Chapter 1

Firing Up Your iPod

In This Chapter

- Comparing iPod models
- Powering up your iPod
- Using and recharging your battery
- Scrolling through the iPod main menu
- Resetting the iPod

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The B-52s sing "Roam if you want to, roam around the world" through your headphones as you take off. The flight is just long enough to watch the "Mr. Monk and the Airplane" episode from the first series of the *Monk* TV show and catch up on the latest episodes of *The Daily Show with Jon Stewart* and *The Colbert Report* — it's so easy to hold and watch your iPod that you don't have to put it away when your flight dinner arrives. You even have time to listen to the "NFL Rants and Raves" podcast to catch up on American football. As the plane lands, you momentarily forget where it is you're going — so you read your destination information on your iPod without even pausing the podcast, and you queue up a playlist of songs to get you through the terminal. If Chicago is your kind of town, you might choose Frank Sinatra. If San Francisco, you might choose anything from Tony Bennett to the Grateful Dead. You have so much content on your iPod, and you can select and play it so easily, that you probably could land anywhere in the world with appropriate music in your ear and convenient eye candy in your hand.

First the iPod changed the way people play music on-the-run, and now it's changing the way people play TV shows and videos. A full-size video iPod holds so much music that no matter how large your music collection is, you will seriously consider putting all your music into digital format on your computer, transferring portions of it to the iPod, and playing music from both your computer and your iPod from now on. And why wait for the best episodes of your favorite TV shows to be broadcast, when you can download the shows anytime you want and play them on a video iPod anywhere you

want? Albums, music videos, TV shows, and movies — you might never stop buying CDs and DVDs, but you won't have to buy *all* your content that way. And you'll never again need to replace the content that you already own.

As an iPod owner, you're on the cutting edge of entertainment technology. This chapter introduces the iPod and tells you what to expect when you open the box. We describe how to power up your iPod and connect it to your computer, both of which are essential tasks that you need to know how to do — your iPod needs power, and it needs audio and video, which it gets from your computer.

Introducing the iPod

The iPod is, essentially, a hard drive or flash memory drive, and a digital music and video player in one device. But that device is such a thing of beauty and style and so highly recognizable by now that all Apple needs to do in an advertisement is show it all by itself.

The convenience of carrying music on an iPod is phenomenal. For example, the 60GB iPod model can hold around 15,000 songs. That's about a month of nonstop music played around the clock — or about one new song a day for the next 40 years. And with the iPod's built-in skip protection in every model, you don't miss a beat as you jog through the park or when your car hits a pothole.

Although Apple has every right to continue to promote its Macintosh computers, the company saw the wisdom of making the iPod compatible with Windows PCs. Every iPod now comes with the software that you need to make it work with Windows systems as well as Macintosh OS X.

A common misconception is that your iPod becomes your music and video library. Actually, your iPod is simply another *player* for your content library, which is safely stored on your computer. One considerable benefit of using your *computer* to organize your content is that you can make perfect-quality copies of music, videos, podcasts, and audio books. You can then copy as much of the content as you want, in a more compressed format, onto your iPod and take it on the road. Meanwhile, your perfect copies are stored safely on your computer. Your favorite albums, TV shows, videos, and podcast episodes can be copied over and over forever, just like the rest of your information, and they never lose their quality. If you save your content in digital format, you will never see your songs or videos degrade, and you'll never have to buy the content again.

The iPod experience includes iTunes (or, in older-generation Windows models, Musicmatch Jukebox), which lets you organize your content in digital form, make copies, burn CDs, and play disc jockey without discs. Without iTunes (or Musicmatch Jukebox), your iPod is merely an external hard drive. As a result of using iTunes (or Musicmatch Jukebox), your content library is essentially permanent because you can make backup copies that are absolutely the same in quality. We introduce iTunes in Chapter 2.

If you're using Musicmatch, visit the companion Web site at `www.dummies.com/go/ipod4e` to find out how to use Musicmatch.

The iPod is also a *data player,* perhaps the first of its kind. As an external hard drive, the iPod serves as a portable backup device for important data files. You can transfer your calendar and address book to help manage your affairs on the road, and you can even use calendar event alarms to supplement your iPod's alarm and sleep timer. Although the iPod isn't as fully functional as a personal digital assistant (PDA) — for example, you can't add information directly to the device — you can view the information. You can keep your calendar and address book automatically synchronized to your computer, where you normally add and edit information. We cover using the iPod as a data player in detail in Chapter 22 and as a general-purpose hard drive in Chapter 23.

Comparing iPod Models

Introduced way back in the Stone Age of digital music (2001), the iPod family has grown by five generations as of this writing, and it has spawned more than 20 different models, including a private-label version (the HPod from Hewlett-Packard), a custom version (iPod U2 Special Edition, featuring all of U2's songs), and offshoots such as the popular iPod nano, iPod mini, and iPod shuffle. Even from the beginning, iPod models were truly innovative for their times. With the MP3 music players of 2001, you could carry about 20 typical songs (or a single live Phish set) with you, but the first iPod could hold more than 1,000 typical songs (or a 50-hour Phish concert).

Today's iPod works with iTunes on either Windows computers or Macs, but that wasn't always the case. The first-generation iPods worked only with Macs. In 2002, Apple introduced the second generation — one version for Windows and another for the Mac, using the same design for both. For the third generation (2003), Apple changed the design once again.

Third-, fourth-, and fifth-generation iPods, and offshoots such as iPod mini, iPod nano, and iPod shuffle, work with either Windows or Mac and come in a variety of hard-drive or flash-memory sizes. One way to tell what kind of iPod you have is by its navigational controls. By design, you can hold an iPod in your hand while you thumb the *scroll wheel* (our generic term for scroll wheel, scroll pad, touch wheel, or click wheel). The LCD screen on full-size models offers backlighting so that you can see it in the dark.

For a nifty chart that shows the differences between iPod models, see the Identifying Different iPod Models page on the Apple iPod Web site (`http://docs.info.apple.com/article.html?artnum=61688`).

First-generation iPods

Apple doesn't sell first-generation iPods anymore, but you might see a few on eBay. More likely, their proud owners are Mac users who still find them useful. Despite its high price tag ($399) compared with other MP3 players, the first 5GB iPod (with 5GB of storage space) was an unqualified success when it was introduced in October 2001. Apple sold more than 125,000 units within 60 days. "Listening to music will never be the same again," Apple CEO Steve Jobs told the press at the introduction of the first iPod, and he was right. Months later, Apple introduced the 10GB model.

First-generation iPods work only with Macs, connecting to a Mac with a standard FireWire cable. The first generation offers a distinctive scroll wheel that physically turns with your finger as you use it. These early iPods are hefty at 6.5 ounces and have a stainless-steel back and dual-plastic top casing.

FireWire is called *IEEE 1394* by the engineers who designed it and *DV terminal* by camcorder manufacturers that use it, except Sony, which calls it *i.Link*.

These models don't offer all the features of newer generations and can't be used with accessories that are designed for newer generations. For example, you can't expect these older models to use extensions such as voice recorders and memory card readers. First-generation models can't be updated to version 2 or newer versions of the iPod software, so they also lack support for features such as adding notes to the iPod and setting up an on-the-go playlist. However, battery life is comparable to newer models, offering up to eight hours before requiring a recharge. (For more about battery life, see "Facing Charges of Battery," later in this chapter.)

Second-generation iPods

Apple introduced a second-generation design in the form of two models: the 20GB iPod for the Mac and the 10GB for Windows. The Windows model of the second generation shipped with Musicmatch Jukebox. Apple doesn't sell these anymore either, but you might find one on eBay.

Second-generation models use an innovative solid-state touch wheel that doesn't physically turn as you use it but instead responds to finger pressure. These models use a standard FireWire connection to connect to the computer with a six-pin FireWire cable.

Second-generation models can't be updated to version 2 or 3 of the iPod software, so they don't offer all the features of the third, fourth, and fifth generation and can't be used with dock-connector and voice recorder accessories designed for newer models. Although standard FireWire accessories (such as power adapters for automobiles) are available for these models, digital camera accessories such as memory card readers are not (as of this writing).

Third-generation iPods

The third-generation models include the 10GB, 15GB, and 30GB models introduced in 2003, and the 20GB and 40GB models introduced later in that same year. All have been discontinued, but you can find them on eBay. All third-generation models share the same basic features and work with Mac or Windows, and Apple continually provides software updates for these models.

Models of the third generation are thinner than the second generation and use touch-sensitive buttons with audible feedback (replacing the pressure-sensitive buttons of the second generation that offer tactile feedback). Third-generation models also use a *dock connector* to connect to a computer or power supply; see Figure 1-1. The dock keeps your iPod in an upright position while connected and lets you connect a home stereo or headphones, which makes the dock convenient as a base station when you're not traveling with your iPod — you can slip the iPod into the dock without connecting cables.

The dock didn't come standard with the 15GB model, but you can order it as an extra from the Apple Store.

The supplied cables connect to the dock on one end (or to the iPod itself if you don't use a dock) and connect to a computer or power supply on the other end, using standard FireWire or USB 2.0. Some models did not include the USB cable, but you can order it from the Apple Store for about $20. (PC users crave choice. You can read about USB in the sidebar "USB or FireWire: That is the question" in this chapter.)

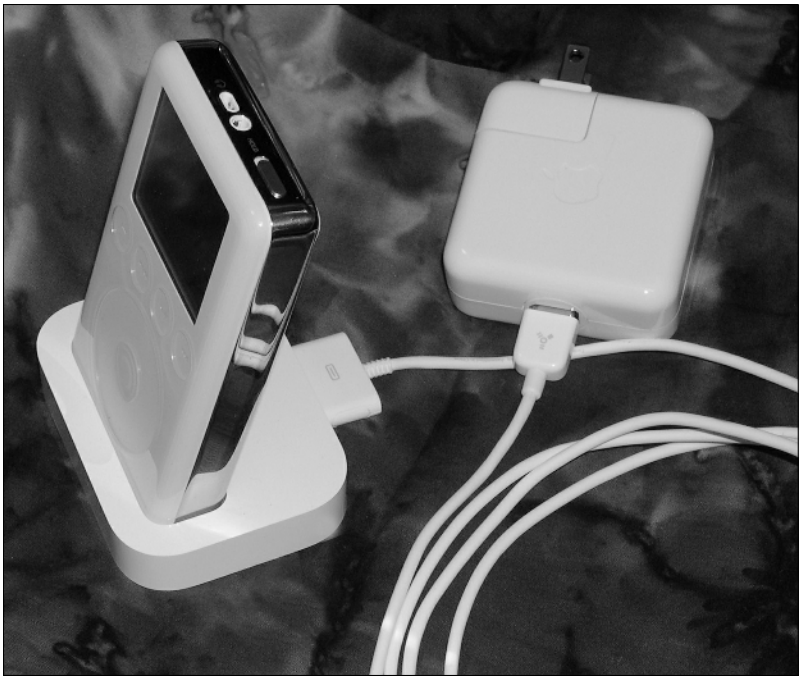

Figure 1-1: The third-generation iPod in its dock connected to the power adapter.

iPod mini

iPod mini, an offshoot of the third generation, is small enough to fit in a shirt pocket; see Figure 1-2. Its smooth, ultra-thin, anodized aluminum case came in five different colors. Apple has since phased out iPod mini (replaced essentially by iPod nano), but you can find one on eBay. The original model houses a 4GB drive that can hold about 1,000 songs — as much as the original 5GB model. Newer models sport a 6GB drive that holds about 1,500 songs. (iPod mini can fit more songs in the same amount of space because Apple introduced a better compression format called AAC in second-generation models. The AAC format can also be used in older models, so when Apple introduced AAC, the capacity of all models increased.)

Besides its smaller size (and therefore, smaller dock), another of iPod mini's distinguishing characteristic is the click wheel, which offers the same functions as the third-generation iPod touch wheel but is more suitable for such a small device. The click wheel combines the scroll wheel and buttons, with pressure-sensitive buttons underneath the top, bottom, left, and right areas of the circular pad of the wheel.

Figure 1-2: iPod mini fits in a shirt pocket.

iPod mini has the same features as full-size third-generation iPods except that it uses a different set of accessories because of its size, and it offers up to 18 hours of battery time between charges. We describe both types of iPods and their accessories throughout this book.

Fourth-generation and color-display iPods

In 2004, Apple introduced a fourth-generation iPod that uses the same click wheel and buttons that iPod mini uses. Fourth-generation iPod software includes the ability to randomly shuffle song playback with the press of a button, and to charge up the iPod through the USB connection to your computer. The fourth-generation iPods were at first available in 40GB and 20GB models with black-and-white displays. Later in 2004, Apple offered 30GB and 60GB models with color displays that can store photos and display slideshows. The fifth-generation models have replaced the fourth generation, but you can find these in some stores and on eBay.

The fourth-generation units with black-and-white displays offer up to 12 hours of battery time between charges. You can play up to 15 hours of continuous music on a color-display iPod between charges or up to five hours of continuous slideshows with music. The battery is the same type as used in other models — the improvement is in how the software manages power in the iPod. Like third-generation iPods, the fourth generation also uses a dock connector to connect the iPod to a computer or power supply, and the dock itself is available separately from the Apple Store. The fourth-generation iPods connect to computers by using either FireWire or USB connections.

The fourth-generation iPod models differ from earlier models by offering a top-level Music choice on the main menu and the ability to create multiple on-the-go playlists. You can also play audio books at slower or faster speeds while maintaining natural-sounding pitch.

The iPod color-display models of the fourth generation, including the earliest model known as *iPod photo,* let you store and view color digital photos as well as store and play sound. These models also do everything a fourth-generation iPod can do and use the same accessories. Apple offered a 20GB model and a whopping 60GB model that can hold up to 15,000 songs and full-color album cover art — or as many as 25,000 photos.

The 60GB iPod with color display uses the same click wheel and buttons iPod mini uses. The color display provides crisp definition for the iPod's menus, making them easier to read, even in sunlight.

The iPod color display, at 220-x-176 pixel resolution and over 65,000 colors, offers excellent viewing with built-in backlighting. With the optional AV cable, you can connect the iPod to a television monitor or video projector for a video-quality slideshow. It even optimizes your photos to fit on a standard (4:3 ratio) or widescreen (16:9 ratio) TV.

Fifth-generation iPods with video

Apple shook the world once again in late 2005 by introducing a new generation of iPod that plays video along with music and photos. The fifth-generation iPod is a bit slimmer than the previous generation while adding a generous 2.5-inch color display that offers remarkable picture clarity for video content.

As of this writing, Apple provides a 30GB model that holds about 7,500 songs or about 75 hours of video, and its battery offers up to 14 hours of music playback, 3 hours of slideshows with music, or 2 hours of video playback.

The 60GB fifth-generation iPod (shown in Figure 1-3), holds about 15,000 songs or about 150 hours of video, and its battery offers up to 20 hours of music playback, 4 hours of slideshows with music, or 3 hours of video playback. Both fifth-generation iPods use the same click wheel and buttons as the fourth-generation models.

You can put videos on your fifth-generation iPod by using iTunes. You can even get some of your favorite TV shows, plus music videos, movie trailers, and short films, directly from the iTunes online store. The color display provides crisp definition for the iPod's menus, making them easier to read, even in sunlight. The iPod color display, at 320-x-240-pixel resolution and over 65,000 colors, offers excellent viewing with built-in backlighting. With the optional AV cable, you can connect the iPod to a television monitor or video projector to show videos and slideshows. It even optimizes your photos to fit on a standard (4:3 ratio) or widescreen (16:9 ratio) TV.

Like fourth-generation iPods, the fifth generation also uses a dock connector to connect the iPod to a computer or power supply, and the dock itself is available separately from the Apple Store. The fifth-generation iPods connect to computers by using USB connections.

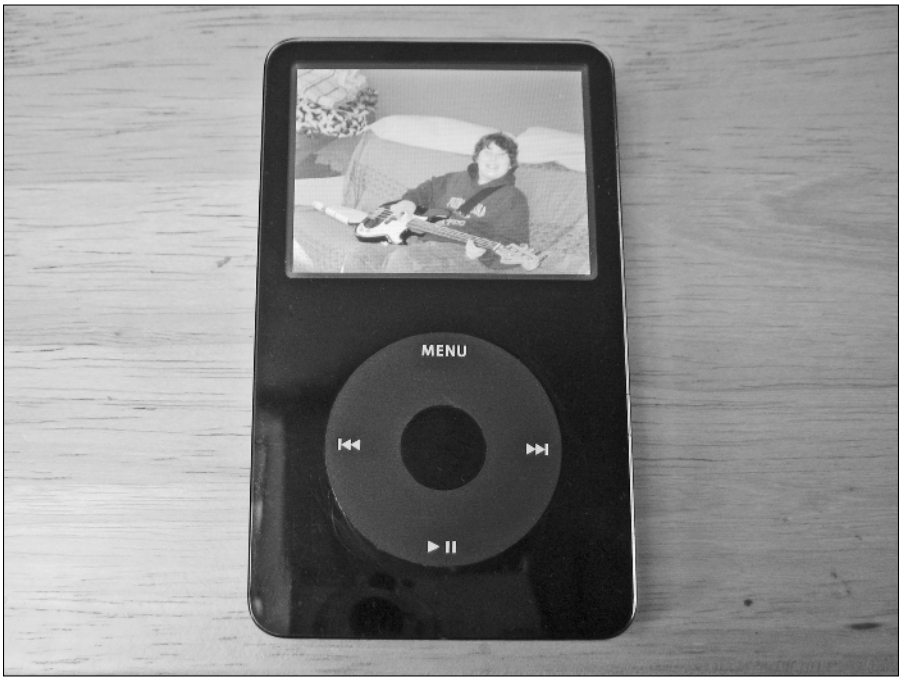

Figure 1-3: Fifth-generation iPods with color displays let you play not only music, but also videos and photo slideshows.

Mano a mano with iPod nano

Honey, Apple shrunk the iPod. The pencil-thin iPod nano is only 3.5 x 1.6 inches and weighs only 1.5 ounces — and packed into this mini marvel is a 1.5-inch color LCD display that crisply displays the iPod menus and album artwork. Apple offers a 1GB model that holds about 240 songs, a 2GB model that holds about 500 songs, and a 4GB model, shown in Figure 1-4, that holds 1,000 songs. Each model offers a battery that can play up to 14 hours of music or four hours of slideshows with music.

Figure 1-4: iPod nano is the smallest iPod that can display photos as well as menus, calendars, and contacts in color.

You read that right — the little wonder can also display photos just like full-size color-display iPods. It is also the smallest iPod that can serve up your personal calendar and contacts. Unlike the smaller iPod shuffle, iPod nano is a full-featured iPod with loads of accessories tailored specifically for it.

iPod nano uses the same style of click wheel and buttons as the fifth-generation models. Like fifth-generation iPods, iPod nano also uses a dock connector to connect to a computer or power supply. iPod nano connects to computers by using USB connections.

Doing the iPod shuffle

If the regular iPod models are not small enough to fit into your lifestyle, try iPod shuffle. iPod shuffle, shown in Figure 1-5, is 3.3 inches long, less than 1 inch wide, and about a third of an inch thick. It weighs only 0.78 of an ounce, which is little more than a car key or pack of gum. You can hang it from your ears with the supplied earbuds and wear it around your neck like a necklace.

The 512MB iPod shuffle can hold 120 songs, and the 1GB model can hold 240 songs — assuming an average of 4 minutes per song, using the AAC format at the High Quality setting (as described in Chapter 18). Remember, iPod shuffle is not for storing music permanently — you use it just to play selections from your iTunes library on your computer. It has no display, but that's actually a good thing because it keeps the size and weight down to a minimum — and you don't need a display to play a couple hundred songs in random or sequential order. You can also use your iPod shuffle to hold data files, just like an external flash memory drive.

Figure 1-5: An iPod shuffle weighs less than an ounce and offers skip-free playback.

With skip-free playback, lightweight design, and no need for a display, you can easily use it while skiing, snowboarding, or even skydiving. That's because it uses flash memory rather than a hard drive — you can shake it as hard as you want without a glitch. iPod shuffle's battery, similar to those used in other fourth-generation iPods, offers up to 12 hours of power between charges.

Unlike other iPods, iPod shuffle can't play tunes in the AIFF or Apple Lossless formats, which consume a lot of storage space but are higher in sonic quality. You can play songs in the AAC format (including songs from the online iTunes Music Store) or the MP3 format. These formats compress the music to use much less space. You can also use the Audible book format and the uncompressed WAV format. On Windows PCs, you can use the free WMV format but not the copyright-protected WMV format. See Chapter 18 for more details on encoding formats.

Underneath the cap on the tip of iPod shuffle is a convenient USB 2.0 connector that links iPod shuffle to a computer or to an optional power supply and supplies power for recharging its battery. You don't need a separate cable. iPod shuffle charges its battery from your computer, so you don't need the optional power supply. You can also get the optional $29 iPod shuffle External Battery Pack, which provides 20 additional hours of playtime with two AAA batteries.

Thinking Inside the Box

Don't destroy the elegantly designed box while opening it; you might want to place it prominently in your collection of Technology That Ushered in the 21st Century. Before going any further, check the box and make sure that all the correct parts came with your iPod.

Things you have and things you need

The fifth-generation iPod box includes earphones, a CD-ROM with the iTunes software for the Mac and Windows PC, and the USB cable you can use to connect your iPod to a computer. You can get accessories, including an AC power adapter, separately — for example, the iPod AV Connection Kit offers the adapter, AV cables, Apple Remote, and the iPod Universal Dock with adapters for all models.

The accessories don't stop there — you might also have a carrying case and some other goodies, many of which we describe in this book. They are available at the online Apple Store (`www.apple.com/store`).

You also need a few things that don't come with the iPod:

- **A PC or Mac to run iTunes:** On a PC, iTunes requires Windows 2000 or XP, a 500 MHz Pentium-class processor or faster, and a minimum of 128MB (256MB or more recommended). With a Mac, iTunes requires Mac OS X 10.2.8 or newer for connecting with FireWire (OS X 10.3.4 or newer for connecting via USB or for using AirPort Express); a 500 MHz G3 processor or better; and at least 256MB of RAM. The iTunes installer for the PC also installs the newest version of QuickTime, replacing any older version you might have. Macs have QuickTime preinstalled; however, you might need to upgrade your version of QuickTime to the newest version to use purchased music from the iTunes Music Store in other iLife applications on a Mac.
- **A PC to run Musicmatch Jukebox *(alternative to iTunes):*** You can alternatively use the iPod with Musicmatch Jukebox and a 300 MHz or faster PC with at least 96MB of RAM running Windows 98, Windows Me, 2000, or XP (with at least 128MB of RAM).

  

  If you're using Musicmatch, visit the companion Web site at `www.dummies.com/go/ipod4e` to discover the requirements to run it.
- **USB connection:** PCs must have USB 2.0 (also called a *high-powered USB*) for fifth-generation iPods and iPod nano; you can use FireWire (also called IEEE 1394) with older models. All current-model Macs provide USB 2.0, and all Macs provide FireWire. See the sidebar, "USB or FireWire: That is the question," in this chapter for more information about FireWire and USB 2.0.
- **FireWire (also called IEEE 1394) cable *(alternative to USB):*** Although older iPod models came with a FireWire cable, fourth- and fifth-generation iPods are supplied with just a USB cable for connecting to either a Mac or a PC. However, you can use a FireWire cable, available from the Apple Store, to connect any iPod with a dock connector to the AC power supply to provide power. You can also use FireWire with first-, second-, and third-generation iPods to connect to your computer. Fourth- and fifth-generation iPods and iPod nano use USB to connect to your computer. If you have an older computer that offers the slower USB 1.0 or 1.1 standard and a newer iPod that updates only via USB, consider upgrading your computer to get faster throughput with USB 2.0 when updating your iPod.
- **iTunes 6.0.5 or newer:** You can download Mac or Windows versions for free from the Apple Web site (`www.apple.com/itunes`). The CD-ROM supplied with current-model iPods should have both versions of iTunes

as well. Older models, still available in stores and online, might include versions of iTunes as old as version 4.5 — which is fine because version 4.5 works. (It just doesn't have all the features of 6.4.) You can download a newer version at any time to replace it.

- **Musicmatch Jukebox for PCs *(alternative to iTunes):*** CD-ROMs supplied with some older iPod models provided Musicmatch Jukebox instead on iTunes. You can use Musicmatch Jukebox if you don't meet the requirements to run iTunes.
- **Applications for managing contacts and calendars (*optional*):** Mac users can install Address Book (for managing contacts) and iCal (for managing calendars), both of which can synchronize your iPod with contacts and calendars. Both are available for free from `www.apple.com`. Windows users can use Outlook or Outlook Express for creating a contacts list and calendars for an iPod.

Using USB or FireWire cables

Current iPod models — the fifth generation and iPod nano — are supplied with a cable that has a USB connector on one end and a flat dock connector on the other end to connect to a dock or to the iPod itself. You can connect the USB end to either the AC adaptor or the computer's USB 2.0 port.

FireWire (called IEEE 1394 in PC circles) is another high-speed connection and power cable, supported by all generations except the current fifth-generation iPod. Fifth-generation iPods and iPod nano use USB to connect to the computer, not FireWire, so if you have the latest video iPod or iPod nano, you can skip all discussions about FireWire — unless you want to use a FireWire cable just to provide power to your iPod.

An older USB port works for synchronizing your iPod, but it doesn't provide power to the iPod. If all you have is an older USB port, you can use it to synchronize your fifth-generation iPod or iPod nano, and then use a FireWire cable (available from the Apple Store) to provide power by connecting it to a FireWire-compatible AC power adapter.

The connection on the bottom of the iPod is the same as the connection on the back of the dock. Plug the flat connector of the cable into the iPod or dock, and then plug the USB connector on the other end into the USB port on your computer.

iPod shuffle offers only a USB connector: Remove the cap from one end and connect it directly to the USB or USB 2.0 connection on your Mac. You can also use an iPod shuffle Dock or a USB extension cable (available from Apple at `www.ipod.com/store`).

USB or FireWire: That is the question

Current fifth-generation iPods and iPod nano models use USB to connect to computers, so USB is the answer. You can use either a FireWire or USB cable to connect the iPod to the AC power supply, but you must use USB to synchronize your iPod with your computer. That's all you need to know. With iPods older than the fifth-generation, you can use FireWire or, in some cases, USB. If you use a Mac, FireWire is the choice to make unless your Mac offers USB 2.0 and you're using an iPod mini, iPod nano, fifth-generation iPod, or iPod shuffle — all of which support USB 2.0. The iPod shuffle supports only USB and USB 2.0, so you have no choice but to use the USB or USB 2.0 connection.

Why so complicated? Technology marches on, leaving older iPod models and computers to talk in an ancient tongue (in this case, FireWire). At one time, it was a question of speed and convenience. FireWire hustled data at rates up to 400 Mbps over its cable. That was typically fast enough — with FireWire, you could transfer an entire CD's worth of music in less than ten seconds.

But engineers are never happy; they keep making things better. USB (Universal Serial Bus) has been around for a while, connecting hundreds of nifty devices to PCs. Such nifty devices include keyboards, pointing devices, external hard drives, keychain-sized flash drives, printers, scanners, and much more. USB proponents envied FireWire, which is more than 30 times faster than USB version 1.1, which offers a speed of only 12 Mbps. So they developed a more advanced generation of USB. Version 2.0 has a transfer rate of 480 Mbps — that's 40 times faster than the first version and comparable with FireWire.

Both FireWire and USB 2.0 connections are plug-and-play: You can plug them in at any time whether your computer is on or off. Depending on the device that you use with these connections, FireWire or USB 2.0 can provide power to the device. For example, fourth- and fifth-generation iPods, iPod nano, and iPod shuffle can draw power from a USB 2.0 connection, and all can draw power from a FireWire connection.

Have we made your choice easier yet for older iPod models? If you have a PC with USB 2.0 (which is more common than one with FireWire), go with it. The only drawback is that with an iPod older than the fourth generation, you might not be able to get power from the connection (depending on the PC), so you can't recharge its battery from your PC. You then need to get a FireWire cable and a FireWire AC adapter to recharge its battery. To connect older-model iPods, you can add FireWire to your PC with an expansion card such as the FireCard 400 CardBus card from Unibrain (`www.unibrain.com`), which plugs into a PC desktop or laptop CardBus slot. Laptop PCs made as far back as 1999 offer CardBus slots. Desktop PCs typically let you add expansion cards inside the PC, and there are many IEEE 1394 expansion cards available on the market. Before you buy a FireWire/IEEE 1394 card, make sure that it's compatible with your hardware and operating system. Apple offers approved FireWire expansion cards at the online Apple Store (`http://store.apple.com/1-800-MYAPPLE/WebObjects/AppleStore`). And, of course, Apple Macs offer built-in FireWire support.

If you have trouble installing your FireWire or USB 2.0 card into a PC or using your iPod with it, see Chapter 26 for troubleshooting tips.

First- and second-generation models offer only a standard FireWire connection, so you can use a standard Mac-style FireWire cable to connect the iPod to the Mac's FireWire connection. Plug the six-pin connector of a standard FireWire cable into the iPod, and plug the six-pin connector on the other end to the FireWire port on your Mac. (The six-pin connector is marked by the Y symbol that resembles a radiation symbol.)

USB and FireWire have been a part of every Mac since at least 2000. (To find out more about USB and FireWire, see the sidebar, "USB or FireWire: That is the question," in this chapter.)

Third-generation full-size iPod models don't support USB 2.0 on the Mac; you must use FireWire.

If you have a Windows PC, you can add FireWire support for older-model iPods. Most PCs already have USB 2.0, which is all you need to provide power to your fifth-generation iPod or iPod nano and to synchronize it with your PC. Although you can use a low-powered USB 1.0 or 1.1 connection, it doesn't supply power to most iPod models.

However, FireWire can provide power to fifth-generation iPod models and iPod nano models.

FireWire/IEEE 1394 expansion cards are available for PCs in various formats: Some offer the standard six-pin port found on Macs, and some offer a four-pin port that is also used in camcorders. If your card has a six-pin port, you can plug your iPod FireWire cable directly into it.

For cards with four-pin ports, Apple provides the FireWire cable adapter, as shown in Figure 1-6, and you can hook it up to the standard six-pin connector at the end of your FireWire cable. The small four-pin connector on the adapter plugs into the four-pin port on the FireWire card. Then plug the other end of your cable to your iPod or your dock. You can purchase a special FireWire/IEEE 1394 cable that has a six-pin plug on one end and a four-pin plug on the other — look for it in well-stocked electronics stores that sell digital camcorders, because many camcorders use such a cable.

The FireWire cable adapter used to be supplied with full-size fourth-generation iPods but is not supplied with iPod mini, iPod nano, or fifth-generation iPods, which use USB 2.0 to connect to your computer. You can purchase a FireWire cable adapter from the Apple Store.

Don't use another USB device in a chain, or a USB 2.0 hub, to connect your iPod — unless the hub is a powered hub. Note that a USB keyboard typically acts like a USB 1.1 hub, but is not powered. Therefore it can't provide power to the iPod and might slow down performance.

Figure 1-6: The FireWire cable adapter for connecting to a FireWire card that has a four-pin port.

Powering Up Your iPod

All iPods come with essentially the same requirement: power. Fortunately, each iPod also comes with a battery and a way of charging it — either directly from your computer or by using a cable and an AC power adapter that works with voltages in North America and many parts of Europe and Asia. (See Chapter 21 for information about plugging into power in other countries.)

First- and second-generation iPod models offer a Mac-style FireWire connection on the top of the iPod. The power adapter also sports a FireWire connection, so all you need is a standard six-pin FireWire cable to plug in.

Third-, fourth-, and fifth-generation models — as well as iPod nano and iPod mini — use a dock that offers FireWire and USB connections. The dock can also connect to your home stereo through a line-out connection.

A FireWire or USB connection to a Mac provides power to the iPod and recharges the battery as long as the Mac isn't in sleep mode. A FireWire connection to a FireWire/IEEE 1394 card in a PC might not be able to provide power — check with the card manufacturer. The smaller four-pin connections for FireWire/IEEE 1394 cards typically don't supply power to the iPod.

If your iPod shows a display but doesn't respond to your touch, don't panic — check the Hold switch on top of the unit and make sure that it's set to one side so that the orange bar disappears (the normal position). You use the Hold switch for locking the buttons, which prevents accidental activation.

You might notice that the iPod's display turns iridescent when it gets too hot or too cold, but this effect disappears when its temperature returns to normal. iPods can function in temperatures as cold as 50 degrees and as warm as 95 degrees (Fahrenheit) but work best at room temperature (closer to 68 degrees).

If you leave your iPod out in the cold all night, it might have trouble waking from sleep mode, and it might even display a low-battery message. Plug the iPod into a power source, wait until it warms up, and try it again. If it still doesn't wake up or respond properly, try resetting the iPod as we describe in "Resetting Your iPod," later in this chapter.

Facing Charges of Battery

You can take a six-hour flight from New York City to California and listen to your iPod the entire time — and with some models, listen all the way back on the return flight — without recharging. All iPod models use the same type of built-in, rechargeable lithium-ion battery with the following power specs:

- The first-, second-, and third-generation iPod models offer up to 8 hours of battery power.
- The fourth-generation models and the iPod shuffle offer up to 12 hours.
- iPod mini offers up to 18 hours.
- The color-display fourth-generation models offer 15 hours of music playing time or 5 hours of photo display with music.
- iPod nano offers 14 hours of music playing time or 4 hours of photo display with music.
- The fifth-generation iPod models offer between 14 and 20 hours of music playing time, between 2 and 3 hours of video playing time, or between 3 and 4 hours of photo display with music.

However, keep in mind that playback battery time varies with the type of encoder that you use for the music files in iTunes. (Chapter 18 has more information about encoders.) It also varies depending on how you use your iPod controls and settings.

The iPod battery recharges automatically when you connect the iPod to a power source — for example, it starts charging immediately when you insert it into a dock that's connected to a power source (or to a computer with a powered FireWire or USB connection). It takes only four hours to recharge the battery fully for all models, and only three hours for an iPod nano.

Need power when you're on the run? Look for a power outlet in the airport terminal or hotel lobby — the battery fast-charges to 80 percent capacity in two hours. After the first two hours, the battery receives a trickle charge for the next two hours until fully charged.

Don't fry your iPod with some generic power adapter — use *only* the power adapter supplied with the iPod from Apple or a certified iPod adapter such as the power accessories from Belkin and other vendors.

A battery icon with a progress bar in the top-right corner of the iPod display indicates how much power is left. When you charge the battery, the icon turns into a lightning bolt inside a battery. If the icon doesn't animate, the battery is fully charged. You can also use your iPod while the battery is charging or disconnect it and use it before the battery is fully charged.

To check the battery status of an iPod shuffle, press the battery status button on the back (the long button above the Apple logo and below the position switch for setting the iPod shuffle to shuffle songs or play them in order). If the battery status light is green, the iPod shuffle is fully charged; if yellow, the charge is low; if red, very little charge is left, and you need to recharge it. If no light is visible, the iPod shuffle is completely out of power, and you need to recharge it to use it.

Maintaining battery life

The iPod's built-in, rechargeable lithium-ion battery is, essentially, a life-or-death proposition. After it's dead, it can be replaced, but the replacement might cost more than $50 (some services may charge less for older models). If your warranty is still active, you should have Apple replace it — don't do it yourself because opening the iPod invalidates the warranty.

Fortunately, the battery is easy to maintain. We recommend *calibrating* the battery once soon after you get your iPod — that is, run it all the way down (a full discharge) and then charge it all the way up (which takes four hours). Although this doesn't actually change battery performance, it does improve the battery gauge so that the iPod displays a more accurate indicator.

Unlike nickel-based batteries that require you to fully discharge and then recharge in order to get a fuller capacity, the iPod lithium-ion battery prefers a partial rather than a full discharge, so avoid frequent full discharges after the initial calibration. (Frequent full discharges can lower battery life.)

Lithium-ion batteries typically last three years or more and are vulnerable to high temperatures, which decrease their life spans considerably. Don't leave your iPod in a hot place, such as on a sunny car dashboard, for very long.

For a complete description of how Apple's lithium-ion batteries work, see the Apple Lithium-ion Batteries page at www.apple.com/batteries.

The bottom of the iPod warms up when it's powered on. The bottom functions as a cooling surface that transfers heat from inside the unit to the cooler air outside. The iPod's carrying case acts as an insulator, so be sure to remove the iPod from its carrying case before you recharge it.

Keeping the iPod in its carrying case when charging is tempting but also potentially disastrous. The iPod needs to dissipate its heat, and you could damage the unit by overheating it and frying its circuits, rendering it as useful as a paperweight. To get around this problem, you can purchase one of the heat-dissipating carrying cases available in the Apple Store. Alternatively, Marware (`www.marware.com`) offers a variety of sporty cases for about $30 to $40.

Even when not in use, your iPod drinks the juice. If your iPod is inactive for 14 days, you must recharge its battery — perhaps the iPod gets depressed from being left alone too long.

Saving power

Full-size iPods include a hard drive, and whatever causes the hard drive to spin causes a drain on power. Your iPod also has a *cache* — a memory chip holding the section of music to play next. The iPod uses the cache not only to eliminate skipping when something jostles the hard drive, but also to conserve power because the drive doesn't have to spin as much.

If you use the AIFF or WAV formats for importing music into iTunes (or Musicmatch Jukebox), don't use these formats with your iPod — convert the music first, as we describe in Chapter 19. These formats take up way too much space on the iPod hard drive and fill up the iPod cache too quickly, causing skips when you play them and using too much battery power because the drive spins more often. (See Chapter 5 for bringing content into iTunes. Chapter 18 provides detailed information about these formats.)

The following are tips on saving power while using your iPod:

- **Pause:** Pause playback when you're not listening. Pausing (stopping) playback is the easiest way to conserve power.
- **Back away from the light:** Use the iPod backlight sparingly. Select Backlight from the iPod main menu to turn it on or off, or turn the Backlight Timer setting to a number of seconds, or to Off, in the iPod's Settings menu. (Choose Settings from the main menu.) Don't use the backlight in daylight if you don't need it.
- **Hold it:** Flip the Hold switch to the locked position (with the orange bar showing) to make sure that controls aren't accidentally activated. You don't want your iPod playing music in your pocket and draining the battery when you're not listening.
- **You may continue:** Play songs continuously without using the iPod controls. Selecting songs and using Previous/Rewind and Next/Fast-Forward require precious energy. Not only that, but the hard drive has to spin more often when searching for songs, using more power than during continuous playback.

Always use the latest iPod software and update your software when updates come out. Apple is constantly trying to improve the way your iPod works, and many of these advancements relate to power usage.

Replacing your battery

Apple customers aren't always happy campers. Early iPods came with batteries that couldn't be replaced, but all it took were a few premature battery failures and quite a few customer complaints for Apple to institute a battery-replacement service. Apple also offers a special AppleCare warranty for iPods.

You can't remove or replace the iPod internal battery yourself. You need Apple to replace it if it dies.

If your iPod isn't responding after a reset (see "Resetting Your iPod" in this chapter for how to reset your iPod), follow the troubleshooting steps in Chapter 26. If these steps don't restore your iPod to working condition, you might have a battery problem. Go to the Apple support page for the iPod (`www.apple.com/support/ipod`) and click the iPod Service FAQ link to read frequently asked questions and answers about iPod support. Then click the iPod Battery Service Request Form link on the support page and follow the instructions to request service and return your iPod for a replacement.

The only time we had to do this (with a 30GB iPod), Apple required us to send just the iPod unit itself, without the power adapter or any other accessories, to Apple's service facility. Within a week, Apple sent back a brand-new iPod (same model).

Thumbing Through the Menus

After you bring content into iTunes and update your iPod, you're ready to play. The design of the iPod lets you hold it in one hand and perform simple operations by thumb. Even if you're all thumbs when pressing small buttons on tiny devices, you can still thumb your way to iPod heaven.

The iPod's unique circular scroll wheel makes scrolling through an entire music collection quick and easy. With your finger or thumb, scroll clockwise on the wheel to scroll down a list, or counter-clockwise to scroll up. As you scroll, options on the menu are highlighted. Use the Select button at the center of the scroll wheel to select whatever is highlighted in the menu display.

In full-size third-generation models, the touch-sensitive buttons above the scroll wheel perform simple functions when you touch them. (First- and second-generation models aren't touch-sensitive, so you need to press them.)

Current fifth-generation iPods, iPod nano, iPod mini, and fourth-generation iPods (including color-display models) provide a click wheel that offers the same functions as the scroll wheel *and* the clickable buttons. It has pressure-sensitive buttons underneath the top, bottom, left, and right areas of the circular pad of the wheel. These areas tilt as you press them, activating the buttons.

The iPod main menu for fifth-generation models, shown in Figure 1-7, offers the following selections:

- **Music:** Select music by playlist, artist, album, song, genre, or composer, or select an audio book.
- **Photos:** Select photos by photo album or select individual photos in the photo library. This selection appears only on color-display models.
- **Videos:** Select videos by playlist or by type (movies, music videos, TV shows, or video podcasts). This selection appears only on fifth-generation models.
- **Extras:** View and set the clock and alarm clock, view contacts, view your calendar, view notes, and play games.

- **Settings:** Adjust display settings, menu settings, the backlight timer, the clicker, and the date and time.
- **Shuffle Songs:** Play songs from your music library in random order.
- **Now Playing:** This selection appears only when a song is playing — it takes you to the Now Playing display.

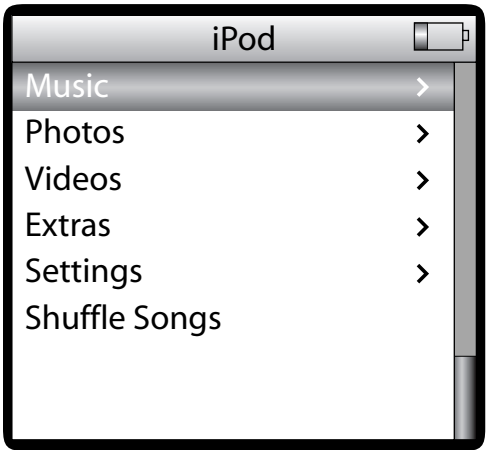

Figure 1-7: The fifth-generation iPod main menu.

The iPod main menu for fourth-generation models and iPod nano is the same as fifth-generation models, but without the Videos selection.

Third-generation models offer the following menu selections:

- **Music:** Select music by playlist, artist, album, song, genre, or composer, or select an audio book.
- **Playlists:** Select a playlist to play.
- **Extras:** View and set the clock and alarm clock, view contacts, your calendar, or notes, and play games.
- **Settings:** Set display settings, menu settings, the backlight timer, the clicker, and the date and time.
- **Backlight:** Turn on or off the backlighting for the iPod display.
- **Now Playing:** This selection appears only when a song is playing — it takes you to the Now Playing display.

The main menu for first- and second-generation iPods and iPod mini offers the following selections:

- **Playlists:** Select a playlist to play.
- **Browse:** Select music by playlist, artist, album, song, genre, or composer, or select an audio book.
- **Extras:** View and set the clock and alarm clock, view contacts, view your calendar, view notes, and play games.
- **Settings:** Set display settings, menu settings, the backlight timer, the clicker, and the date and time.
- **Backlight:** Turn on or off the backlighting for the iPod display.
- **Now Playing:** This selection appears only when a song is playing — it takes you to the Now Playing display.

Pressing the iPod Buttons

The buttons on full-size iPod models do various tasks for song playback:

- **Previous/Rewind:** Press once to start a song over. Press twice to skip to the previous song. Press and hold to rewind through a song.
- **Menu:** Press once to go back to the previous menu. Each time you press, you go back to a previous menu until you reach the main menu.
- **Play/Pause:** Press to play the selected song, album, or playlist. Press Play/Pause when a song is playing to pause the playback.
- **Next/Fast-Forward:** Press once to skip to the next song. Press and hold Next/Fast-Forward to fast-forward through the song.

The buttons and scroll wheel on full-size iPods can do more complex functions when used in combination:

- **Turn on the iPod.** Press any button.
- **Turn off the iPod.** Press and hold the Play/Pause button.
- **Disable the iPod buttons.** To keep from accidentally pressing the buttons, push the Hold switch to the other side so that an orange bar appears (the locked position). To reactivate the iPod buttons, push the Hold switch back to the other side so that the orange bar disappears (the normal position).

- **Reset the iPod.** You can reset the iPod if it gets hung up for some reason. (For example, it might get confused if you press the buttons too quickly.) This operation resets the iPod, essentially restarting the iPod's hard drive. It doesn't change the music or data on the iPod. See "Resetting Your iPod," later in this chapter to find out how to reset your iPod.
- **Change the volume.** While playing a song (the display reads `Now Playing`), adjust the volume with the scroll wheel — clockwise turns the volume up, counterclockwise turns the volume down. A volume slider appears on the iPod display, indicating the volume level as you scroll.
- **Skip to any point in a song.** While playing a song (the display says `Now Playing`), press and hold the Select button until the progress bar appears to indicate where you are in the song, and then use the scroll wheel to scroll to any point in the song. Scroll clockwise to move forward and counterclockwise to move backward.

Setting the Language

Wiedergabelisten? Übersicht? (Playlists? Browse?) If your iPod is speaking in a foreign tongue, don't panic — you're not in the wrong country. You might have purchased an iPod that's set to a foreign language. More likely, someone set it to a different language accidentally or on purpose (as a practical joke). Fortunately, you can change the setting without having to know the language that it's set to.

To set the language, no matter what language the menu is using, follow these steps:

1. **Press the Menu button repeatedly until pressing it doesn't change the words on the display or until you see the word *iPod*.**

   If pressing the Menu button no longer changes the display, you're at the main menu. With fourth- and fifth-generation models and iPod nano, the menu displays the word *iPod* no matter what language is selected — and you know you're at the main menu.

2. **Choose the third option from the top on fourth-generation iPods without color displays. Choose the fourth option from the top on iPod mini, iPod models with color displays, and older models. (In English, this is the Settings option.)**

   Scroll clockwise until the item is highlighted, and then press the Select button. The Settings menu appears.

3. **Choose the third option from the bottom of the Settings menu (which, in English, is the Language option).**

   The Language menu appears.

4. **Choose the language that you want to use. (English is at the top of the list.)**

If these steps don't do the trick, the menu may have been customized (something you can discover how to do in Chapter 22). Someone could have customized it previously, or perhaps you accidentally pressed buttons that customized the menu. To get around this problem, you can reset all the iPod settings back to the defaults. (Unfortunately, resetting your iPod to the default settings wipes out any customizations that you've made. You have to redo any repeat/shuffle settings, alarms, backlight timer settings, and so on.)

Follow these steps to reset all your settings, no matter what language displays:

1. **Press the Menu button repeatedly until pressing it doesn't change the words on the display or until you see the word *iPod*.**

   If pressing the Menu button no longer changes the display, you're at the main menu. With fourth-generation and fifth-generation models and the iPod nano, the menu displays the word *iPod* no matter what language is selected — and you know you're at the main menu.

2. **Choose the third option from the top on fourth-generation iPods without color displays. Choose the fourth option from the top on iPod mini, iPod models with color displays, and older models. (In English, this is the Settings option.)**

   The Settings menu appears.

3. **Choose the option at the bottom of the menu (in English, the Reset All Settings option).**

   The Reset All Settings menu appears.

4. **Choose the second menu option (in English, the Reset option; the first menu option is Cancel).**

   The Language menu appears.

5. **Choose the language you want to use. (English is at the top of the list.)**

The language you choose now applies to all the iPod menus. But don't pull that practical joke on someone else!