

Hacking iPod

part



in this part

Chapter 1

Sounds Awesome: Music
on Your iPod

Chapter 2

More Than Music

Chapter 3

Way Beyond the Music:
Hardware

Chapter 4

Way Beyond the Music:
Software

COPYRIGHTED MATERIAL

Sounds Awesome: Music on Your iPod

chapter

1

This is a book about a music player and music software, so I think it's reasonable to start off with a chapter about music before we get into the wackier stuff. A beginning is a delicate time—let's begin our adventure with some delicate, friendly hacks.

Share Your iPod

Apple has always focused on making products for individuals: One of the company's early slogans was “one person, one computer”, which was a radical thought in the early 1980s. After all, that's why they called it *a personal* computer. But the reality is that as much as you want to keep your beautiful iMac, PowerBook, or iPod to yourself, sometimes you just have to share. The folks at Apple acknowledge this with features like multiple-user accounts and printer sharing in Mac OS X, although they would probably be happier if we all went out and got one of each, for everybody: one person, lots of computers.

You might not feel like sharing your iPod, but there are times when it's just too valuable to keep to yourself. For example, if you're about to take a long family road trip, having everybody's tunes in the car is a great way to make the ride go faster, especially when you're in unknown radio territory.

Using your iPod to please all members of the family probably means loading it with some music you don't usually carry around, unless you share the same taste in songs as your teenage son (maybe) and nine-year-old daughter (less likely).

Create a portable family jukebox

Assuming you have your iPod all filled up with your favorite music, how do you go about temporarily transforming it into the portable family jukebox? If you have everybody's music you want collected together on one computer, you simply need to make sure your iPod is set up to automatically synchronize songs and playlists with iTunes. You can check your setting in iTunes by connecting the iPod to your computer,

in this chapter

- Share Your iPod
- Update Your iPod without Replugging
- Use Smart Playlists to Keep Your iPod Fresh
- Shuffle Your Music and Use Repeat
- Tweak the Sound
- Scrub Your Songs to Hear What You Want

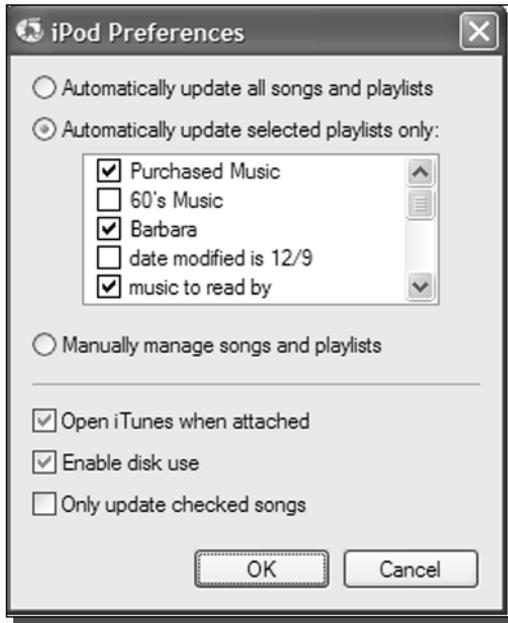


FIGURE 1-1: The iPod Preferences dialog box lets you decide how music will be copied from iTunes to iPod.

selecting the iPod in the column at the left, and then clicking the tiny iPod button near the lower-right corner of the iTunes window. That will bring up the iPod Preferences dialog box (Figure 1-1).

In the Preferences dialog box, choose the second option, “Automatically update selected playlists only.” Then, go through the playlists and check the ones you want to copy to your iPod. If you have more than a few playlists, you’ll have to scroll to see them all. And if you don’t have enough to make the list scroll, you’ll probably enjoy beefing up your playlist collection when you get to Chapter 5.



Tip If you think you might have enough space on the iPod for all your music and all of everyone else’s, you should just copy all the playlists to the iPod. See the sidebar *Sink the iPod* for more information.

When you’re done picking playlists for the iPod, click OK. As soon as you do, iTunes empties out your iPod, then starts copying the music and playlists over there. You can keep an eye on copying progress in the status display. When it’s all done, the display will say “iPod update is complete,” and you’re ready to go.

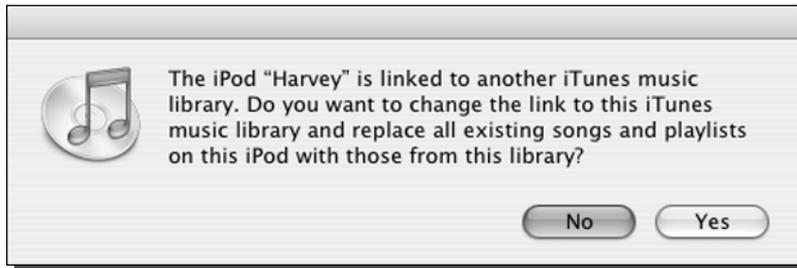


FIGURE 1-2: The iPod tells you if it's linked to another computer.

Music, music, everywhere

What if you don't have all your family's tunes on one computer? In that case, you need to grab your iPod and cable and walk around the house from computer to computer, like Johnny Appleseed. Except instead of planting trees, you'll be gathering music. Connect your iPod to each computer in turn. After you connect, go to iTunes, if the computer doesn't take you there automatically. If you have music on computers that can't run iTunes or can't connect to an iPod, you need to copy the songs to one that can.

When you hook up the iPod, you'll probably get a message like the one in Figure 1-2, pointing out that your iPod is in alien territory. Just click "No" to indicate that you don't want to move the iPod permanently to this computer. Then, click the tiny iPod button on the lower right to open iPod Preferences again. But this time, you should select "Manually manage songs and playlists," then click OK. You can now drag songs and playlists directly to the iPod, even dropping them inside playlists that are already on the iPod.



Using the "Manually manage songs and playlists" can be dangerous. By messing directly with music on the iPod, you can make changes that are out of sync with the songs and playlists you're keeping in iTunes. You can lose songs and playlist changes when you return to automatic updating. For more information about this, see the sidebar "*Sink the iPod*".

When you get your iPod back to your own computer, you'll find that it remembers the "Manually manage" setting. You should keep it on that setting until you return from the trip and you're ready to restore your iPod to your exclusive control, when you'll probably want to go back to automatic updates.

Sink the iPod

On that happy day when you brought home and set up your iPod, you got to decide how music was to flow into it from iTunes. You picked from three options for how to sync your iPod with your computer. The first, "Automatically update all songs and playlists," is useful only if you

have enough room on your iPod to hold all the music you have in iTunes. If you think that describes you, iTunes can check your assumption. Choose that option, then click OK. Immediately, if not sooner, iTunes starts thinking very hard, adding up the space used by all your music in iTunes, and comparing that sum to the room you have on your iPod. If you have enough space on the iPod, then you've got it easy. All your music and playlists get copied over, so you can grab your iPod, round up the family, and jump in the car. (If all your music fits on an iPod, Apple would probably like you to consider visiting the iTunes Music Store more often.)

If you're a master manipulator, you might have picked the option, "Manually manage songs and playlists". This setting gives you dictatorial control over the music on your iPod. With this option, the only way to get music onto the iPod is to drag it over there with your bare mouse. Once a track is on the iPod, you can have your way with it: change tag information like name and artist, choose an equalizer preset, or even delete the poor thing. But watch out: changes you make to songs and playlists on the iPod are *never* copied back to iTunes on your computer.

Obviously, you have to be very careful with this option, and I recommend you avoid using it, except in specialized situations, such as collecting music from several computers for our family road trip. It's too easy to get confused and inadvertently delete music from the iPod that you don't have anywhere else. (Well, it was too easy for *me*, anyway.) If you must use this setting, make sure you don't make changes to songs and playlists directly on the iPod while you're working in iTunes. And please drive safely!

Update Your iPod without Replugging

As an iPod owner, you get to experience frequent cool moments as you come across its niftier features. One of those moments happens whenever you simply connect your iPod to your computer. If you're using automatic updating (see the hack *Share Your iPod*), you watch as the computer feels that the iPod is there, starts iTunes, and begins updating the music on the iPod.

Sometimes you find yourself messing around with playlists while the iPod is connected. If you open iPod Preferences and make any changes to the set of playlists you want to put on the iPod, then click OK, iTunes automatically updates what's on the iPod to match your new set of playlists.

But there is a case when automatic updating isn't fully automatic. If you change a song in a playlist in iTunes, and that playlist is synched with the iPod, the change isn't immediately copied to the iPod. Instead, the update happens when you eject the iPod, right before the computer lets go. But you might want the iPod to update right away, for example, if you're on the edge of running out of iPod space and you're watching carefully as you try to tweak your playlists to use up every last ounce of iPod disk storage.

One way to force an update is to eject the iPod and disconnect it, then immediately plug it back in so you can keep working on it. But that would be wrong. There's a much easier

way lurking in iTunes: the “Update Songs on iPod” item at the bottom of the File menu. Just choose that item, and your iPod will be updated at once. This also saves wear on your iPod’s connectors and cables, not to mention your fingers.

Use Smart Playlists to Keep Your iPod Fresh

The iTunes Smart Playlists feature seems merely interesting at first glance, but there’s far more to it than meets the eye, like an iceberg or the One Ring. Smart Playlists provide easy and powerful ways to create lists of songs, and you can teach them to update themselves automatically, based on rules you devise. By combining Smart Playlists with the automatic update that happens when you connect your iPod to your computer, you get an almost magical combination that can deliver fresh music every time.

There are a few Smart Playlist properties that are especially useful in ensuring an ever-changing supply of tunes:

- Play Count keeps track of how many times you’ve listened to a particular song.
- Date Added tells when you put the song in the iTunes library.
- Last Played is the date of the most recent time iTunes or the iPod played the tune.

Play Count and Last Played are especially supercool, because they keep track of your listening whether it’s on the iPod or in iTunes. So, if you listen to “Father of Mine” by Everclear on your iPod, the next time you connect to your computer, the Play Count and Last Played values for that song will know that it was played.

By using these three properties, you can easily build Smart Playlists that bring fresh stuff to your iPod. For example, if you want to grab music that you haven’t heard in a couple of months, you can make a Smart Playlist like the one shown under construction in Figure 1-3.

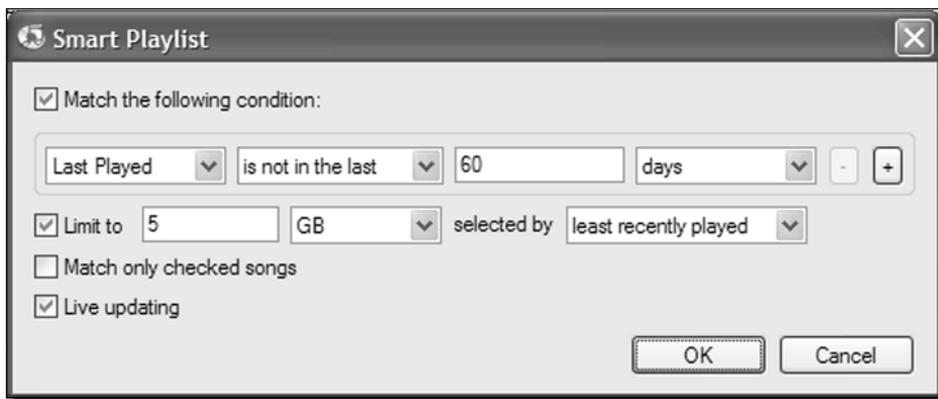


FIGURE 1-3: You can create a playlist that includes only music you haven’t listened to recently.

With the settings shown in Figure 1-3, you'll get a playlist made of songs that haven't been played for at least 60 days. By using the "Limit" setting, you can make sure this playlist doesn't take over your whole iPod. This example uses a 5GB limit—you can adjust that to your taste. The "Live updating" checkbox is essential. It ensures the playlist refreshes itself every time a song is played. Without that box checked, the Smart Playlist essentially becomes frozen as soon as it's created, which can be useful, but right now we want fresh, not frozen.

Here's another way to load new tunes into your iPod: make a Smart Playlist with settings "Date Added is in the last 30 days". This will give you a list of the stuff you've bought or ripped in the past month.

Do you ever get so busy that you buy music and then forget to listen to it? D'oh! Create a Smart Playlist to overcome that problem forever. Just choose the condition "Play count is 0" and your music will no longer be able to hide from you.

Of course, listening to new music requires that you pay attention, at least a little, and sometimes you're just not in the mood for that much cogitation. A good antidote for that is a set of songs you like to listen to over and over. You can use Smart Playlists to construct a set of the 100 songs you play the most. First, turn off the "Match the following condition" checkbox at the top of the dialog box. Then, choose "Limit to 100 songs selected by most often played". Click OK, and there you go—musical comfort food.

Cross-Reference



Smart Playlists are cool enough that we devote a big chunk of space to them later, in Chapter 5.

This Is the End

If you start to fool around with the Play Count and Last Played values, you might notice that you remember hearing a song, but iTunes doesn't think it was played. That could be. The Play Count and Last Played values aren't adjusted until the song plays all the way through to the end. And no fair skipping to the next song, either—the end of the song must be played. You can cheat a little by fast-forwarding through the song until the end, then letting the very last part play.

Shuffle Your Music to Hear It All

Sometimes you know just what you want to hear, and sometimes you don't. For those moments when you're feeling suggestible, your iPod can help you out. All you have to do is use the Shuffle setting. If you're already familiar with Shuffle, you might not have tried its little-known third option, which we'll discuss here.

Located in the iPod Settings menu, Shuffle has three options: Off, Songs, and Albums. When it's Off, all playlists and albums are played in their "natural" order. When you set Shuffle to Songs, the order of songs within a playlist or album is random. The third Shuffle setting, Albums, is useful if you like to listen to whole albums, one after another, on your iPod. With this setting, the iPod will choose a random album, play it all the way through in order, then continue to choose random albums and play their songs in order.

Random Difference

The iPod and iTunes deal with random play in subtly different ways. In iTunes, each playlist remembers its own Shuffle setting. On the iPod, the global Shuffle setting affects all the music you're playing. This leads to much consternation if you sometimes listen to a "Favorites" playlist on your iPod, which is best played at random, while other times you like to hear albums all the way through: you're constantly turning Shuffle on and off to make it work the way you want. And the Shuffle Album setting doesn't really help in this case. If you use Shuffle Album when playing your Favorites, the iPod picks off and plays all the Favorites that happen to be on the same album before it continues on.

Use Repeat, Use Repeat

Once you've mastered the Shuffle setting, which is not really very hard, you should also take a look at its close relative, Repeat. Like Shuffle, you'll find Repeat in the iPod's Settings menu. There are three settings for Repeat: Off, One, and All. If you leave it set to Off, your lists will play all the way through to the end, and then the iPod will simply stop playing, return to the main screen, and politely wait for you to decide what you want to do next.

If you're going to use Repeat, you'll probably want the All setting. This one plays the current playlist, album, or artist to the end of the list, then starts over again and keeps going until you change the setting, your battery runs out, or the sun goes supernova.

The final and quirkiest Repeat setting, One, simply repeats the same song over and over. Why would you want to do this? Maybe you really love a song—I mean, *really, really* love it—or you need to keep repeating a song for some public performance, such as playing the title theme music to *Beetlejuice* out your window on Halloween.

You get some interesting interactions when you turn on both Repeat All and Shuffle Songs. With this combo, you'll get the same playlist repeated endlessly, but the songs will be in a different order every time. That's kind of cool.

Note that unlike Shuffle, the Repeat settings work the same way in both iTunes and iPod.

Hacking the Culture: How to Win Friends

When Steve Jobs introduced the iTunes Music Store at a presentation on April 28, 2003, some experts said Apple was doing nothing less than saving the music industry from itself. Apple worked for 18 months to convince the major music labels that making songs available for purchase online was a good idea. Since then, the iTunes Music Store has been very successful and widely imitated. But one of the richest moments of that introduction came when Jobs displayed a quote he attributed to Hunter S. Thompson: “The music business is a cruel and shallow money trench, a long plastic hallway where thieves and pimps run free, and good men die like dogs. There’s also a negative side.”

When the quote appeared on the screen, the crowd applauded wildly, except for some of the music industry executives in the room.

Get Sound Check to Work

Ever notice how some CDs are REALLY LOUD and others are very quiet? The sound level is built into the way the CDs were recorded and mastered—the volume changes without you wanting it to. In particular, older CDs often seem to be mastered at low volume levels compared to recent music. This is really annoying when you’re listening to a playlist with songs from various eras.

Luckily, iPod and iTunes have a magic trick that cures this problem: Sound Check. This feature analyzes the volume of songs and adjusts it so that they’re all in the same range. When you play songs with Sound Check, your personal volume choice becomes the way to turn it up or down.

Unfortunately, Sound Check is a little trickier than it needs to be. You have to turn it on both in iTunes and on the iPod. Here are the steps:

1. (Here’s the part most everyone remembers to do.) Turn on Sound Check in iTunes. Choose iTunes ⇨ Preferences on the Mac, or Edit ⇨ Preferences on Windows. Click the Audio tab, then make sure the Sound Check box is on. After you click OK, iTunes starts rummaging through your music and leveling the volume. iTunes displays its progress in the status area (see Figure 1-4). Connect your iPod to update its music.
2. (Here’s the step people often forget.) On the iPod, go to the Settings screen and turn Sound Check on.

That’s it. If you don’t turn on Sound Check on the iPod, your songs won’t be played at the leveled volume when you hear them on the iPod, and you’ll wonder what the heck is going on.



FIGURE 1-4: Sound Check makes the volume levels similar on all your music.

Use the Equalizer to Get Terrific Sound

Modern music playback equipment uses a technique called *equalization* to modify the way audio information is reproduced. An equalizer splits the music into its component frequencies, then makes some of the frequencies louder and others less loud. The idea is to reduce the sounds that are harsh or not appropriate to the music, while emphasizing the sounds that are most important.

To produce the best results, equalizer settings vary depending on the type of music that's playing. For thumping dance music, a good equalizer setting would emphasize the lower range of frequencies, while a setting for music with more delicate vocals would enhance the middle-to-high ranges of the human voice.

You probably know that your iPod and iTunes have equalizers built in. If you love music but you don't consider yourself an audiophile, you might not have explored the equalizer. If that's the case, you should give it a try. It's very easy to use, and it makes a remarkable difference in how your music sounds.

The easiest way to use the equalizer on your iPod is to pick a setting and turn it on. Go to the Settings menu and choose the Equalizer. On this screen it's the setting that starts with "EQ", such as "EQ-Off" or "EQ-Rock". After you choose it, you'll see a list of more than 20 settings for the equalizer, including Off. Pick the setting that matches the type of music you usually listen to and click the Select button. Now you'll get to hear lovely equalized music.

There are more advanced ways to use the equalizer. For example, each song can carry its own equalizer setting. This trick requires iTunes. To pick an equalizer setting for a song in iTunes, click a song and choose File ⇨ Get Info. Click the Options tab. Choose a setting from the Equalizer Preset pop-up. Any songs that have their own equalizer preset will now be played using that setting, in iTunes and on the iPod.

Don't Be Denied

When you start playing with the equalizer on your iPod, you might want to go to the EQ menu while a song is playing to find out what its equalizer preset is. Unfortunately, there's no way to tell what preset a song has on the iPod. The setting shown in the EQ menu is the current global setting, not the preset for the current song.

Just to make things more useful, not to say more confusing, you can override the current song's (invisible) preset by choosing a different setting from the EQ menu while the song is playing. When you do this, the song continues to play but instantly switches to the new setting. The next time the song plays, it reverts to its preset.

Scrub Your Songs to Hear What You Want

Everybody is in a hurry nowadays, even us iPod owners. The original iPod software included a way to fast-forward or rewind through the current song by holding down $\gg|$ or $|<<$. That was fast, but not fast enough, and a later version of iPod software added the ability to zip through songs just as fast as you can turn the scroll wheel. To use this handy feature, press the Select button when you're on the Now Playing screen. The progress bar gets a little diamond that shows the current spot in the song. When you see that, you can use the scroll wheel to move back and forth quickly through the current song, a technique called *scrubbing*. After you leave the wheel alone for a few seconds, the iPod figures you're done, and the regular progress bar comes back. You can also get it back right away by pressing Select again (you have to press it an extra time with a 2003 iPod in order to get past the "rate my song" screen).

Summary

Hacking isn't the exclusive domain of evil geniuses, master programmers, and those who own the big box of Craftsman tools. We can all hack our worlds to make them fit better. As promised, this chapter provides iPod music hacks that are simple, straightforward, and in many cases, even useful—hacks for everybody.

Your iPod might be the world's greatest music player, but that's not all it knows how to do—far from it. Coming up in Chapter 2, we'll move beyond the music as we delve into other iPod features.