

D I G I T A L

dts

S O U N D



DTS Surround Sound in iTunes

For Windows and Mac



In This Guide

- Importing DTS CD music into iTunes (Windows)
- Streaming DTS from iTunes to Apple AirportExpress or AppleTV
- Use your iTouch or iPhone as an iTunes remote
- Using Multiple iTunes Libraries (DTS surround vs. Stereo for iPod/iPhone)
- Using .m4a files in other Windows programs
- Importing DTS CD music into iTunes (Mac)
- Digital Output (Mac)
- Digital Output options (for Macs without a digital out)

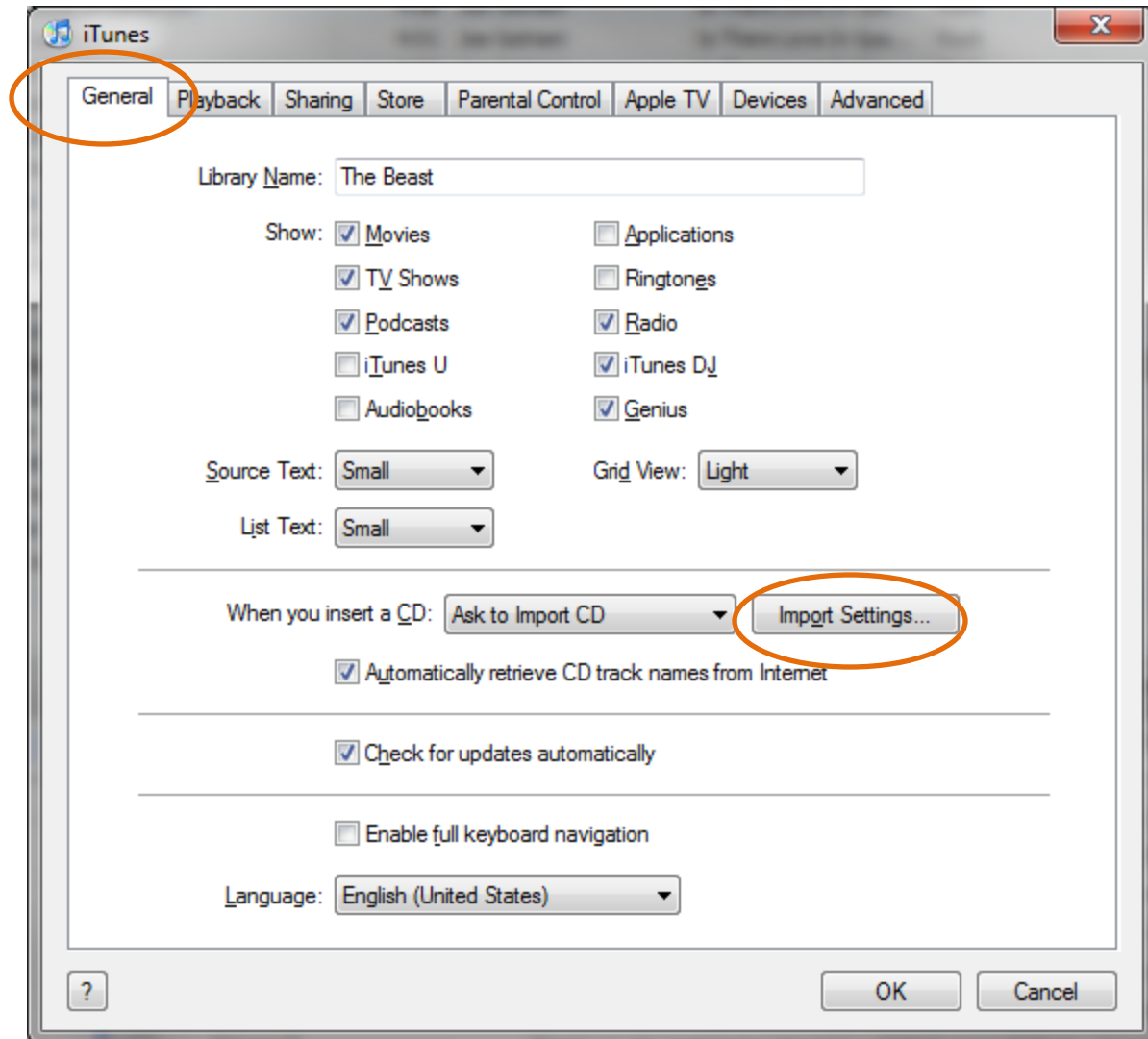
DTS and iTunes in Windows

- iTunes can stream DTS (Digital Theater Systems) encoded audio files through the optical audio out port on an AppleTV or an AirPort Express Base Station connected to an amplifier (or powered speaker set) with a DTS decoder
- Apple Lossless encoder in iTunes preserves DTS encoding of imported music



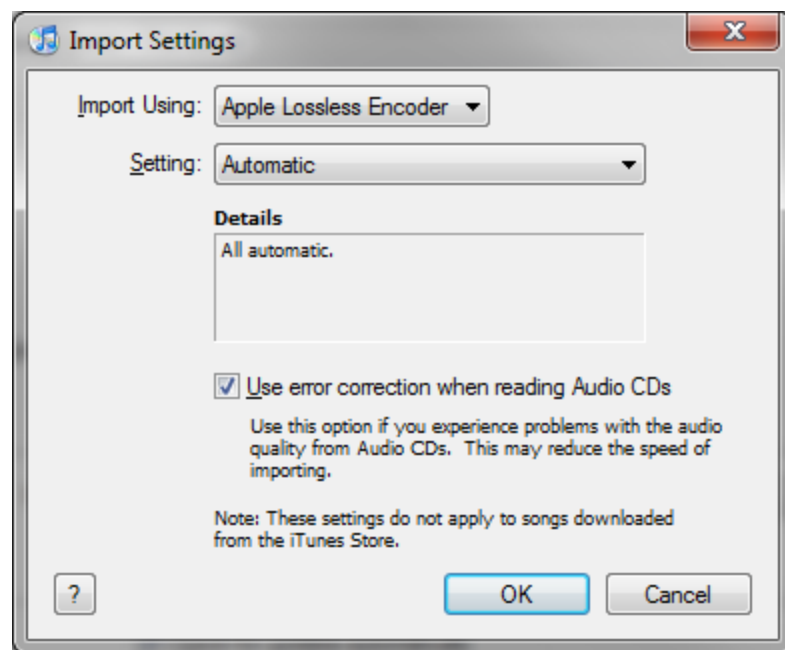
iTunes Preferences

1. On the General tab
2. Choose Import Settings



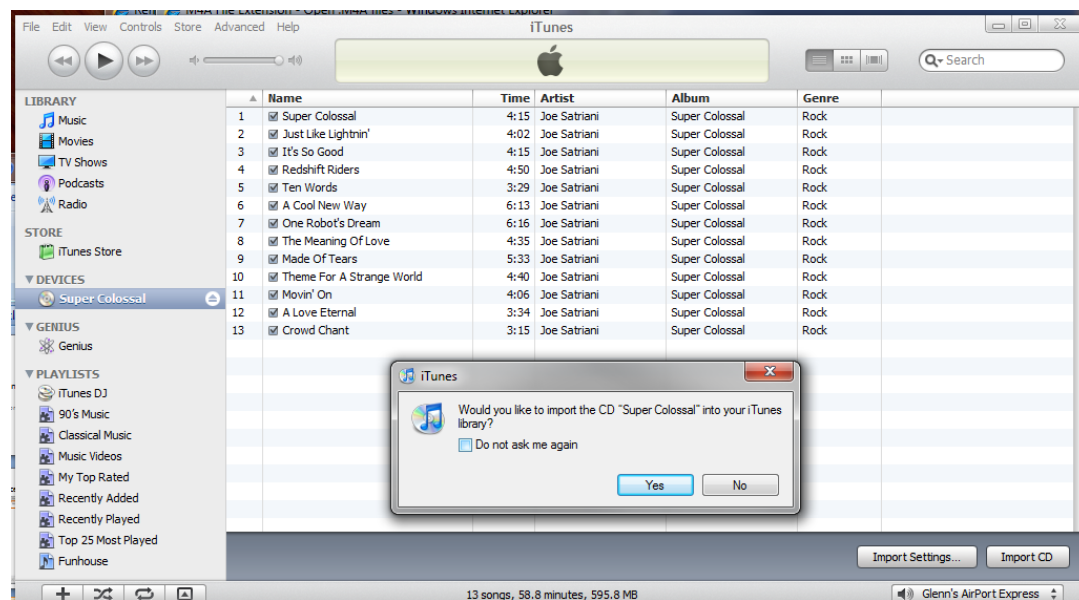
Import Settings

1. Choose “Apple Lossless Encoder”
 - That will create .m4a files
2. Click OK



Import DTS Music CDs

1. Import DTS Music CDs just as you would any CD
2. Download Artwork, make playlists, etc.!



Playback

- Because Window's Sound Subsystem (kMixer) is not "bitperfect" it cannot be used to playback DTS encoded sound
- iTunes does not
 - Allow for ASIO or other bit perfect drivers
 - Or decode DTS
- However, you can stream bit perfect to an Apple Airport Express or Apple TV
- Optical connection from there to your Home Theatre

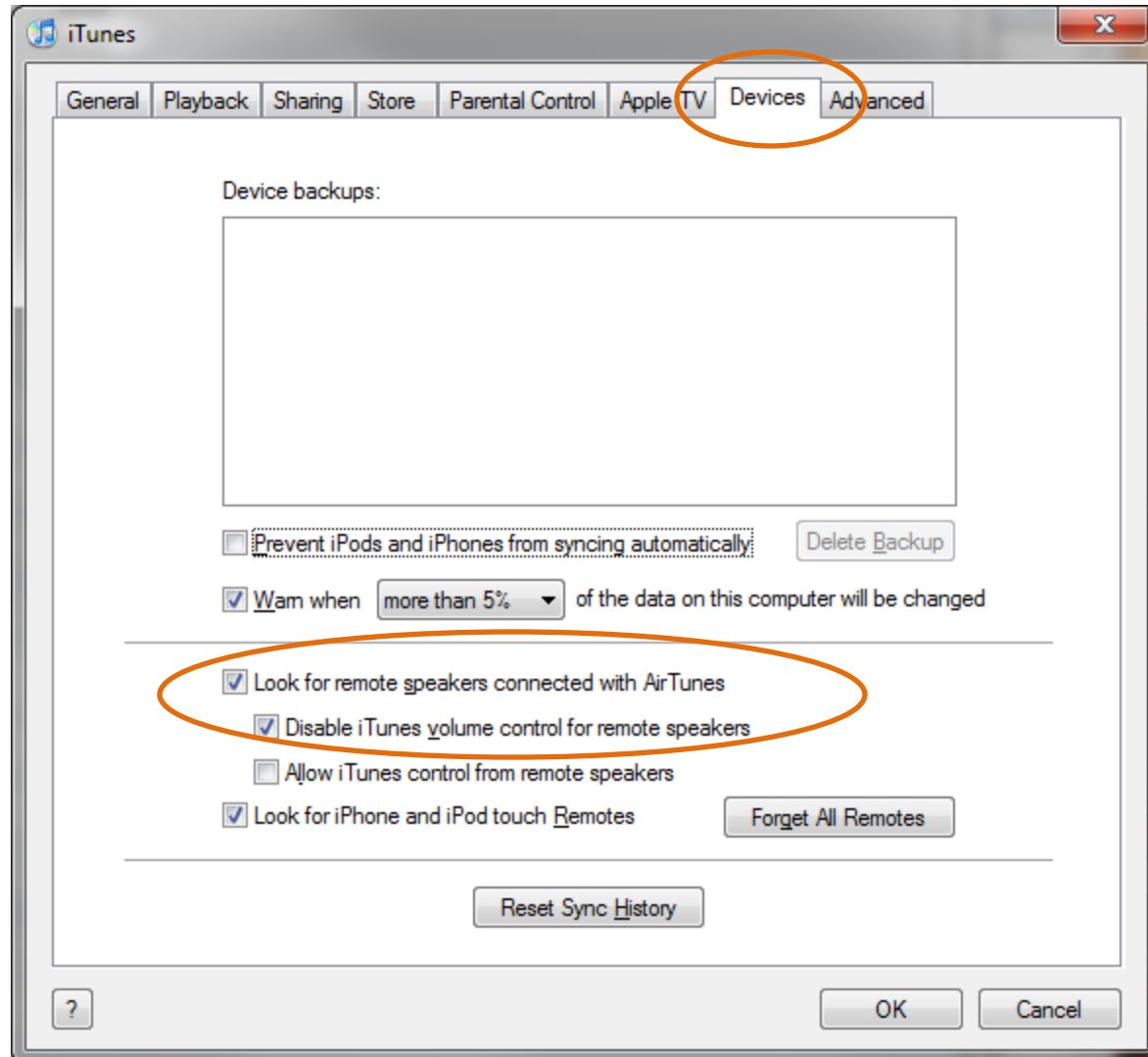
AirportExpress



- <http://www.apple.com/airportexpress/>
- WiFi Receiver with 1/8" optical output
 - Your network must have a WiFi access point or router
 - Your computer with iTunes can be connected “hardwired” or via WiFi
 - You can only stream to one AirportExpress at a time
 - Each AirportExpress can only receive from one Computer at a time
 - Connect AirportExpress to your HT with 1/8" to Toslink cable
 - Use Apple AirportExpress software to set up your AirportExpress

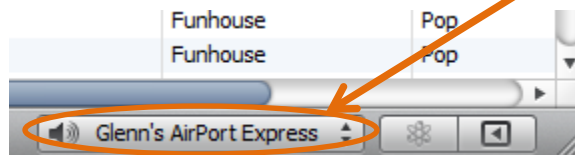
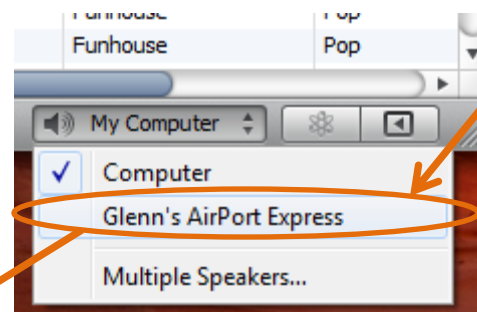
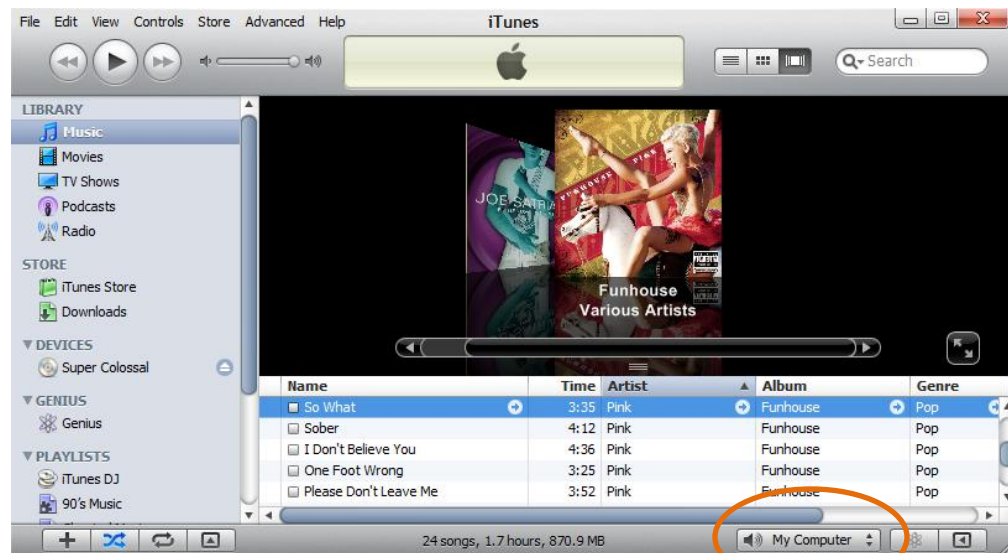
iTunes Preferences

1. On the Devices tab
2. Check “Look for remote speakers connected with AirTunes”
3. Check “Disable iTunes Volume control for remote speakers”



Select your AirPort Express

- Select your AirPort Express in the lower right-hand Corner of iTunes



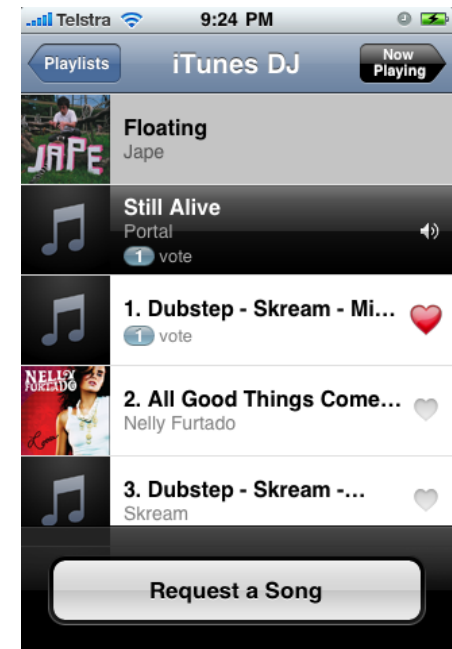
AppleTV

- I haven't tested AppleTV but it should work the same way
- <http://www.apple.com/appletv/>



Remote

- If you have an iPhone or iPodTouch you can use it as an iTunes Remote
- <http://itunes.apple.com/app/remote/id284417350?mt=8>



Mixing Stereo and Surround Songs in iTunes

- May be dependent on your HT
 - My experience is Stereo followed by Surround works, but the reverse does not, unless I turn my HT on and off
- I've chosen to have only surround sound in my iTunes library, but you could “segregate” surround by iTunes library, playlist, genre, etc.

Using Multiple iTunes Libraries

- You can have more than one iTunes library. You might want multiple libraries so that you could, for example, have a library of surround music that wouldn't be synced to your iPod
- **To create or use a different iTunes library:**
 - If iTunes is open, quit it
 - Hold down the Shift key (Alt key on Mac) while you open iTunes
 - Windows: From the Start menu, choose All Programs > iTunes > iTunes
 - In the dialog that appears, do one of the following:
 - To create a new library, click Create Library
 - To choose a different library, click Choose Library
- You can name your iTunes library (the folder containing all of your iTunes content and the iTunes Library.itl file) whatever you like and store it anywhere

Teaching Other Windows Programs about .m4a files

- Foobar2000:
 - Install the ALAC decoder component
 - <http://www.foobar2000.org/components>
- Imgburn
 - Install the DC-Bass source filter (also adds flac and other formats support)
 - [http://www.free-codecs.com/DC-Bass Source Filter download.htm](http://www.free-codecs.com/DC-Bass_Source_Filter_download.htm)
- EAC
 - Install iTunesEncode.exe
 - <http://www.hydrogenaudio.org/forums/index.php?showtopic=35242>
 - EAC External Compression options for Apple Lossless
 - Note: If you have On extraction, start external compressors queued in the background checked in EAC Options, make sure you have it set to use only one compressor thread.
 - Use file extension : .m4a
 - Program, including path, used for compression : Browse and locate 'iTunesEncode.exe'.
 - Additional command line options : -e "Lossless Encoder" -a "%a" -l "%g" -t "%t" -g "%m" -y %y -n %n -i %s -o %d -d
 - Resulting .m4a files are iTunes ready (tagged etc.)



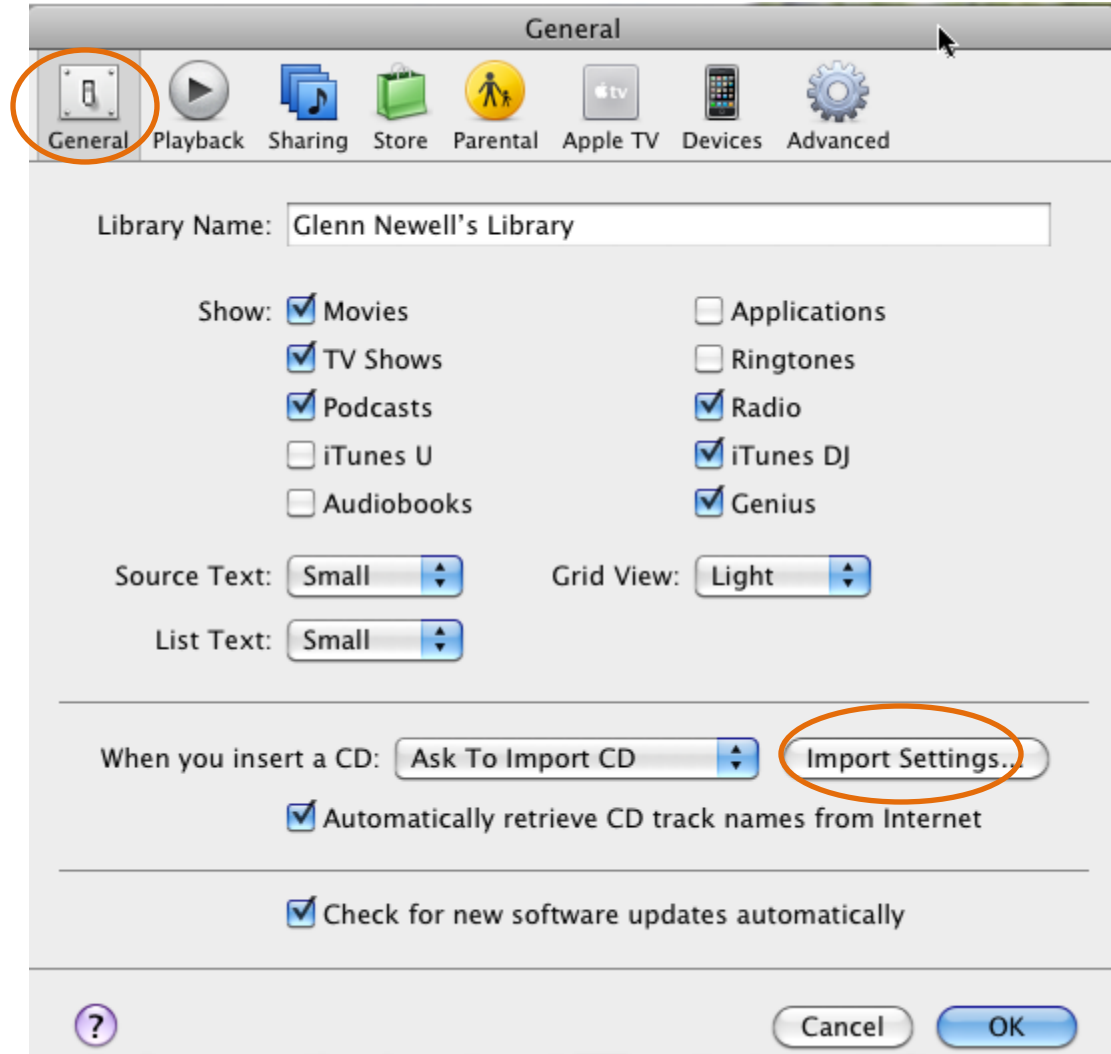
Mac

DTS and iTunes on a Mac

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- Apple Lossless encoder preserves DTS encoding

iTunes Preferences

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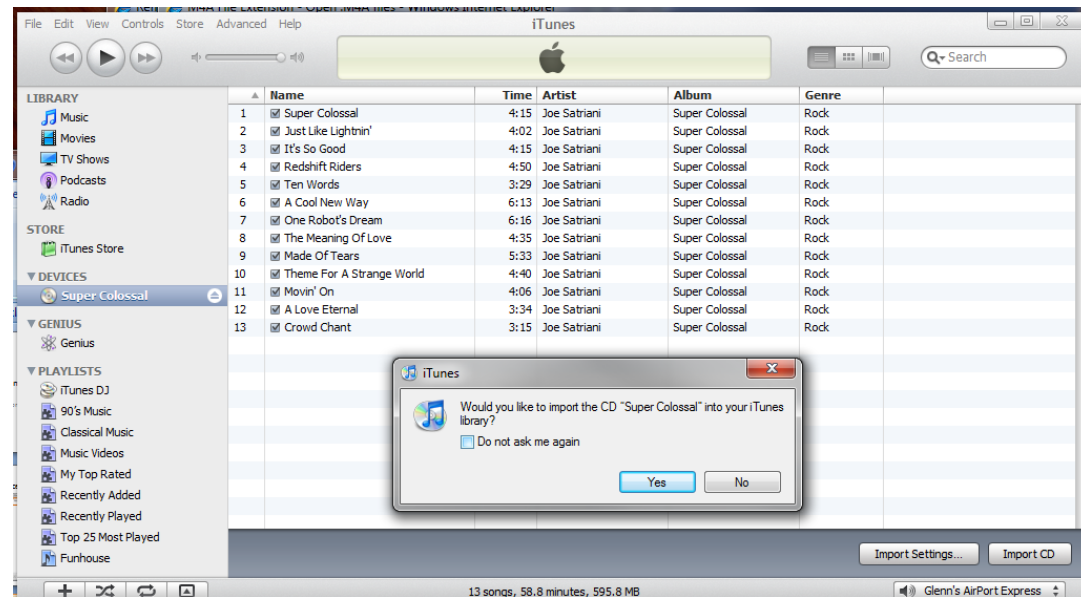
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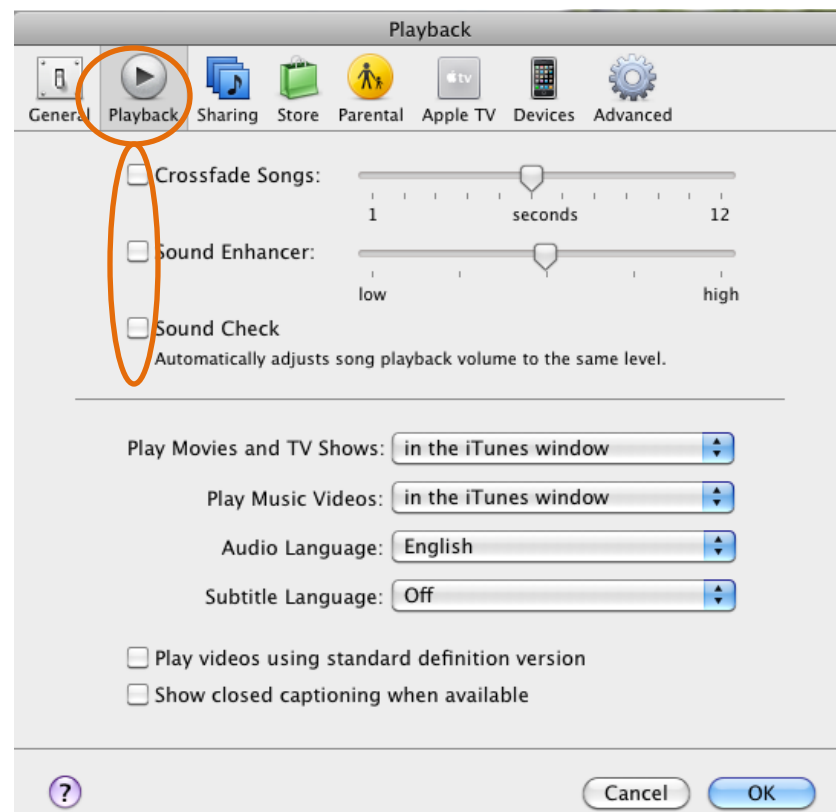
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Steps for “bit perfect” playback

1. Drag the volume slider in iTunes to maximum
2. Turn off these preferences:
 - Sound Enhancer
 - Crossfade playback
 - Sound Check
- These are on the “Audio” preferences tab in some versions of iTunes



Steps for Bit perfect playback – cont.

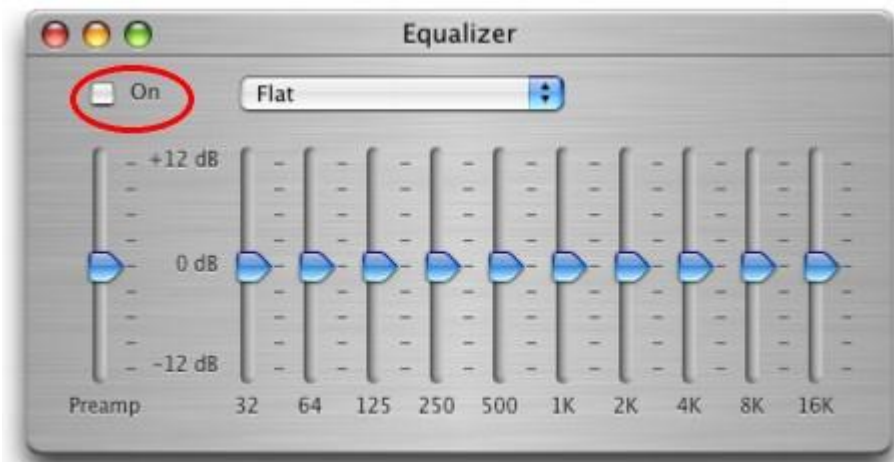
1. Turn off the Equalizer

- Click the Equalizer button



2. Make sure the Equalizer is off

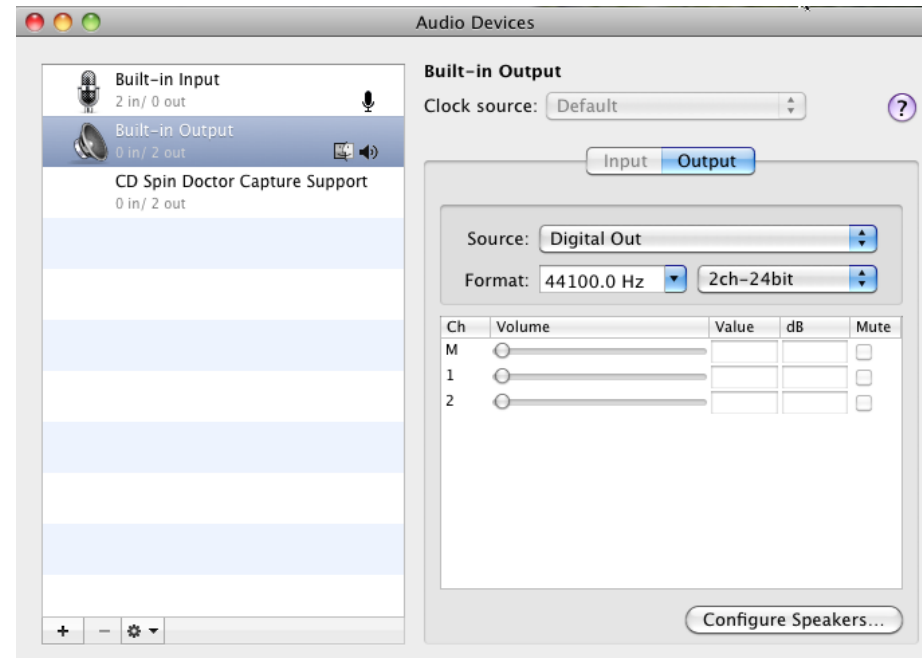
- You can view the equalizer from the window menu if the EQ button is not displayed



Audio Midi Setup



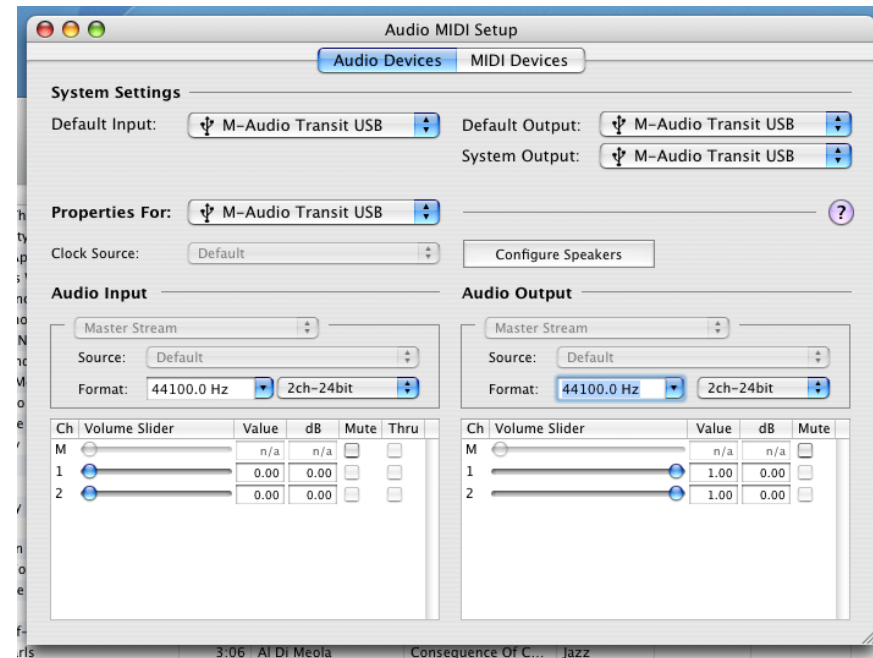
1. Go to Applications
→ Utilities → Audio
MIDI Setup
2. Set the Audio
Output for 44,100 Hz
3. 2ch-24bit
 - **Not** “encoded
digital audio”



Macs without a digital out Can use M-Audio USB sound card



1. Go to Applications
→ Utilities → Audio
MIDI Setup
2. Set the Audio
Output for 44,100 Hz



AirTunes, etc.

- Of course Macs can use AirTunes to stream DTS to AirportExpress and AppleTV
- Remote control of iTunes from iPhone or iPod Touch
- As described in the Windows section