



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

- On the General tab
- Choose
 Import
 Settings

iTunes		And inclusion in the second in	x
General	Playback Shari	aring Store Parental Control Apple TV Devices Advanced	_
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	Show:	Movies	
		✓ TV Shows	
		Podcasts Radio	
		□ i <u>T</u> unes U II orași un	
	Source Text:	: Small ▼ Gri <u>d</u> View: Light ▼	
	L <u>i</u> st Text:	: Small -	
	When you i	u insert a <u>C</u> D: Ask to Import CD	
		Automatically retrieve CD track names from Internet	
		Check for updates automatically	
		Enable <u>full</u> keyboard navigation	
	<u>L</u> anguage:	English (United States)	
?		OK Cancel	



Import Settings

1. Choose "Apple Lossless Encoder"

- That will create .m4a files
- 2. Click OK

🚮 Import Settings								
Import Using:	Apple Lossless Encoder 💌							
<u>S</u> etting:	Automatic							
	Details							
	All automatic.							
	✓ Use error correction when reading Audio CDs Use this option if you experience problems with the audio quality from Audio CDs. This may reduce the speed of importing.							
	Note: These settings do not apply to songs downloaded from the iTunes Store.							
?	OK Cancel							



Import DTS Music CDs

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

			1	É			Q- Search
IBRARY		Name	Time	Artist	Album	Genre	
🗖 Music	1	Super Colossal	4:15	Joe Satriani	Super Colossal	Rock	
Movies	2	Just Like Lightnin'	4:02	Joe Satriani	Super Colossal	Rock	
	3	✓ It's So Good	4:15	Joe Satriani	Super Colossal	Rock	
I V Snows	4	Redshift Riders	4:50	Joe Satriani	Super Colossal	Rock	
Podcasts	5	Ten Words	3:29	Joe Satriani	Super Colossal	Rock	
👷 Radio	6	A Cool New Way	6:13	Joe Satriani	Super Colossal	Rock	
TODE	7	One Robot's Dream	6:16	Joe Satriani	Super Colossal	Rock	
TORE	8	The Meaning Of Love	4:35	Joe Satriani	Super Colossal	Rock	
I Tunes Store	9	Made Of Tears	5:33	Joe Satriani	Super Colossal	Rock	
DEVICES	10	Theme For A Strange World	4:40	Joe Satriani	Super Colossal	Rock	
Super Colossal	11	Movin' On	4:06	Joe Satriani	Super Colossal	Rock	
	12	A Love Eternal	3:34	Joe Satriani	Super Colossal	Rock	
GENIUS	13	Crowd Chant	3:15	Joe Satriani	Super Colossal	Rock	
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			Vould you like	to import the CD "Su	per Colossal" into vour iTune		
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📸 Classical Music			Do not ask	me again			
📷 Music Videos							
🚮 My Top Rated					Mar Na		
Recently Added					Tes NO		
Recently Played			_				
Tag 25 March Disuad						_	
Top 25 Most Played						Impo	rt Settings Import CD
M Funhouse						Impo	Import CD



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

- <u>http://www.apple.com/airportexpress/</u>
- 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"
- Check "Disable iTunes Volume control for remote speakers"

🕼 iTunes 📃	3
General Playback Sharing Store Parental Control Apple TV Devices Advanced	
Device backups:	
\boxed{W} am when more than 5% \checkmark of the data on this computer will be changed	
✓ Look for remote speakers connected with AirTunes ✓ Disable iTunes volume control for remote speakers	
Allow iTunes control from remote speakers Look for iPhone and iPod touch <u>Remotes</u> Forget All Remotes	
Reset Sync <u>H</u> istory	
? OK Cancel	



Select your AirPort Express

Select your
 AirportExpress in
 the lower right hand Corner of
 iTunes





AppleTV

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





Remote

- If you have an iPhone or iPodTouch you can use it as an iTunes Remote
- <u>http://itunes.apple.com/app/remote/id28441</u>
 <u>7350?mt=8</u>







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
 - <u>http://www.foobar2000.org/components</u>
- Imgburn
 - Install the DC-Bass source filter (also adds flac and other formats support)
 - <u>http://www.free-codecs.com/DC-Bass_Source_Filter_download.htm</u>
- EAC
 - Install iTunesEncode.exe
 - <u>http://www.hydrogenaudio.org/forums/index.php?showtopic=35242</u>
 - 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.)





DTS and iTunes on a Mac

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



iTunes Preferences

- 1. On the General tab
- 2. Choose Import Settings

		General		•
General Playback St	haring Store Par	rental Apple TV	Devices	Advanced
Library Name:	Glenn Newell's	Library		
Show:	Movies		App	lications
	Podcasts		Ring Rad	jtones io
	📄 iTunes U 🗌 Audiobooks		🗹 iTur 🗹 Gen	nes DJ ius
Source Text:	Small 🛟	Grid View	: Light	•
List Text:	Small 🛟			
When you inse	rt a CD: Ask T	o Import CD	¢	Import Settings.
	Automaticall	y retrieve CD tr	ack nam	es from Internet
	🗹 Check for ne	w software upd	lates aut	omatically
(?)			(Cancel OK



Import Settings

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

	Import Settings
Import Using:	Apple Lossless Encoder
Setting:	Automatic
	Details
	All automatic.
	Use error correction when reading Audio CDs Use this option if you experience problems with the audio quality from Audio CDs. This may reduce the speed of importing.
	Note: These settings do not apply to songs downloaded from the iTunes Store.
	Cancel OK

?



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Tuner D1		Un Trunes					
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📸 Classical Music			Do not ask	me again			
📷 Music Videos							
🚮 My Top Rated					Mar Na		
Recently Added					Tes NO		
Recently Played			_				
Tag 25 March Disuad						_	
Top 25 Most Played						Impo	rt Settings Import CD
M Funhouse						Impo	Import CD



Steps for "bit perfect" playback

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





Cancel

OK



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

- Go to Applications
 → Utilities → Audio
 MIDI Setup
- 2. Set the Audio Output for 44,100 Hz
- 3. 2ch-24bit
 - <u>Not</u> "encoded digital audio"

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

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

	Audio	Devices	MIDI Devices				
System Setting	s						
Default Input:	🜵 M-Audio Transit US	B 🛟	Default Output:	dio Tran	io Transit USB		
			System Output:	∯ M-Au	dio Tran	sit USB	÷
Properties For:	🜵 M-Audio Transit US	B 🛟					- (
Clock Source:	Default	Å Ŧ	Configure Spe	akers			
Audio Input –			Audio Output				
- Master Stream	, (†)		Master Stream		*) -		
Source: De	fault	\$	Source: Def	ault			÷
Format: 441	100.0 Hz 2ch-24bit	•	Format: 441	00.0 Hz	2ch-2	4bit	•
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1 0	0.00 0.00		1		1.00	0.00	
2	0.00 0.00		2	C	1.00	0.00	- 1

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