

# Join Together v5.1.5

## AppleScript Studio Application for iTunes

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at Doug's AppleScripts for iTunes.

This application will enable you to join the files of selected iTunes tracks together with Quick Time and export them as a single AAC file/track. Optionally, with Apple's "Chapter Tool" application installed, you can then create a "chapterized" audio file of the exported AAC file.

**Requires:** Mac OS 10.4 ("Tiger") or better  
iTunes 4.9 or better (version 6 or better preferred)  
QuickTime Player v7.0 or better  
Chapter Tool *required* for creating "chapterized" AAC's

This application is Donationware. If you use it and like it *please* consider making a donation to support my AppleScripting efforts. [Click here for more info.](#)

### Installation:

Place the Join Together application anywhere it is conveniently accessible. The Applications folder is as good a place as any. Because Join Together is an application I do not recommend placing it in your iTunes Scripts folder since it cannot be accessed from the iTunes Script menu. (See the accompanying "Make A Join Together Launch Script" to create a small AppleScript that *can* launch Join Together from the iTunes Script menu.)

### QuickTime v7.x.x

In order to export joined files as AAC files you **must** have QuickTime Player 7 or better.

### Chapter Tool

"Chapter Tool" is a command-line application that assists with creating "chapterized" audio files, (a.k.a. *enhanced audio files*). This script utilizes it to create such files from your joined tracks.

You can download the Chapter Tool application (currently Beta 2.0b8 as of this writing) by clicking on the URL clip provided in this script's download package. The direct download URL is <podcast\_chapter\_tool\_beta.dmg> or <[http://homepage.mac.com/applepodcast/podcasts/Resources/static/podcast\\_chapter\\_tool\\_beta.dmg](http://homepage.mac.com/applepodcast/podcasts/Resources/static/podcast_chapter_tool_beta.dmg)>

The "Chapter Tool" folder must be installed in your *username > Music* folder, as its instructions also direct.

You should be familiar with how "Chapter Tool" works; however you needn't actually be proficient with it since the "Join Together" applet handles all the required input and command-line operations.

### How to use:

Launch Join Together by double-clicking its icon.

In iTunes, select some **unprotected** tracks whose files you want to join\*.

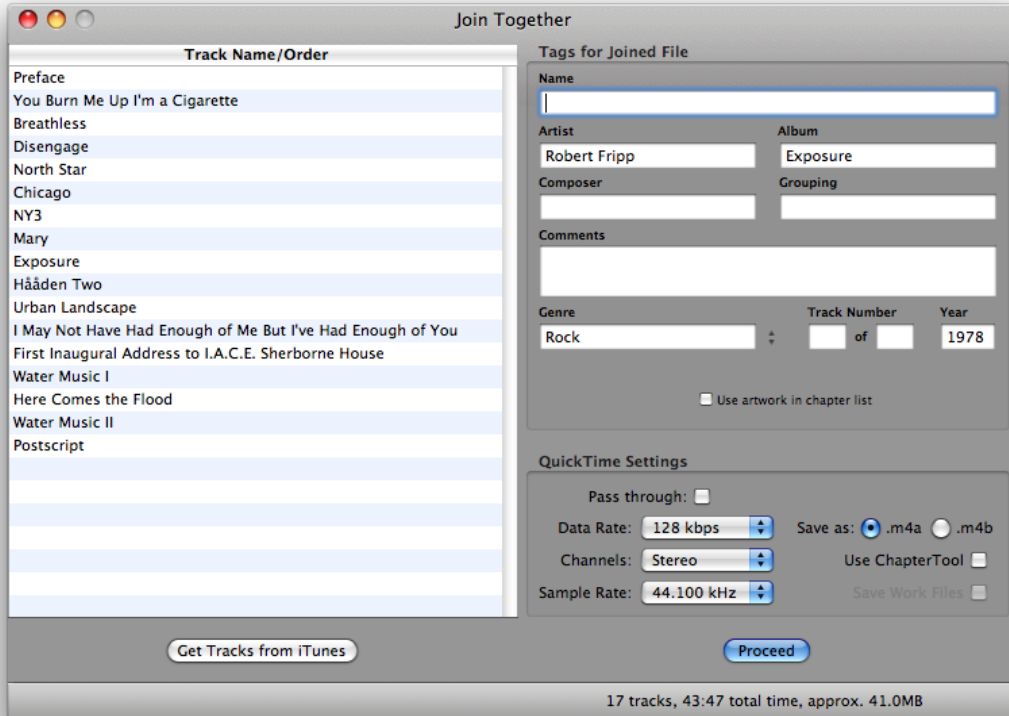
- Alternatively, you can just select a **playlist** containing the tracks whose files you want to join.
- Or, you can select a **CD playlist** and all the enabled (check-marked) tracks will be joined.

**\*Note:** If you have selected any Protected AAC tracks which cannot be copied, such as those purchased from the iTunes Store, you will be alerted *after* the files have been opened in QuickTime. However, tracks converted with my AppleScript "Make Bookmarkable", even though they display as Protected AAC tracks, *can* be selected, joined, and exported.

In Join Together, Click the "Get Tracks from iTunes" button or click "Get Tracks from iTunes" in the File menu, or press Command-G.

- If useable tracks or a playlist of useable tracks have been selected in iTunes *before* running Join Together then they will be displayed in Join Together's main screen at startup. Otherwise, the main screen will be blank until you have selected tracks or a playlist in iTunes and clicked "Get Tracks from iTunes".
- If the combined time of your selected tracks is greater than 12 hours, you will see a red exclamation point to the left of the "Proceed" button. This is to warn you that the final joined file *might not* be able to be exported by QuickTime. Your mileage may vary. (See "QuickTime Export Size Limit", below.)

The main screen will populate with the selected tracks names and any common tags:



#### "Track Name/Order" Box

The left section of the screen, the **Track Name/Order** box, will display the selected tracks in the order you selected them.

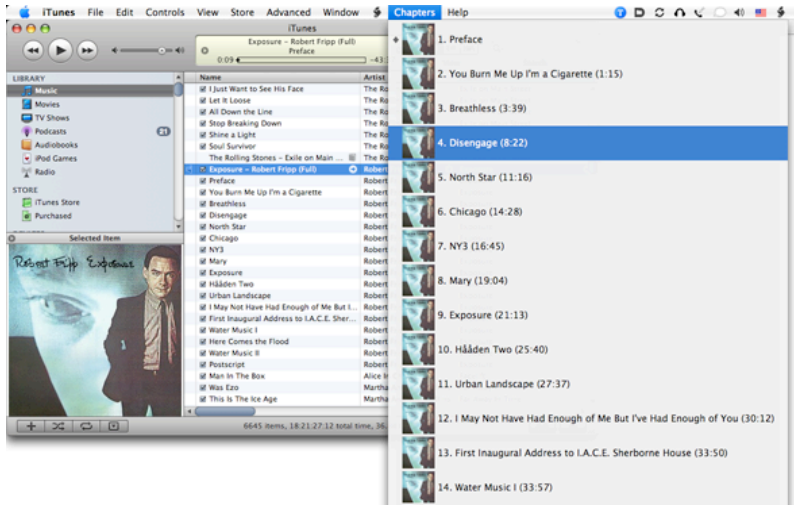
- Track order can be **re-arranged** by clicking and dragging a name to a new location in the list.
- Track names can be **edited** by double-clicking on them. These are the names that will appear in the chapter list—if you decide to use ChapterTool to chapterize the final joined file.
- To **revert** the tracks back to their original order and names after making changes, click the **Track Name/Order** column heading.

#### "Tags for Joined File" Section

You can enter Name, Artist, Album, Grouping, Composer, Comments, Genre, Track Number/Count and Year tags for the final joined file. All tags *except* the Name tag are optional. However, text that appears in any of the tag text boxes *will* be assigned to the final joined file's corresponding tags in iTunes.

Click the Genre popup menu to display all of the Genre names currently used by your iTunes. Select a Genre name from the popup and it will appear in the Genre text box. Otherwise you can just enter a new Genre name in the Genre text box.

If any of the selected tracks contain album art then you can choose to use the available artwork in the chapter list created by Chapter Tool (if you will use Chapter Tool) by clicking in the "Use artwork in chapter list" check box.



Chapterized joined file with artwork in the chapter list. As of iTunes 7 the "Chapters" Menu appears when a track with chapters is selected.

- Album artwork from the first track will be used as the album artwork for the final joined file. This is a bug/feature. Currently, Join Together has no option to select a *specific* track's album artwork for the final joined file. Of course, you can add your own artwork after the file has been added to iTunes.
- A joined file created from CD tracks will have no album artwork.

### "QuickTime Settings" Section

Join Together's **QuickTime Settings** are similar to QuickTime's Audio export settings.

If the files of the selected tracks can be exported using the Pass Through audio export setting (this exports a joined AAC file *very quickly* using the **same common bit rate** as the selected files) the Pass Through check box will be available. The files must be of the same bit rate to be exported with Pass Through. CD tracks cannot be exported with Pass Through. (See **Pass Through and iTunes 7.5, QuickTime 7.3** in the **Important Notes** section below.)

Otherwise, you can set your export options using the Data Rate, Channels, and Sample Rate popup boxes. As you do so, the approximate size of the final joined file will be updated in the track information at the bottom of the main screen.

- If you select Pass Through, the sample rate and data rate used for the final file will be displayed to the right of the Pass Through check box.

You can select to save the final joined AAC file with an ".m4a" or ".m4b" extension and corresponding Macintosh file type ("M4A" or "M4B", respectively) using the "Save as:" radio buttons. .m4a files are "regular" AAC files, .m4b are "bookmarkable". In any case, the track will be set in iTunes to "Remember playback position".

If ChapterTool is installed correctly, you will see the ChapterTool check boxes. Check the "Use ChapterTool" check box to create a chapterized (aka "enhanced") exported file.

Checking "Save Work Files" will preserve the pre-chapterized audio file, exported artwork (if any) and the XML file used to create the chapterized audio file to a folder on the Desktop. Otherwise, these files will be deleted when the script has finished. It isn't necessary to save the work files, but some users have asked for this option.

*The "chapterizing" operation requires the correct installation of Apple's ChapterTool command-line application in your `username > Music` folder. Please read the documentation that accompanies ChapterTool for the correct installation procedure. In essence the Chapter Tool folder with all its contents intact must reside in the `username > Music` folder.*

Your export settings will be saved to be used for the next session.

When all settings have been established, click the "Proceed" button (or press the "return" key on your keyboard). Depending on your settings, processing can range from just a minute to *several hours*. Be patient!

The final joined file will be added to iTunes. The file itself will be saved to the iTunes Music folder (the folder designated in iTunes' Preferences.../Advanced/General) in the appropriate Artist-Album folder.

### Important Notes:

- **Pass Through and iTunes 7.5, QuickTime 7.3** - As of iTunes 7.5, iTunes' AAC encoder will only allow encoding using ABR (Average Bit Rate) and VBR (Variable Bit Rate). These are the options when "Use Variable Bit Rate Encoding" is un-checked and checked, respectively, in the Custom AAC encoding dialog. Previous versions of iTunes could encode without VBR using CBR (Constant Bit Rate), which enabled QuickTime's "Pass through" encoding option to be used; this option is only available if each file in the final joined file is of the same bit rate. Regrettably, files converted or imported with iTunes 7.5 will not use CBR and, thus, will not all have the same bit rate and the "Pass through" option will not be available.

- **Re-Joining Already-Been-Joined Files** - QuickTime does not read chapterized audio files so you cannot join files that have already been joined using "ChapterTool". Joined files that have *not* been chapterized can be re-joined.

- **Unresponsiveness During Export** - Because "It's The Way It Is", if you switch to another application during QuickTime's export process you will be unable to access either the QuickTime or the Join Together progress indicator windows. One way of getting around this is to use Expose's "Hide/Show All Windows" command by clicking the F9 button to display all open windows. Then look for the QuickTime progress window amongst the displayed windows. When QuickTime has completed the export, Join Together will come forward as soon as possible and proceed.

(**Spaces in Leopard** - I have experienced crashes when switching Spaces while QuickTime is exporting. It could be my set-up or it could be the way *Spaces* handles application threading. I'll keep an eye on this.)

• **Audio Files created with iTunes 5.x** - An iTunes 5.x bug prevents audio files imported or converted with iTunes 5.x from being recognized correctly with the Pass Through setting. The result is that only the first of the joined files will be recognized in the final joined file. This bug was fixed in iTunes 6. However, if it so happens that only one of your joined files is recognized then this may be the reason.

• **iTunes 7 "Master" Libraries** - iTunes 7 introduced segregated libraries for Music, Movies, Audiobooks, Podcasts, TV Shows. For better or worse iTunes will *automatically* place ".m4a" tracks in the Music library and ".m4b" tracks in the Audiobooks library. There is no getting around this.

• **Gaps Between Tracks** - "Gapless" joined files are possible when the following conditions are met:

- All selected tracks are CD tracks
- or
- All selected tracks have a sample rate of 44.1 kHz
- All selected tracks have the same bit rate

Files that have been imported or converted with QuickTime or iTunes seem to be better candidates for gapless joins.

• **CD tracks, AIFF, and WAV files** work very well (especially live recordings or "Darkside of the Moon"-type productions where track audio is contiguous). **Apple Lossless** files are ignored in any case since joining them in QuickTime would create a monstrously large file.

• **AAC and MP3 files** seem to be a toss-up for gapless. It appears that QuickTime adds a small amount (about .040-.050 seconds for 44.1 kHz files, for example) of *something* to the beginning of these files. I am unable to determine the exact length of this dead space per file, and thus, it cannot be edited out precisely. (If you want to see what I mean, open an AAC in QuickTime and check its duration in the Movie Info window. Then, open it in GarageBand and note the approximately .050 seconds of time discrepancy.) I myself have not experienced a problem with gapless files, but there were some reports from beta-testers who could not completely eliminate gaps between AAC/MP3 files under various (and undeterminable) circumstances.

A workaround would be to simply join CD tracks directly. If you wish to join the tracks from multiple CDs, rip the CD tracks as AIFFs first and join the AIFF files in Join Together. Converting AACs or MP3s to AIFF is not particularly recommended due to audio quality issues, however, this is also a reliable workaround.

• Files obtained through other means—a different ripper, for example—*may* not produce a completely gapless joined file.

#### QuickTime Export Size Limit

My friends at 3AM Coffee Software have pointed out that QuickTime can only export about thirteen and a half hours of audio in a single file:

*"The 13½ limit comes about because QuickTime does not (easily) allow more than 2 billion samples in a single file. CDs are ripped at 44,100 samples per second (44.1 kHz), so this works out to about 13½ hours. If your tracks have a different sample rate, take 596 and divide by the sample rate that iTunes reports (in kHz) to get the maximum number of hours that [QuickTime] can handle (e.g. 596/44.1 is about 13.5)."*

Thanks to Derrick Bass of 3AM for bringing this to my attention.

If the combined time of your selected tracks is greater than 12 hours, you will see a red exclamation point to the left of the "Proceed" button. This is to warn you that the final joined file *might not* be able to be exported by QuickTime. Your mileage may vary.

#### Chapter Names Displaying in iPod

You may have noticed that when a chapterized Podcast is played on the iPod its chapter names will be displayed when navigating the chapters. Unfortunately, this effect is only possible when iTunes has actually downloaded a Podcast from the internet. This effect is not possible with a chapterized audio file *before* it has been downloaded by iTunes, such as those created by Join Together.

However, if you want to get this effect with chapterized files created with Join Together, you can use a script I wrote called "Re-Add Selected Tracks as Podcast":

<<http://www.dougscripts.com/itunes/scripts/ss.php?sp=readdaspodcast>>

This script tricks iTunes into "downloading" a selected track's file from your Mac's built-in Apache web server so that iTunes treats it as a Podcast episode audio file; you must have Personal Web Sharing activated in your Sharing Preferences. More details about this script are available online via the link above. (As of this writing, sorry to say, the "Re-Add Selected Tracks as Podcast" script has not been updated for Mac OS X 10.5.)

#### Future Development

It has been suggested to include options that delete source tracks/files, provide ability for user to select location for saved final joined file, provide ability to select playlist to which to copy final joined file's track, and so on. Your ideas are worthy of consideration so let me know.

#### Helpful Links:

Click on the underlined URL text:

- [Doug's AppleScripts for iTunes](#)
- [Assign Shortcut Keys to AppleScripts](#)
- [Download FAQ - Info on downloading and installing AppleScripts](#)
- [Doug's RSS Feed - Recent site news, script additions and updates](#) (add link to your news reader)
- [30 Most Recent RSS Feed - Most recent new and updated scripts](#) (add link to your news reader)

**Information and download link for this script is located at:**

<http://www.dougscripts.com/itunes/scripts/ss.php?sp=jointogether>

"Polished Window" GUI courtesy of Matt Gemmell, <<http://mattgemmell.com/>>, who has some other excellent Xcode source code available for download.

**Version History:**

v5.1.5 december 6 2007

- Fixed rare problem that prevented iTunes' Chapter Menu from displaying chapter names when playing chapterized file

v5.1.4 november 24 2007

- Fixed problem during chapterizing when track names contain high ASCII characters

v5.1.3 november 7 2007

- maintenance release; updated for Mac OS X 10.5 (Leopard)

- new icon

- added "Check For Update" menu option

- added "Comments" tag for final joined file

v5.1.2 april 5 2007

- fixes -54 file error and -2753 variable error

- includes "Make A Join Together Launch Script" applet

v5.1.1 march 5 2007

- fixes error when attempting to generate Genre names list from the XML file of a loaded multiple library (iTunes 7 or better)

- prohibits every track of "Music" or "Audiobooks" playlist to be auto-selected (when no specific tracks in them are selected)

- renames some error message variables in attempt to locate specific "variable m not defined" error, which is to be fixed in a future version

v5.1 september 22 2006

- fixes problem with iTunes 7 that prohibited selecting tracks in the "Music" playlist

- now able to select, join, and export tracks converted to ".m4b" with the AppleScript "Make Bookmarkable" which appear in the iTunes 7 "Audiobooks" playlist--despite being listed as "Protected". (True "Protected" files, such as those from the iTunes Store, cannot be joined.)

- waits for QuickTime to fully load each file before proceeding

v5.0.2 july 17 2006

- fixes problem with extended ASCII characters in Song Names which could cause a fatal AppleScript error

- no longer creates temporary work folder in /Library/Application Support, uses ~/Library/Application Support instead, avoiding permissions errors

- fixes rare error that could occur when "use artwork" is selected and no artwork exists for a selected track

v5.0.1 july 12 2006

- removes "beta expired" notice

v5.0 july 11 2006

- now an AppleScript Studio application, optimized as a universal binary

- provides single screen GUI for settings input, progress indicator

- added additional tags for final joined file

- added full range of QuickTime audio export settings

- most setting preferences saved between sessions

- ability to re-organize and rename selected tracks

- option to use track artwork in chapter list

v4.0.2 may 12 2006 (last AppleScript version--no longer being developed as such)

- compatible with QuickTime Player 7.1

v4.0.1 april 28 2006

- no longer prohibits using same-named tracks

v4.0 april 19 2006

- changed applet name to "Join Together" (formerly "Join Tracks and Chapterize")

- will join enabled (check-marked) CD tracks

- works properly when FileVault is active

- saved as Run-Only, source available by request

v3.3 march 20 2006

- Active Spotlight no longer a requirement

- QuickTime Pro no longer a requirement; the non-Pro version of QuickTime Player is still required

- attempts to correct for miniscule "frames" gap occurring between joined MP3 and AAC tracks (44.1 kHz files/"Pass-Through" setting only)

- option to save the Chapterizing XML file and pre-Chapterized audio file to a folder on the desktop

- displays bit and sample rate for Pass-Through option in export settings choose box; hilites if possible to use

- warns if final file will be over 12 hours long, a length QuickTime "may not" be able to handle--see Read Me

- corrected error when trying to set front window to library playlist 1 if front window "not" a browser window (eg, a video playback window); now a try block

- fixes potential timeout error on final dialog

- streamlining of code

v3.2.1 january 3 2006

- fixed problem that may have generated an error if "Chapter Tool" not installed

v3.2 december 27 2005

- provides option to use either .m4a or .m4b as joined file extension and file type

- selecting to use Chapter Tool is now at the start of operation, no longer after file is joined

- unless concatenating MP3 files, audio files are no longer copied to temporary folder

- "Done" dialog will give up after 60 seconds

- streamlining of code

v3.1 december 18 2005

- added 64 kbps/44.1 kHz/Mono AAC export setting at user request

- creates new QT movie rather than new QT audio recording, as this resulted in errors for some users without an audio recording device

v3.0 october 13 2005

- restored "Pass-Through" option since a previous bug in iTunes 5 has been fixed in iTunes 6

v2.1 sept 21 2005

- MP3s can be concatenated with 'cat', when criteria is met (restored from previous version)

- provides timeout error checking on choose dialogs

- "Chaperize?" dialog will not timeout

- prohibits naming joined track using same name as of one of the selected tracks

- stores and resets QT's "open movie in new player" preference to ensure files open in separate windows

- error checking during export of QT file detects "Cancel" and quits

- some code consolidation

v2.0 sept 14 2005

- can accept any combination of MP3 or AAC tracks for joining and export as AAC with QTPro

- files must be exported from QTPro using AAC-LC settings, rather than the "Pass Through" settings used in previous versions of the script

- converts exported QT file to file type "m4a" and creator type "hook" (iTunes)

- final tracks will be made bookmarkable (requires iTunes 5 or better)

- converts European time formats for Chapter Tool compatability, i.e: 12:34.5678 to 12:34.5678

- checks for and prohibits using same-named tracks

- adds option to supply Composer tag
- removed check for same kind (except "Protected AACs") and bit rate
- QT now closes source movies after copying data

v1.1.1 jul 22 2005

- code adjustments to prevent 'file not found' errors under some circumstances

v1.1 jul 20 2005

- added timeout blocks to cp and mv commands to ensure large files get moved correctly
- fixed problem with converting common XML entities
- set working directory name to "\_\_temp\_join\_folder" rather than using unique playlist name

v1.0 jul 18 2005

- initial release

this doc last updated April 4 07

**If you have any trouble with this application, please email me.**

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