Stereo Changed to Joint Stereo

My Stereo setting encodes my MP3 file at Joint Stereo.

To create the highest quality MP3 file, the XingMP3 Encoder always uses *Joint Stereo (*Stereo mode 1) - at bitrates 128 kbps and below. Stereo mode 1 is sometimes known as Joint Stereo.

AudioCatalyst version 2.0 includes an Advanced options feature that allows you to override the default Stereo modes at bitrates 128 kbps and above. This "Force Simple Stereo" option will not always create the highest quality file. Before selecting Force Simple Stereo When Possible, read the following important information about Stereo modes.

Don't confuse Joint Stereo (Stereo mode 1) with the Joint Stereo coding used for MPEG layer 2 encoding - it is not the same. Joint Stereo (Stereo mode 1) encoding for MPEG layer 3 allows the XingMP3 Encoder to use additional methods of encoding, specifically - MS Stereo (Middle/Side Stereo), and for lower bitrates only, Intensity Stereo, in addition to the Independent Channel coding used for Stereo mode 0. MS Stereo uses one channel to encode information that is identical on the left and right channels and the other channel to encode the differences between the two channels. Intensity Stereo encodes only bits that are perceived to be important to the stereophonic image. The XingMP3 Encoder uses Intensity Stereo only in low bitrate files, (96kbps or less) where file size is critical to the user.

In Joint Stereo (Stereo mode 1), the encoder dynamically (frame by frame) chooses the method of encoding that produces the best quality for each individual frame. Dynamic encoding improves compression efficiency which results in a higher quality file using less bits.

Stereo mode 0 encodes the left and right channels independently. The total bitrate remains constant, but the split between the channels can vary. The XingMP3 Encoder uses this flexibility to improve quality by allocating more bits to the channel with the more dynamic signal. For MPEG layer 3 encoding, Stereo mode 0 limits the encoder to only one method of encoding - Independent Channels. Because Stereo mode 0 is limited to one method of encoding, Joint Stereo (Stereo mode 1) in most cases produces higher quality. In the exceptions, the Stereo mode 0 quality will be essentially equivalent to Joint Stereo (Stereo mode 1).

Troubleshooting

CDDB Issues

When I attempt to connect to CDDB, the connection times out.

Try using an alternate connection method to reach the CDDB server. Open the CDDB Settings dialog from the Settings option on the menu bar. If your "Connect via" method is set to TCP/IP, then try HTTP. If it is set to HTTP, try TCP/IP.

I wanted to try an alternate CDDB connection method, but it is grayed out and will not let me change it.

Not all CDDB servers support both TCP/IP and HTTP. If either TCP/IP or HTTP is grayed out in the "Connect via" section of the CDDB settings, the CDDB server you currently have selected does not support a connection of that type. If you need to use a connection type that is grayed out, select a different CDDB server.

I'm behind a firewall, and I am having trouble reaching the CDDB servers.

If you are having trouble connecting to your CDDB server and you are behind a firewall, select a server that supports HTTP for a connection method. If you are behind a firewall and require a proxy to connect to the outside world, see your network administrator.

Troubleshooting ASPI Issues

When I tried to select ASPI as a Rip Method under the Settings dialog box, it was grayed out and could not be selected.

Either your system is lacking an ASPI manager to handle the interactions between the computer and the CD-ROM, or your ASPI manager cannot read digital audio.

There are some ASPI managers that don’t let calls to IDE devices though and then AudioCatalyst™ will not even see the CD-ROM drive. Scanners, zip drives, and other hardware devices may use ASPI managers and sometimes they install their own manager which replaces the original one. Both the ASPI managers from Windows 95 and 98 work without problems but if someone has installed a program that has replaced the original ASPI manager, the device may not work.

If there is an ASPI error, it is because the drive was not able to perform the command either because the drive did not understand the command or there is some other problem, such as a scratched disc. It is not easy to understand why an ASPI error occurs. If ASPI errors occur all the time, then the drive does not understand the command which is often simply because that drive cannot read digital music.

If you are currently running an Adaptec ASPI driver, you should upgrade your ASPI driver from Adaptec's Web site at http://www.adaptec.com/support/files/drivers.html. Note: The Adaptec site only supports upgrades for Adaptec's drivers already installed on your system.

1. In the Software/Driver Files Search text box, type ASPI32.
2. Click Find File.
3. Download ASPI32.exe and then exit all running programs.
4. Run ASPI32.exe and reboot your computer. When your computer restarts, the ASPI field should be enabled allowing you to use ASPI as a rip method.

No matter what I do whenever I use ASPI as a Rip Method, I get an "ASPI Error".

Not all CD-ROM drives support ASPI as a Rip Method. If you've updated your ASPI manager and are still receiving ASPI errors, then attempt to use MSCDEX as a rip method.

When I use Buffered or UnBuffered Burst Copy as a Rip Method, I get lots of pops and clicks, or

large segments of static.

Your CD-ROM drive most likely needs to use a Rip Method that has a jitter-correction. Jitter-correction, or synchronization, is performed when the data coming in off the CD-ROM is not being assembled correctly by the computer. Under the Settings dialog box, select the Rip Method "Dynamic Synch Width". This will attempt to give you only the amount of synchronization needed to successfully rip the track with the least extra time.

I'm using Dynamic Synch Width, but I'm still getting "Lost Synch!" errors.

If you are getting "Lost Synch!" errors with Dynamic Synch Width, try using the Fixed Synch Width Rip Methods. There are 10 levels of Fixed Synchronization from 1 (the lowest degree of synch and fastest) to 10 (the highest degree of synch and slowest). Start from 1 and work your way to 10 - try to find which settings work best for your hardware.

I've tried every Rip Method that ASPI has, and I'm still not happy with the output I'm getting.

Try to use MSCDEX as the CD-ROM access method. If you are on a NT machine, MSCDEX will not be available.

Troubleshooting MSCDEX Issues

When I try to select MSCDEX as an access method, the selection is grayed out.

You are most likely running Windows NT. Windows NT does not support MSCDEX, so you will need to find an ASPI rip method that works for you.

The computer says something about a scsi1hlp.vxd file. What does this mean?

The program has detected a file on your system which is keeping you from performing digital audio extraction. This problematic file is only found in later versions of Windows 95 and Windows 98. This file can be safely be replaced with its original which should allow you to rip CDs with MSCDEX as an access method. For directions on downloading and replacing the file, see "The Problem with Reading Digital Audio Under Windows OSR2 Release" in the AudioCatalyst's Help files.

I replaced my scsi1hlp.vxd file, and I'm still having problems ripping with MSCDEX.

It is possible that your CD-ROM drive does not support digital audio extraction or does not support extraction through MSCDEX. Attempt to use ASPI as an access method, or try to setup a real mode driver for your CD-ROM drive.

When I rip my tracks with MSCDEX, the output files are nothing but static.

If you've already altered your scsi1hlp.vxd file and you still get nothing but static, your drive most likely does not support digital audio extraction. Popular MP3 web sites, such as www.MP3.com, have lists of CD-ROM drives that support digital audio extraction. Check similar lists to see if others report problems ripping CDs when using the same model CD-ROM drive.

I can access CDs fine with MSCDEX, but when listening to the output WAV or MP3 there are pops and clicks throughout the track.

Pops and clicks are caused by the computer not being able to properly arrange the segments of data coming off the CD. An effective means of fixing this is to increase the amount of synchronization that MSCDEX is using to access your CD. From the Settings dialog, under the MSCDEX tab, set "Read audio in blocks of" to 25 frames and "Synchronize with" to 4 frames. This should give you the most secure form of MSCDEX ripping with the greatest amount of synchronization.

MSCDEX works with my CD-ROM drive and the output files sound great, but it is very slow.

If you are using MSCDEX with no quality problems and would like to increase your speed, there are two options that you can optimize. In the Settings dialog, under the MSCDEX tab, there are two fields, "Read audio in blocks of" and "Synchronize with". "Read Audio in blocks of" dictates how much of the CD is ripped to your computer at a time. The larger this value, the quicker your encode will go. The section "Synchronize with" determines how much extra data is ripped from the CD each time it is accessed. Lowering this value will also increase your rip speed. We suggest that you modify these two settings one step at a time and test at each step to make sure that your output files aren't developing pops and clicks. With a little experimentation, you will be able to find the settings that are best for your hardware.

Troubleshooting Ripping Errors

ASPI Error

An ASPI Error is reported when your computer and CD-ROM drive are not communicating at the level needed for CD audio ripping.

There are two main causes for an ASPI Error. The first, and most common, occurs when you have a CD-ROM drive that does not support ASPI as an access method. If this is the case, you will need to use the MSCDEX Driver to access your CD-ROM drive. The second most common reason occurs because you need to update your ASPI manager to a newer version.

Synchronization Lost

A Synchronization lost error occurs when you are using a "synch width" rip method under ASPI or when you are using MSCDEX as an access method. (Synchronization is also known as Jitter-Correction.)

Using an access or rip method with synchronization is a good method of removing pops and clicks from your output files. If you receive a "Synchronization lost" error, you need to increase the amount of synchronization used so that your computer has an easier time assembling the information once it is off the CD and onto your computer.

- If you are using ASPI as an access method and you receive this error, attempt to use a higher level of "fixed synch width" or try "dynamic synch width". The higher the

level of "fixed synch width" used directly increases the amount of synchronization used at the cost of speed.

- If you are using MSCDEX as an access method, increasing the value of the field "synchronize width" will increase the amount of synchronization used at the cost of speed.
- If you are receiving "Synchronization lost" errors that you feel are incorrect, go to Settings and select the Misc. tab from the bottom of the dialog. Check the item there called "Continue even if synchronization fails". Under rare circumstances, output files will show no loss of quality even if the program reports Synchronization lost errors.

ASPI did not answer

This error most commonly indicates a physical problem with your CD-ROM drive or CD media.

This error occurs most often on CD-ROM drives of lower quality. The CD-ROM drive hangs due to bad CD media, overheating, or hardware failure. Depending on your CD-ROM drive, you can fix the problem by opening the drive door and letting the CD-ROM cool off, using a different CD media, or rebooting your computer. If you are receiving this error often and there are no problems with the CD media you are using, it may be a sign that your CD-ROM drive is failing. Under some circumstances once your CD-ROM drive returns this error, it will not function properly until powered down and restarted.

Temp.wav could not be opened as a temporary record file

There are multiple reasons why you would receive this error. It is commonly associated with disk/file problems.

- In the directory you specified under Settings, there is already a file called temp.wav that is being accessed by another program or is write protected or hidden. Close the program which is accessing the file or change its file attributes.
- There is insufficient disk space to create the file. Freeing up some disk space should clear up the problem.
- The path that you specified under Settings no longer exists. Select a new work directory under the Settings dialog.

Could not initialize MP3 encoder

If your copy of AudioCatalyst™ was installed properly, you should not receive this error.

If you are receiving this error when starting AudioCatalyst™, uninstall and re-install the software.

General MP3 encoder failure

If your copy of AudioCatalyst™ was installed properly, you should not receive this error.

If you are receiving this error when starting AudioCatalyst™, uninstall and re-install the software.

SCSIHLP.VXD Issues

The latest version of Windows 95 (known as the OSR2 release or Windows 4.00 build 1111) and Windows 98 normally can't read digital audio through MSCDEX calls. (However, there is no issue with the ASPI calls.) The problem has been located to the scsi1hlp.vxd file. Even though the name suggests that the file should only be used for SCSI devices, it actually handles IDE CD-ROMs as well.

Either way, in most cases it helps if the Scsi1hlp.vxd file is replaced with the old version.

To check which version of Windows 95 you are running, do one of the following:

> Go to **Settings, Control Panel, and then System**. If it says Microsoft Windows 95 4.00.950 B, you have the OSR2 release. Note the "B" after the version digits. There is also a version 4.00.950a that doesn't work either.
>
> Go to **AudioCatalyst™, Help, and then System Information**. If it says build number 1111, you have the OSR2 release.

To check which scsi1hlp.vxd version your computer is using, do one of the following:

> Go to **Explorer**, right-click on the file C:\windows\system\iosubsys\scsi1hlp.vxd. Click on properties and then version.
>
> Go to **AudioCatalyst™, Help, and then System Information**. The version number is written to the left of Scsi1hlp.vxd version.

It doesn't matter which Windows version you are running as long as the right scsi1hlp.vxd file is used. If the CD vendor has provided its own drivers for the CD, it may work with the wrong scsi1hlp.vxd version. If you are using a version other than 4.00.950 and it is not working, replace it with the 4.00.950 version. The file is located in the C:\windows\system\iosubsys directory. Here is a link to Sony's site that contains the file: ftp://ftp.sony.com/ccpg/pc/scsi1hlp.exe

For instructions on using the scsi1hlp.exe, go to ftp://ftp.sony.com/ccpg/pc/scsi1hlp.txt

If it is not found on that site, try to find it on the Internet. Search for scsi1hlp.exe or scsi1hlp.vxd.

Make a backup copy of your scsi1hlp.vxd before you replace it. Beware of renaming it to scsi1hlp.vxd1111 or something like that. When Windows uses this file, it seems to search for a file that loosely matches scsi1hlp.vxd. Rename it to osr2vxd.bak or something similar.

You have to restart Windows after you have replaced the file!

Downgrading to the SCSIHLP.VXD has no adverse effects on your system.

DAE Speed Issues

> Some CD-ROM drives have an acceleration that the user can set. To use speed acceleration, we recommend using an intermediate WAV file.

CD-ROM Accessing Methods Unavailable

If both the ASPI and MSCDEX ripping methods are unavailable in the Settings dialog box, you need to download an ASPI manager.

Hints

CD-Ripping usually works fine without the need for special adjustments, but not always... When the process doesn't work, it's often hard to be able to suggest a definitive remedy other than trial and error. Try both the ASPI and MSCDEX methods to see which works best on your system. If you still experience problems, try with another computer. When you find a working system, swap CD readers to see if the problem lies with your computer or reader. By a process of elimination, you can determine the source of the problem. Some CD readers quite simply can't read digital audio, which is not the same as being able to play a track!

- If WAV files are incorrectly read and are found to contain pops and clicks, it sometimes helps if you click the box "Synch data transfer" under Settings -> Control Panel -> System -> Device Manager -> CD-ROM. This may help for both IDE and SCSI drives.
- There are often problems with the reading of the first sectors of a CD if the Windows 95 internal driver is used with the read method MSCDEX. AudioCatalyst™ therefore reads the first 30 frames one by one and those that can't be read properly are skipped. (It is usually the first 16 or 17 frames that can't be read.) Because the first track usually starts with silence, one will not usually notice any difference. This problem does not occur with ASPI as a rip method.
- Do not disturb AudioCatalyst™ when it is reading from the CD. AudioCatalyst™ itself will not develop any problems, the device driver between AudioCatalyst™ and the CD player may encounter problems.
- If you are about to buy a new CD player, put AudioCatalyst™ and the ag12free.dll/ag12full.dll on a floppy disk, go to the retailer and test the CD player before you buy it. There is a list of tested CDs on http://www.audiograbber.com-us.net/cddrives.cgi.
- You can drop WAV files from Windows Explorer into AudioCatalyst's™ main window to easily normalize/create MP3s (assuming you already have the WAVs.)
- If you want a track span over more than one song, you must first double-click the last one of them. Check the end frame for that track and double-click the first one. Change the end frame of the first track to the value you got from the last one. Note: This can only be done with the full version. The free version won't let you go outside the original start/end frames.
- If you get ASPI error on the last track, it usually helps if you double-click the track and lower the last sector a little. Try with 75, which equals one second.
- Some CD readers occasionally get an ASPI error. You have to test yourself to see if you can find any settings that make your CD reader work reliably.

Glossary

ASPI
Short for Advanced SCSI Programming Interface, an interface specification developed by Adaptec, Inc. for sending commands to a SCSI host adapter. ASPI has become a de facto standard that enables programmers to develop applications and drivers that work with all ASPI-compatible SCSI adapters.

MSCDEX
Short for Microsoft CD-ROM Extension, a driver that enables DOS and Windows 3.x systems to recognize and control CD-ROM players. The driver is located in a file called MSCDEX.EXE. Windows 95 replaces MSCDEX with a 32-bit, dynamically loadable driver called CDFS.