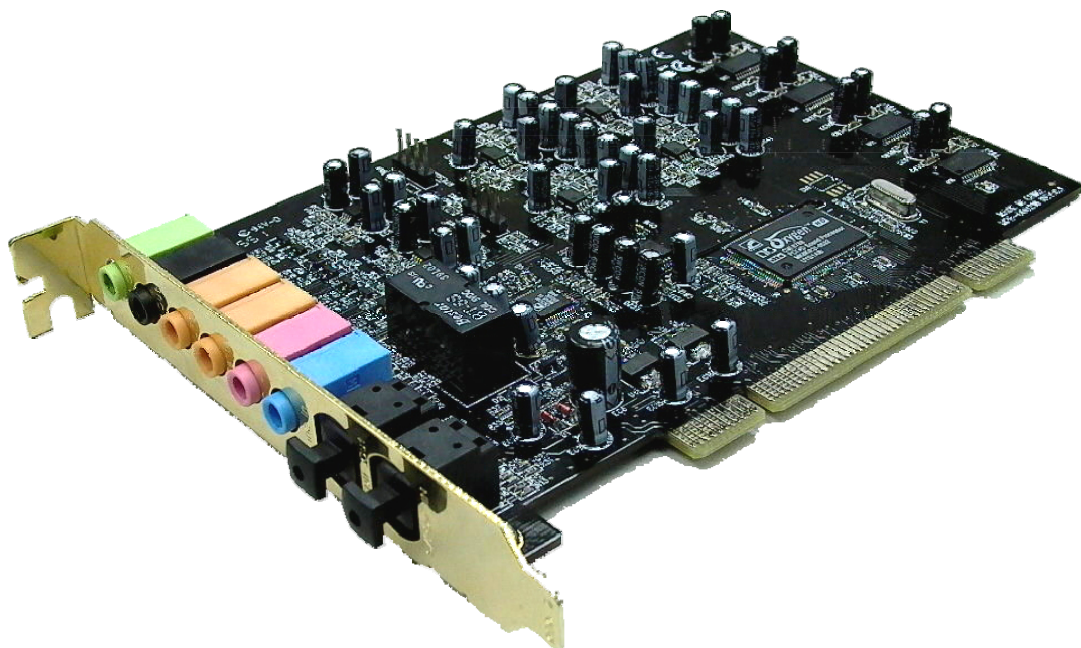# sondigo
inferno

**Advanced 7.1 Channel
PCI Sound Card**

User Manual

Sondigo
12581 16th Ave
#45039
Surrey, BC, V4A 9L1
Canada

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FCC

This equipment has been tested and found to comply with limits for a Class B digital device pursuant to Part 15 of Federal Communication Commission (FCC) rules

IC

This Class B digital apparatus complies with Industry Canada ICES-003

CE

This equipment has been tested and found to comply with the limits of the European Council Directive on the approximation of the law of the member states relating to electromagnetic compatibility (89/336/EEC) according to EN 55022 class B & EN 55024.

Compliance Statement

These limits are designed to provide reasonable protection against radio frequency interference in residential installations. This equipment generates, uses and can radiate radio frequency energy, and if not installed or used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an electrical outlet on a circuit different from that to which the receiver is connected to

CAUTION!

The Federal Communication Commission warns the user that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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ASIO is a trademark and software of Steinberg Media Technologies GmbH.

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

All other trademarks are the property of their respective owners.

Thank you for purchasing the Sondigo Inferno Advanced 7.1 Channel Sound Card -- featuring the most complete set of audio technologies ever assembled in a single sound card product. Powered by the C-Media Oxygen HD PCI Audio Processor, the Sondigo Inferno is the best way to enjoy music, movies and games on your PC.

The C-Media Oxygen HD chip is the heart of the Sondigo Inferno and is the latest all digital design from market leaders C-Media Electronics.

Dolby Digital Live enables a single digital cable connection to carry high quality Dolby Digital 5.1 audio from your PC to digital speakers and AV Receivers. All audio, including games and music is processed in real time into industry standard Dolby Digital 5.1 surround.

Dolby Headphone creates a stunning multichannel surround experience over ordinary stereo headphones. Dolby Headphone is compatible with all types of audio on your PC and is so realistic you will believe you are listening over speakers in a well controlled listening room.

Dolby® Virtual Speaker technology simulates a highly realistic 5.1-speaker surround sound listening environment from as few as two speakers. Dolby Virtual Speaker technology also creates a wider two-channel environment during playback of stereo CDs and MP3 content, and when combined with Dolby Pro Logic® II processing, delivers a virtual surround listening experience from any high-quality stereo source.

Dolby® Pro Logic® II technology processes stereo movie and music content into five playback channels of full-bandwidth surround sound. Dolby Pro Logic II unlocks the directional cues that occur naturally in stereo content and processes these elements to create a five-channel surround sound playback experience.

Pro Logic IIx is the first and only technology to process any native stereo or 5.1 signal into a 6.1- or 7.1- channel output, creating a seamless, natural surround soundfield that immerses you in the entertainment experience. With Dolby Pro Logic IIx you can choose Movie or Music modes to tailor your listening experience to source material

DTS-Interactive provides a single cable connection to your DTS enabled surround sound system. Your stereo or multichannel (up to 5.1) audio sources are re-encoded into a DTS audio signal and sent out from your PC to any DTS enabled system such as, powered PC speakers with built-in DTS decoder, an A/V receiver or any other DTS compatible surround sound system. The result: simplified installation, the elimination of the clutter, tangles, and cost of multiple analog cables and high-quality DTS surround sound.

With DTS Neo:PC, you can turn your stereo audio (WMA, MP3, CD, and more!) into a convincing multichannel audio experience. Borrowing from DTS' Neo:6, the technology that provides you with surround sound from stereo sources in high-end home theatre products, Neo:PC is optimized for your personal computer and is the perfect companion to DTS-Interactive. Now you can upgrade your stereo audio to enveloping DTS surround sound and utilize the single wire solution of DTS Interactive.

ASIO

With the multichannel ASIO output driver in the Sondigo Inferno you get high performance, low-latency audio output from ASIO compatible applications. ASIO is a trademark and software of Steinberg Media Technologies GmbH.

Full 3D Sound Support

With fully CPU optimized Creative EAX and Microsoft DirectSound3D support, your games will sound better than ever!

10 band Equalizer

High quality EQ to enable precise adjustment of sound, with user preset storage.

Magic Voice

Great feature for disguising voice for VOIP applications and for pitch shifting for Karaoke.

Room Effects

Provides special room acoustic effects to enable you to experience the sound of concert halls and variety of other rooms and spaces.

Intelligent Speaker Management

Intelligent speaker management allows users to specify physical speaker locations and the software will automatically create the optimal sound field.

C-Media FlexBass™

The Sondigo Inferno's advanced bass management features allow a wide variety of different speaker types and combinations to be supported, ensuring each speaker gets only the signals it can efficiently reproduce.

Discrete ADCs and DACs

The Sondigo Inferno owes its fantastic audio quality to the discrete digital-to-analog and analog-to-digital converters that are found in high end consumer audio equipment such as DVD players and AV Receivers.

7.1 channel output

The Sondigo Inferno features 7.1 channels of pristine 24-bit/192 kHz audio output

Optical S/PDIF input and output

Supports the widest range of digital output formats possible: 24-bit 48/96/192kHz PCM, Dolby Digital 5.1 and DTS 5.1

High quality stereo input

Two channels of 96kHz 24bit audio input for super-clean recordings from instruments and other line-level devices.

Dedicated Microphone Input

Separate microphone input for VOIP and other recording applications

Specifications

- 32bit PCI Bus Master, PCI 2.1 / PCI 2.2 compliant
- Supports multi-speaker output to 2 / 4 / 5.1 or 7.1 speakers
- Complies with Microsoft® PC99 specification
- Integrated 192k/24-bit S/PDIF transmitter and 192k/24-bit S/PDIF receiver
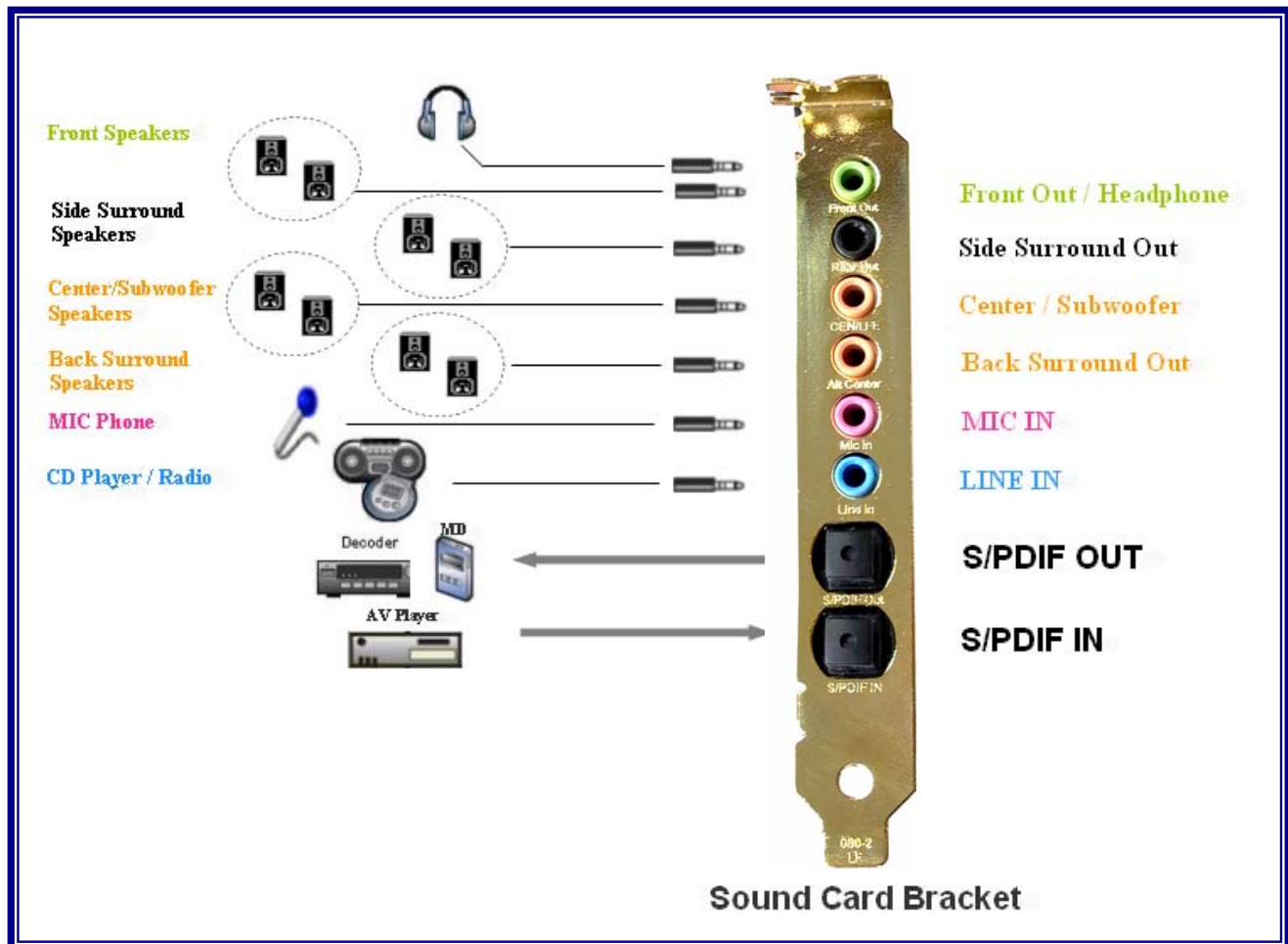
Connectors :

- **Internal**   : CD Audio In , AUX In
- **External**   : Front-Out / Rear-Out / Center & Woofer / ALT CEN
- Line-In / Mic-In / SPDIF-In / SPDIF-Out

System Requirements

- PC with one 32-bit PCI slot free
- Microsoft® Windows® XP SP2 / Microsoft® Windows® 2000 (SP4 recommended)
- Intel® Pentium® III 700MHz CPU or better   (PIII 800 or better recommended)
- 256 MB system memory (minimum)
- 100 MB available HDD space
- CD-ROM drive (or DVD-ROM drive recommended)

Connection and Speaker Setup:

2. Installation
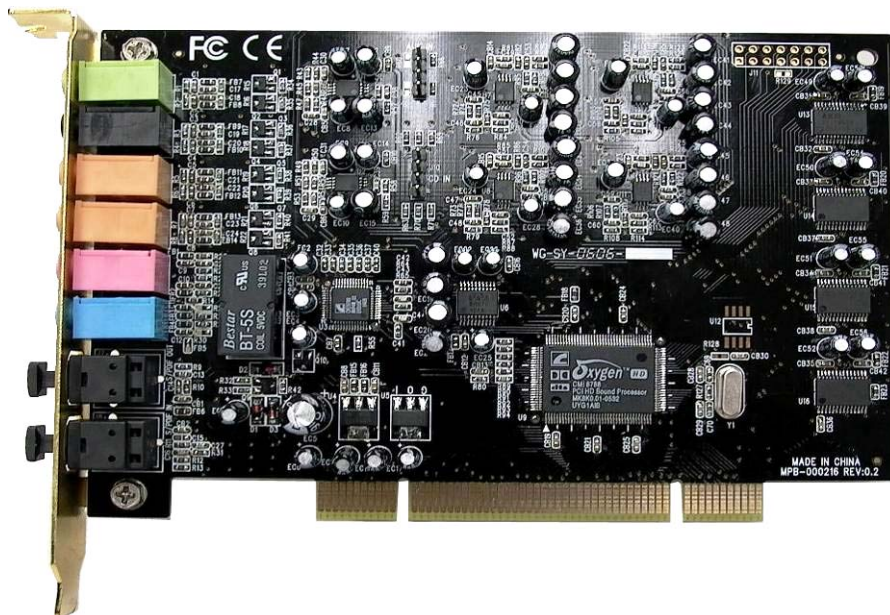
A. Hardware Installation

Please follow the following steps carefully to install your sound card.

1. Turn off your computer and disconnect all power cords.
2. Remove the case/cover from your computer. Refer to your PC's user manual for more details.
3. Plug the Sound Card into any free 32-bit expansion PCI slot of the computer.
4. (optional) Connect the audio cable to your CD-ROM or DVD-ROM drive.
5. Put the computer case/cover back on and reconnect the power cords.

Connecting Audio Devices
You can connect various types of audio equipment to the sound card through its back panel jacks, such as speakers, headphones, and A/V Receivers. The following diagram shows the connectors on the back panel.

Labels on left side of image (top to bottom):
F-Out
R-Out
C/LFE
ALT CEN
MIC
LINE IN
SPDIF OUT
SPDIF IN

INFERNO PCI Sound Card Connection Chart:

	Headphones	2 Speaker	4 Speaker	6 Speaker	8 Speaker
F-Out	Headphones	Front	Front	Front	Front
R-Out	-	-	Rear	Rear	Rear/ Side surround
C/LFE	-	-	-	Center / Subwoofer	Center / Subwoofer
ALT CEN	-	-	-	-	Back surround
MIC IN	Microphone	Microphone	Microphone	Microphone	Microphone
LINE IN	Line Input	Line Input	Line Input	Line Input	Line Input

Other Connections:
S/PDIF-In: Digital Input (with optical cable)
S/PDIF-Out: Digital Output (with optical cable)

B. Software Installation

Auto Run

Auto Run for Windows® 2000 / XP
1. Insert the Software CD into your CD-ROM or DVD/ROM drive.
2. Follow the on-screen instructions to finish the installation.

If Auto Run does not work with your computer, please refer to the following:

Installing the Sound Card Driver under Windows® 2000/XP

We recommend that you uninstall any other PCI sound card drivers from your system before continuing.

1. After you have inserted the Inferno card into an available PCI slot, power up your computer and wait for Windows®2000 / XP to boot up.
2. The message box will show "Found New Hardware Wizard" Click "**Cancel**".
3. Insert the Software CD into your CD-ROM or DVD-ROM drive. The installer should run automatically in a few seconds. If it does, skip ahead to step 7.
4. Click the "**Start**" button on the bottom left corner of your screen.
5. Select "**Run**".
6. Enter the path for the driver installation program; for example, "**D:\ SETUP.EXE**" if Drive D is your CD-ROM or DVD-ROM drive.
7. Click "**OK**" to start the driver installation, and follow the on-screen instructions to finish the installation.
8. When the driver has been installed, please restart your computer.

Uninstalling the Sound card Driver for Windows® 2000/XP

1. Click "**Start**".
2. Select "**Settings**".
3. Select "**Control Panel**" and click "**Add/Remove Programs**".
4. Select "**C-Media PCI Audio** " and than click "**Change/Remove or Add/Remove**".
5. Follow the on-screen instructions to finish the uninstall, then reboot your system.

Configuration

After the installation there will be a new icon in your system tray.

Click on this icon to open the Inferno Control Panel, where you can set up and test your new sound card. The next section will explain some if the Control Panel's functions.

Main Setting tab

DSP mode
Click this button to toggle between Speaker Test mode (shown) and DSP Mode.

Audio Technology Buttons
Click a these icons to access the driver's advanced audio features, such as Virtual Speaker Shifter, Dolby Headphone, Dolby Virtual Speaker, Dolby Pro Logic IIx, and DTS Neo:PC.

Clicking on one of these buttons will allow you to change the technology's parameters in the area below the buttons.
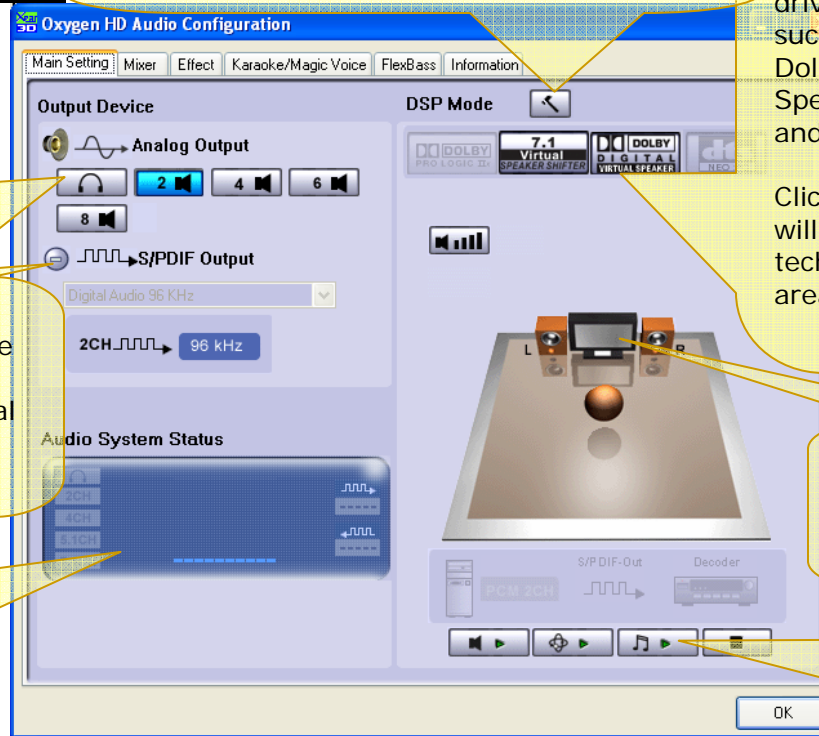
Analog output mode
Choose the box that best describes your set up (head phones, stereo speakers, etc)

Digital output mode
Click the button to enable or disable the digital output. Select your digital output format from the pull-down menu

Audio System Status
Gives an overview of the current audio settings

Speaker test icons
Click a speaker to play a test sound through that channel.

Speaker test buttons
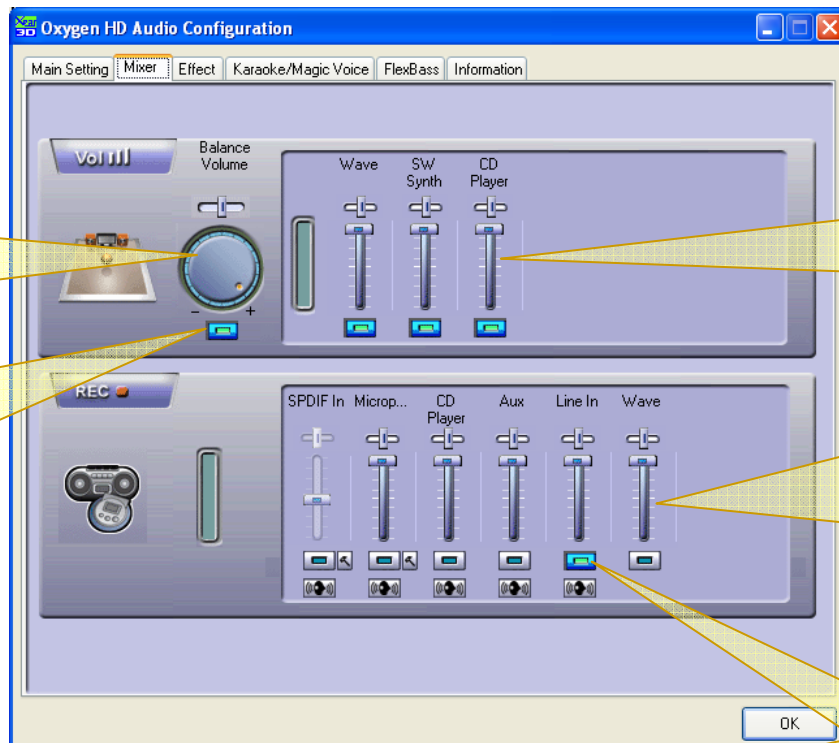Click a button to stop or start a speaker test for all channels

Mixer tab

Master Volume
Use this control to change your overall volume level.

Mute button
Use this button to disable all audio from passing through to your speakers

Source Volume
Each of these sliders allows you to control the volume of a different audio source.

Recording Levels
Each of these sliders allows you to control the input volume of different recording sources.

Recording Select
Use these buttons to select your recording input. Note that only one can be active at a time.
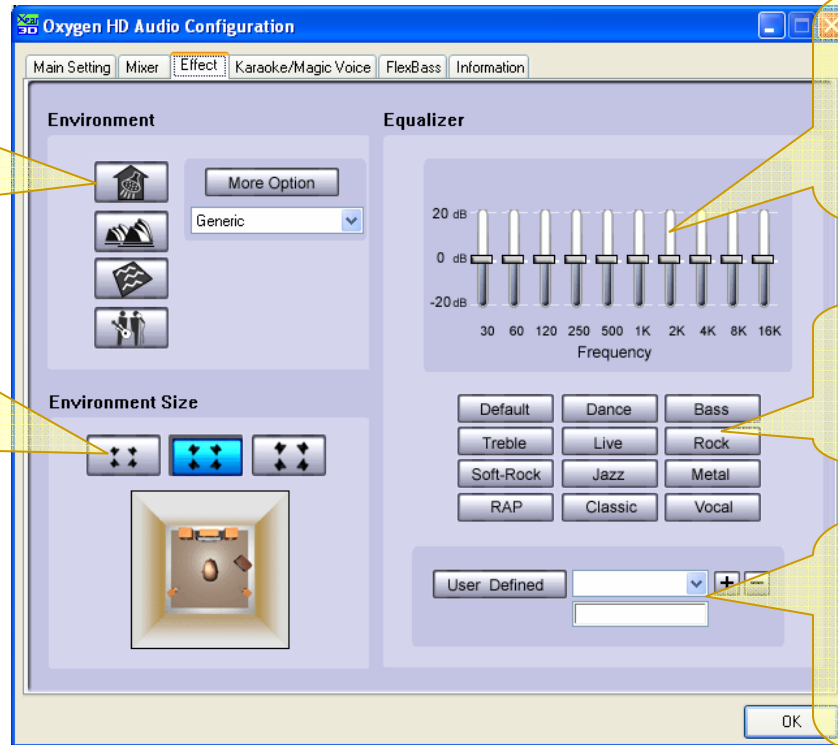
Effect tab

Environment Presets
Click one of these buttons to add environment effects to your audio.

Environment Size
Choose from one of three environment sizes, which will change the depth of the reverb effect.

Equalizer Setting
Shows the current settings for the EQ. You can drag the sliders to customize the EQ to your tastes.

Equalizer Presets
Click a button to use one of the 12 included EQ presets.

Custom Defined EQ
Use this section to select or create one of your own EQ settings. Use the "+" button to add a new EQ setting.

Karaoke/Magic Voice tab

On/off switch
Click to enable or disable the karaoke/voice effects.
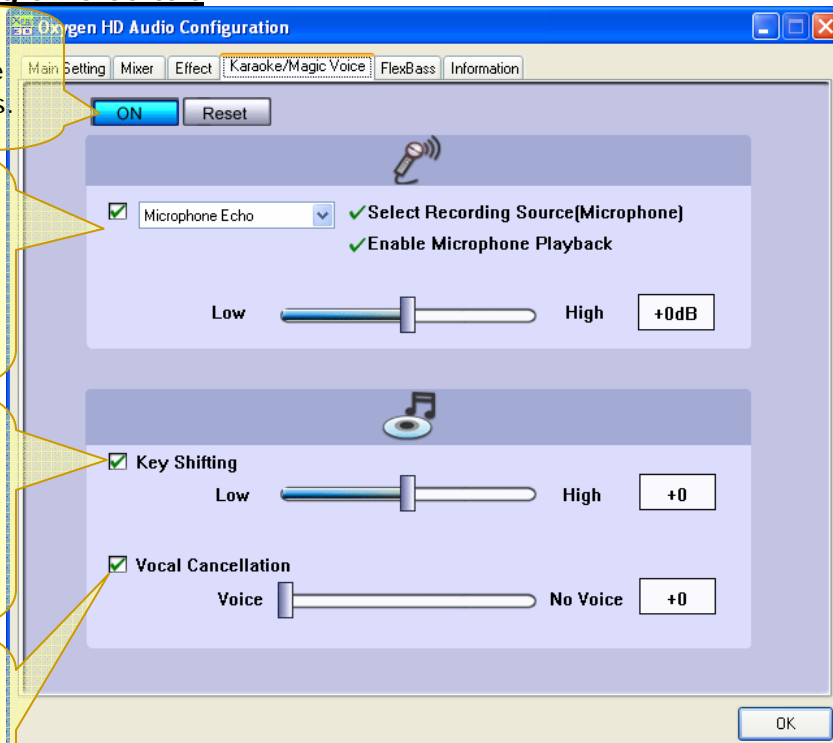
Microphone Effects
Use the check box to enable, and use the menu to choose, an effect for the microphone input.

Key Shifting
Use the check box to enable key shifting, and the slider to choose the amount of the key shift.

Vocal cancellation
Use the check box to enable vocal cancellation, and use the slider to set the amount of cancellation

FlexBass tab

On/off switch
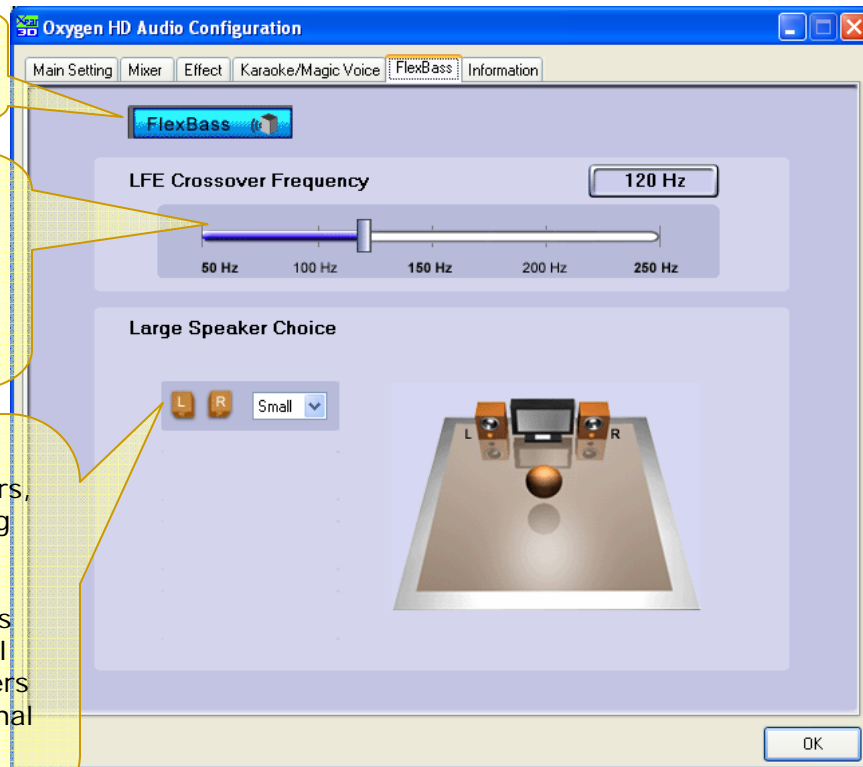Click to enable or disable FlexBass.

Crossover Frequency
Use this slider to select the frequency that divides audio output into the normal and Sub channels.

Speaker Size setting
For each pair of speakers, choose its bass handling capacity:

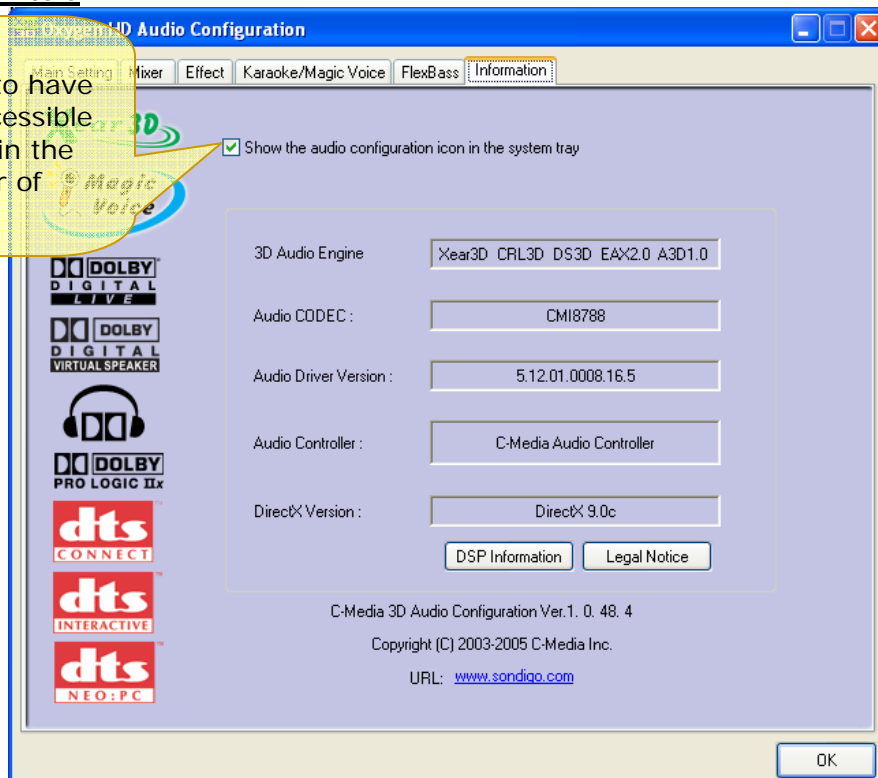**Small**: Only frequencies above the crossover will be sent to these speakers
Large: A full-range signal will be sent to these speakers

Oxygen HD Audio Configuration

Main Setting | Mixer | Effect | Karaoke/Magic Voice | FlexBass | Information

FlexBass

LFE Crossover Frequency   120 Hz

50 Hz   100 Hz   150 Hz   200 Hz   250 Hz

Large Speaker Choice

L R   Small

L   R

OK

Information tab

System tray icon
Enable this check box to have your audio settings accessible from the system tray (in the lower right hand corner of your screen)

Oxygen HD Audio Configuration

Main Setting | Mixer | Effect | Karaoke/Magic Voice | FlexBass | Information

☑ Show the audio configuration icon in the system tray

DOLBY DIGITAL LIVE

DOLBY DIGITAL VIRTUAL SPEAKER

DOLBY PRO LOGIC IIx

dts CONNECT

dts INTERACTIVE

dts NEO:PC

3D Audio Engine	Xear3D CRL3D DS3D EAX2.0 A3D1.0
Audio CODEC :	CMI8788
Audio Driver Version :	5.12.01.0008.16.5
Audio Controller :	C-Media Audio Controller
DirectX Version :	DirectX 9.0c

DSP Information   Legal Notice

C-Media 3D Audio Configuration Ver.1. 0. 48. 4

Copyright (C) 2003-2005 C-Media Inc.

URL: www.sondigo.com

OK

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3. Troubleshooting

A. After installing the Inferno, there is no sound output

1. Check that your speakers are connected to the card connectors properly. If applicable, make sure that your speakers' power cord is plugged in and the speakers are switched ON.
2. Make sure that the system volume is not muted.
3. Make sure that your card is properly seated in its PCI slot. If necessary, turn off your computer, remove the card, clean its edge connector and re-insert it in the PCI slot.
4. Close any audio programs that are running and restart them.
5. In *Start>Control Panel>Sounds and Audio Devices*, click on the "Audio" tab and ensure that "C-Media Oxygen HD Audio" is set as the default device for audio playback.
6. Try closing and re-opening your audio program. If you changed your default audio playback device (in step 5), this will ensure that your program will send its audio to your Inferno driver, and not to a different audio device on your computer.

B. There is audio from my speakers, but it is noisy...

1. Check that your speakers are connected to the card connectors properly. Sometimes noisy audio is a result of connectors that are not fully engaged.
2. Go to the system volume control and adjust its setting and see if the problem is solved.
3. Keep your microphone away from the speakers in order to avoid feedback noise.

C. My Microphone or speaker is not working

1. Make sure the microphone is plugged in all the way in the Mic-in jack.
2. In the Inferno Control Panel, go to the Mixer tab and make sure that the system volume is not muted.
3. Microphone problems: Still in the Mixer tab, check that the Microphone input is selected, and the Microphone volume slider is set at least halfway up (as below).