound Blaster Live! can give you.

To run SB Live! Experience, bring your pointer to the top of the screen to display Creative Launcher, click the Sound Blaster Live! tab, and then click the SB Live! Experience icon. On the opening screen, click to select the topic that interests you.

Creative EAX Demo

Run this EAX demonstration to learn more about Environmental Audio and how it makes computer games and simulations more realistic by taking into account the accoustic properties of the surroundings that you are supposed to be in.

Creative Diagnostics

Use Creative Diagnostics to quickly test your audio card’s Wave, MIDI or CD Audio playback, recording function and speaker output.

Creative Launcher

Creative Launcher allows you to organize your desktop and open Creative applications quickly.

Creative Launcher resides at the top of your screen. It consists of the system menu icon (the Creative logo at the top left corner), the website icon, group tabs, and the group items. The Environmental Audio icon is on the right.

The **Live!Task** tab in the Launcher offers a "one-touch" setting which you can use to perform a task easily. An application can be launched with its associated Super-Environment Presets using the Launcher. The controls are arranged intuitively:
"I want to" [perform a task] "With" [this Super-Environment preset]

The Readme file on that page offers a comprehensive description on how to configure this “one-touch” setting. Click the right-arrow on the right until you can see the Readme icon; then click it.

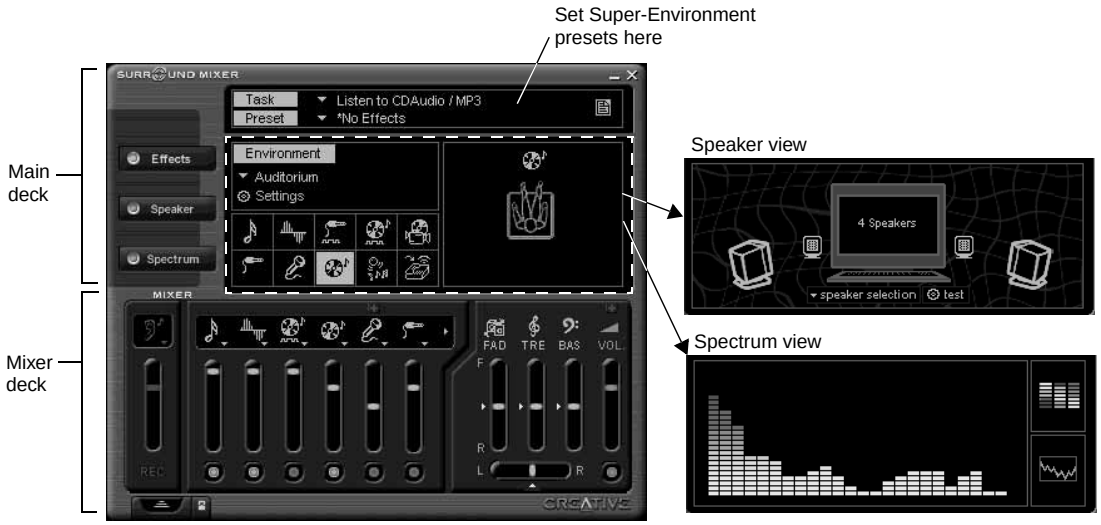
You can create and save new Super-Environment presets in Creative Surround Mixer and then configure them in Launcher.

The installation creates a number of group tabs in Launcher that may contain shortcuts to Creative applications such as PlayCenter and Recorder. It may also contain shortcuts to other applications for your hardware settings, volume control, help files, or demonstration programs by Creative.

For details on managing groups and items in Launcher, see its online help.

Surround Mixer

Creative Surround Mixer is the nerve center for setting and controlling the various aspects of your audio card. It consists of two "detachable" decks: the **Main deck** and the **Mixer deck**.



Main deck

The top area of the **Main deck** allows you to:

- Select tasks or save, delete, import and export Super-Environment presets. You can save endless combinations of these settings as Super-Environment presets for the selected speaker output. A Super-Environment preset, when selected, is your passport to a one-step automatic configuration of speakers, mixer and effects for whatever you want to do: play a particular game, record to a particular medium, record or play in a particular style—each style having its unique set of positions of audio input sources. These presets can then be configured for use in Creative Launcher's Live!Task.

The three buttons at the left side of the Main deck allows you to switch between three different views:

- In the **Effects** view, you can select and create your audio environment and position audio sources within the speaker configuration space.
- In the **Speaker** view, you can select your speaker setup and perform a speaker output test.
- In the **Spectrum** view, you can select and display the spectrum analyzer during playback or recording.

Mixer deck

The **Mixer deck** allows you to:

- Mix sounds from various audio input sources when playing or recording;
- Adjust the volume level for the audio input sources;
- Adjust the treble and bass level, front/rear or left/right balance.

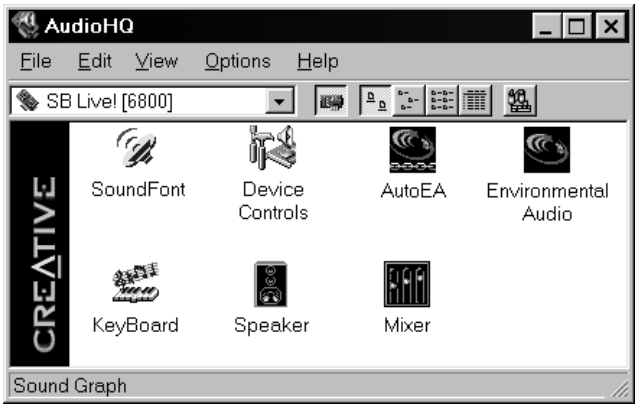
Tip

❑ If you are not sure what the icons on the Surround Mixer represent, place the pointer over any icon or area to display the tooltip.

For details on what you can do in Surround Mixer, explore the its online help.

AudioHQ

AudioHQ contains several control utilities that allow you to view, audition, or set up the audio properties of one or more audio devices on your computer.



AudioHQ can be accessed using any of the following methods:

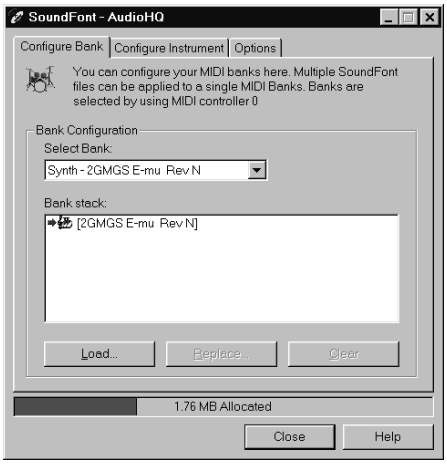
- Click the **AudioHQ** tab in Creative Launcher;
- Click **Start** -> **Programs** -> **Creative** -> **Sound Blaster Live!** -> **AudioHQ**;
- Click the AudioHQ icon located at the bottom right corner of your Windows desktop.

SoundFont Control

Creative SoundFont Control allows you to configure MIDI banks with SoundFont files and instruments, as well as set the caching algorithm and space.

Configure a MIDI Bank

To configure a MIDI bank:



1. In SoundFont dialog box, click the **Configure Bank** tab.
2. In the **Select Bank** list, select the MIDI bank to configure.
3. Click the **Load** button and load the SoundFont file you want to the MIDI bank.
   The latest file loaded always appears at the top of the **Bank Stack** box.
   The top of the stack is indicated by an arrow.
4. To replace a SoundFont file, click the file and then click the **Replace** button.
5. To clear a bank from the stack, select the bank and then click the **Clear** button.
   A variation bank can only be cleared by clearing its main bank.
6. Repeat Steps 3, 4 or 5 as required.

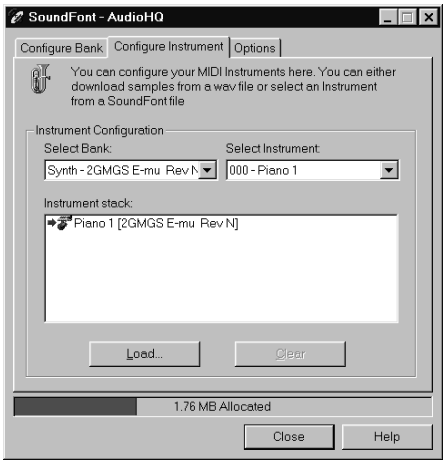
By stacking a SoundFont file instead of replacing one with the other, you may return to the original sounds or use the new selection.

You can “spot” hide particular instruments by loading one or more SoundFont files on top of the original.

When you clear a SoundFont file, you remove the latest configuration of the main bank and any variation banks, including the latest configuration of instruments on the Configure Instrument tabbed page.

Configure an Instrument

To configure an instrument:



1. In the SoundFont dialog box, click the **Configure Instrument** tab.
2. In the **Select Bank** list, select the bank whose instruments you want to configure. You can select any bank.
3. In the **Select Instrument** list, select the instrument to configure.
   In the **Instrument Stack**, you may see an instrument entry although you did not load an instrument on this page. The instrument can be found in a bank loaded on the **Configure Bank** tabbed page.
4. Click the **Load** button and load a SoundFont or single-instrument (for example, .WAV) file.
   The last file loaded always appears at the top of the **Instrument Stack** with an arrow pointing to it.
5. To clear an instrument from the stack, select the instrument and then click the **Clear** button.
6. For faster processing of SoundFont files, the files are loaded into memory. You need to set the maximum amount of cache memory your SoundFont files can occupy, so that your system performance does not suffer from insufficient memory. You can also set the caching algorithm for a balanced system performance.

Setting the maximum amount of cache memory for SoundFont files does not mean setting aside or reserving the space. The space can still be used by your computer or other files, if needed.

SoundFont Options

You change the following options on the **Options** tabbed page of the SoundFont Control dialog box:

To specify the caching algorithm:

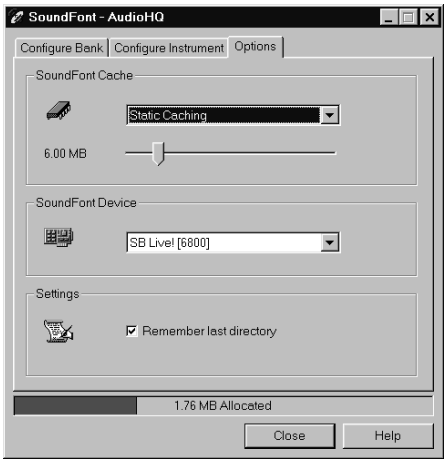
- Select an algorithm from the **SoundFont Cache** list.

To set the amount of cache for SoundFont files:

- Drag the **SoundFont Cache** slider to set the amount of cache.

To change the SoundFont device

- Select the new device from the **SoundFont Device** list.



Device Controls

Device Controls allows you to configure for audio playback the audio devices that allow multiple simultaneous Wave playback sessions. For example, you can play five Wave tracks at the same time and enjoy the sounds from them all.

Playback Sessions

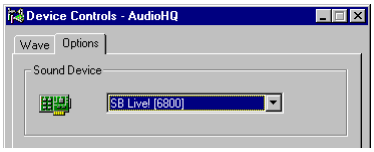
To set maximum simultaneous Wave playback sessions:

- On the Wave tabbed page, drag the Maximum Simultaneous Wave Playback slider to the right to set a higher number of Wave playback sessions, or to the left to set a lower number of simultaneous playback sessions.

Sound Device

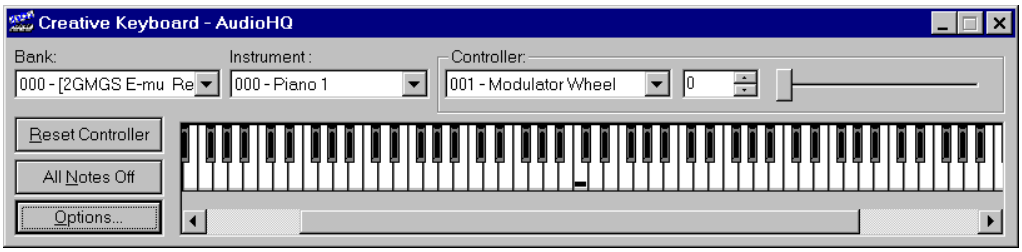
To select the sound device to configure:

- On the Options tabbed page, click the device you want to configure from the Sound Device list.
  The device is immediately selected.



Creative Keyboard

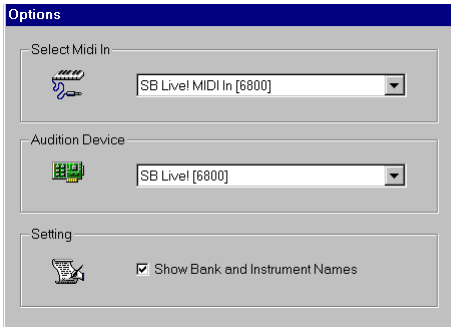
Creative Keyboard is a virtual keyboard which allows you to audition or play musical notes produced through MIDI devices. To edit the sound, use Vienna SoundFont Studio or another sound editor.



MIDI Input

To select a MIDI input device:

1. In the **Select MIDI In** box in the **Options** dialog box, click the correct MIDI port.
2. Click the OK button.



You can use external MIDI input devices to audition your MIDI banks and instruments. First, connect a MIDI input device to your audio card and then select that device in Creative Keyboard.

Test an Instrument

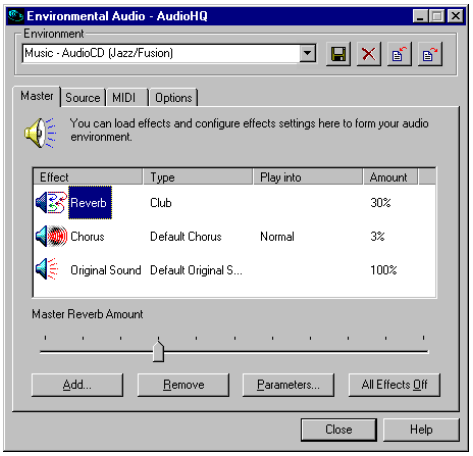
To test an instrument:

1. In Creative Keyboard, click the bank and the instrument you want.
2. Click the keys on the keyboard to test the sound. If you have an external MIDI input device, you will probably find it easier to use it instead.

Tips

- ❑ To select multiple notes to play simultaneously, use your right mouse button to click the keys, which will be marked by black dots.
- ❑ To release the keys, right-click them one by one, *or* click the All Notes Off button for simultaneous release.
- ❑ To slide across the keyboard, drag the mouse.
- ❑ If the playback's sustain is too long, click the All Notes Off button.

Environmental Audio Control



Environmental Audio Control allows you to configure the EMU10K1 effects engine. It allows you to specify the components that make up the audio elements that in turn make up an environment. An environment is the modeling of a real-world experience. We have provided some entertainment, gaming and various environments to get you started with. Environmental Audio Control can be also be accessed from Creative Surround Mixer.

Learn from the online help how to:

- ❑ Configure master effects
  - Add or remove effects from an environment
  - Specify the effect type
  - Specify the degree or amount of the effect
  - Edit an effect all the way down to its parameters or building blocks
- ❑ Configure source effects, that is, set the amount of the effects to apply on an audio source.
- ❑ Configure MIDI playback effects
- ❑ Export an environment to a file
- ❑ Import an environment

AutoEA

AutoEA stands for Automatic Environmental Audio. More precisely, this applet allows you to specify for any audio application which Super-Environment preset to automatically associate with the currently active speaker output. For the automatic super-environment to work, AutoEA must be active or at least minimized.

Associating a Super-Environment

For each audio application on your computer, you can specify the super-environment that will be automatically associated with it, for each speaker output configuration. For example, when playing a MiniDisc using Creative PlayCenter, you may want to associate different Super-Environments for the speaker outputs "Live!Surround" and "4 Speakers".

1. In the **Application** list, select the audio application with which to associate a super-environment for a particular speaker output. If the application is not in the list, click the Browse button to browse for and open the application.
2. In the **Speaker Output** box, click the speaker output to configure.
3. In the **Linked Super-Environment** box, click the Super-Environment preset you want to associate with this application/speaker-output combination.
   This combination trio are automatically set.
4. If you want AutoEA to monitor this application's activity, clear the **Do not monitor this application** check box. If you check it, AutoEA will not configure the Super-Environment for that application even when the application is started.

For other functions, refer to its online help.

Wave Studio

Wave Studio allows you to perform the following sound editing functions easily:

- Play, edit, and record 8-bit (tape quality) and 16-bit (CD quality) Wave data. Enhance your Wave data or create unique sounds with various special effects and editing operations such as rap, reverse, echo, mute, pan, cut, copy, and paste.
- Open and edit several Wave files at the same time.
- Import and export raw (.RAW) data files.

See its online help for details.

Creative PlayCenter

PlayCenter allows you to play most types of media—multimedia files (MIDI, Wave, MP3, etc.), audio CDs, and Video CDs—using a single player. Just insert or select your media and PlayCenter does the rest.

The new SoundFont Association feature allows you to autoload SoundFont banks used by MIDI files such that you can experience the power of SoundFont technology seamlessly.

PlayCenter launches LAVA! automatically whenever you play an MP3 file. You can also set LAVA! to launch automatically when playing audio CDs or other multimedia files.

Creative Recorder

Recorder allows you to record sounds or music from various input sources like the microphone or Audio CD, and save them as Wave (.wav) files.

For details on how to use Recorder, see its online help.

Creative LAVA!

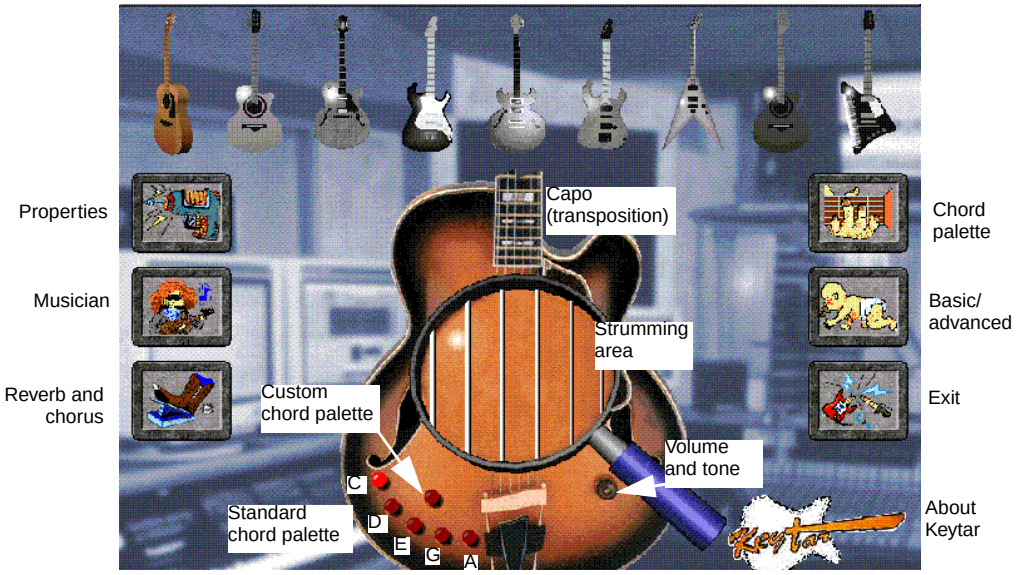
Creative LAVA! (Live! Audio-Visual Animation) gives your music visual expression that enhances the emotional depth of your music experience.

Through LAVA!, 3D graphical objects interact with the music and intelligently dance to the sound cues from sources such as CD and MIDI.

Explore the various animation scenarios provided by LAVA! or create your own environments and scenarios for your animation.

Creative Keytar

With Creative Keytar, an easy-to-use and highly interactive edutainment software for beginners, you can turn your multimedia computer into a virtual rhythm guitar system immediately. Click a picture at the top of the screen to choose your favorite guitar. Press a function key (F1, ..., F12) to activate a chord, and you can start strumming or plucking your favorite tune, all in a matter of seconds or minutes.



Just hold the chord with one hand until it is time to change the chord and use the other hand to strum or pluck the strings according to a tune's rhythmic variation. You don’t need to worry about notes, all you need is a sense of rhythm and remember your chord keys, no need to worry about notes. You only need to know and memorize chord fingerings.

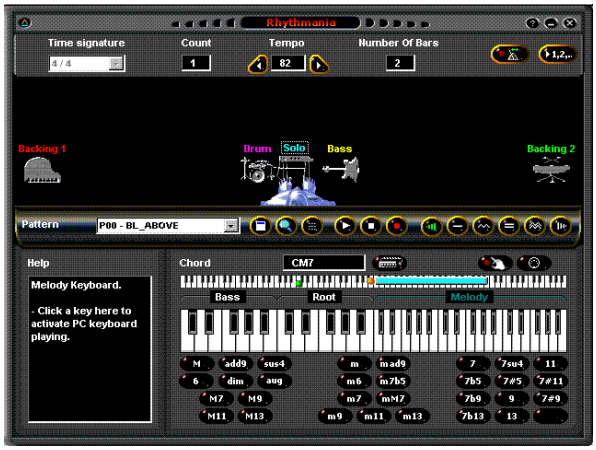
Learn how to use Keytar from its online help.

Creative Rhythmania

Creative Rhythmania lets you create a MIDI file, choosing from a professional set of backup rhythms and instruments.

Creative Rhythmania allows you to:

- ❑ Perform with auto-accompaniment in Rhythm mode:
  - Four-part Rhythm section
  - Preset backing styles
  - Interactive backing arrangement
  - Chord Palette system
  - SoundFont support
- ❑ Choose between two Keyboard types: PC (QWERTY) keyboard or MIDI keyboard connected to your PC.



Rhythmania is essentially pattern-based software:

- ❑ You play a Pattern to provide auto-accompaniment for your melody playing.
- ❑ You create or modify a Pattern by building or changing it Section by Section in Rhythm mode.
- ❑ Then, you combine a Pattern and a melody to create a Sequence in Sequencer mode.

For details on how to use Rhythmania, see its online help.

A

General Specifications

This section lists the specifications of your card.

Features

PCI Bus Mastering

- ❑ PCI Specification Version 2.1 compliant
- ❑ Bus mastering reduces latency and speeds up system performance

EMU10K1

- ❑ Advanced hardware accelerated digital effects processing
- ❑ 32-bit digital processing while maintaining a 192 dB dynamic range
- ❑ Patented 8-point interpolation that achieves the highest quality of audio reproduction
- ❑ 64-voice hardware wavetable synthesizer
- ❑ Professional-quality digital mixing and equalization
- ❑ Up to 32 MB of sound RAM mapped to host memory

Stereo Digitized Voice Channel

- ❑ True 16-bit Full Duplex operation
- ❑ 16-bit and 8-bit digitizing in stereo and mono modes
- ❑ Playback of 64 audio channels, each at an arbitrary sample rate
- ❑ ADC recording sampling rates: 8, 11.025, 16, 22.05, 24, 32, 44.1 and 48 kHz
- ❑ Dithering for 8-bit and 16-bit recording

AC '97 Codec Mixer	❑ Mixes EMU10K1 audio sources and analog sources such as CD Audio, Line In, Microphone, Auxiliary and TAD ❑ Selectable input source or mixing of various audio sources for recording ❑ 16-bit Analog-to-Digital conversion of analog inputs at 48 kHz sample rate
Volume Control	❑ Software record and playback control of Master, Digitized Voice, and inputs from MIDI device, CD Audio, Line, Microphone, Auxiliary, TAD, SPDIF, Wave/DirectSound device, and CD Digital (CD SPDIF) ❑ Separate bass and treble control ❑ Front and Rear Balance control ❑ Muting and balance control for individual playback sources
Creative Multi Speaker Surround™ (CMSS™)	❑ Multi-speaker technology ❑ Professional-quality panning and mixing algorithm ❑ Independent multiple sounds can be moved and placed around a listener

Connectivity

Sound Blaster Live! card

Audio Inputs

- ❑ One line-level analog Line input via stereo jack on rear bracket
- ❑ One mono Microphone analog input via stereo jack on rear bracket
- ❑ CD_IN line-level analog input via 4-pin Molex connector on card
- ❑ AUX_IN line-level analog input via 4-pin Molex connector on card
- ❑ TAD line-level analog input via 4-pin Molex connector on card
- ❑ CD_SPDIF digital input via 2-pin Molex connector on card, accepting sampling rates of 32, 44.1 and 48 kHz

Audio Outputs

- ❑ DIGITAL OUT (Front and Rear SPDIF digital outputs) via 4-pole 3.5mm minijack on rear bracket
- ❑ Two line-level analog outputs via stereo jacks on rear bracket, Front and Rear Line-Outs
- ❑ Stereo headphone (32-ohm load) support on Front Line-Out

Interfaces

- ❑ D-Sub MIDI interface for connection to external MIDI devices. Doubles as Joystick port
- ❑ AUD_EXT 2x20 pin header for connection to Optical Digital I/O card or Drive Bay

B

SB Emulation in MS-DOS/ Windows 95/98

Background

Legacy games in the market have been designed for only MS-DOS. SB Live! supports MS-DOS games. There are two ways to play MS-DOS games:

- **From the MS-DOS box in Windows 95/98 (recommended)**

  To open the box:

  - Click **Start** -> **Programs** -> **MS-DOS Prompt**.

- **In the Windows 95/98 MS-DOS mode**

  There may be times when you do not want to or cannot run a game from the MS-DOS box. The game may be incompatible with Windows 95/98, or there are insufficient system resources to play the game with Windows 95/98 loaded. In such cases, use the MS-DOS mode, in which only the real-mode portions of Windows 95/98 are loaded.

  To restart the system in MS-DOS mode when you are already in Windows 95/98:

  1. Click **Start** -> **Shut Down**.
  2. Click the **Restart the computer in MS-DOS mode** option button, and then click the **OK** button.

  To start the system in MS-DOS mode at system startup:

  1. At startup as Windows 95/98 is loading, hold the F8 key.
  2. At the startup menu, choose the Command Prompt Only option, and then press <Enter>.

Understanding the Installation Program

The installation program modifies your AUTOEXEC.BAT and CONFIG.SYS files.

The AUTOEXEC.BAT File Settings

The installation program adds the following statements to the AUTOEXEC.BAT file:

```
SET CTSYN=C:\WINDOWS
SET BLASTER=A220 I5 D1 H5 P330 T6
C:\PROGRA~1\CREATIVE\SBLIVE\DOSDRV\SBEINIT.COM
```

The first two statements set up the environment variables for your audio card. For an explanation of the variables, see “Environment Variables” on page B-5.

The third statement runs SBEINIT.COM which is the SB Live! MS-DOS driver. It is required for the SB Live! card to function properly under MS-DOS mode.

SBEINIT.COM requires the HIMEM.SYS and EMM386.EXE files to be loaded. If needed, the installation program adds the necessary HIMEM.SYS and EMM386.EXE lines to your CONFIG.SYS file, creating the file if it is not present.

On the rare occasion a program does not work with expanded memory, simply add the NOEMS parameter to your memory manager. For example:

```
DEVICE=C:\WINDOWS\EMM386.EXE NOEMS
```

You may load this driver into high memory in the AUTOEXEC.BAT file, even though the default is not. For example:

```
LOADHIGH=C:\PROGRA~1\CREATIVE\SBLIVE\DOSDRV\SBEINIT.COM
```

Do not remove the memory manager altogether. Do not attempt to load SBEINIT.COM into high memory when using the NOEMS option if SBEINIT.COM fails to run SBELOAD.EXE or SBECFG.EXE. In the rare case that an MS-DOS game will not work with a memory manager, you will not be able to use the SB Live! card with the game.

The CONFIG.SYS File Settings

The installation program adds the following statements to the CONFIG.SYS file:

```
DEVICE=C:\WINDOWS\HIMEM.SYS
DEVICE=C:\WINDOWS\EMM386.EXE
```

System Resource Settings

In the following tables, the preferred values are in bold.

This section explains the following software SB emulation resources—not hardware resources—of your card:

- ❑ Input/Output (I/O) Addresses
- ❑ Interrupt Request (IRQ) Line
- ❑ Direct Memory Access (DMA) Channel

If your card encounters a conflict with a peripheral device, you may need to change its resource settings. For details, see “Resolving I/O Conflicts” on page D-6.
When any resource setting is changed, make sure that the environment variables (see “Environment Variables” on page B-5) reflect the changes as well. You can view your system environment by typing **SET** at the DOS prompt.

Input/Output (I/O) Addresses

I/O addresses are communication areas used by your computer’s central processor to distinguish among various peripheral devices connected to your system when sending or receiving data.

Table B-1: Possible default input/output (I/O) addresses.

Device	Default I/O Address Range
SB interface	**220H to 22FH** 240H to 24FH 260H to 26FH 280H to 28FH
MPU-401 UART MIDI interface	300H to 301H 310H to 311H 320H to 321H **330H to 331H**

Table B-1: Possible default input/output (I/O) addresses.

Device	Default I/O Address Range
Stereo music synthesizer	**388H to 38BH**

Interrupt Request (IRQ) Line

An IRQ line is a signal line that a device uses to notify your computer's central processor that it wants to send or receive data for processing.

Table B-2: Possible default interrupt request (IRQ) line assignment.

Device	Default IRQ Line
SB interface	**5**, 7, 9, 10

Direct Memory Access (DMA) Channel

A DMA channel is a data channel that a device uses to transfer data directly to and from the system memory.

Table B-3: Possible default direct memory access (DMA) channel assignment.

Usage	Default DMA Channel
First DMA channel	0, **1**, 3
Second DMA channel	**5**, 6, 7

Environment Variables

Environment variables are used to pass hardware configuration information to the software in your system. For MS-DOS, your audio card includes the following:

- ❑ CTSYN Environment Variable
- ❑ BLASTER Environment Variable

CTSYN Environment Variable

The CTSYN environment variable points to the location of the CTSYN.INI file, which usually resides in the Windows directory. The syntax for this variable is as follows:

```
CTSYN=path
```

where path is the location of the CTSYN.INI file.

BLASTER Environment Variable

The BLASTER environment variable specifies the base I/O address, IRQ line, and DMA channels of the SB interface. Its syntax is:

```
BLASTER=A220 I5 D1 H5 P330 T6
```

The parameters in the command are as follows.

This Parameter	Specifies
A*xxx*	SB interface's base I/O address.
I*x*	IRQ line used by the audio interface.
D*x*	First DMA channel used by the audio interface.
H*x*	Second DMA channel used by the audio interface.
P*xxx*	MPU-401 UART interface's base I/O address.
T*x*	Card type. *x* must be 6.

Determining Resources

To find the current SB Live! SB16 Emulation resources in Windows 95/98:

1. Click **Start** -> **Settings** -> **Control Panel**.
2. In the **Control Panel** window, double-click the **System** icon.
3. In the **System Properties** dialog box, click the **Device Manager** tab.
4. Double-click **Creative Miscellaneous Devices**, and then double-click **Creative SB Live! SB16 Emulation**.
5. Click the **Resources** tab.

You can use the information in the resource list to help you configure MS-DOS games for use with the SB Live! card.

The resource list may show three entries of “Input/Output Range” and two entries of “Direct Memory Access”. They correspond to the sequence of entries in Table B-1 and Table B-3. If the number of entries do not match, a good estimate of the identity of the device is its I/O address or DMA channel.

To find the current SB Live! SB16 Emulation resources in MS-DOS mode:

The MS-DOS driver SBEINIT.COM must be running for SBECFG.EXE to work properly.

1. Switch to your SB Live! DOS driver directory, that is:
   `C:\PROGRA~1\CREATIVE\SBLIVE\DOSDRV`
2. Type **SBECFG** and then press <Enter>.

Some older games may have difficulty detecting the SB Live! card at certain resource settings. Typically, these games expect the card to be at a fixed set of resources and would fail to load if those resources are not detected. If you have older MS-DOS games that do not work properly, try changing the SB Live! SB16 Emulation configuration. Use the following as a guide:

Problem: Sound Blaster emulation is not recognized.
Solution: Try switching the SB Emulation IRQ between 5 and 7, use DMA channel 1, use SB interface port 220.

Problem: The MPU-401emulation is not recognized.
Solution: Try using Port address 330.

Selecting the Best Audio Options in a Game

Most MS-DOS–based games that provide sound have some procedure for audio setup. These procedures generally allow you to choose from a list of popular audio cards or audio devices.

Games may present audio options differently. Some may present a single choice that corresponds to a particular audio device; for example, Sound Blaster 16, Roland Sound Canvas, etc. Others provide an option for music and digital audio separately; for example, General MIDI music with Sound Blaster digital audio. In such a case, there are often two separate menus to configure.

Some games allow you to set the MIDI port address and IRQ for music and sound. Make sure that these settings correspond to the values displayed by SBECFG.EXE or the Resources tabbed page of the Creative SB Live! SB16 Emulation Properties dialog box.

There are games that offer MPU-401/Roland (General MIDI or MT-32/LAPC-1) as an option. Often these games allow you to set the MIDI port address. Make sure that they match the MIDI address in the Resources list on Resources tabbed page of the Creative SB Live! SB16 Emulation Properties dialog box. The same values can be found under “MPU-401 (General MIDI, Roland MT-32/LAPC-1) Emulation”, displayed by SBECFG.EXE in MS-DOS mode. Remember to enable the MT-32 MIDI patch with the SBEMIXER program if you select Roland MT-32 or LAPC-1 for music.

Music Options

Most MS-DOS games offer a menu choice for sound when they start up. If you have a choice between General MIDI and MT-32, always choose General MIDI, since it will provide you with the best sound quality. If you need to use MT-32, you must first switch from the General MIDI instrument set (the default) to the MT-32 instrument set using SBEMIXER. Be sure to switch back to the General MIDI set when you are finished using the MT-32 instrument set.

Digital Audio Options

SB Live! supports Sound Blaster, Sound Blaster Pro, Sound Blaster 16, and Adlib digital audio emulation. If an application provides all these as options, specify the choices in this order:

1. Sound Blaster 16
2. Sound Blaster Pro
3. Sound Blaster
4. Adlib

MS-DOS Mode Utilities

The SB Live! card includes a few MS-DOS utilities. These utilities require the SB Live! DOS driver SBEINIT.COM to be loaded.

SBECFG.EXE

Use the SBECFG.EXE utility to obtain the hardware settings and the status of the SB Live! card.Typing **SBECFG.EXE** at the command prompt displays the following hardware settings:

- ❑ PCI Hardware Settings: Port, IRQ
- ❑ Sound Blaster Emulation: Port, IRQ, DMA
- ❑ MPU-401 Emulation (GM, Roland MT-32/LAPC-1) Emulation: Port
- ❑ Adlib Emulation: Port

The emulation settings appear only if they are enabled.

SBEMIXER.EXE

Use SBEMIXER.EXE to change the volume levels of the MPU-401 instrument set used on the SB Live! card. You can use SBEMIXER.EXE from the command line—useful for advanced users who want to set up batch files with particular volume levels—or within the SBEMIXER screen. The settings for SBEMIXER.EXE are independent of the Creative Mixer settings in Windows 95/98.

To set SBEMIXER values in the command line:

At the DOS prompt, type the SBEMIXER command in a single line. Its syntax is:

`SBEMIXER [/S:`*x*`] [/W:`*x*`] [/C:`*x*`] [/M:`*x*`] [/?]`

where square brackets [ ] denote optional parameters, and:

This Parameter	Specifies
/S:*x*	Synth volume. *x* can be a value from the range 0 to 127.
/W:*x*	Wave volume. *x* can be a value from the range 0 to 127.
/C:*x*	CD audio volume. *x* can be a value from the range 0 to 127.
/M:*x*	Synth MT-32/LAPC-1 mode. For *x*, 0 is Off, 1 is On.
/?	View a short description of the parameters.

An example of an SBEMIXER command is

SBEMIXER /S:64 /W:120 /C:50 /M:0

which corresponds to "set the synth volume to 64, the Wave volume to 120, the CD audio volume to 50, and turn off the Synth MT-32/LAPC-1 mode".

To set SBEMIXER values within the Mixer screen:

At the DOS prompt, type

SBEMIXER

The interactive editor mode allows you to change the mixer settings with the mouse, <Tab>, <PgUp>, <PgDn>, or arrow keys.

Use the Save button to save the settings for the next session.

SBESET.EXE

Use SBESET.EXE to manually configure SB resources or disable SB Emulation. By default, SB Emulation in DOS follows the Windows settings. For example, if you disable SB Emulation in Windows, in the next boot to DOS, SB Emulation in DOS disabled. Under rare circumstances you may need to manually reconfigure DOS SB Emulation, for example, if there is conflict in DOS before it can boot to Windows. SBESET.EXE is run from the command line.

To set SBESET values in the command line:

At the DOS prompt, type the SBESET command in a single line. Its syntax is:

`SBESET [-Axxx] [-Ix] [-Dx] [-Hx] [-Pxxx] [-dx] [-wx]`

where square brackets [ ] denote optional parameters, and:

See "System Resource Settings" on page B-3 for a list of the possible values.

This Parameter	Specifies
-A*xxx*	SB interface's base I/O address.
-I*x*	IRQ line used by the audio interface.
-D*x*	First DMA channel used by the audio interface.
-H*x*	Second DMA channel used by the audio interface.

-P*xxx*	MPU-401 UART interface's base I/O address.
-d*x*	SB Emulation mode. For *x*, 1 is Off, 0 is On.
-w*x*	Set *x* to 1 to use the Windows-assigned resource configuration. Set *x* to 0 to use (your) user-assigned resource configuration.

An example of an SBESET command is

SBESET -A240 -I5 -D3 -w0

which corresponds to "set the SB interface's base I/O address to 240, the IRQ line used by the audio interface to 5, the First DMA channel used by the audio interface to 3, and use the Windows-assigned resource configuration".

SBEGO.EXE

Use this to confirm whether SB16 Emulation is properly installed and working.

C

Changing Audio Card Settings

You might want to disable interfaces that you are not using to free up resources, for example, when you do not have enough IRQ lines.

This appendix is organized as follows:

- ❑ Enabling/Disabling Gameport Joystick Interface
- ❑ Enabling/Disabling Other Features

Enabling/Disabling Gameport Joystick Interface

The Gameport Joystick interface on your audio card can be enabled or disabled in Windows 95/98.

To enable or disable the interface in Windows 95/98:

1. Click **Start** -> **Settings** -> **Control Panel**.
2. In the **Control Panel** window, double-click the **System** icon.
3. In the **System Properties** dialog box, click the **Device Manager** tab.
4. Double-click **Sound, Video And Game Controllers**, and then select **Creative Gameport Joystick**.
5. Click the **Properties** button.

6. In the Properties dialog box:

   If you have an **Original Configuration (Current)** check box:

   - To enable the interface, make sure that the check box is selected.
     To disable it, clear the check box.

   If you have a **Disable In This Hardware Profile** check box:

   - To enable the interface, clear the check box.
     To disable it, make sure that the check box is selected.
7. Click **OK** to restart Windows and for the change to take effect.

When the Gameport Joystick interface is disabled, the entry in Device Manager has a red cross.

Enabling/Disabling Other Features

In Windows 95/98 and Windows NT 4.0

Use the applets under Creative AudioHQ to enable or disable features such as Stereo Enhancement Effect.

To open AudioHQ from the Sound Blaster menu

Click **Start** -> **Programs** -> **Creative** -> **Sound Blaster Live!** -> **AudioHQ**.
Check out the applets within the AudioHQ window.

To open AudioHQ from Creative Launcher

Click Creative Launcher at the top or bottom of your computer screen, and then click the **AudioHQ** tab.
Check out the applets indicated by the icons in the Launcher.

D

Troubleshooting

This appendix provides tips for solving problems you may encounter during installation or normal use.

Problems Installing Software

In Windows 95/98, the installation does not start automatically after the CD-ROM is inserted.

The AutoPlay feature in your Windows 95/98 system may not be enabled.

To start the installation program through the My Computer shortcut menu:

1. Double-click the **My Computer** icon on your Windows desktop.
2. In the **My Computer** window, right-click the CD-ROM drive icon.
3. On the shortcut menu, click **AutoPlay** and follow the instructions on the screen.

To enable AutoPlay through Auto Insert Notification:

1. Click **Start** -> **Settings** -> **Control Panel**.
2. In the **Control Panel** window, double-click the **System** icon.
3. In the **System Properties** dialog box, click the **Device Manager** tab and select your CD-ROM drive.
4. Click the **Properties** button.
5. In the **Properties** dialog box, click the **Settings** tab and select **Auto Insert Notification**.
6. Click the **OK** button to exit from the dialog box.

Problems With Sound

There is unexpected excessive environmental sound or effects when an audio file is played.

The last selected preset is an inappropriate environment for the current audio file.

To switch to an appropriate environment:

1. Open the **Environmental Audio** control applet in AudioHQ.
2. In the Environment list, select “No effects” or an appropriate environment.

No sound from the headphones.

Check the following:

- ❑ The headphones are connected to the Line Out jack.
- ❑ Under the **Speaker** view in the Main deck of Surround Mixer, make sure that the Speaker selected is “Headphones”.

If your record source is “What U Hear”, then at any one time, you can only select one of the five sources and mute the others. Therefore, you can get sound from the rear speakers only from the selected source.

In a 4-speaker configuration, there is no sound from the rear speakers.

Check the following:

- ❑ The rear speakers are connected to the audio card’s Rear Out jack.
- ❑ If you are playing sound from one of these sources:
  - CD Audio
  - Line In
  - TAD
  - Auxiliary (AUX)
  - Microphone

To solve the problem:

1. In Surround Mixer’s Mixer deck, make sure the radio button of the source being played is selected, that is, enabled.
2. Select the same source as the record source.

For example, if you are playing DVD games or movies, make sure that you select the Auxiliary device and select the Auxiliary device as your record source in Surround Mixer.

❑ If you have changed environments, make sure that your active sources are selected in Surround Mixer.

No sound from the speakers.

Check the following:

- First, check that you have connected your speakers to your card's output. Second, check that you have selected the correct source in the Mixer deck. If both these conditions have been met and you still do not get any sound, click the red plus sign above the VOL control and check whether the Digital Output Only check box is selected. If it is, you are in the Digital Output Only mode and so must connect to digital speakers to hear the sound from your audio card. See the section on Digital Output Only in Surround Mixer's online help for more information.

No audio output when playing digital files such as .WAV, MIDI files or AVI clips.

Possible causes:

❑ The speaker volume knob (if any) is not set properly.

❑ The external amplifier or speakers are connected to the wrong jack.

❑ There is a hardware conflict.

❑ The Speaker selection in the Main deck of Surround Mixer is incorrectly selected.

❑ The **Original Sound** sliders in either the **Master** and **Source** tabbed pages of the Environmental Audio applet are set at or near 0%.

Check the following:

❑ The speakers' volume control knob, if any, is set at mid-range. Use Creative Mixer to adjust the volume, if necessary.

- ❑ The powered speakers or external amplifier are connected to the card's Line Out or Rear Out jack.
- ❑ No hardware conflict between the card and a peripheral device. See "Resolving I/O Conflicts" on page D-6.
- ❑ The Speaker selection in the Main deck of Surround Mixer corresponds to your speaker or headphone configuration.
- ❑ The **Original Sound** sliders in either or both the **Master** and **Source** tabbed pages of the Environmental Audio applet are set to 100%.

No audio output when playing CD-Audio or DOS games that require a CD-ROM.

To solve this problem:

- Make sure the Analog Audio connector on the CD-ROM drive and the CD In connector on the audio card are connected.

Panning a source sometimes turns off its sound.

This occurs when you are in the Digital Output Only mode and the source's left-right balance in a software mixer application other than Surround Mixer (for example, the Windows Volume Control application) is at the opposite end compared to the position to which you have panned the source in the Main deck of Surround Mixer. For example, the CD Audio balance in Windows Volume Control is on the left but in Surround Mixer you have panned the CD Audio to the right.

To solve this problem:

- Open that other mixer, and center the balances for all the audio input sources.
  This ensures that your analog sources will not turn silent when you pan them in Surround Mixer.

Problem with Surround Mixer

The mixer settings change unexpectedly with every change of super-environment presets.

To solve this problem:

- Dissociate the mixer settings.

  1. Click the Super-Environment Preset Options icon in the upper right corner of Surround Mixer.
  2. To dissociate mixer settings, make sure that **Dissociate Mixer Settings** is checked on the menu that appears.

Insufficient SoundFont Cache

There is insufficient memory to load SoundFonts.

This may occur when a SoundFont-compatible MIDI file is loaded or played while insufficient memory has been allocated to SoundFonts.

To allocate more SoundFont cache:

- On the **Options** tabbed page of the SoundFont Control applet, move the SoundFont Cache slider to the right.

The amount of SoundFont cache you can allocate depends on the system RAM available.

If there is still insufficient system RAM available:

- On the **Configure Banks** tabbed page of the SoundFont Control applet, select a smaller SoundFont bank from the **Select Bank** box.
  The smallest SoundFont bank available is 2 MB (2GMGSMT.SF2).

The trade-off of a smaller SoundFont file is its lower sound quality.

Problems With Joystick

The joystick port is not working.

The audio card's joystick port conflicts with the system's joystick port.

To solve this problem:

- Disable the audio card's joystick port and use the system port instead. For details, see "Enabling/Disabling Gameport Joystick Interface" on page C-1.

The joystick is not working properly in some programs.

The program may use the system processor timing to calculate the joystick position. When the processor is fast, the program may determine the position of the joystick incorrectly, assuming that the position is out of range.

To solve this problem:

- Increase your system's 8 bit I/O recovery time of the BIOS setting, usually under the Chipset Feature Settings section. Or, if available, you may adjust the AT Bus speed to a slower clock. If the problem persists, try a different joystick.

Do not attempt to make changes to the BIOS unless you have experience with system software.

Resolving I/O Conflicts

Conflicts between your audio card and another peripheral device may occur if your card and the other device are set to use the same I/O address.

To resolve I/O conflicts, change the resource settings of your audio card or the conflicting peripheral device in your system using Device Manager in Windows 95/98.

If you still do not know which card is causing the conflict, remove all cards except the audio card and other essential cards (for example, disk controller and graphics cards). Add each card back until Device Manager indicates that a conflict has occurred.

To resolve hardware conflicts in Windows 95/98:

1. Click **Start** -> **Settings** -> **Control Panel**.
2. In the **Control Panel** window, double-click the **System** icon.

You can also refer to the Troubleshooting section in the Help file of Windows 95/98.

3. In the **System Properties** dialog box, click the **Device Manager** tab.
4. Under the Sound, Video And Game Controllers entry, select the conflicting audio card driver—indicated by an exclamation mark (!)—and click the **Properties** button.
5. In the Properties dialog box, click the **Resources** tab.
6. Make sure that the **Use automatic settings** check box is selected, and click the **OK** button.
7. Restart your system to allow Windows 95/98 to reassign resources to your audio card and/or the conflicting device.

Problems in Windows NT 4.0

A Service Control Manager error message appears with one or more other error messages at system restart.

This occurs after you remove an audio card from your computer after you have successfully installed the Sound Blaster Live! card. Windows is trying to match the drivers to the removed audio card.

To solve this problem:

1. Log on to your computer as Administrator.
2. Click **Start** -> **Settings** -> **Control Panel**.
3. Double-click the **Multimedia** icon, and then click the **Devices** tab.
4. In the list, remove from under these entries
   - Audio Devices
   - MIDI Devices And Instruments

   the items other than
   - Audio for Creative SB Live!
   - MIDI for Creative SB Live!
   - MIDI for Creative S/W Synth
5. Click the **OK** button to close the dialog box.
   The drivers are removed.

Problems with Encore DVD Player

The Encore DVD Player is not launched when a DVD disc is inserted into the drive.

To solve this problem:

1. In the Windows system tray, right-click the Disc Detector icon, and then click **Properties**.
2. On the **General** tabbed page of the **Creative Disc Detector** dialog box, make sure that **Enable Disc Detector** check box is selected.
3. Click the **Players** tab.
4. Select the DVD Disc entry and then click the **Select Player** button.
5. In the **Players Properties** dialog box, click the **Browse** button.
6. Browse to C:\Program Files\Creative\PC- DVD Encore and double-click the entry **ctdvdply**
   The Name box now displays the entry *ctdvdply.*
7. Click the **OK** button twice to close.

Now when you double-click the Disc Detector icon, the Encore DVD Player is launched.