

## Sound Card Essential Troubleshooting

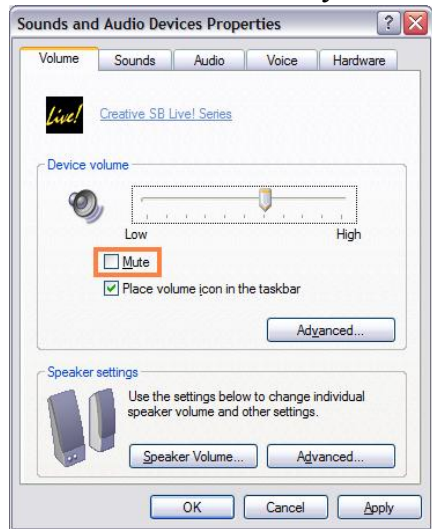
Keywords / Key Phrases: Sound Blaster, sound card, troubleshooting, install, uninstall, reinstall, detect, BIOS, intermittent

### Summary:

- ✓ Remove any prior audio card and its software before installing the new card
- ✓ Ensure all cables are securely connected, e.g. speaker cables and power cables
- ✓ Verify the device status and verify mixer settings
- ✓ Test the sound card with a pair of headphones
- ✓ We suggest that you update the system BIOS, chipset drivers, and Windows Service Pack
- ✓ We suggest that you test the card in a different PC, different PCI slots, or different USB ports if using a USB Sound Blaster

### 1. Verify sound and audio properties

1. Click **Start**, **Settings**, **Control Panel** and **Sounds and Audio Devices**.
2. Click the **Volume** button, and make sure that the volume is not muted. Adjust the volume slider if necessary.



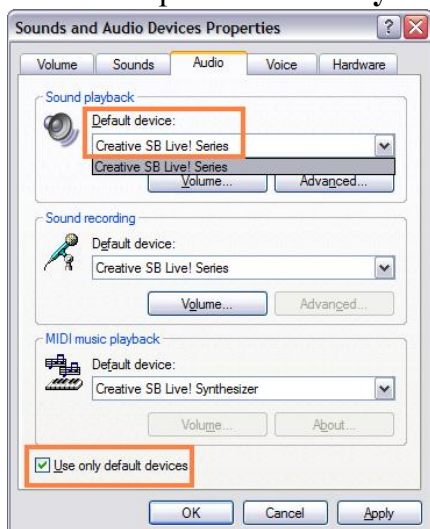
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3. Click **Advanced** under **Device volume**, and then click **Advanced**. If your speakers are connected to Line-Out (Analog) jacks, make sure that the box next to **Digital Output Only** is not checked



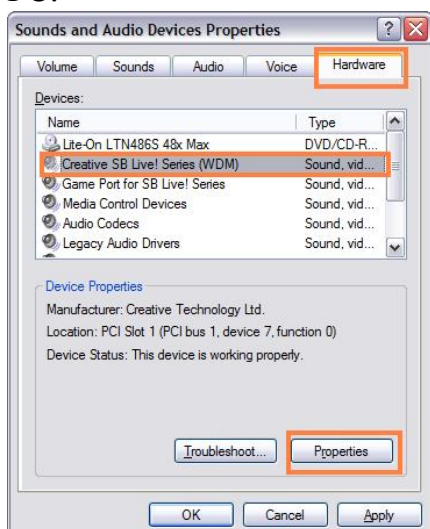
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4. Click the **Audio** button in the **Sounds and Audio Devices** screen.
5. Make sure that your Sound Blaster device is chosen as the **Default device**.
6. Select the option to **Use only default devices**.



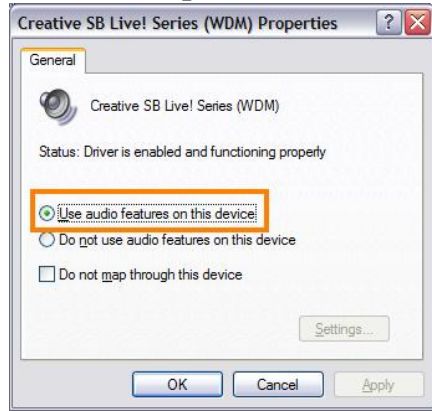
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7. Click the **Hardware** button, and click the Sound Blaster device installed in your PC.



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8. Click the **Properties** button, and verify its status.



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If the device status indicates that there is a problem with the device driver or resource conflict, continue to the next step, **Disable onboard audio and existing audio card**, or step 7 **Reinstall Sound Blaster drivers**.

If the device status indicates that the sound card is working properly, continue to step 3, **Test the sound card's outputs with a pair of headphones**.

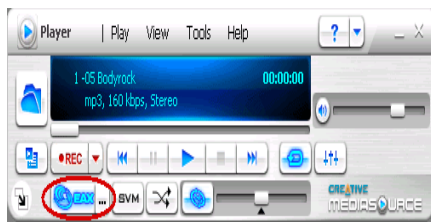
## 2. Disable onboard audio and uninstall existing audio card

- If there is an onboard audio on your PC's motherboard, it is recommended that you disable onboard audio to prevent any conflicts it may cause with the Sound Blaster device.
- Onboard audio may be labeled as Audio Device, Sound, Onboard Sound, Onboard PCI Audio, or Onboard Sound Blaster etc. For specific steps on how to disable onboard audio on your PC, please contact the motherboard manufacturer or consult the motherboard's documentation.
- If you are upgrading from a standalone audio card that can be physically removed from your PC, it is recommended that you remove it, and uninstall its drivers before installing the new card.

## 3. Test the sound card's outputs with a pair of headphones

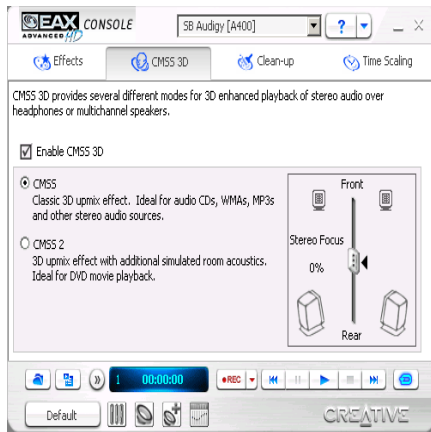
If you have a multi-channel speaker system connected to your Sound Blaster card, and you can not hear sound from certain speakers (channels) as expected, you can test audio outputs from individual line-out jacks with a pair of headphones, which will help determine if the sound card is at fault or the speakers attached to the sound card.

1. Install the Sound Blaster applications such as Creative MediaSource, Creative EAX Console, etc) shipped with your card if you have not done so.
2. In Creative MediaSource, click the EAX icon to access EAX Console.



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### 3. Enable CMSS or CMSS-3 in EAX Console.



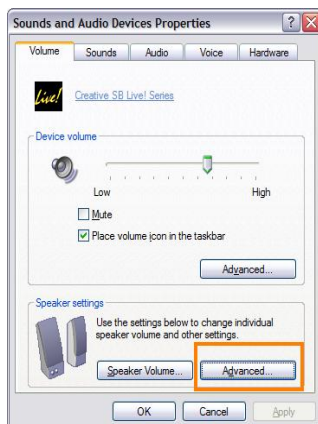
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If you have Sound Blaster X-Fi card, you can also enable the CMSS-3D feature in Entertainment Mode or Game Mode.



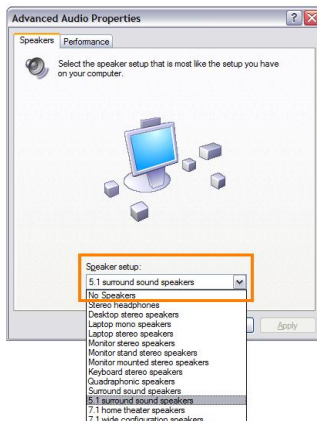
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4. Click **Start**, **Settings**, **Control Panel** and **Sounds and Audio Devices**.
5. Click the **Volume** button, and make sure that the volume is not muted, and it is not set too low.
6. Click the **Advanced** button.



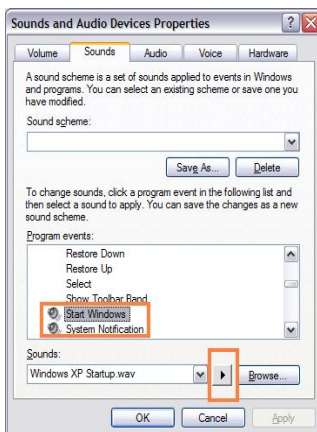
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- Click the drop down arrow next to Speaker Setup, and select a speaker configuration that matches your speaker setup, and then click **OK**.



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- Click the **Sounds** button in the **Sounds and Audio Devices** screen, and locate **Start Windows** sound under **Program Events**. You can select any sound for this test.



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You are now ready to test the audio output from individual line out jacks (Line Out 1, 2 and 3).

- Plug the headphones to **Line Out 1** to test front right and front left channels. Click the **Play** button, and you should be able to hear the Windows Startup sound from your headphones.
- Plug your headphones to **Line Out 2** to test rear right and front left channels. Click the **Play** button, and you should be able to hear the Windows Startup sound from your headphones.

For Sound Blaster X-Fi, Sound Blaster Audigy 4 Pro, the Line Out 2 is also for **Side Right** (only on 7.1 speaker systems).

This headphone test is unable to the Side Right channel because of the way Line Out jacks are wired.



3. Plug your headphones to **Line Out 3** to test Center and Subwoofer, and then click the **Play** button. You should be able to hear the Windows Startup sound from your headphones.

For Sound Blaster X-Fi, Sound Blaster Audigy 4 Pro, and Sound Blaster Audigy 2 cards, the Line Out 2 Line Out 3 is also for **Side Left** (only on 7.1 speaker systems) or **Rear Center** (only on 6.1 speaker systems).

This headphone test will not be able to test the Rear Center (6.1) or the Side Left (7.1) because of the way Line Out jacks are wired.

If the headphone test results are satisfactory, the sound card is properly configured. You will need to examine, test or reconfigure the speaker system connected to the sound card.

On the other hand, if the headphone test results are not satisfactory, that is, you can not hear sounds from certain channels, or there are cracklings and pops, continue to next step, **Optimize BIOS settings and game settings for improved audio quality**.

If you have a Logitech WebCam or QuickCam installed, you can disable Acoustic Echo Cancellation. For further information, please see [QuickCam: Multi-channel audio device not providing sound to all output channels](#)

#### **4. Optimize BIOS settings for improved audio quality**

Crackling and popping during sound playback can often be resolved by changing audio levels in games or modifying BIOS configuration. For further information, please refer to our Knowledge Base article, [Solution ID 24669: X-Fi Sound Cards Crackling and Popping](#).

We suggest that you contact the system vendor for more information on BIOS updates.

- Increase **VGA Shared Memory Size** if you are using an onboard graphics card.
- Set **AGP Aperture Size** (MB) to half of the system's RAM or lower.
- Toggle **Peer Concurrency**.
- Toggle **Spread Spectrum Control**
- Toggle **Memory Hole**
- Enable **AGP Fast Writes** if your graphics card supports it.
- Change **PCI Latency Timer** ( starting with 32).
- Invoke dual-channel memory mode on the motherboard. Systems that are not configured in dual-channel mode can experience crackling during games. For more information about invoking dual-channel mode, please refer to your motherboard manufacturer.
- Ensure that the SATA hard drive is not conflicting with PCI memory resources. Changing to a different controller may help.

Modify the clock settings on an nVidia GeForce SLI graphics card (for other brands of graphics cards, please consult the documentation for that card or contact the manufacturer):

1. Right click the **Desktop**.
2. From the context menu, choose **Properties**. The **Display Properties** window appears.
3. Click the **Settings** tab, and then the **Advanced** button.
4. In the new window, click the nVidia tab (the one with the nVidia logo).
5. In the list that appears, click **Clock Frequency Settings**.
6. Select the **Manual** radio button.
7. In the **Settings** drop-down menu, choose "Performance (3D)".
8. Adjust the **Memory Clock Speed** to your specifications.
9. Click **Test Changes**.
10. Click **Apply**.

### **Warning!**

Changing the default clock speed on a graphics card can have unexpected results. Please consult your graphics card documentation for further details.

## **5. Resolve humming, intermittent hissing, or no sound**

To reduce static or buzzing noise from speakers, avoid placing speaker cables next to computer monitors, TV, an AC adapter, or any chargers for MP3 players or cell phones, etc. These devices have a strong field, which may induce noise.

If you are getting audible levels of background hum and hiss, you can install a **Ground Loop Isolator**, available at various electronics stores, for example, Radio Shack. The Radio Shack Product Support page has specifications of Ground Loop Isolator (270-



0054). For more information about ground loop, please follow this link:

[http://www.epanorama.net/documents/groundloop/home\\_solving.html](http://www.epanorama.net/documents/groundloop/home_solving.html)

Additional procedures to try to reduce humming or other static audio are:

- Use a digital output/input connect if it is present
- Reduce the setting of the volume control until the hum or hiss is reduced to an unnoticeable level and use the signal source to control the output level
- Set the volume control of the signal source to a high setting (70% or higher) and use the volume control to vary output
- Ensure that the subwoofer is not placed on or near a high frequency electrical source
- Ensure that the signal source is correctly grounded

If you are using a digital speaker system, or a receiver connected to the Digital Out jack on your sound card, make sure that the PCM SPDIF sampling rate on your sound card match the sampling rate of the receiving device. The choices available are 48 kHz and 96 kHz.

To change the sampling rate, double click the **Device Controls** icon in Audio HQ or Audio Console select the required sampling rate from the Digital Output Sampling Rate list.

## 6. Adjust Hardware Acceleration

1. Click **Start, Settings, Control Panel** and **Sounds and Audio Devices**.
2. Click the **Advanced** button under **Speaker settings**.
3. Select the **Performance** button.
4. Adjust the **Hardware acceleration** slider to a desired level.

**Note:** Settings lower than **Full** may not provide access to all features of the sound card.



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## 7. Reinstall Sound Blaster drivers

If a sound card is not detected by a PC, or Windows could not locate necessary drivers, you can try to manually install the drivers. Reinstalling drivers can also help resolve audio crackling and popping caused by improper implementation.

1. Power down your PC and restart.

When a (PCI) Sound Blaster card is first installed on a PC, it will be identified as a **PCI Multimedia Audio Controller** during the boot process after the BIOS has completed its Power-On Self-Test (POST), which scans for any hardware changes in your PC.

If your Sound Blaster card is not identified or listed during the boot process, it is strongly recommended that you reseal the card, or move it to a different PCI slot.

If the difficulty persists, try the card in a different PC.

2. Insert the Installation CD into a CD/DVD-ROM drive while holding the **Shift** key down to prevent the installation program from automatically running.
3. Browse the CD and open the **Audio** and **Drivers** folders. The location of these folders may change between installation CDs. You may use the Windows search utility by click on **Start**, **Search** and selecting to search all files located on the CD/DVD-ROM drive the disk is in and searching for the filename **CTZAPXX.EXE**. If **CTZAPXX.EXE** cannot be located, search for **STARTER.EXE**.
4. Open the folder corresponding to the type of Windows that is installed, locate the file **ctzapxx.exe** and run that file.
5. Select the option **Driver Installation** under **Update Option** and **WDM Drivers** under **Driver Type**.
6. Check the box **Overwrite existing shared Creative audio driver files**.



7. Click **OK** to run the utility.

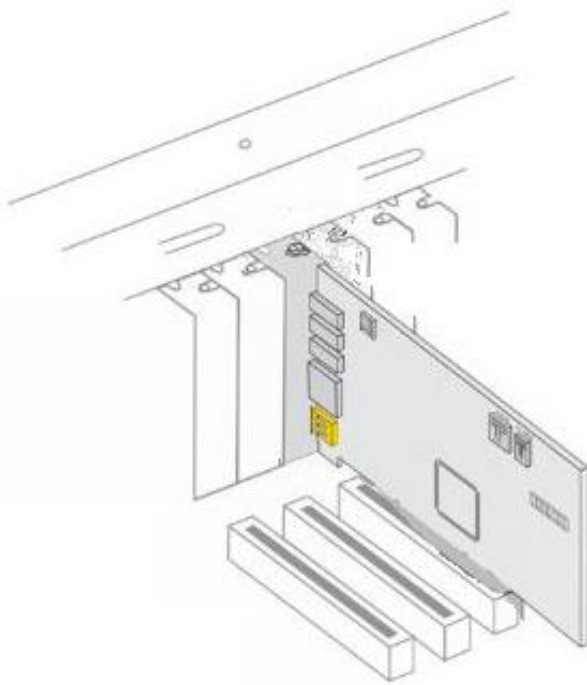
If the sound card is still not detected, please try another PCI slot or another PC.

### **8. Move the card to a different PCI slot or USB port**

If the conflict persists between your Sound Blaster device and other devices after disabling onboard audio, it will be necessary to try the Sound Blaster card in a different PCI slot, or try a different USB port if you are using a USB Sound Blaster.

Changing slots/ports can fix problems due to poor connection, hardware resource conflicts due to IRQ (Interrupt Request) conflict, bad or defective USB port or PCI slot.

For detailed instructions on how to install or move an expansions card such as a Sound Blaster card, please refer to the Sound Blaster manual, or the manual for your PC.



## **9. Test on a different PC**

If the sound card is not detected during the boot process, and it has been tested with different PCI slots or USB ports (if using an external Sound Blaster), it is recommended that you test the sound card with a different PC to determine if the sound card is faulty or if there is a conflict with the PC that it is being installed in.

It is preferred that the test PC be different from the first PC.

Last Updated: April 22, 2009