

Building Your Digital Music Library

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iTunes' foremost function is as a digital music organizer, a way for you to replace your bulky CD collection with a flexible, programmable digital music library that fits inside your computer. To accomplish this, naturally, you'll have to get your music into iTunes somehow.

Recently, iTunes has added video playback to its repertoire—music videos, TV shows, short films, videos downloaded from the Internet, and even home movies that you make with your own camcorder. Even though the software is still called *iTunes*, its features include video organizing methods and playback functions that turn it into a complete multimedia jukebox that stores all your favorite pieces of entertainment.

Music you add to the iTunes Library comes from any of the following sources:

- Imported (*ripped*) from CDs you already own
- Imported from your existing collection of MP3, AAC, or unprotected WMA files
- Imported as an individual music file that you receive or create yourself or one that you convert from an analog format such as a tape or vinyl LP
- Copied in automatically by iTunes during installation. (See **2** [Run iTunes for the First Time](#))
- Purchased from the iTunes Music Store

Similarly, videos can come from any of the following sources:

- Created yourself using a camcorder and video editing software
- Downloaded from the Internet
- Purchased from the iTunes Music Store

The iTunes Music Store, the method for acquiring new music and videos that requires the least effort and the fewest middlemen, is covered in **18** [Sign Up for the iTunes Music Store](#) and related tasks in Chapter 4, “Using the iTunes Music Store.” The tasks in this chapter cover the remaining methods of building your music and video collection, particularly the one for which the iTunes interface was primarily designed: importing music from your existing CD collection. The chapter begins with an introduction to the kinds of music and video files you will encounter while using iTunes, and the different types of entertainment items that iTunes organizes for you.

8 About Music and Video Formats

→ SEE ALSO

72 Convert Audio Files to Other Formats

No matter how easy to use a piece of software is, there are some trivialities of computer technology that you just can't escape. One of these bits of esoterica is the plethora of digital music and video file *formats* that you'll encounter while using iTunes. Ideally, and for the most common paths of use, file formats are little more than a curiosity you never have to deal with yourself; but the moment you try to do anything at all advanced with your music, you'll find yourself surrounded by what seems an alphabet soup of acronyms and labels, lurking malevolently just under iTunes' polished surface. It pays to know what each of these formats is all about and how to deal effectively with it.

Here you'll learn what the different formats that iTunes recognizes are used for, and—more importantly—how they relate to the different styles of music and video entertainment that iTunes helps you to collect.

Music File Formats

All digital music files follow essentially the same idea: a series of numbers that describe the pitch and intensity of the sound waveform at each particular instant in the audio stream, all adding up to a familiar musical sound when it's interpreted by software such as iTunes at normal playback speed. Different kinds of files differ, though, in exactly what form those numbers take. Some music formats support *compression* (the ability to reduce the file size by discarding relatively unimportant sound information, or by indexing small repeated fragments of sound instead of encoding all of them directly—in addition to other, ingeniously mathematical methods). Some formats support *Digital Rights Management (DRM)*, enforcing copy protection. Some forms of digital audio files encode stereo data differently from others, resulting in a somewhat different sound quality. These subtle but important differences are what make some formats more suitable for certain tasks than others, and explain why we have to deal with so many different file formats in the world of digital music.

▶ KEY TERMS

Format—The specific internal data structure of a digital music or video file, determined by the software that first popularized a given type of file. Competing software has often resulted in different incompatible formats for similar kinds of files.

Compression—Fitting more music into a fewer number of bytes by discarding unimportant musical data or indexing repeated patterns.

The following audio file formats are either supported directly by iTunes or destined to be a part of your life as you work with iTunes. Except where noted, the customary filename extension—the three or four letters after the final period (.) in a file's name—is the same as the acronym of the format listed.

- **CDDA (Compact Disc Digital Audio)**—An uncompressed, true stereo digital audio stream made up of a simple series of audio samples. This is the standard format in which every commercial audio CD is encoded and the format in which iTunes burns audio CDs. The CDDA format is essentially interchangeable with AIFF and WAV formats, and it's almost never used directly on computers.
- **AIFF (Audio Interchange File Format)**—An uncompressed audio stream format developed by Apple and popularized as the default sound format of the Macintosh platform. It is still the preferred format for raw audio editing on the Mac. You can convert AIFF files without loss of quality to WAV format and back.
- **WAV (Windows WAVeform file)**—An uncompressed audio stream format developed by Microsoft and IBM. Equivalent to AIFF in its supported features and file size, WAV is the default raw audio format for Windows. You can convert WAV files without loss of quality to AIFF format and back.
- **MP3 (MPEG-1 Audio Layer 3)**—Developed in the early 1990s as part of the MPEG video/audio compression specification, MP3 is the first audio format to have brought the file size of individual song tracks down to the point where they could be easily transferred across the Internet while still sounding nearly true to the original CD-quality sound from which they were derived. Encoding technology for MP3 files is subject to patents held by Thomson Consumer Electronics and the Fraunhofer Institute, which contributed to the format's original design. MP3 is a *lossy* compression format, meaning that any music converted to MP3 format cannot be flawlessly converted back to its original format; some music data is inevitably lost. The benefit is that an MP3 file usually achieves about a 12:1 compression ratio over the uncompressed source, depending on the *bit rate* you select during encoding.

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► KEY TERMS

Lossy—A compression or conversion process in which some sound information or resolution is irretrievably lost, as when encoding a CD to MP3 format. The converse is *lossless* compression, meaning a reversible process in which no information is lost.

Lossless—A compression or conversion process that preserves perfect sound quality from the original source. Lossless compression doesn't achieve such small file sizes as *lossy* compression, but it's reversible.

Bit rate—The number of bits per second consumed by an audio stream. The bit rate can be constant or variable. If the rate is constant, you can use it to calculate how much disk space a song file will take up.

MP3's compression is achieved through a number of techniques, including the discarding of superfluous (inaudible) audio data and the application of psychoacoustics. Stereo information is usually done in “joint stereo” mode. That means that instead of two separate tracks for the left and right channels, most information is recorded as a “mono” track and a separate channel records the separation from left to right, which saves on file size. Also, Variable Bit Rate (VBR) encoding is frequently employed to encode lower-complexity sections of music at a lower bit rate, saving space without sacrificing audio quality.

MP3 files have no DRM technology built in, so there is no way for a copyright holder to control or track the spread of an MP3 version of a song. MP3 files do, however, have **info tags**—also known as ID3 tags—that allow the user to embed a wide variety of organizational information into the file's text headers. This information does not interfere with the audio stream, but it gives software such as iTunes the ability to organize MP3 files with much better control and flexibility than with filenames alone.

In iTunes, an MP3 file is identified in the **Kind** column as **MPEG audio file**.

- **AAC (Advanced Audio Coding)**—The official successor to MP3, AAC (another lossy compression format) is the latest iteration of the audio specification in the MPEG standard, part of the MPEG-4 framework that underlies modern versions of **QuickTime**. Apple is currently the most visible company using AAC in its products, although it is far from being a “proprietary” format; the only thing proprietary about AAC as used in the iTunes Music Store is the way the DRM scheme (known as FairPlay) is keyed to individual purchasers. Functionally, however, as far as any company that wants to interoperate with music purchased through iTunes, Apple's format is essentially closed.



AAC files incorporate many advances over the earlier MP3 format, including as many as 48 distinct audio channels, a more dynamic form of stereo encoding, and a notably smaller file size for files that are encoded with the same subjective sound quality. This means that if you encode your CD collection in AAC format instead of MP3, you can save about 25 percent of your disk space (which, remember, also applies to the space available on your iPod). AAC supports all the same info tags that MP3 does.

There are two flavors of AAC as used in iTunes: *protected* and *unprotected*. Protected AAC files are keyed to an individual purchaser's identity and cannot be opened on a given computer unless that computer has been

authorized with the central iTunes authorization servers; as many as five separate computers can be authorized at one time for a single purchaser account. (See **23 Authorize a Computer to Play Purchased Music** for more information.) Unprotected AAC files are as freely portable and playable as MP3 files are; you can send an unprotected AAC file to anyone else with iTunes or any other software capable of reading AAC files, and the recipient can play it successfully. When you import music from your CD collection, iTunes creates the digital music files by default in unprotected AAC format.

AAC files are identified by either an **.m4a** (MPEG-4 Audio) or **.m4p** (MPEG-4 Protected) filename extension, depending on whether the files are protected with DRM.

- **WMA (Windows Media Audio)**—Microsoft’s answer to MP3 (and later, to AAC as used in iTunes), WMA is a lossy compression format that is entirely proprietary and owned by Microsoft. Its capabilities are comparable to those of AAC—the audio quality for a given file size is considerably better than with MP3, and thus for the same audio quality you get significant file size savings. WMA also comes in both protected and unprotected flavors. iTunes for Windows can import unprotected WMA files by converting them to AAC on-the-fly.

The DRM scheme in WMA files as sold through the online music stores that compete with the iTunes Music Store is flexible and is implemented differently by various sellers. Some stores restrict copying and playback to a certain number of computers, like iTunes does. Others, like Napster’s subscription service, enforce an expiration date beyond which you cannot open a file; periodic authorization is required to extend the expiration date on these files. Still other services set a limit on the number of times you can play a given song before it becomes locked.

- **Apple Lossless**—A format developed by Apple and released with iTunes 4.5 in April 2004, with the intention of supporting high-quality audio storage for professional musicians and audiophiles without requiring the full amount of disk space required by uncompressed AIFF, WAV, or CDDA data. Apple Lossless achieves compression of about 2:1 over the uncompressed source data by using techniques similar to those found in GIF or ZIP files (both compression formats that must by their nature be totally lossless). If you encode your music using Apple Lossless, expect to consume about 5 megabytes (MB) of disk space for every minute of music; but this music will be at true CD quality without even the minimal degradation of quality found in MP3 or AAC formats. Apple Lossless files are encapsulated in MPEG-4 wrappers; thus, they have an **.m4a** filename extension. These files are not, however, AAC files.

- **MIDI (Musical Instrument Digital Interface)**—Completely unlike all the preceding formats, MIDI is not a series of samples at all, but a synthesized music format. MIDI files are generally tiny compared to sampled music files such as AAC and MP3—only 20 to 50 kilobytes (KB)—because all they contain are lists of commands comparable to what you would see on a piece of sheet music. MIDI files depend on a library of playback technology to interpret these commands, as an orchestra would read the sheet music in front of it; both Windows and Mac OS X can play MIDI files natively, but the playback quality of a MIDI file depends greatly on the quality of the synthesized instruments in the software you use. iTunes can add MIDI files to its Library and play them using the QuickTime MIDI instruments, but you cannot transfer these files to the iPod. MIDI files generally have a **.mid** extension.

iTunes lets you convert between most of these formats, if not bidirectionally, at least from each to a native format such as AAC or MP3. In the tasks in this chapter, you will see how to take advantage of the strengths of these different formats as you bring in your music from varying sources to consolidate it into your digital iTunes Library.

Video File Formats

Video files have their own set of formats, each defined by the company or software that originally popularized it. Some video formats are just frameworks that can support many different codecs (encoding and decoding algorithms); others are more monolithic in nature, with the format and the codec being synonymous. What you have to know is that iTunes works with all the video formats supported by Apple's QuickTime multimedia architecture, but the iPod supports a much more limited range of file formats.

- **MPEG**—Developed by the Moving Picture Experts Group in the early 1990s, MPEG (whose files end in **.mpg** or **.mpeg**) is a format that's widely supported on all computing platforms, including QuickTime and iTunes. The original MPEG standard (MPEG-1) contains the specification for MP3 audio files, as described earlier. The audio and video tracks in an MPEG file are multiplexed or "muxed," meaning that they're tied together and cannot be independently edited. In iTunes, an MPEG file is listed in the **Kind** column as **QuickTime movie file**. Because MPEG's compression technology is not particularly advanced (and thus its quality-for-file-size compromise is not ideal), MPEG files are not supported on the iPod; however, iTunes can convert them to an iPod-compatible format. (See [47 Put Your Home Movies and Downloaded Videos on Your iPod.](#))

- **AVI**—The Microsoft multimedia container format, Audio/Video Interleave is a framework developed in 1992 that supports a wide variety of different codecs. The most popular video format on the Internet today (used for distributing illicit recordings of movies and TV shows, in the same way that MP3 files became the preferred format for digital music piracy) is AVI with the DivX codec or one of its relatives. Even though QuickTime can play AVI files as long as it recognizes the codec, you cannot import AVI files into iTunes or transfer them to the iPod.
- **Flash**—Popularized in the late 1990s by Macromedia (now Adobe), Flash is very different from the other types of video files listed here. It's a sprite animation framework that uses vector images described by mathematical curves. This approach results in quite small file sizes even for long-running videos; thus, Flash has become very popular for distributing movies over the Internet. However, Flash files (with an **.swf** extension) are supported only to a limited extent by QuickTime and cannot be added to iTunes or transferred to the iPod.
- **Windows Media**—A comparatively recent development by Microsoft, Windows Media Video (**.wmv**) files are a proprietary standard being popularized by the movie-making tools that are built into Windows, and they are one of the more common video formats on the Internet today. (WMV is the video counterpart to WMA.) Windows users can play WMV files natively in Windows Media Player; Mac users can play them in the QuickTime player using a free plug-in from Flip4Mac and Microsoft (<http://flip4mac.com/>); this plug-in also allows Mac users to import WMV files into iTunes. However, you cannot transfer these WMV files to the iPod, and because a plug-in to add WMV support to QuickTime is not available for Windows, you can't add WMV files to iTunes in Windows.
- **QuickTime**—Apple's own venerable video framework, QuickTime files work like AVI files in that they can use any of a myriad of different codecs, including very modern ones such as MPEG-4. The **.mov** extension can be confusing; it indicates a QuickTime wrapper on a movie file that can be self-contained or just consist of a pointer to another file or set of files on your disk or on the Internet. Most **.mov** files that you find on the Internet are in a popular codec such as Sorenson 3 or MPEG-4/AVC (H.264) and can be used in iTunes with no trouble. However, you have to convert some QuickTime files to a compatible format (see **47 Put Your Home Movies and Downloaded Videos on Your iPod**) before you can transfer them to the iPod.
- **MPEG-4**—The newest iteration of the MPEG standard is the native and preferred format for both iTunes and the iPod. It's also the foundation for the modern QuickTime architecture. MPEG-4 files can contain any of several

different codecs, but the most efficient one (and the one used by iTunes and the iTunes Music Store) is H.264, also known as AVC (Advanced Video Coding), which enables videos to display a broadcast-quality picture at a file size that is suitable for downloading. As with AAC audio files, MPEG-4 files come in both protected and unprotected varieties, although both use the extension **.m4v** (MPEG-4 Video). Unprotected MPEG-4 files also use that extension. You can import any MPEG-4 video file into iTunes and transfer it to the iPod for portable viewing.

In summary, iTunes can import and play MPEG, AVI, QuickTime, and MPEG-4 files (and WMV files if you have a Mac and the Flip4Mac plug-in). To transfer movie files to the iPod, you must ensure that they are in MPEG-4 format, although iTunes can convert several kinds of files to MPEG-4 for use on the iPod.

Styles of Music and Video in iTunes

iTunes distinguishes between a number of different kinds of entertainment media, depending on how the media is presented and what mechanisms exist for organizing it. Following is a list of the different kinds of media you'll find in iTunes:

- **Digital music**—Any music, spoken word, comedy, or other audio that you would normally expect to find on CDs. This is the bulk of what you'll collect in iTunes, and iTunes' primary goal is to make the navigation and playback of your digital music as versatile as possible. Digital music can be in MP3, AAC, AIFF, WAV, Apple Lossless, or MIDI formats (although MP3 and AAC are the most common). Digital music is organized in the **Library**, which is at the top of the iTunes **Source** pane.
- **Podcasts**—A *podcast* can be anything from a simple downloadable MP3 file of a guy talking, to a multichapter audio stream of music, comedy, politics, and commentary with artwork displayed at each named chapter marker, or even a video stream in MPEG-4 format. Because a podcast is episodic in nature, with new episodes being released on a regular basis (often weekly), you subscribe to a podcast using the URL (Web address) of its **RSS feed** (see **30 Watch for Newly Added Music Using an RSS Feed**) or by selecting it in the **Podcast** directory of the **iTunes Music Store**. iTunes then downloads new episodes when they become available, and it alerts you to episodes you haven't played yet using a blue dot that also appears next to the episode's listing on the iPod. Podcasts by default support automatic **bookmarking**, which means that iTunes keeps track of your place when you stop listening to the audio stream and resumes at that point when you play the podcast episode again. It even synchronizes the bookmark to the iPod so that you can go from iTunes to the iPod and have the episode always pick up right where you last left off. See **39 Subscribe to and Listen to Podcasts** for more details.

▶ KEY TERMS

Bookmarking—Not an official term; refers to iTunes' ability to keep track of where you left off listening to a podcast or audiobook or stopped watching a TV show; iTunes starts there again when you view the item again, whether in iTunes or on the iPod. You can enable or disable bookmarking on a per-file basis in the **Options** pane of the **Info** window, using the **Remember playback position** check box.

Audiobook—The digital equivalent of the spoken-word tape. It's a special kind of digital audio file that plays for a long time as its content (the text of a book or speech) is read. The file supports automatic bookmarking and multiple internal chapter markers, and the iPod has the ability to speed up and slow down the rate at which it is read.

- **Audiobooks**—An **audiobook** is the digital equivalent of a book on tape. Spoken narration of a book is recorded into a long audio file, usually in AAC format, and distributed in several parts that can each last for hours. A single audio file representing a part of the book can have its own subdivisions, or “chapters,” that you can skip to using the selector that appears next to the status display in iTunes when you're playing it. Audiobooks support automatic bookmarking, making sure that you don't lose your place in a long stream of narration. The iPod, additionally, can speed up or slow down the playback speed at which the audiobook is read without affecting the pitch of the narrator's voice. Audiobooks are organized with your digital music in the iTunes Library, and they have their own listing in the **Music** menu on the iPod; see **56 Listen to an Audiobook or Podcast at Home or on the Go** for more information.
- **Internet Radio**—A “stream” of audio data (usually in MP3 format) coming from a source on the Internet, Internet Radio data cannot be saved directly by iTunes, paused, rewind, or scanned using the scrub bar—it's a live stream to which you connect by specifying a web address to listen to. Favorite Internet Radio streams are added to your iTunes Library as you listen to them so that you can return to them whenever you want, but (naturally) you cannot transfer them to your iPod. Internet Radio streams sometimes use downloaded “playlist” files to schedule the playback of tracks that are stored on the server. Refer to **40 Listen to an Internet Radio Station** for more information.
- **Movies**—This category of video files indicates standalone items such as short films from Pixar and Disney, home movies, and videos you download off the Internet, which can be in QuickTime or MPEG-4 format in iTunes, and only in MPEG-4 format on the iPod. Movies that you buy from the iTunes Music Store have automatic bookmarking turned on by default, allowing you to keep your place and return to the movie later. Other movies have to have bookmarking turned on manually to keep track of their playback positions.

- **Music videos**—A specific category of videos that you can buy from the **iTunes Music Store**, music videos are just like the ones you would see on MTV—popular songs set to video. These files do not support automatic bookmarking by default (they’re usually no longer than a typical song, so bookmarking isn’t really important), but you can turn it on for individual files if you want.
- **TV shows**—Released sequentially as they’re broadcast new, and in complete “seasons” (analogous to “albums” for music), TV shows are episodes of popular television series from any of more than a dozen popular networks. Because they have no commercials, half-hour episodes last for about 22 minutes and hour-long episodes are 45 minutes, although some cable shows that were designed to be broadcast without commercial interruption last for the complete hour. TV shows support automatic bookmarking so you won’t lose your place in iTunes or on the iPod.
- **Booklets**—Presented as premiums in the iTunes Music Store, usually accompanying special packaged sets of digital music such as the \$150 *The Complete U2*, digital booklets are computerized versions of the books you might expect to get in a premium CD or boxed music set at the record store. Containing such things as lyrics, biographies, interviews, cover art, and artist commentaries on the music it accompanies, booklets are listed in the iTunes Library along with the artists and albums to which they pertain.

These subdivisions of your audio and video files allow you to narrow your searching scope when you search for music or videos using the **Search** box. (See [33 Find and Play Music in iTunes](#) for more information about searching.) Be sure to familiarize yourself with the subtle differences between each of these types of media, because when you want to dial up a specific podcast episode, audiobook chapter, or TV show episode on your iPod, you need to know what groupings to look for on the way to your desired content.

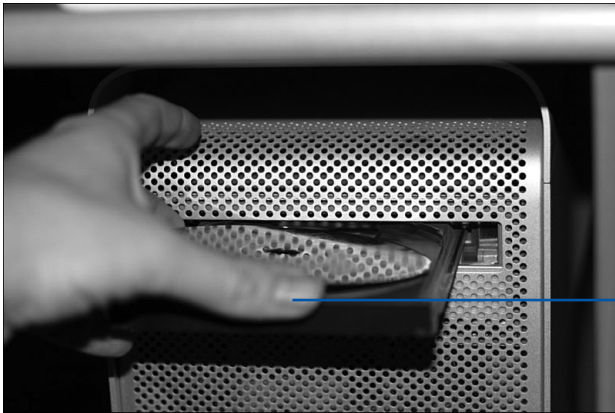
9 Import a Music CD into iTunes

✓ BEFORE YOU BEGIN

- 2 Run iTunes for the First Time

→ SEE ALSO

- 10 Get CD Track Names Manually
- 13 Add Album Art to Songs
- 58 Create an Audio CD from a Playlist
- 69 Re-Import a Music CD for Improved Quality



1 Connect to the Internet

2 Insert the CD You Want to Import

3 Wait for Track Names to Be Downloaded

5 Import the CD Tracks



4 Make Necessary Edits to Track Names

9 Import a Music CD into iTunes

Chances are that you've already got a collection of music on compact discs. In fact, you might have dozens of discs taking up room in organizers, spilling out onto shelves, getting their contents mixed up with their jewel cases, slowly driving you mad. Finding and playing music on your CDs, unless you're superhumanly organized, might be getting to be more of a hassle than it's worth.

Now that you have iTunes, it's time to put an end to all that. With a couple of clicks of the mouse, you can convert each of your commercial CDs into a catalog entry in the iTunes Library—ready for you to select and play at a moment's notice.

► TIP

iTunes also makes a dandy player for any of your CDs, even if you don't want to import its music into the iTunes Library. Just insert the disc as shown in this task, wait for the track names to be downloaded, and then play the tracks as described in [33 Find and Play Music in iTunes](#). iTunes also keeps records of the downloaded track names and applies them to the files on the CD if you look at them in the Finder or Windows Explorer.

1 Connect to the Internet

This step is optional but highly recommended. iTunes has to be able to connect to the Internet to download the album name and the titles of the tracks included on each of your CDs. Standard music CDs don't have this track name information embedded into them—the information on the CD itself is just several tracks of raw CDDA audio data, and the only way that the disc can address the data is by track numbers. The titles and album name are included only in the printed liner notes.

This is the reason for the existence of Gracenote (<http://www.gracenote.com>), also known as the CDDB, or CD Database. Gracenote is a publicly accessible database of CD names and track titles, defined using each CD's unique combination of track lengths. It's highly unlikely that any two different discs will have the same number of tracks with all the same track lengths. The unique arrangement of each disc's tracks and lengths enables iTunes to submit your CD's raw track information to Gracenote and immediately get back a response containing all the CD's track names, which are then applied to all the tracks on the CD in iTunes.

► NOTE

Gracenote's database is populated through the volunteer efforts of millions of ordinary computer users like you. Its information might thus be inaccurate or incomplete. If you find errors in the downloaded track names from Gracenote, make the changes necessary (as shown in Step 4) and submit them to Gracenote as described in [14 Submit CD Track Names to the Gracenote Database](#).

2 Insert the CD You Want to Import

First select an audio CD that you want to add to iTunes' Library. Open your computer's CD drive and insert the disc. Close the drive door and wait for the disc to spin up.

► TIP

If you have a lot of music CDs to import, you can save time by setting up iTunes to automatically begin importing the music off every disc you insert. First open the iTunes **Preferences** window. (Choose **Edit, Preferences** in Windows or **iTunes, Preferences** on the Mac.) Then, in the **Advanced** section, click the **Importing** tab and choose the **Import Songs** or **Import Songs and Eject** option from the **On CD Insert** drop-down menu.

3 Wait for Track Names to Be Downloaded

If you're connected to the Internet, iTunes contacts the Gracenote database and submits your CD's track lengths; if Gracenote finds a match, it returns the name of the CD album and the titles of all the tracks. In iTunes' song listing, the track names are applied to the tracks, and the disc is labeled with its album name.

► NOTE

If you're on a dial-up modem connection, depending on your system configuration, iTunes might cause your modem to automatically connect to the Internet so that it can obtain the track names.

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In the unlikely event that two or more disc entries in the Gracenote database have the same sets of track lengths, you are prompted to select the appropriate one. If you can't tell which one is correct (for instance, if two different people submitted significantly different information for the same disc), choose one; if you don't like the results, query the Gracenote database again as explained in **10 Get CD Track Names Manually**.

If you don't have an active Internet connection, iTunes lists the disc as **Untitled CD** and shows the tracks with names such as **Track 01**, **Track 02**, and so on. See **10 Get CD Track Names Manually** if you inserted the CD before you connected to the Internet.

4 Make Necessary Edits to Track Names

Gracenote's information might contain typos or outright errors. (As a volunteer project dependent on user input, it's not perfect.) You can correct these errors before importing the tracks. In fact, it's best to do it now instead of after importing so that when you insert the CD again, iTunes remembers the corrected information for the CD's tracks and not the erroneous data from Gracenote.

Click once on any song shown in the song listing to select it; click again in any of the displayed fields, such as the **Song Name** field. The field turns into an editable text box showing the field's current contents. You can type a new

name for any track, change the artist name, adjust the genre (the style of music), change the year when the album was released, or make other similar changes. Alter the disc's album name by clicking its text label in the **Source** pane. Press **Return** or **Enter** to accept the changes to the name.

An alternative way to make changes to track information—and a more complete one that gives you access to far more fields than just the ones visible in the listing—is to select a song and then choose **File, Get Info** (or right-click the song and choose **Get Info** from the context menu). In the dialog box that appears, make any changes you want to that track's information, and then click **OK** to apply them.

Select multiple tracks (hold down **Shift** as you click to select a range of songs, or hold down **Ctrl** or **⌘** to select individual noncontiguous tracks); then choose **Get Info** to edit certain fields of all the selected tracks at once. This is an excellent way to change (for example) the **Genre** field of all the tracks at once, if Gracenote supplied information claiming that the CD is a rock album but you would classify it as pop or alternative.

► TIP

If you want to import only certain tracks and skip others, disable the small check box next to each track that you don't want to import.

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5 Import the CD Tracks

When all the track names are adjusted to your liking, click the round **Import CD** button in the upper-right corner of the iTunes window. The disc spins up and iTunes starts copying the music data onto your computer. Internally, iTunes is copying the raw CDDA music streams to memory and then encoding them to AAC format, into which it copies all your edited track information as it saves each song file to the hard disk. The speed of this process depends greatly on the performance of your computer. A high-end Intel Core computer, or a Pentium IV or Power Mac G5, can import at 25x or higher (25 times the speed of raw playback), and is in fact limited more by the data transfer rate of the CD drive than of the speed of the CPU. Older computers can import only at slower speeds, such as 10x or even as little as 5x.

► TIP

By default, your music is imported in unprotected AAC format, the most efficient and high-quality format that iTunes supports. If you want to use a different format, such as MP3 or a **lossless** format such as AIFF or Apple Lossless, or if you want to adjust the bit rate or other options on the imported files, see **71 Import a CD in CD-Quality (Lossless) Format**.

By default, iTunes plays the songs on the CD as you import the tracks. You can turn off this behavior in the **Advanced, Importing** section of the iTunes Preferences window.

▶ NOTE

Tracks toward the end of the disc import faster than the ones at the beginning because CD audio is encoded from the center of the disc outward, and the outside of the disc moves faster—moving more data linearly past the sensor per second—than the inside of the disc.

As iTunes finishes importing each track, a green check mark appears next to that track in the song listing, and you can switch to the **Library** view to see the tracks in your library. (Incomplete tracks are shown in gray and cannot be played.) When all the tracks have been imported and you hear the musical chime that signals the completion of the process, click the **Eject** icon next to the disc name in the **Source** pane, or simply eject the disc from your CD drive.

If your CD is damaged and iTunes has difficulty importing the tracks, refer to **69 Re-Import a Music CD for Improved Quality** for some techniques you can try.

For the finishing touch, see **13 Add Album Art to Songs** to give your imported music the graphical content it needs to really give you the full experience of your old physical CDs.

10

10 Get CD Track Names Manually

✓ BEFORE YOU BEGIN

- 9** Import a Music CD into iTunes

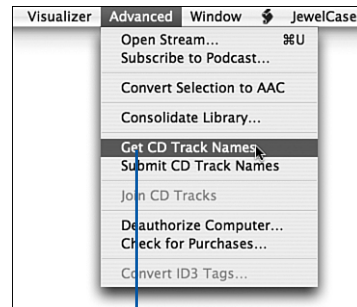
→ SEE ALSO

- 14** Submit CD Track Names to the Gracenote Database
- 16** Extract a “Secret Track” into the iTunes Library

If you forgot to connect to the Internet before inserting an audio CD, don’t panic—even though it looks like you’re stuck with an **Untitled CD** with tracks unhelpfully labeled **Track 01**, **Track 02**, and so on, you’re not out of options. A command in iTunes’ **Advanced** menu lets you send a new query to the Gracenote database even after iTunes has given up trying to find the disc’s correct track listing. You don’t have to painstakingly type in all the track information yourself.



1 Insert an Audio CD



3 Get CD Track Names

2 Connect to the Internet



4 Import the CD Tracks

10 Get CD Track Names Manually

NOTE

This task describes how to retrieve track names if you haven't yet imported the CD. If you have already imported a CD with generic track names, you can type all the names in manually, or you can import the CD again (making sure that you connect to the Internet first). See [69 Re-Import a Music CD for Improved Quality](#) for the procedure.

1 Insert an Audio CD

Select an audio CD that you want to add to your iTunes Library. Insert it into the computer's CD drive and close the drive door. Wait for iTunes to populate the CD's track listing; if you don't have an Internet connection, the tracks are given generic names such as **Track 01**, **Track 02**, and so on.

2 Connect to the Internet

You must have an active Internet connection at this point. Kick your teenager off the phone and dial up your modem; or connect your laptop to the local wireless network. Make sure that your connection is active by trying to connect with your browser to a website or two.

3 Get CD Track Names

Choose **Get CD Track Names** from the **Advanced** menu. iTunes makes a fresh attempt to contact the Gracenote database and replace its existing list of generic track names with the correct names from the database.

If you were presented earlier with multiple choices of disc entries, and you picked one whose contents turned out not to be correct, you should be given the same choices again; be sure to pick another disc entry this time around.

4 Import the CD Tracks

Click **Import** to copy the music from the CD into your iTunes Library. When you hear the musical chime, eject the CD and switch back to the Library view (click **Library** in the **Source** pane) to enjoy your imported music.

11

► TIP

Some CDs simply don't have entries in the Gracenote database. If you can't get track names for your CD no matter what you do, enter all the track names yourself and see [14](#) **Submit CD Track Names to the Gracenote Database** to do a good deed for your fellow fans.

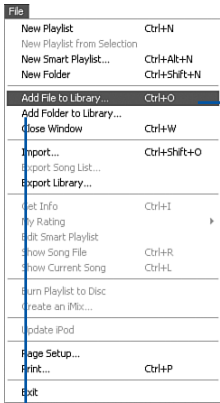
11 Add a Music or Video File to Your iTunes Library

✓ BEFORE YOU BEGIN

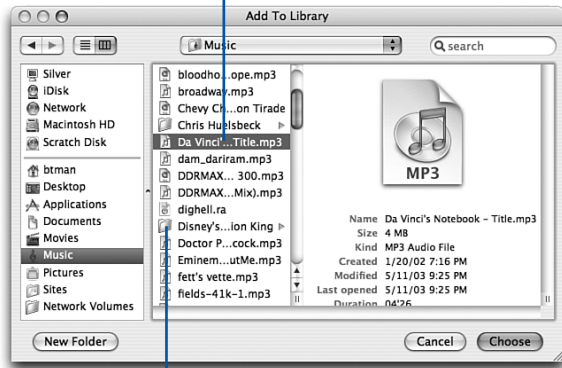
- 2 Run iTunes for the First Time

→ SEE ALSO

- 12 Import Your Existing Digital Music Collection into iTunes
- 47 Put Your Home Movies and Downloaded Videos on Your iPod
- 70 Customize Importing Options
- 72 Convert Audio Files to Other Formats
- 75 Examine and Modify Song Information Tags

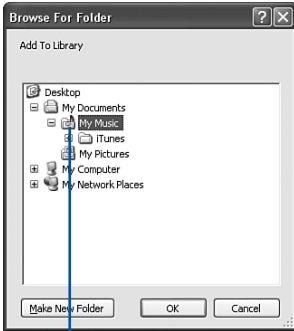


1 Add a File by Navigating



1 Add a File by Navigating

2 Add a Folder Full of Files (Windows)



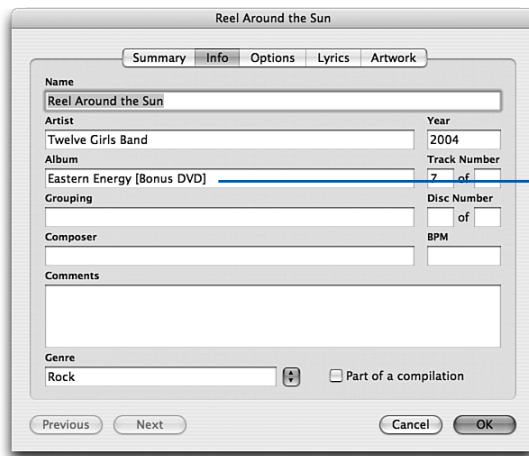
2 Add a Folder Full of Files (Windows)

2 Add a Folder Full of Files (Mac)



3 Drag a File or Folder into iTunes

4 Find the File You Just Added



5 Fill Out the Info Tags

Not all your music files are found on physical CDs. Chances are, if you've been on the Internet for any length of time, you've received or discovered music files (usually in MP3 format) from time to time—whether the files are of popular songs or of any other nature, such as comedy routines, political speeches, demo songs from a friend, or archived radio broadcasts. Perhaps you're an amateur or professional musician creating music using applications such as EJay or GarageBand, and you want to add your productions to your iTunes Library so that you can enjoy them with the rest of your music and transfer them to your iPod to take with you. Or perhaps you've just found a lot of music you like using file-sharing services. (But of course, you wouldn't do that.)

Fortunately, adding these files to iTunes is pretty easy, and you can do it one of two ways: by navigating to the file's location or by dragging and dropping. iTunes can import songs in MP3, AAC, AIFF, WAV, or MIDI format. In Windows, it can also import unprotected WMA files, which it automatically converts to AAC format during the importing process. Video files in MPEG-4 or QuickTime format can be imported in this way, too.

1 Add a File by Navigating

11

Choose **File, Add File to Library** (in Windows) or **File, Add to Library** (on the Mac). A file picker dialog box appears. Use this picker (which is in the standard form for your operating system) to navigate to the location on the hard disk of the music file you want to import. Select the file and click **Open** or **Choose**. (You can also select multiple files at once by holding down **Shift**, **Ctrl**, or **⌘** as you click.) iTunes copies the file into an appropriate place in your **iTunes Music** folder, filing it into subfolders named according to the embedded *info tags* (if present). The original file is left untouched on your hard disk.

A reference to the file is now available in your Library, and its info tags are added to the navigation lists (**Artist**, **Album**, and **Genre**), if present. If the file is a video, it's also available by clicking **Videos** in the **Source** pane; this action shows you a “thumbnail” preview of the video floating over a reflective black surface along with its embedded information.

▶ TIP

If you prefer, you can have the iTunes Library point directly to the file in the location where you added it, instead of copying it into the **iTunes Music** folder. To do this, turn off the **Copy files to iTunes Music folder when adding to library** check box in the **Advanced, General** section of the **iTunes Preferences** window. (Choose **Edit, Preferences** in Windows, or **iTunes, Preferences** on the Mac.)

2 Add a Folder Full of Files

Suppose that you like to keep all your MP3 files in a certain folder on your disk; or suppose that you have a folder that resulted from unpacking a ZIP archive of a certain collection of MP3 files, such as a ripped CD album. Instead of picking each file individually to add it to the iTunes Library, you can instead choose the whole folder. iTunes imports all the importable files in that folder and ignores any nonimportable files; it even searches subfolders for files to import, making it a one-step process to add a whole folder-tree full of music and video files.

► NOTE

Adding a large number of files at once to the iTunes Library, as when importing a whole folder tree, can be a time-consuming process. iTunes must duplicate every file and sort all the copies into the **iTunes Music** folder. You must also be sure to have sufficient hard disk space to hold all the copies of the music you import because you'll end up with two copies of everything.

On the Mac, the process for adding a folder is the same as in Step 1: In the file picker window, simply select the folder name (instead of selecting an individual file within the folder) and click **Choose**. In Windows, however, choose **Add Folder to Library** from the **File** menu; a separate kind of picker appears, showing you the folder tree structure beginning with your **Desktop**. Open folders in the tree until you see the folder you want; click to select it and then click **OK**.

► NOTE

iTunes does not create duplicate entries in its database for the same audio or video files. You can drag a file into iTunes as many times as you want, but it doesn't create an additional entry or lose track of the file. This means you can safely and cleanly add a whole folder full of MP3s, even if you've already added some of the individual MP3 files inside it to the iTunes Library. The **Date Added** field for those files isn't even updated.

If duplicate files do appear in your Library, you can eliminate them using the steps in [76 Eliminate Duplicate Tracks](#).

3 Drag a File or Folder into iTunes

Another, more direct way to add a file or folder to iTunes is to simply drag and drop it into iTunes. In the Finder or Windows Explorer, navigate to the file or folder that you want to import; with the iTunes window open, click and drag the item into the song listing pane of iTunes (the main body of the window, below the **Browse** lists). The + icon on the mouse pointer indicates that

the item will be added to iTunes when you release the mouse button. When the mouse is in the iTunes window and the + icon is visible, drop the item into iTunes to add it to the Library.

▶ **TIP**

You can also drag files or folders to the iTunes icon in the Dock in Mac OS X to add them to the iTunes Library.

4 Find the File You Just Added

iTunes doesn't automatically scroll to show you the file you just added. If you want to find the file, the easiest way is to type its filename into the **Search** box while the **Library** item is selected in the **Source** pane. As you type, the song listing narrows to show you only the matching songs in the Library.

Another way to locate the newly added song is to scroll horizontally to the **Date Added** column in the song listing pane (see [77 Customize Which Information Columns Are Displayed](#) if this column is not there) and then click the column heading twice to sort the songs on that column in descending order. The newly added song (or songs) should be at the top of the list.

If the file you added is a video, click **Videos** in the **Source** pane to see the video as an icon in a specialized presentation screen without music files getting in your way.

5 Fill Out the Info Tags

If the song files you imported weren't created using iTunes or a similar program with access to the Gracenote database, chances are that the *info tags* aren't completely filled out. Without all the info tags properly set, you can't navigate to the song using the **Artist** and **Album** lists, as you can with tracks you imported properly from a CD or bought from the iTunes Music Store. Select a song and click in various fields to make changes to its fields. Alternatively, select the song and choose **File, Get Info** (or right-click the song and choose **Get Info** from the context menu) and make the changes in the comprehensive info tag editor window.

12 Import Your Existing Digital Music Collection into iTunes

✓ BEFORE YOU BEGIN

- 2 Run iTunes for the First Time
- 11 Add a Music or Video File to Your iTunes Library

→ SEE ALSO

- 13 Add Album Art to Songs
- 47 Put Your Home Movies and Downloaded Videos on Your iPod
- 75 Examine and Modify Song Information Tags
- 76 Eliminate Duplicate Tracks
- 107 Restore Your Music Library Database from a Backup Copy

Let's face it: You probably already have a number of MP3 files on your computer. If you've been using the Internet for a while, you might have hundreds or even thousands of MP3s, either imported from your CD collection using other software or obtained from the Internet. iTunes makes no judgments about where your music comes from; it organizes it all equally, letting you transform your flat listing of music files in a folder somewhere on your computer into the multilevel database that makes iTunes' music navigation so easy.

This task lets you bring your collection of MP3 files—no matter how large—into iTunes with a full understanding of the consequences of the organizational options that iTunes gives you. First you set iTunes to treat imported files the way you want it to; then you import your music collection—as lengthy a process as that might be—as described in [11 Add a Music or Video File to Your iTunes Library](#).

1 Open the Preferences Window

Open the iTunes **Preferences** window. (In Windows, choose **Edit, Preferences**; on the Mac, choose **iTunes, Preferences**.) Click the **Advanced** tab, and then click **General**.

2 Choose to Copy Music Files to the iTunes Music Folder

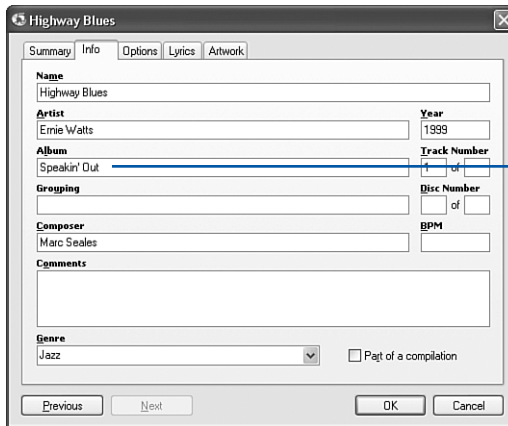
The **Copy files to iTunes Music folder when adding to library** check box determines exactly what happens when you import a new file or group of files into the iTunes database. If the check box is enabled, iTunes makes a duplicate of each imported file and places it into an appropriate place in the **iTunes Music** folder, in subfolders based on the **Artist** and **Album info tags**. If the check box is disabled, the iTunes database instead points to added music files wherever in the system they happen to be; it does not duplicate them into its own folder.

- 3 Choose to Keep Your iTunes Music Folder Organized
- 1 Open the Preferences Window



- 4 Add Your Music Collection to iTunes

- 2 Choose to Copy Music Files to the iTunes Music Folder



- 5 Fill Out Missing Info Tags

12 Import Your Existing Digital Music Collection into iTunes

The default behavior is to allow iTunes to copy newly added files into its managed folder, which keeps all your music files neatly organized in a single location. You might want to turn this feature off if you like keeping certain

“one-off” MP3 files in a certain folder outside your **iTunes Music** folder for quick access in the Finder or Windows Explorer or by other applications but you also like to use iTunes to play those files from time to time.

Enable the option if you want iTunes to keep its own copy of each music file in its own folder, to do with whatever it needs, while leaving your original copy untouched. Disable the option if you don’t want iTunes making duplicates of all your imported files, a process that doubles the disk space that your music files need (at least until you get rid of the originals).

► NOTE

If there isn’t enough space on the hard disk to create the necessary duplicates, iTunes stops copying and reports the error condition so that you can free up some space before trying again.

3 Choose to Keep Your iTunes Music Folder Organized

The other relevant option in the **Advanced** tab of the **Preferences** window is **Keep iTunes Music folder organized**. With this option enabled, every change you make to the info tags of a file in the iTunes interface is reflected immediately in the files themselves. For instance, if you change the title of a song, the file is renamed in the background to match (with a prefix reflecting the disc number, if it’s part of a CD set, and the track number). If you change the artist name or album name, the folders into which the file is organized are also renamed and the file is moved accordingly. Disable this option if you don’t want iTunes messing around with your files’ names.

For example, if you want to import all your music into iTunes while leaving the files in their original locations on your hard disk and with their original names, disable the **Copy files to iTunes Music folder when adding to library** option. If you want iTunes to copy your music files to the **iTunes Music** folder and add them to appropriate locations in the folder tree depending on the initial state of the **Artist** and **Album** info tags in each of the files, but *not* to update the folders or filenames after they’ve been imported, enable the **Copy files to iTunes Music folder when adding to library** option but disable the **Keep iTunes Music folder organized** option. If, however, you want to allow iTunes to perform all the organizational duties for which it was designed, taking full advantage of all the flexibility of music files with rich info tag data, leave both options enabled; this means you’ll always be able to navigate to your appropriately named music files in the Finder or Windows Explorer, just as easily as you can in iTunes.

► NOTE

If you re-enable the **Keep iTunes Music folder organized** option after you initially disabled it, iTunes must perform a check against all the songs in its Library to make sure that all the filenames are accurate. This process can take a long time, and you can quit it by clicking **Stop**; but it's a good idea to let it finish making everything neat, so be patient.

4 Add Your Music Collection to iTunes

When the two important settings are configured to your liking, click **OK** to close the **Preferences** window. Now you're ready to bring all your music into iTunes.

If you have several music folders and a lot of time on your hands, you can import each folder individually into iTunes as described in **11 Add a Music or Video File to Your iTunes Library**. However, the most fun way—especially if you enabled both organizational options in Steps 2 and 3—is to throw all your files into iTunes at once, even if you have thousands of songs in your collection. To do this, first consolidate your music collection by placing all your folders of MP3s into a single parent folder. Then drag the parent folder into the song listing area of the iTunes window and release the mouse button when you see the + icon on your mouse pointer.

Depending on the speed of your computer and the number of files you have, the length of the ensuing process can be several minutes or more, even up to the better part of an hour. As iTunes copies and sorts your music files, you can watch them being filed away into the appropriate folders within your **iTunes Music** folder. iTunes will be unresponsive, but using the Finder or Windows Explorer, you can watch your music collection be organized for you while you wait.

► NOTE

If any unprotected WMA files are among your music collection, iTunes pops up a window that notifies you that it will be converting these files to AAC format as it imports them. The AAC files are organized into the appropriate folders, and the original WMA files are left untouched on your hard disk.

5 Fill Out Missing Info Tags

Now begins a task that will probably take you days, if not weeks or months, to finish to your satisfaction, depending on how obsessively neat you are: editing all the newly imported entries in the iTunes database so that all their info tags are properly filled out. Whether you've chosen to let iTunes update the underlying filenames or not, keeping the info tags correctly updated is

important to allowing you to navigate efficiently, set up *Smart Playlists* based on the info tags, and share the music over the local network or to your iPod in such a way that you can navigate it smoothly. See [75 Examine and Modify Song Information Tags](#) for more information on updating your songs' details, and [13 Add Album Art to Songs](#) to enhance your songs with appropriate album art.

13 Add Album Art to Songs

✓ BEFORE YOU BEGIN

- 9 Import a Music CD into iTunes
- 11 Add a Music or Video File to Your iTunes Library

→ SEE ALSO

- 83 Automatically Download Album Art
- 84 Carry and View Digital Photos and Slideshows on an iPod

As convenient and versatile as digital music files are, they can't replace certain things about CDs. There's just something special about being able to pick up a CD case and identify it by the artwork on its cover; a listing of songs in bare text format just doesn't bring with it quite the same cachet, especially when the listing for a Mozart symphony looks just the same as the one for a ska band or stand-up comedian's routine. Furthermore, CD albums tend to come with booklets full of lyric sheets, interviews, cast and crew information, and more—some very extensive and thick. Where is the equivalent of these things in the digital music world?

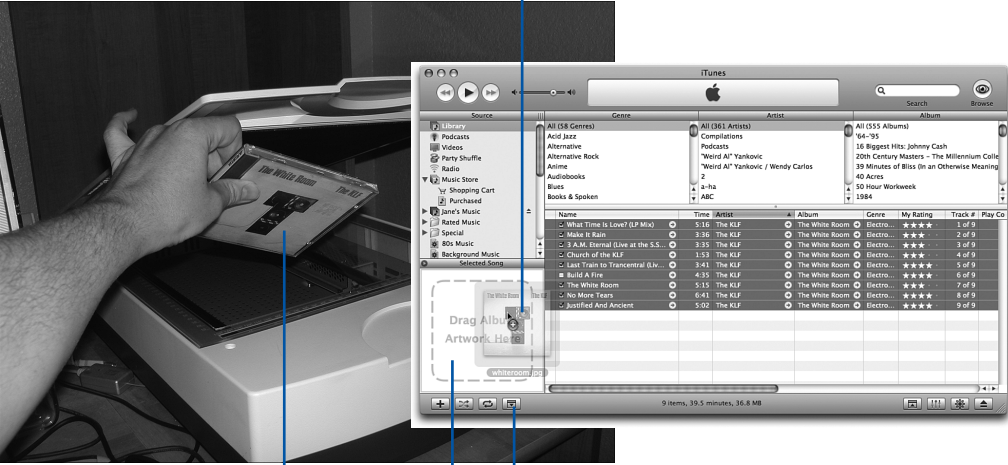
iTunes can't quite provide the same experience that these features of CDs give you. However, you *can* add album art in the form of digital image data to the headers of your MP3 or AAC files. A scanned picture file—even a high-resolution one—is only a few hundred kilobytes (KB) at most, compared to the 3 or 4MB of a complete digital audio file; thus, adding a piece of album art to a song, or even several pictures at once, doesn't materially increase the impact on your disk space. It can, however, greatly enhance your enjoyment of your music by showing you what the album for the song you're listening to looked like.

► NOTES

Songs you purchase from the iTunes Music Store come with their own high-resolution album art already built in; some albums, usually premium "boxed set" collections, come with digital booklets containing lyrics and other information that would normally appear in a CD's booklet.

When you buy videos from the iTunes Music Store, they play in the same display pane that shows album art or in a separate window, and iTunes selects their thumbnail icons (shown in the **Videos** view) automatically from the first few seconds of the video.

4 Drag In Album Art

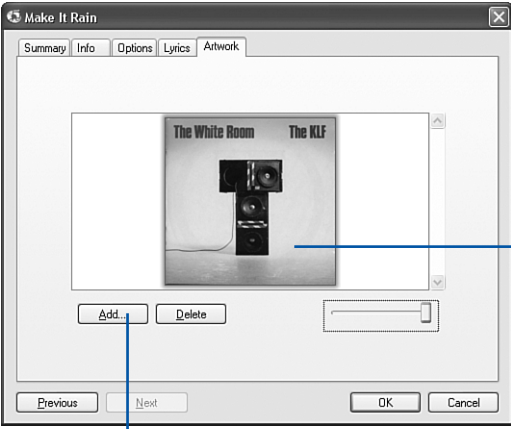


1 Obtain Album Art Images

3 Display the Viewer Pane

6 View Album Art

5 Organize Album Art Images in a Song



2 Add Album Art by Navigating

13 Add Album Art to Songs

1 Obtain Album Art Images

The first step is to get one or more images of the album art for a given CD album. If you have a scanner, you might choose to scan the cover of your CD jewel case insert, in addition to some of the pages from the interior of the

insert booklet. Consult the documentation for your scanner if you choose to do it this way; save the final picture files with at least 500 pixels of resolution in both width and height, but don't make it much bigger than 1000 pixels square. Save the image file in JPEG format for the best compression/quality balance. Try to keep each picture less than 200KB in size.

If you don't have a scanner, you can usually find acceptable album art images on the Internet. AMG's Allmusic service (<http://www.allmusic.com>) has comprehensive discographies for almost all major bands, including album art that, although not very high-resolution, will do in a pinch.

► NOTE

Some third-party programs are designed to search the Internet for album art images to add to iTunes; see [83 Automatically Download Album Art](#) for more information.

► WEB RESOURCE

<http://www.allmusic.com>

The Allmusic site, run by the All Media Guide (AMG), contains comprehensive discography listings of most well-known bands, including album art that you can use in your imported music files.

2 Add Album Art by Navigating

Use the **Library** view and the browse columns to navigate to the music you want to modify. Select a single song, and then choose **File, Get Info** (or right-click the selected song and choose **Get Info** from the context menu).

► TIP

You can select an entire album, or all of an artist's works, by choosing it from the appropriate browse list. For instance, if you click **Phil Collins** in the **Artist** listing at the top of the iTunes window, and leave **All** selected in the **Album** listing, you can then choose **Get Info** to simultaneously edit all the information of all the Phil Collins songs in your Library.

If you select multiple songs and then choose **Get Info**, there is no **Artwork** tab—instead, in the **Multiple Song Information** window that appears, there is a small square to which you can drag the artwork picture file and apply it to all selected files at once.

Click the **Artwork** tab of the **Info** dialog box. This pane shows you all the album art that is currently embedded in the selected song. Use the slider in the lower-right corner to adjust the size of the thumbnails of the images. You can view the thumbnails one at a time at maximum size (click the **Previous** and **Next** buttons to scroll through the images associated with each song in the list in iTunes), or at any size down to 32 onscreen at once. You can add more than 32 images if you want.

Click the **Add** button to add another piece of art to the information for the selected song. In the file picker that appears, navigate to the location of the picture you want to add; select it and click **Choose** or **Open**. The picture is added to the display pane. Repeat for all the pictures you want to add to this song. (You can't add more than one picture at a time.) Click **OK** to dismiss the info window.

► **TIP**

You can remove a piece of album art from a song by selecting it in the display pane of the info window and clicking **Delete**. If you select multiple songs and then view the **Multiple Song Information** window, you can clear the album art from all selected songs by clicking the artwork in the small square and pressing **Delete**.

3 **Display the Viewer Pane**

Click the **Show or Hide Viewer Pane** button under the **Source** pane in the iTunes window. A smaller pane, labeled **Selected Song**, opens above the button; this **Viewer** pane shows you any album art that already exists in a selected song, or a gray dashed box with a *Drag Album Artwork Here* message if there is no album art in the song.

13

► **NOTE**

Click the **Selected Song** heading to switch the **Viewer** pane to **Now Playing** if music is playing. This action toggles between views of the album art for the selected song or for the currently playing track (if the track art is different from what's selected).

4 **Drag in Album Art**

A quicker way to add album art than the one described in Step 2 is to drag picture files from the Finder or Windows Explorer into the **Viewer** pane. This works whether you have selected a single song or a group of songs. First make sure the **Viewer** pane is displayed, using the button fourth from the bottom left; then make sure the **Viewer** pane is showing the **Selected Song**. (Click the header to change its mode if it shows **Now Playing**.) Then you will be able to drag picture files straight into the **Viewer** pane to apply them to all selected songs.

You can add multiple pictures at once this way—just select multiple files and drag them all into the **Viewer** pane with one motion. You can even drag pictures directly from your web browser into the pane, without having to save them to your computer first.

5 Organize Album Art Images in a Song

When you have added multiple pictures to a song or group of songs, you will probably want to set the order in which that artwork appears. This way, you can be sure that the album cover artwork appears first, and that as you browse the pictures, they appear in the correct sequence. Open the info window again for a song or group of songs, and click the **Artwork** tab. Adjust the slider until all the pictures are visible at once. Now click and drag the pictures into the order you want them to appear. The first one should go at the upper left, and so on in the normal order you would expect in reading a page from left to right.

6 View Album Art

Click the small thumbnail image in the **Viewer** pane to display the full-resolution image in its own window. If there is more than one picture embedded in a song, use the **Left** and **Right** arrow buttons to page through the available pictures.

► TIP

Drag the vertical divider to widen or narrow the **Source** pane. As the **Source** pane grows wider, the **Viewer** pane gets larger accordingly, keeping a square shape.

If you have an iPod with a color screen, the album art for the current song appears on the **Now Playing** screen. If you press the **Select** button several times to switch through the various control modes, you can view the artwork at the full size of the iPod's screen. The iPod keeps showing the album art and does not automatically revert to the regular **Now Playing** screen until you press **Select** again.

14 Submit CD Track Names to the Gracenote Database

✓ BEFORE YOU BEGIN

- 9 Import a Music CD into iTunes

→ SEE ALSO

- 75 Examine and Modify Song Information Tags

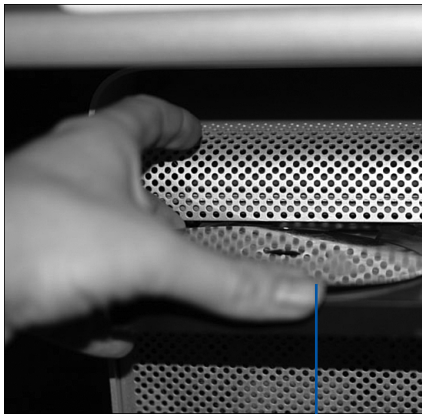
The reason Apple uses the Gracenote database to provide track names for inserted CDs is that it's the largest public database of track names available. It's the largest because it gets information from the millions of people using software like iTunes every day. Apple could have chosen to provide its own internal music database, with professionally entered information—as Microsoft did in the past for its own CD-playing software—but the inevitable result would have been that

its information would have been much more limited. Apple chose to go with Gracenote's much greater coverage of all the thousands, if not millions, of CD albums available in the world, because the risk of occasional erroneous information was a small price to pay for the much vaster field of information that is available.

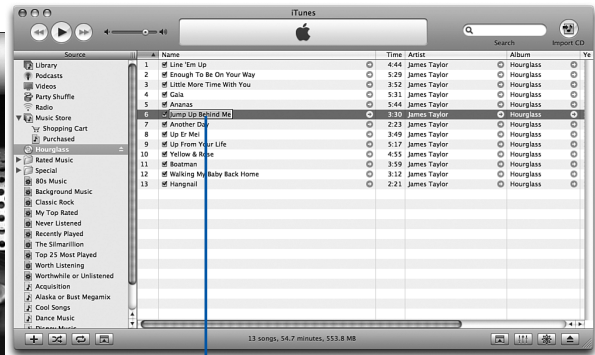
► NOTE

The same philosophy is present in Wikipedia (<http://www.wikipedia.org>), the online collaborative encyclopedia whose contents are edited daily by everyone who happens to want to add anything. The risk of abuse is more than mitigated by the wealth of accurate and useful information that users provide and the general tendency of people to provide more correct information than bad.

14

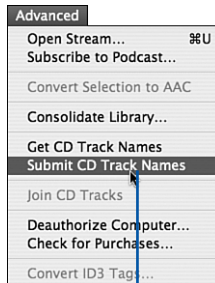


1 Insert an Audio CD



2 Make Necessary Edits to Track Names

3 Connect to the Internet



4 Submit CD Track Names

14 Submit CD Track Names to the Gracenote Database

As an iTunes user importing the music from your CD collection for the first time, you can do your part to make sure that the Gracenote database has the most accurate information possible. If you notice errors in the track name data it provides, simply make the necessary corrections and submit the changes back to Gracenote before you import each CD.

To submit CD track information, you have to start with a physical commercial CD, not just a collection of tracks in your Library.

1 Insert an Audio CD

Select an audio CD that you want to add to your iTunes Library. Insert it into the computer's CD drive and close the drive door. Wait for iTunes to populate the CD's track listing; if you don't have an Internet connection, the tracks are given generic names, such as **Track 01**, **Track 02**, and so on.

2 Make Necessary Edits to Track Names

Using the info window or the displayed fields in the song listing pane, enter the proper names for the tracks on the CD. The best approach is to select all the songs on the disc, choose **File, Get Info** (or right-click the song and choose **Get Info** from the context menu), and make all the changes at once to as many fields as possible. Make sure that the CD's title is correct; if it's part of a multiple-disc set, fill in the **Disc Number** fields rather than putting an identifier such as [1/3] in the title. If you can, fill in the **Composer**, **Genre**, and **Year** fields, too. (**Year** should reflect the original release date of the album so that the music on the disc can be accurately pegged to a certain era in musical history.) Click **OK** when you're done; all the fields are updated to reflect your changes.

3 Connect to the Internet

If you're not connected to the Internet already, connect now. Dial up your modem or connect to the wireless or wired network, depending on your circumstances.

4 Submit CD Track Names

Choose **Advanced, Submit CD Track Names**. iTunes connects to the Gracenote site, checks the available categories, and submits your information. The information submitted uses the CD's track lengths as a key to find the correct database entry; it uses your edited track names as the information to submit. If an entry for your CD is already in the database, your new information will supersede it.

That's all there is to it. The Gracenote staff checks your submission for accuracy and adds it to the database usually within a day or two. Don't expect feedback or a thank-you from Gracenote—but from now on, anyone trying to import the same CD whose information you just submitted will get your more accurate information instead of what was available before.

15 Import a CD with Joined Tracks

✓ BEFORE YOU BEGIN

9 Import a Music CD into iTunes

→ SEE ALSO

70 Customize Importing Options

Most CDs are designed so that you can play individual songs out of order, select them at random, mix them in with tracks from other discs, and so on. However, that's not the case with all CDs. Some discs—for example, CDs of live performances (in which audience applause carries over from one track to the next) or spoken-word renditions of popular books—don't sound very good when their tracks are shuffled around. Also, the technically inevitable “hiccup” that occurs between tracks (particularly on the iPod) can disrupt the flow of these unified streams of audio enjoyment.

iTunes provides a solution for this problem: You can import groups of CD tracks as *joined* tracks, meaning that several tracks are merged into a single unbroken digital audio file with no “hiccups” or internal breaks of any kind.

► NOTE

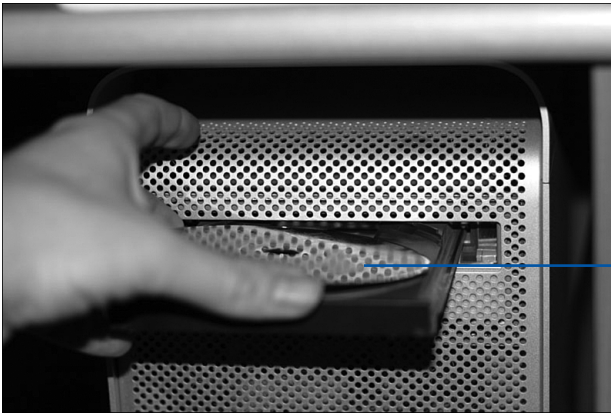
You can join tracks only when you are importing them from a CD. If you want to join tracks that are already in your iTunes Library, burn them to an audio CD, and then join and import the tracks. See [58 Create an Audio CD from a Playlist](#) for more information.

1 Insert an Audio CD

Select an audio CD that you want to add to your iTunes Library. Insert it into the computer's CD drive and close the drive door. Wait for iTunes to populate the CD's track listing; if you're connected to the Internet, the correct track names should be downloaded automatically from Gracenote and applied to the tracks.

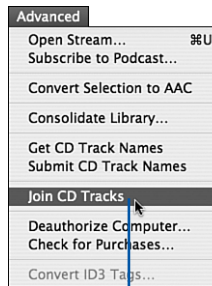
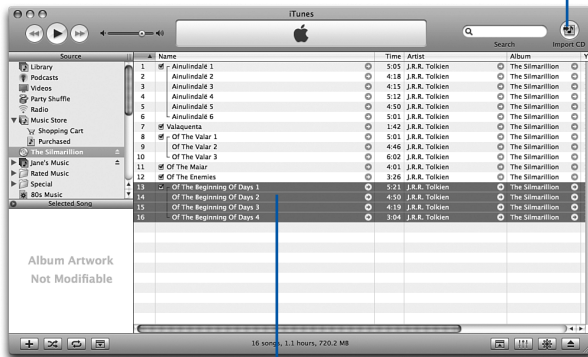
2 Select Tracks to Join

In the iTunes song listing, select two or more consecutive tracks on the CD. (Hold down **Shift** as you click.) Note that the tracks must be listed according to the track numbers (the first column) for the purpose of this task.



1 Insert an Audio CD

4 Import the CD



3 Join CD Tracks

2 Select Tracks to Join

15 Import a CD with Joined Tracks

3 Join CD Tracks

Choose **Advanced, Join CD Tracks**. This command creates what is effectively a single long track from the selected tracks. When you import the CD, only one audio file is created from the joined tracks, taking on the name and other track info of the first track in the selection. (The individual track names and numbers are no longer available, although the imported album retains the original number of total tracks, and nonjoined tracks are not renumbered.) A “bracket” appears next to the joined tracks, indicating their joined status.

► TIP

You can create multiple sets of joined tracks within a single CD, if necessary.

To unjoin a set of joined tracks, first select one or more of the joined tracks; then choose **Advanced, Unjoin CD Tracks**. However, note that this approach applies only to tracks you haven't yet imported; once the tracks are imported as a single joined file, you can't split them up again without painstaking manual editing in a specialized audio program.

4 Import the CD

Click the **Import** button to begin importing the CD into your iTunes Library. Examine the resulting songs in your Library when the process is done. You should see only a single long track in place of the set of joined tracks you selected, and their flow will be uninterrupted when you play back the track.

16 Extract a “Secret Track” into the iTunes Library

16

✓ BEFORE YOU BEGIN

- 9 Import a Music CD into iTunes
- 11 Add a Music or Video File to Your iTunes Library

→ SEE ALSO

- 74 Find Music Files from iTunes Entries
- 76 Eliminate Duplicate Tracks

Sometimes the authors of CDs get sneaky on us. Sometimes they like to slip in a “secret” track, right at the end of the disc, after a long period of silence following the end of the final track. This practice is left over from the days of cassette tapes and vinyl LPs, when the tape or record might have several minutes of dead time left over at the end. An unsuspecting listener might hear silence after the end of the last track and, thinking that the tape was over, simply stop the player and rewind the tape. Only the true die-hard fans of the band would listen to the silence all the way to the physical end of the tape or record; these fans would be rewarded for their trouble by the occasional hidden “secret” track stuck in right before the end.

In the age of CDs, this practice made less sense, because any quick perusal of the track lengths would indicate that there was something fishy about a Track 12 that lasted for 14 minutes, especially if the song itself didn't run for more than the usual 3 or 4 minutes. However, some CD authors continue to do this, hiding “secret” tracks in plain sight.

1 Find the Song with the Secret Track

2 Create a Duplicate of the Song File

3 Add the Duplicate File into iTunes

4 Adjust the End Time of the Original Track

5 Adjust the Start Time of the Secret Track

16 Extract a “Secret Track” into the iTunes Library

But it’s the iTunes age now, and we have control over our music that just wasn’t possible in the earlier days. Now we can snip up that final 14-minute track, crop out the useless silence from the middle, and turn the “secret” track into a full-fledged track with its own rightful place in the song listing. We can listen to it without having to go through the preceding “real” track and the intervening silence first. After we’ve enjoyed the band’s little joke, we can move on to organizing our music the “right” way.

1 Find the Song with the Secret Track

Navigate to the song in the **Library** listing that has the hidden track buried inside it. Select this song by clicking it; then choose **File, Show Song File** (or right-click the song and choose **Show Song File** from the context menu). This command opens a Finder or Windows Explorer window showing the selected song file.

2 Create a Duplicate of the Song File

In Mac OS X, click the song file to select it; then choose **File, Duplicate** to create an identical copy. In Windows, right-click the file and choose **Copy**; then right-click in the same window and choose **Paste** to create a duplicate of the file.

3 Add the Duplicate File into iTunes

Drag the newly created duplicate into iTunes to add it to the Library as described in **11 Add a Music or Video File to Your iTunes Library**. There should now be two identical copies of the same song right next to each other in the **Library** view.

4 Name the Duplicate Track

Now it's time to choose a song name for the newly unhidden not-so-secret track. By their nature, these songs aren't normally shown in CD track listings, so you have to choose an appropriate title yourself. Type the new song name using the editable fields in the song listing pane or the info window.

It's also a good idea to choose an appropriate track number for this song. If there are 12 "official" tracks on the disc, and you enter 13 for the track number for the new song, the 12 in the "total" field (after the **of**) gets blanked out because it's no longer valid. You might want to update all the tracks in the album so that there are 13 total tracks. To do this, select all the tracks in the album (or select the album title in the **Album** list), choose **File, Get Info**, and update the "total" field (located after the **of** in the **Track #** column).

5 Adjust the End Time of the Original Track

Select the original track, the one from which you extracted the secret track. Play the track and move the scrub bar to the end of the first segment of audio, which is the end of the "real" track. Click the second line of the display until it reads **Elapsed Time**. Then write down the time signature it reports one or two seconds after the real track ends.

Move the playhead to the point where the secret track begins. Write down the time signature when this occurs; make sure to pick a time about one second before the track starts so that you don’t end up missing the first sounds of the secret track.

Choose **File, Get Info** to display the info window; then click the **Options** tab. In this tab, you can customize the effective starting and ending time for individual tracks. That’s ideal for your needs here, because what you want to do is snip out the silence in the middle of both the original and new files—and get rid of the irrelevant track of music from each of them. For the original song, set the **Stop Time** field to the time signature you wrote down for the end of the original track.

6 Adjust the Start Time of the Secret Track

Click **Next** to select the duplicate track. (Make sure that you have the right file by switching to the **Info** tab temporarily.) Set the **Start Time** field to the time signature you wrote down for the beginning of the hidden track. Click **OK**.

Now you have two separate tracks, for all intents and purposes, the same as if they had come off the CD that way. True, both tracks still report an erroneously long running time, but if you play either song—in iTunes or on the iPod—all that plays is the actual music, the part you care about.

