

Spacewalker
Soundsystem



**HOT-247 Sound Card
User's Manual**

Deluxe Version



FCC Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 properly. In strict accordance with the manufacturers instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/television technician for help and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock o. 004-000-00345-4

FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the users authority to operate this equipment.

Note : In order for an installation of this product to maintain compliance with the limits for a Class B device, shielded cables and power cord must be used.

CE Notice:

Following standards were applied to this product, in order to achieve compliance with the electromagnetic compatibility :

- Immunity in accordance with EN 50082-1: 1992
- Emmitions in accordance with EN 55022: 1987 Class B.

NOTICE

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Manual Ver 1.0

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Introduction

The HOT-247 is a 16-bit stereo 3D 64 Voices Wavetable sound card based on the OPTi 82C933 Plug-and-Play 3D Integrated audio controller chip. The HOT-247 is compatible with all major PC sound standards, including Sound Blaster[™] Pro, Ad Lib[™], General MIDI and Windows Sound System[™]. The HOT-247 provides an integrated sound solution for business audio, educational and entertainment sound, and other multimedia applications.

The HOT-247 sound card will let you run thousands of Sound Blaster and Sound Blaster Pro compatible games and applications, including a rapidly growing number of Windows business applications that are compatible with the Windows Sound System.

The HOT-247 sound card also has multiple input and output ports for recording and playback of stereo sound.

Features

Here is a brief overview of HOT-247 main features:

The HOT-247 a full-featured sound card that includes the following:

- * **ISA Plug and Play (PnP)**___ Supports the Plug and Play Specification 1.0a which allows the system to automatically detect and configure devices that conform to the standard. This eliminates the user having to know and configure the correct IRQ, DMA and I/O channel settings.

- * **3D Sound Enhancement**___ Supports 3D spatial enhancement and effects tuning

- * **Wave Audio**___ Maximum recording and playback sampling rate of up to 48 KHz stereo.

- * **Sixteen-bit digital-to-analog and analog-to-digital converter**___ 16-bit and 8-bit digitizing in stereo and mono mode.

- * **Twenty-two Voice FM Music Synthesizer**___ Yamaha OPL3 FM Synthesizer technology.

Play up to 22 instruments simultaneously to deliver a high quality of rich and crisp music.

- * **Digital/Analog Mixer**___ Mix analog stereo from CD-audio, Line-In, FM music and digitized voice sources. Digital stereo mixing from Microphone, Line-in, CD-audio and Line-out Master volume control.

- * **Built-in Stereo Power Amplifier**___ 2-watt per channel stereo power amplifier.

- * **MIDI Interface/Joystick Port**___ Built-in integrated MIDI MPU-401 interface with FIFO, IBM PC joystick/game port.

- * **Interfaces**___ Wavetable synthesizer interface, Speakers Out, Line In, and Microphone In.

- * **Bundled Software**___

Willow Pond MediaRack (support multi-language)

Invision Cyberkeyboard

Midisoft Internet Media Player (15-day trial version)

NetSpeak WebPhone (30-day full version)

50 Popular MIDI Files

What is in your package?

You should have the following items in your package:

- * HOT-247 Sound Card
- * HOT-247 Device Driver(support multi-language), Utilities and Manual CD
- * HOT-247 Sound Card User Manual (this document)

System Requirements

The HOT-247 is manufactured for IBM PC compatible computers, software, and related computer components:

- * IBM - compatible computer models 486, Pentium, PS/2 (model 25/30) and compatibles

- * Enough RAM to accommodate the system, plus the waveset chosen (4MB wavesets included)
- * VGA or SVGA graphics adapter and monitor
- * At least 12MB free on hard disk for installing all HOT-247 software
- * Windows 95, Windows 95 OSR2, Windows NT 3.51/4.0, Windows 3.x, DOS 6.x or OS/2 Warp 3.0/Merlin 4.0.
- * External speakers, microphone or headphones (optional)

Quick Installation Windows 3.x

This section is for those who are familiar with the hardware and software installation of PC peripherals, especially PC compatible sound cards, and the Windows 3.x operating system. If you run into difficulties, please see the full instructions provided Hardware Installation and Software Installation. These Quick Installation instructions are intended to be brief and do not cover all of the HOT-247 Sound Card options and configurations.

Hardware Installation

1. Power down your computer, remove the cover and find an empty 16-bit expansion slot.
2. Install the HOT-247 Sound Card into the open slot and secure it.
3. Connect a pair of speakers to the Speaker Out connector on the HOT-247 Sound card bracket.

WARNING! To avoid temporary or permanent hearing loss or impairment due to unexpected noise or static, always hold your headphones away from your ears before turning on the computer. You should also lower your speakers volume before testing.

4. Replace your computer cover. Hardware installation is complete.

Software Installation

1. After installing the hardware as explained above, turn the computer back on and start Windows.
2. Insert the HOT-247 Installation CD into your CD-ROM drive.
3. Select **File** and **Run**.
4. Type **D:\INST247** and click **OK**.
5. The "**Spacewalker Soundsystem Setup**" screen will show up, click on "**Install Driver**" then "**Install DOS/Windows 3.x driver**", program will copy the installation files to your hard disk drive.
6. The end of the installation program will prompt you to REBOOT your system, be sure to select **OK**, the installation program will restart system.

The software installation will then be completed and a new product group will be visible in Windows. The utilities in this group allow you to reconfigure the settings of the card and configure the audio mixer features.

Quick Installation Windows 95

This section is for those who are familiar with the hardware and software installation of PC peripherals, especially PC compatible sound cards.

Hardware Installation

You must already have Windows 95 installed on your computer and running properly before continuing.

1. Power down your computer, remove the cover and find an empty 16-bit expansion slot.
2. Install the HOT-247 Sound Card into the open slot and secure it.

3. Connect a pair of speakers to the Speaker Out connector on the HOT-247 Sound Card bracket.

WARNING: To avoid temporary or permanent hearing loss or impairment due to unexpected noise or static, always hold your headphones away from your ears before turning on the computer. You should also lower your speakers volume before testing.

4. Replace your computers cover. Hardware installation is complete.

Software Installation

Please follow the steps below for a proper installation of the drivers for Windows 95. It is assumed that you already have Windows 95 installed and have properly plugged in your Sound Card.

1. Turn your computer on. The system will boot the Windows 95 operating system.
2. The Windows 95 Plug-and-Play capabilities will detect "**OPTi Audio 16**" and search for the drivers for the new hardware.
3. Insert the HOT-247 Installation CD into your CD-ROM drive and click *Next* to continue. Direct the installation to:
D:\Driver\Win95\English (or German, French, Chinese, . . .) for Windows 95 Driver or
D:\Driver\Cybersyn for CyberSynth Software Wavetable Windows 95 Driver.
4. System will now install the HOT-247 driver. After driver installation, system will prompt you to restart the computer.

Note: Depending upon the original Windows 95 installation choices, you may be asked to insert the original Windows 95 CD-ROM in the system during the installation process to install all the appropriate files.

Hardware Installation

The hardware installation of the HOT-247 Sound Card is easy and can be performed in just a few steps. The sound controller has no switches (see Figure 1). The sound controller installation program configures all of the settings. This section will describe the hardware installation and configuration options using the sound controller installation program.

Note: This section presumes that you are familiar with your particular PC compatible computer and with DOS and Windows terminology. If you are installing the HOT-247 into a system that is running Windows 95, you must already have Windows 95 installed on your computer and running properly before installing the hardware.

Default Configuration

The HOT-247 Sound Card supports both Sound Blaster Pro and Windows Sound System applications. The HOT-247 Sound Card defaults to Sound Blaster Pro mode when the system is booted up in DOS. It switches to Windows Sound System mode when Windows 3.x is launched. The default configuration of a system that supports the Plug and Play 1.0a specification will depend on the available system resources.

If your system is not PnP compatible the default configuration is as follows:

Operation Mode	SoundBlaster Pro Compatible
IRQ	5
DMA Channel	1
I/O Port Address	220h

Warning! The HOT-247 Sound Card is susceptible to damage from electrostatic discharge. Please make sure you are properly grounded before proceeding with these installation instructions.

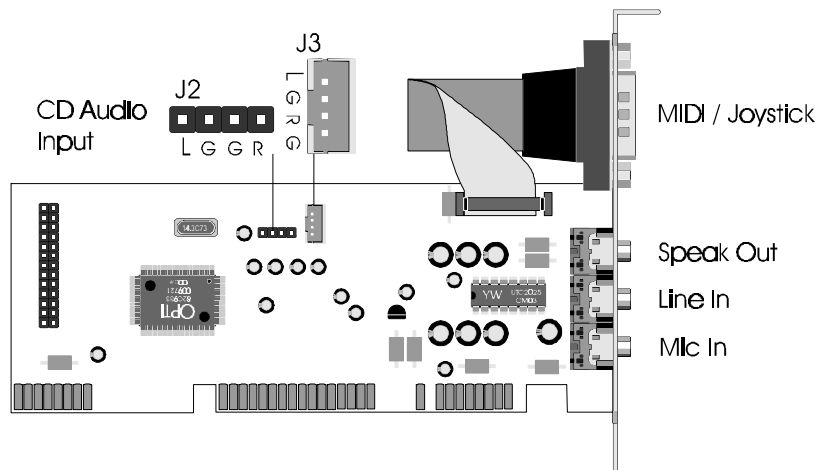


Figure 1 HOT-247 3D 64 Voices Wavetable Sound Table

Installing HOT-247 Sound Card

To install the board:

1. With your computer system power off, remove the cover, find an empty 16-bit expansion slot, and remove the metal bracket.
2. Insert the HOT-247 Sound Card into the expansion slot firmly and evenly.
Take care not to force it into the slot. Once you have properly positioned the HOT-247 Sound Card into the slot, secure the HOT-247 Sound Card with the bracket screw.
3. Replace the cover of the computer.
4. Connect your speaker or headphones to the external output connections on the HOT-247 Sound Card bracket. For more information on connecting external devices, see next Section.

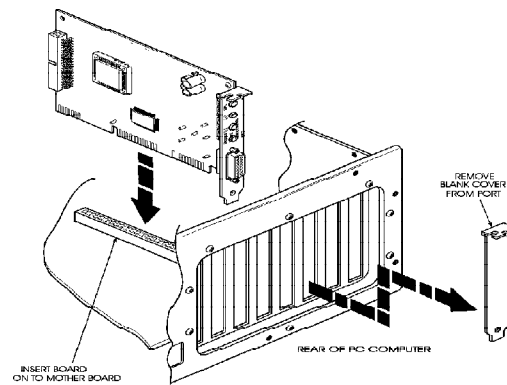


Figure2 Installation HOT-247 Sound Card

Connecting External Devices.

The HOT-247 Sound Card provides a number of ways for you to connect external devices to it, such as headphones, microphones and speakers. This chapter will describe the HOT-247 Sound Card connectors and the process of connecting external devices. The HOT-247 Sound Card supports the following external devices:

- * Speakers
- * Headphones
- * Power amplifier
- * Microphone
- * Joystick
- * MIDI adapter

Please have the user reference manuals of the external devices on hand for reference.

Warning! Use the configuration program, SNDINIT.EXE, to adjust the volume to mid-range before connecting any speakers to the sound card to avoid damaging your hearing or your equipment.

Speaker Out

SPK-OUT is a stereo output through which the combined signal of all internal and external audio sources on the board is output. It can be connected to 1/8-inch TRS stereo headphones or to amplified speakers.

Line Input

LINE-IN is a stereo line-level input that accepts a 1/8-inch TRS stereo plug. It can be used as a source for digital sound recording, a source to be mixed with the output, or both.

Mic Input

MIC-IN is a 1/8-inch jack that provides a mono input. It can use a dynamic mono or stereo microphone with a resistance of not more than 600 ohms.

Joystick / MIDI

The Joystick/MIDI port is a 15-pin female connector. This port can be connected to any IBM PC compatible joystick with a 15-pin D-sub connector. Disable the joystick port on the sound card (using the **SDINIT.EXE** program) if you already have a game port or game card.

MIDI Instrument Connection

You need a MIDI adapter to connect a MIDI instrument to the sound card. The MIDI adapter can be connected to the Joystick/MIDI port. You will also need MIDI sequencing software to run MIDI instruments with your computer.

Windows 3.x/DOS Software Installation

The HOT-247 Sound Card installation program (INST247.EXE) will install all of the software drivers and applications needed to achieve both Sound Blaster Pro and Windows Sound System compatible operation.

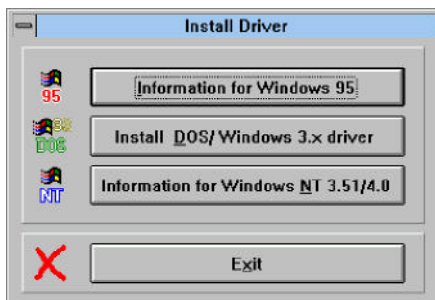
Device Driver Installation

The following steps will guide you through the full software installation and configuration for the HOT-247 Sound Card. We recommend that you read through them now, and become familiar with them before installing the software.

1. After installing the hardware, turn the computer back on and start Windows 3.x.
2. Insert the HOT-247 Installation CD into your CD-ROM drive.
3. Select **File** and **Run**.
4. Type **D:\INST247** and click **OK**.
5. The **Spacewalker Soundsystem Setup** screen will show up.



6. click on "**Install Driver**" then "**Install DOS/Windows 3.x driver**".



Note: It is strongly recommended that you exit all Windows programs before running this Setup Program. Click **Cancel** to quit Setup and then close any programs you have running. Click **Next** to continue with the Setup program.

7. The next screen lets you select a directory to install the software. The default is OPTi933.

8. From here, either select a directory that exists or type in the name of a new directory. If you type in a new directory you will be asked:
Choose **Yes**.
9. Select **Next** to continue the installation. The install program will begin copying the files to the directory you selected.
10. When it has finished you will be asked if you want to view the README file.
It is recommended that you select Yes because this file will have the latest information available about this sound card.
11. This concludes the installation. The program will prompt you to REBOOT your system, be sure to select **OK**.

The software installation will then be completed and a new product group will be visible in Windows. The utilities in this group allow you to reconfigure the settings of the card and configure the audio mixer features. Refer to the next section for more information.

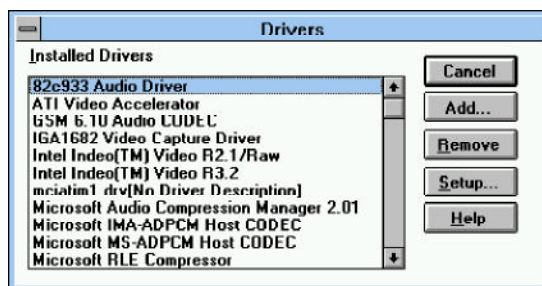
Windows 3.x Configuration

The HOT-247's OPTi Audio Driver Setup menu allows you to change the settings for the OPTi Audio Driver in Windows 3.x. To access this menu, perform the following steps.

1. Double-click the **Main** program group.
2. Double-click the **Control Panel** icon.



3. Double-click the **Drivers** icon.
4. Highlight the "82c933 Audio Driver" and choose **Setup**.

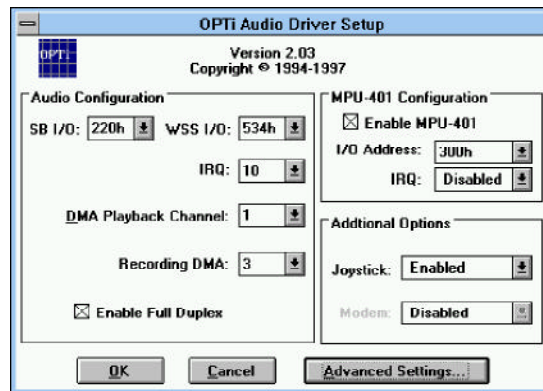


This will display all of the configuration settings for the sound card.

Audio Configuration

The Audio Configuration section allows you to set the I/O address (for both Sound Blaster and Windows Sound System configurations), IRQ settings, DMA Channels, and Full Duplex. To change any of these settings click on the arrow next to the selection and use the scroll bars to choose another setting.

WARNING! Do not change these settings unless you are familiar with your system configuration and know they will not cause conflicts with other hardware settings. Incorrect settings can cause the system to hang.



Possible settings are:

Option	Default	Other Settings
SB I/O	220h	240h
WSS I/O	534h	608h, E84h, F44h
IRQ	5	7, 9, 10, 11
DMA Playback Channel	1	0, 3, 5, 6
Recording DMA*	0	1, 3, 5, 6
MPU-401 I/O Address	300h	310 ~ 360
MPU-401 IRQ	Disabled	5, 7, 2/9, 10, 11

* Not available when Full Duplex is disabled.

Additional Options

This allows you to set up the joystick and modem options. Possible settings are:

Option	Settings
Joystick	Enabled, Disabled
Modem	Disabled

Advanced Settings

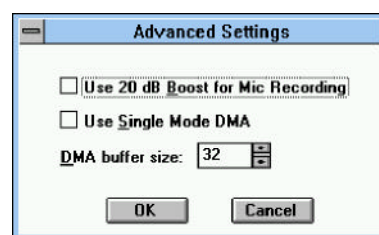
Another selection on configuration menu is advanced settings. If you wish to modify the advance settings, click on **Advance Settings** and the following will appear. Make the necessary changes as described below and click **OK**.

Boost for Microphone Recording

Enables you to enable a 20dB boost to the record level for the microphone input (MIC IN). This allows you to compensate for less powerful microphones and increase the record signal.

Use Single Mode DMA

Your computer system may support both Single Mode DMA as well as Demand Mode DMA. Demand Mode DMA provides a more efficient means of transferring data between memory and a device. However, if your system does not support Demand Mode DMA, you must select Single Mode DMA instead.



DMA Buffer Size

Setting the DMA buffer size tells the CPU how much data to transfer between memory and a device at one time. If you specify a larger size, it allows the CPU to complete the transfer of data faster but increases the memory consumption. The default size should be 32 Kilobytes (32K). If you decide to change the buffer size, be sure to make it multiples of 4K.

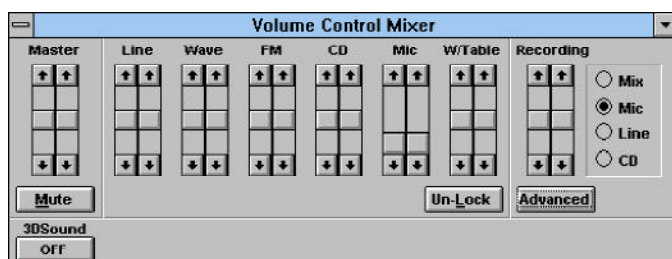
Windows 3.x Applications

After the installation is complete and you have rebooted Windows 3.x, you will see a new program group on your desktop.



Audio Mixer

The Audio Mixer applet lets you adjust the volume settings for each of the individual audio sources that the HOT-247 supports.



Advanced

Click the Advanced button to show the 3D Sound On/Off button, shown below. This button toggles the 3D sound feature on and off.

Read Me File

This will display an ASCII text file that contains all of the latest information on the device drivers. If you did not read this file during the installation procedure, please take a moment to do so now in case there is pertinent information.

933 Uninstall

Double-clicking on this icon will remove the audio device drivers from Windows. Once the drivers are removed you will need to reboot so the changes can take effect.

DOS Configuration and Utilities

Once you have installed the sound drivers in Windows 3.x, there are three utilities that are accessible from DOS if you wish to enable and use sound in any DOS based application.

SNINIT.EXE

The sound initialization program (SNINIT.EXE) allows you to select many of the options that are available in the Windows Configuration program.

You can run the SNINIT.EXE program at anytime to make changes to your HOT-247 Sound Card configuration. When reconfiguring the HOT-247 Sound Card, you can use the following parameter lines:

SNDINIT /B Runs the program using the values specified in the SOUND16.CFG configuration file in batch mode.

SNDINIT /? Displays help on how to use SNDINIT.

SNDINIT Runs the program to let you change your sound controller configuration. You will see the Configuration and Sound Test menu you used in the installation program.

Sound Device Settings Selection

Selection	Settings
Current Mode	Sound Blaster Pro, Windows Sound System
Sound Blaster Pro IO Port	220, 240
Windows Sound System IO Port	534, E84, F44, 608
IRQ	5, 7, 2/9, 10
Play DMA	0, 1, 3, 5, 6
Record DMA	0, 1, 3, 5, 6

MPU-401 Interface

Selection	Settings
Select	OFF, ON
IO Port	300, 310, 320, 330
IRQ	OFF, 5, 7, 2/9

Additional Options

Selection	Settings
Joystick	Enabled, Disabled
Modem	Disabled

At the bottom of the menu are three selections.

The **Help** option displays a help file that shows you how to navigate through the menus and save information.

The **Accept** option loads the settings as they appear on the screen and exits the program.

The **Mixer** option allows you to set the recording playback levels for the audio mixer as well as select the input source for recording.

The volume level all range from 0 to 99 and can be changed by clicking on the up and down arrows next to the level or by clicking on the gauge that shows the current level. You can also turn on the mute to silence all audio levels.

The Source can be either **Line, CD, Mic, or Mix**. You can also set the microphone volume to be 20dB higher than normal (this is to compensate for some microphones that have low output levels) and gain to a value between 0 and 99.

The **3D** control button allows you to turn the 3D Spatial Sound Effect on or off.

There is also a button that allows you to test the sound. Press this button and you will hear a sample wave sound. If the sound plays correctly and the volume is OK, press **Done** to return to the Configuration Menu.

Volume TSR Utility

Also included in the DOS package is a terminate-and-stay-resident program (VOLTSR.EXE) that allows you to change the volume for DOS applications with the following keystrokes:

ALT+CTRL+U = Volume Up
ALT+CTRL+D = Volume Down
ALT+CTRL+M = Mute

Type **VOLTSR /u** at the DOS prompt to remove VOLTSR from memory.

Notes on Software Installation

The notes below will provide a little more information concerning the HOT-247 Sound Card Installation software.

Changes to AUTOEXEC.BAT

The installation program will need to add several lines to your AUTOEXEC.BAT file. You can choose to have INSTALL make these changes for you immediately, or store the changes in a separate file called AUTOEXEC.MAD so you can use your own text editor and edit the system files and make the changes later.

Your path statement will have the C:\OPTi933 subdirectory added to it (with the PATH %PATH%;C:\OPTi933 command). The following lines also will be added:

```
SET BLASTER=A220 I5 D1 T4  
SET SOUND16=C:\OPTi933  
PATH C:\OPTi933; %path%  
C:\OPTi933\sdinit /b
```

These lines indicate default settings. Changes you made to the default path or HOT-247 Sound Card configuration will be reflected accordingly.

Changes to CONFIG.SYS

The installation program will also make changes to your CONFIG.SYS file. You can choose to have install make these changes for you immediately, or store the changes in a separate file called CONFIG.MAD so you can make the changes later.

```
DEVICE=C:\OPTi933\CDSETUP.SYS /T:X
```

Windows 95 Software Installation

Windows 95 Driver Installation

The HOT-247 supports the Plug-and-Play specification which makes installation into a Windows 95 system fast and easy.

Note: You must already have Windows 95 installed on your computer and running properly before installing the hardware. If you install the sound card hardware, then install Windows 95, your system will not recognize the sound card properly.

To install the HOT-247 Sound Card into a system that is running Windows 95:

1. Turn your computer on. The system will boot the Windows 95 operating system.
2. The Windows 95 Plug-and-Play capabilities will detect the "**OPTi Audio 16**" and search for the drivers for the new hardware.
3. Insert the HOT-247 Installation CD into your CD-ROM drive and click *Next* to continue. Windows 95 will search all the available drives for an appropriate device driver. If it does not find the driver, it will not say OPTi Plug-N-Play Device and you will have to click on Other Locations and direct Windows 95 to the driver location manually. Direct the Installation to:
D:\Driver\Win95\English (or German, French, Chinese, . . .) for Windows 95 Driver or **D:\Driver\Cybersyn** for CyberSynth Software Wavetable Windows 95 Driver.
4. System will now install the HOT-247 driver. After driver installation, system will prompt you to restart the computer.

Note: Depending upon the original Windows 95 installation choices, you may be asked to insert the original Windows 95 CD-ROM in the system during the installation process to install all the appropriate files.

Real Mode DOS

After you have successfully installed the drivers for Windows 95 and the system has booted correctly, you can install the drivers for audio applications that run in DOS mode. To do this,

1. Insert the HOT-247 Installation CD into the appropriate drive.
2. From the Windows 95 desktop select *Start* then *Run*.
3. Type **D:\INST247** and press *Enter*.
4. The "**Spacewalker Soundsystem Setup**" will show up, Click on "**Install Driver**" then "**Install Real-Mode DOS Driver**".



Note: It is strongly recommended that you exit all Windows programs before running this Setup Program. Click **Cancel** to quit Setup and then close any programs you have running, then start over. Click **Next** to continue with the Setup program.

5. The next screen lets you select a directory to install the software. The default is OPTi933. If you do want to install the files in this directory, click on **Browse** to change it.
6. From here, either select a directory that exists or type in the name of a new directory. If you type in a new directory you will be asked:
Choose **Yes** to return to the first screen.
7. Select **Next** to continue the installation. The install program will begin copying the files to the directory you selected.
8. When it is finished, you will be asked if you wish to view the README file. It is recommended that you select **Yes** because this file will have the latest information about this sound controller.
9. This concludes the installation and the program will prompt you to REBOOT your system, be sure to select **OK**. This will insure that the HOT-247 Sound Card is properly configured.

Windows 95 Driver Uninstall

To remove the HOT-247 sound card from your Windows 95 computer:

1. Click on the **Start** button.
2. Select **Setting**.
3. Select **Control Panel**.
4. From the Control Panel, double-click the **Add/Remove Programs** icon.
5. The following screen will be displayed. Highlight "**OPTi 933 Audio Drivers**" and click on the **Add/Remove** button
6. Confirm that you want to remove the drivers by clicking on **Yes**.
7. After the drivers have been removed you will need to shutdown the system and remove the audio card. If you restart without removing the card, Windows 95 will detect and ask for the drivers again. Select **Yes** (or press Y) to shut down the computer.

Using Software Wavetable

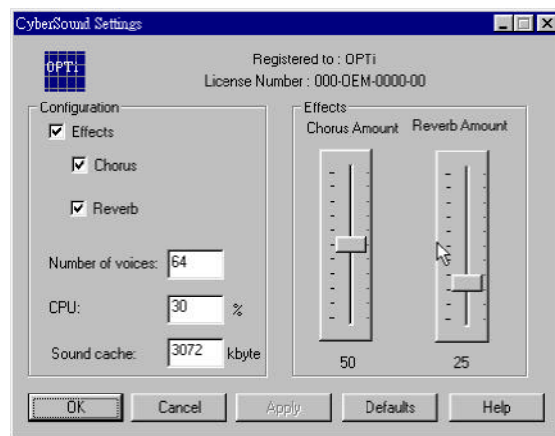
To use the software wavetable, you can either use Windows 95 Media Player or HOT-247 bundled MediaRack. For the utilization of audio tuning functions, we recommend MediaRack. To play MIDI file by software wavetable in Media Player, you need to select "**Device**", then "**Properties**". Select "**CyberSynth**" to switch the MIDI device to OPTi-CyberSynth Software Wavetable. You cannot change device selection while you are playing a MIDI file in MediaPlayer.

In MediaRack, you can switch different output MIDI devices while playing a MIDI file. Click the "**MIDI**" in the tool bar, then "**Select Output**" to switch between different MIDI devices. Due to the nature of software wavetable, you will feel sound volume decrease after you change the output to the software wavetable. You can increase sound volume by adjusting the Master Volume slide bar.



You can adjust the Chorus and Reverb sound effect for MIDI output in CyberSynth Software Wavetable. Go to **Control Panel**, and double click the "**CyberSound Settings**" icon to launch the effect control desk.

The default Number of Voices is 64. You may modify the number from 24 up to 64 voices. Minimum 24 voices are required by General MIDI (GM).



Windows NT3.51/ 4.0 Software Installation

To install the software for the HOT-247 Sound Card in Windows NT 3.51/4.0 follow this procedure: The installation process assumes that Windows NT has been installed. Refer to documents for Windows NT installation.

1. Insert HOT-247 Sound Card in the system. Refer to your menu for proper sound card hardware installation.
2. Logged on Windows NT in Administrator mode. Windows NT audio driver can't be installed or modified unless Windows NT is started in Administrator mode.

3. **For Windows NT v3.51:**

- 1) Choose **Drivers** icon from **Control Panel**.
- 2) Remove all of the following previously installed audio drivers:
 - Windows Sound System
 - OPTi 82c930, 82c931
 - OPTi 82c93x Audio Driver
- 3) Restart system.

For Windows NT v4.00:

- 1) Choose **Multimedia** from **Control Panel**.
- 2) Click on **Devices** tab.
- 3) Click on **Audio Devices**.
- 4) Remove all of the following previously installed audio drivers:
 - Windows Sound System
 - OPTi 82c930, 82c931
 - OPTi 82c93x Audio Driver
- 5) Restart system.

4. **For Windows NT 3.51:**

- 1) Start Windows NT in Administrator mode.
- 2) Choose **Drivers** icon from Control Panel.
- 3) Click the **Add** button in Drivers dialog box.
- 4) Select **"Unlisted or Updated Driver"** and click the OK button.
- 5) Insert the HOT-247 Installation CD into your CD-ROM drive and browse path to **D:\Driver\WinNT\English (or German, French, Chinese, . . .)**.
- 6) Click the **OK** button in the **"Add Unlisted or Updated Driver"** box

For Windows NT 4.0

- 1) Start Windows NT in Administrator mode.
 - 2) Choose **Multimedia** from Control Panel.
 - 3) Click on **Devices** tab.
 - 4) Click the **Add** Button.
 - 5) Select **"Unlisted or Updated Driver"** and click the **OK** button.
 - 6) Insert the HOT-247 Installation CD into your CD-ROM drive and browse path to **D:\Driver\WinNT\English (or German, French, Chinese, . . .)**.
 - 7) Click the **OK** button in the **"Add Unlisted or Updated Driver"** box
5. A setup dialog box will appear.
Configure the Audio, MPU-401, Gameport, CD-ROM, and advanced options. Choose the CD-ROM Interface Settings for selecting whether to enable or disable the on-board IDE CD-ROM interface. **Please note HOT-247 has no IDE CD-ROM support** . Choose the **OK** button to accept the settings.
6. Choose the **Restart Now** button to have the new driver and any changed driver settings to take effect when Windows NT restart.

OS/2 Warp 3.0/Merlin 4.0 Software Installation

The HOT-247 driver supports both OS/2 Warp 3.0 and OS/2 Merlin 4.0. Before you install HOT-247 Driver make sure that you have installed OS/2 WARP Version 3.0 Revision 8.162 or later.

1. Ensure that your HOT-247 Sound Card has been properly installed and power on your system and wait for the OS/2 Desktop to appear.
2. From your OS/2 Desktop, open (double click) the OS/2 System folder and then open the Command Prompts folder.
3. Open either the OS/2 Window icon or the OS/2 Full Screen icon to start an OS/2 command prompt session.
4. Insert the HOT-247 Installation CD into your CD-ROM drive.
5. Type "**D:\Driver\OS2\Mininstall**" and ENTER.
6. MINSTALL will display 3 options to install - OPTi WAVE OS/2 Driver, OPTi OPL3 Driver and OPTi WIN-OS/2 Audio Driver. Select the options and click **OK**. Follows the instruction to complete the installation.
7. Type **EXIT** and **ENTER** to return to OS/2 Desktop.
8. Reboot OS/2.

Installing and Viewing HOT-247 Utilities on CD

Installing HOT-247 Utilities on CD

1. Insert the HOT-247 Installation CD into your CD-ROM drive.
2. Spacewalker Soundsystem Setup will auto appear in Windows 95/NT4.0, or
3. Select *Start / File* and *Run*.
4. Type *D:\INST247.EXE* and click *OK*.
5. The “Spacewalker Soundsystem Setup” screen will appear.



6. Click “Install Utility” button then Install Utility Wizard will appear.

Viewing HOT-247 Utilities on CD

The following description simply overview these useful utilities bundled on CD.

MediaRack

(Directory path: Driver\Utility\Mrack\English(Europe))

Media Rack gives you control over your PC audio functions through a user interface as simple to use as home stereo system. It is available in Windows 3.x, Windows 95 and Windows NT4.0 environment and support multi-language.



WebPhone

(Directory path: Driver\Utility\Webphone\Webphn32(Webphn16))

WebPhone is a professional, feature rich audio and video communication system, which requires some preparation on your part in order to use it properly and to take advantage of all the functions that it has to offer. Please take the time now to read through these release notes (wpnotes.wri) and read the How to Guide (wphowto.wri) or run the User Manual (wpman.exe) to learn how to operate your WebPhone (webphone.exe) before attempting to use it or if you require help. It is available in Windows 3.x, Windows 95 and Windows NT4.0 environment.



Internet Media Player

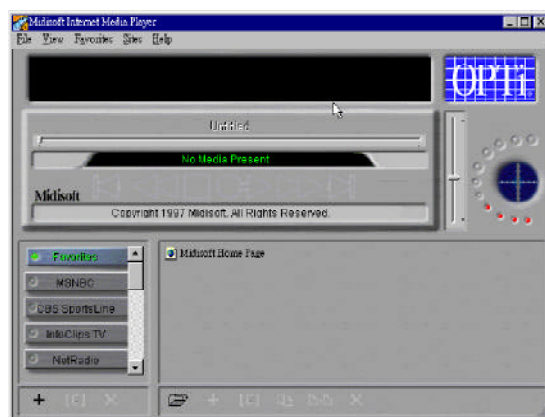
(Directory path: \Driver\Utility\Implayer)

Internet Media Player include NetShow Player and Microsoft NetShow RealPlayer.

Use NetShow Player to play Active Streaming format (.asf) files and live ASF streams.

NetShow Player can receive ASF information delivered via unicast or multicast.

Using the NetShow RealPlayer, you can listen and view thousands of hours of live and prerecorded clips, including sporting events, live radio stations, news, music, and lectures. It is available in Windows 95 and Windows NT4.0 environment.



CyberKeyboard

(Directory path: \Driver\Utility\Cyberkbd)

The source of sound in your computer is CyberSynth, a powerful software synthesizer that is used as the sound source for many music, game, and multimedia software applications. CyberSynth reproduces a wide variety of instrument sounds from the most commonly used instrument categories, such as pianos, organs, brass, strings, woodwinds, drums, sound effects, and more. CyberSynth Keyboard allows you to access these sounds using your mouse. It is available in Windows 95 and Windows NT4.0 environment.



Viewing Complete Manual on CD

The following steps will guide you to view HOT-247 complete manual bundle on CD.

1. Insert the HOT-247 installation CD into your CD-ROM drive.
2. "**Spacewalker Soundsystem Setup**" will auto appear in Windows 95 and Windows NT 4.0, or Select **File/Run** and type **D:\INST247.EXE**.
3. The "**Spacewalker Soundsystem setup**" will appear, click "**Read Manual**" button then "**Spacewalker Setup-Manual on CDROM**" Wizard will appear.
4. Select **Sound Card** item on **Keyword** Block, then "**HOT-247 3D 64 Voices Wavetable**" on Item Block.
5. Click **Manual** icon on the right side, then Spacewalker Setup-manual on Reader CD-ROM wizard will execute Acrobat Reader to read the manual.
6. If your system doesn't have Acrobat Reader, "**Spacewalker Setup-Manual on CD ROM**" wizard will install Acrobat Reader before it reads the manual.

Troubleshooting

Resolving Hardware Conflicts

This chapter describes the possible hardware conflicts between your sound card and other interface cards if your system does not support the Plug and Play (PnP) 1.0a specification, and ways of resolving these conflicts. PnP systems will not have hardware conflicts because the system assigns the appropriate configuration from available resources.

Hardware conflicts occur when two or more devices use the same I/O address, IRQ, or DMA channel. The default setting of the HOT-247 Sound Card is as follows:

DMA = 1

I/O Address = 220H

IRQ = 5

This setting might come into conflict with other devices such as a network card, video card, scanner, printer or SCSI adapter/controller card.

To resolve hardware conflicts:

1. Find out the current board setting (DMA channel, IRQ, I/O port address) of the sound card by running SNDINIT.EXE.
2. If you know of any peripheral card in your system that is using the same setting, change the hardware setting for the other card or the sound card.
3. If you are unsure of the settings of the peripheral card, remove all cards except the sound card and other essential cards from your system. Run SNDINIT.EXE each time you remove an interface card. If your sound card functions properly after removing an interface card from your system, the interface card you just removed is in conflict with your sound card. Find out the DMA channel, Interrupt request line, I/O port address which the interface card is using. Change the settings on your sound card or the interface card so that the two are not using the same values.

Note : It is advisable to change the jumper settings on the other interface card since some Sound Blaster games use the default Sound Blaster settings i.e. I/O Port Address = 220H, Interrupt = 5, DMA = 1. These games might not work properly if you change the resource settings on the sound card.

Commonly Encountered Problems and Solutions

Problem

Your computer would not boot up after you installed HOT-247 Sound Card.

Solution

The sound board was not inserted completely into the 16-bit slot.

Problem

The computer hangs, reboots itself, or issues a parity error after the sound card is installed.

Solution

There is a hardware conflict between HOT-247 Sound Card and other interface cards in your system. Run SNDINIT to find out which hardware setting is giving a hardware conflict.

Problem

A device in your computer does not work or does not work properly after the sound card is installed.

Solution

- a. There might be a hardware conflict between the sound card and another device. Try removing other hardware cards in your system to try and isolate and determine where the hardware conflict originates. Once found, see if you can change the settings on the other device.
- b. Run SNDINIT.EXE to find out which hardware setting on the HOT-247 Sound Card is conflicting.

Problem

The system hangs when you enter or exit Windows 3.x.

Solution

- a. If you have installed another sound card in your system before, make sure you have removed all its drivers in Windows 3.x including any virtual device driver.
- b. There might be conflicts with another device in your system.

Problem

There is no sound output in games.

Solution

- a. Check that the speakers are connected properly to the Speakers-Out connector on the sound card. If your speakers use batteries, make sure that they have the batteries they need.
- b. The volume setting is too low. Run SNDINIT.EXE to adjust the volume to a higher level.
- c. Make sure that the sound board is inserted properly into the computer.
- d. If your games are Sound Blaster compatible, make sure the card is in Sound Blaster mode. You can find out what mode the sound card is in by entering SNDINIT /B at the DOS prompt. Run SNDINIT.EXE if you need to change the mode.
- e. There might be a DMA conflict between the sound card and other interface cards in your computer. Make sure the DMA channel your sound card is using is not being used by another device in your system.
- f. Some games need EMM to play digitized voice. Please refer to the documentation that comes with your game.

Problem

The sound is distorted during sound test or during normal usage.

Solution

- a. Your speakers might be defective or the quality of the speakers is poor. Make sure you have a good pair of speakers.
- b. Volume setting is too high. Use SNDINIT.EXE to adjust the volume.
- c. Interference from another interface card in your computer. Try to install the sound card into a different slot.

Problem

There is no music or digitized voice or there is only music in some games (e.g. XWing, Mixed-Up Mother Goose.)

Solution

- a. Some applications need extended or expanded memory to run properly. Use a memory manager to set up the required memory in your system. Refer to the applications user guide on what is required.
- b. You do not have enough memory to run the game. Remove nonessential device drivers or the volume control TSR program, VOLTSR.EXE, from memory.
- c. You are not in Sound Blaster mode. Type SNDINIT /B to find out what mode you are in. Type SNDINIT and change to Sound Blaster mode if you are not already in that mode.

- d. Make sure you have the following line in your AUTOEXEC.BAT file:
SET BLASTER=A220 I7 D1

Problem

Your joystick does not work after installing the sound card.

Solution

There is a conflict between the game port on the sound card and the game port in your system. Run SNDINIT.EXE to disable the game port on the sound card or remove the additional joystick from your system.

Problem

Joystick is not working properly in some programs.

Solution

The CPU speed of your computer might be too fast. You might want to reduce the speed. Refer to your computer's manual for instructions on setting up your computer's operating speed.

Problem

You cannot record any sound using a microphone.

Solution

- a. If your microphone has an On/Off switch, make sure the switch is turned on.
- b. Make sure you plug the microphone into the microphone-in connector.

Problem

You cannot use the hot keys to control the volume while in a game.

Solution

- a. You did not load the program into memory. Type VOLTSR at the DOS prompt to load the program.
- b. Some games block the TSR from the keyboard. You will not be able to use the hot keys if this is the case.

Problem

No sound when running Windows 3.x application, MIDI files cannot be played, or you get a MIDI error message.

Solution

- a. If you have not installed the HOT-247 Sound Card software, please do so now.
- b. Check that you have the following drivers installed in the Windows 3.x Drivers Dialog Box:

OPTi Audio Device Driver

OPTi External MIDI Device Driver

If you are missing any one of the above drivers, check the SYSTEM.INI file as follows:

1. Choose RUN from the File menu in Program Manager.
2. Type SYSEDIT in the command Line text box and choose OK. Look for the following entries:

[drivers]

timer=timer.drv

midimapper=midimap.drv

wave=SND933.drv

aux=SND933.drv

midi=SND933.drv

mixer=SND933.drv

midi1=MPU401P.drv

```
[SND16.drv]
SINGLEDMA=YES
CODECTYPE=AD1845
MPU401=YES
```

3. Add any missing lines if necessary.
- c. Verify that the MIDI mapper is a valid selection. Refer to the Control Panel section of the Windows 3.x manual for more details.

Problem

There is no sound or the sound is distorted when you are running Windows Sound System applications.

Solution

- a. You need the Microsoft Audio Compression Manager to play compressed files in Windows Sound System applications. Make sure you have the following line in the [drivers] section of your SYSTEM.INI file:

```
wavemapper=msacm.drv
```

- b. You have disabled the Single Mode DMA option in the Advance Setting box. Some motherboards can only support Single Mode DMA and therefore your environment can only operate under this mode.

Problem

You get the following error message when you boot up your computer:

The wave file for sound testing could not be found or is corrupted. Please reinstall the file from the installation diskette.

Solution

The path to the directory where the HOT-247 Sound Card files are located is not set or the required file, SNDTEST.WAV, is missing. Type SET at the DOS prompt. If HOT-247 Sound Card files are in the OPTi933 directory in your C: drive, you should see the following line:

```
SOUND16=C:\OPTi933
```

If this line is not present, type:

```
SET SOUND16=C:\OPTi933
```

to set up the path to the HOT-247 Sound Card directory temporarily. You need to add the following line to your AUTOEXEC.BAT file to set the path permanently:

```
SET SOUND16=C:\OPTi933
```

If the line is already in your AUTOEXEC.BAT file, check that you have the file SNDTEST.WAV in your C:\OPTi933 directory. Rerun the installation program if necessary.

Problem

You get the following error message when you boot up your computer.

Your start-up configuration file could not be detected. Please reinstall the original file from your installation CD.

Solution

The path to the directory where the HOT-247 Sound Card files are located is not set or the required file, SOUND16.CFG is missing. Type SET at the DOS prompt. If the HOT-247 Sound Card files are in the OPTi933 directory in your c: drive, you should see the following line:

SOUND16=C:\OPTi933

If this line is not present, type

SET SOUND16=C:\OPTi933

to set up the path to HOT-247 Sound Card directory temporarily. You need to add the following line to your AUTOEXEC.BAT file to set the path permanently:

SET SOUND16=C:\OPTi933

If the line is already in your AUTOEXEC.BAT file, check that you have the file SOUND16.CFG in your C:\OPTi933 directory. Rerun the installation program if necessary.

Problem

There is no music coming from the game even though the music synthesizer is set to General MIDI.

Solution

- a. Make sure that the game does support General MIDI for music synthesis.
- b. Make sure that the MPU-401 interface is ON by using SNDINIT.EXE. Also, change the I/O port and interrupt if necessary.

Problem

In Windows 3.x, the sound quality of MIDI file playback does not improve as compared with ordinary FM synthesis.

Solution

- a. Check the MIDI mapper on the Control Panel. Make sure that the MIDI mapper output is set to OPTi MPU-401 instead of the OPTiFM(tm) synthesis.
- b. Check the MIDI output selection in your MIDI application. Make sure that MPU-401 is selected.