Chapter 1

Firing Up Your iPod

In This Chapter

- Comparing iPod models
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- Using and recharging your battery
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The B-52's 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 Tom Cruise in the movie *Vanilla Sky* and the "Mr. Monk and the Airplane" episode from the first series of the *Monk* TV show, as well as 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 you're in San Francisco, you might choose anything from Tony Bennett to the Grateful Dead. You have so much content on your iPod (that you can select and play so easily) that you probably could land anywhere in the world with appropriate music in your ear and convenient eye candy in your hand.

iPods changed the way people play music on-the-run. Now, they're 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'll seriously consider putting all your music into digital format on your computer, transferring portions of it to an 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 iPods 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 iPods

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

The convenience of carrying music on an iPod is phenomenal. For example, the 160GB sixth-generation iPod Classic can hold around 40,000 songs. That's more than two months of nonstop music played around the clock — or about two new songs per day for the next 54 years. And with iPod's built-in skip protection in every model, you won't miss a beat as you jog through the park or when your car hits a pothole.

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, movies, 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, audio books, TV shows, movies, 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'll never see your songs or videos degrade, and you'll never have to buy the content again.

The iPod experience includes *iTunes* (for Mac or Windows), which lets you synchronize content with your iPod and other devices, such as the iPhone and Apple TV. You also use it to organize your content, make copies, burn CDs, and play disc jockey without discs. We introduce iTunes in Chapter 2.

Second-generation and third-generation iPod models can also be synchronized with a Windows PC using MusicMatch Jukebox version 7.5, which was provided on CD-ROM with some second-generation models before iTunes became available for Windows. A newer version of this software, renamed MusicMatch, does not work directly with iPods. If you're using MusicMatch, visit this book's companion Web site to find out how to use MusicMatch.

An iPod is also a *data player,* perhaps the first of its kind. As an external hard drive, an 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. You can keep your calendar and address book automatically synchronized to your computer, where you normally add and edit information. We cover using an iPod as a general-purpose hard drive in Chapter 22 and using it to synchronize your computer's calendar and contact information in Chapter 23.

Comparing iPod Models

Introduced way back in the Stone Age of digital music (2001), the iPod family has grown by six generations as of this writing, with custom versions for the band U2 and offshoots such as the popular iPod nano and the tiny $79 iPod shuffle that lets you wear up to 240 songs on your sleeve. Apple has recently introduced sixth-generation iPod models and the iPhone, combining iPod capabilities with a cell phone and wireless PDA. 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 iPods could hold more than 1,000 typical songs (or a 50-hour Phish concert).

Earlier-generation iPods

Today's iPod models and iPhone work 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-, fifth- and sixth-generation iPods — as well as 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. The iPhone and sixth-generation iPod Touch let you tap the sensitive display with your finger to select items and functions, and flick with your finger to scroll or move the display.

To learn more about previous generations of iPods, including detailed information about cables and connections, visit this book's companion Web site. 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`).

Sixth-generation iPods

Apple shook the world once again in late 2007 by introducing a new generation of iPod models (see Figure 1-1) with attractive enclosures and easier-to-use controls.

The sixth-generation iPod models include:

- **The iPod touch:** This spectacular model, which shares the design characteristics and many of the features of the iPhone, offers a touch-sensitive display and Wi-Fi Internet connectivity so that you can purchase music directly from your iPod and surf the Web. (Wi-Fi, which is short for wireless fidelity, is a popular connection method for local area networks; you can set up your home or office with Wi-Fi using an inexpensive Wi-Fi hub such as Apple's AirPort Extreme.)

Figure 1-1: Sixth-generation iPods include (left to right) the iPod touch, iPod classic, iPod nano, and iPod shuffle.

- **The iPod classic:** The original iPod design is now slimmer and offers more capacity and longer battery life than previous generations, with 80GB and 160GB models.
- **The iPod nano ("the fatty"):** The new fatter, shorter iPod nano now plays video as well as music, podcasts, and audio books.
- **The iPod shuffle:** The tiniest iPod now comes in a variety of colors.

You can put videos on your iPhone or sixth-generation iPod classic or nano models by using iTunes. You can even get some of your favorite TV shows, plus music videos and full-length movies, directly from the iTunes Store. The color display provides crisp definition for the iPod's menus, making them easier to read, even in sunlight.

Like third-, fourth-, and fifth-generation iPods, the sixth generation also uses a dock adapter cable to connect the iPod or iPhone to a computer or power supply. You can also use an Apple or third-party dock with your iPod, and use the dock adapter cable to connect the dock to your computer or power supply. The dock keeps your iPod in an upright position while connected and lets you connect a home stereo or headphones. This makes the dock convenient as a base station when you're not traveling with your iPod because you can slip the iPod into the dock without connecting cables. You can pick one up at an Apple Store or order one online, or take advantage of third-party dock offerings.

Fingering the iPod touch

The iPod touch, like the iPhone, lets you access the Web over a Wi-Fi Internet connection. You can use the built-in Safari Web browser to interact with Web services and applications, and the built-in YouTube application to play videos. Safari even displays a virtual keyboard for typing login entries, passwords, and text of any kind, including numbers and punctuation symbols. The innovative touch-sensitive display provides a rich set of navigation controls and menus controlled by software. You can use the Cover Browser with your finger to browse your music and video collection. You can even access the iTunes Store directly from your iPod touch and purchase content.

Less than a third of an inch thick and weighing only 4.2 ounces, the iPod touch is slightly smaller than an iPhone and offers the same single menu button on the front. Apple offers 8GB and 16GB models as of this writing. The 8GB model holds about 1,750 songs, 10,000 photos, or about 10 hours of video. The 16GB model holds about 3,500 songs, 20,000 photos, or about 20 hours of video. Both models use the same battery that offers up to 22 hours of music playback, or 5 hours of video playback.

Twirling the iPod classics

Sixth-generation iPod classic models use the same click wheel and buttons as the fifth-generation models, combining the scroll wheel with pressure-sensitive buttons underneath the top, bottom, left, and right areas of the circular pad of the wheel. As of this writing, Apple provides a slim, 4.9-ounce 80GB model and a 5.7-ounce 160GB model.

The 80GB model holds about 20,000 songs or about 100 hours of video, and its battery offers up to 30 hours of music playback, or 5 hours of video playback. The 160GB model holds about 40,000 songs or about 200 hours of video, and its battery offers up to 40 hours of music playback, or 7 hours of video playback. Both models hold up to 25,000 photos.

Mano a mano with iPod nano

Nicknamed "the fatty" by Apple fans, the new iPod nano, pencil thin and a little over two inches wide by less than three inches high, weighs only 1.74 ounces but packs a punch: video. This mini marvel offers a 2-inch color LCD display that crisply displays video, iPod menus and album artwork. Apple offers a 4GB model that holds about 1,000 songs, and an 8GB model that holds about 2,000 songs. (See Figure 1-2.)

Each model offers a battery that can play up to 24 hours of music — all day and all of the night — or 5 hours of video.

Figure 1-2: iPod nano is the smallest iPod that can display video.

The iPod nano is the smallest iPod that can serve up videos, podcasts, photos, and musical slideshows as well as 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 sixth-generation iPod classic models. Like other sixth-generation iPods, iPod nano uses a dock adapter cable to connect to a computer or power supply. A variety of docks for the iPod nano are available from Apple and other companies.

Doing the iPod shuffle

If the regular iPod models aren't small enough to fit into your lifestyle, try iPod shuffle. The 0.55-ounce iPod shuffle, as shown in Figure 1-3, is shaped like a money clip and is about the same size — 1.07 x1.62 inches with a depth of 0.41 inch. In several different flashy colors and convenient for clipping to just about anything, the iPod shuffle is fast becoming a fashion statement.

However, the current iPod shuffle that clips to your clothing is not the first iPod that you could wear. That honor belongs to the original iPod shuffle, which is 3.3 inches long, less than 1 inch wide, and about one-third of an inch thick. It weighs only 0.78 ounce, which is little more than a car key or a pack of gum. You can hang it from your ears with the supplied earbuds and wear it around your neck like a necklace. You can still find them for sale in retail outlets and used ones on eBay, but Apple replaced the original with the much smaller clip-on model.

iPod shuffle models have no display, but that's actually a good thing because this design 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.

The 1GB iPod shuffle holds about 240 songs. The older iPod shuffle, at 512MB, holds 120 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 meant to store music permanently. Instead, you use it just to play selections from your iTunes library on your computer.

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. An iPod shuffle battery offers up to 12 hours of power between charges.

Figure 1-3: An iPod shuffle weighs less than an ounce and offers skip-free playback.

Unlike other iPods, iPod shuffle can't play tunes in the highest-quality Audio Interchange File Format (AIFF) or Apple Lossless formats, which consume a lot of storage space. See Chapter 18 for more details on encoding formats.

The current iPod shuffle models built to resemble a money clip connect to power and to your computer by using a special mini-dock supplied in the box. The mini-dock includes a cable that links your 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.

The all-in-one iPhone

When Apple introduced the iPhone on June 29, 2007, lines formed around the block at the New York and San Francisco stores as eager early adopters

bought out all inventories. Hold one in your hands and you'll understand why: the innovative touch-sensitive display provides a rich set of navigation controls and menus, as shown in Figure 1-4, controlled by software — including a full keyboard for entering text, numbers, and special symbols. This iPod can not only phone home; it can monitor all your e-mail and browse the Internet with full page display, utilizing a Wi-Fi network when it senses one.

Figure 1-4: The iPhone offers a touch-sensitive display with rich menus and navigational controls.

The iPhone comes in 4G ($499) or 8G ($599) models and incorporates flash memory just like an iPod touch, iPod shuffle or iPod nano. Its 3.5-inch, widescreen multi-touch display offers 480-by-320–pixel resolution at 160 dots per inch for crisp video pictures, and it can display multiple languages and characters simultaneously. The iPhone's built-in rechargeable lithium ion battery offers up to 8 hours of talk time (250 hours on standby), up to six hours browsing the Internet or seven hours playing video, and up to 24 hours playing music. It also offers Bluetooth for using wireless headphones and microphones. And the iPhone is no slouch when it comes to acting like an iPod: It can play music, audio books, videos (such as TV shows, music videos, and even feature-length movies), and even podcasts. You can also display photos and slideshows set to music.

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 or iPhone. Keep the box in case, heaven forbid, you need to return the iPod or iPhone to Apple — the box ensures that you can safely return it for a new battery or replacement.

The sixth-generation iPod classic box includes earphones and a USB dock adapter cable that can connect either the iPod or a dock to a computer or power adapter. You can get accessories, including Apple's Universal Dock and an AC power adapter, separately. For example, the iPod AV Connection Kit offers the adapter, AV cables, Apple Remote, and the Universal Dock with adapters for all models.

The accessories don't stop there. Docks of various sizes, shapes, and functions are available from vendors, such as Belkin, Monster, and Griffin and some docks are combined with home speaker systems. You might also want a carrying case and some other goodies, many of which are 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 version 7.4 requires Windows XP (with Service Pack 2 to support Apple TV and the iPhone), or 32-bit editions of Windows Vista, running on a 500 MHz Pentium-class processor or faster, and a minimum of 256MB. If you intend to watch video, you need at least a 2.0 GHz Pentium-class processor or faster, and at least 512MB of RAM and 32MB of video RAM.

With a Mac, iTunes version 7.4 requires Mac OS X 10.3.9 or newer or Mac OS X 10.4.7 or newer (version 10.4.10 or newer required for iPhone), a 500 MHz G3 processor or better; and at least 256MB of RAM. If you intend to watch video, you need a 1GHz G4 processor or better, and 16MB of video RAM.

- **USB connection:** PCs must have USB 2.0 (also called a *high-powered USB*) for fifth-generation iPods and iPod nano. However, you can use FireWire (IEEE 1394) with older iPod models. All current-model Macs provide USB 2.0, and all Macs provide FireWire.

  For details about using USB or FireWire cables, visit this book's companion Web site.

- **Internet connection:** Apple recommends a broadband Internet connection to buy content and stream previews from the iTunes Store, although it is possible with a dial-up connection. At minimum, you need some kind of Internet connection to download iTunes itself.
- **CD-R or DVD-R drive:** Without a disc burner, you can't burn your own discs. On a PC, you need a CD-R or DVD-R drive. On a Mac, you need a Combo or Super Drive to burn your own discs.
- **iTunes:** Make sure you have the current version of iTunes — use the automatic update feature, which we describe in Chapter 2. You can also download iTunes for Windows or the Mac from the Apple site (`www.apple.com/itunes/download`); it's free. See Chapter 2 for instructions.

  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 7.4.) You can download a newer version at any time to replace it.
- **QuickTime:** QuickTime (required for video) comes with iTunes. The iTunes installer for the PC installs the newest version of QuickTime for Windows (version 7.2 as of this writing), replacing any older version you might have. Macs have QuickTime preinstalled (version 7.2 as of this writing), and Mac OS X automatically updates QuickTime if you use the Software Update feature of System Preferences in the Apple menu.

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 20 for information about plugging into power in other countries.)

Fifth- and sixth-generation iPod models (including the iPod touch) and the iPhone — as well as iPod nano, iPod mini, and third- and fourth-generation iPods — offer a dock connection. You can connect these models to a dock that offers USB 2.0 connections for power and synchronizing (or FireWire for third-generation models). Docks for full-size iPods can also connect to your home stereo through a line-out connection.

Sixth-generation iPods and iPod nanos 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 an iPod itself. You can connect the USB end to either the Apple power supply or the computer's USB 2.0 port. The iPhone is also supplied with a USB cable for connecting the iPhone or its dock to your computer or to the power supply.

The connection on the bottom of the iPod or iPhone is the same as the connection on the back of the iPod or iPhone dock. To connect your iPod or iPhone to your computer, plug the flat connector of the cable into the device or dock (press the buttons on both sides of the flat connector to fit it snugly into the connection), and then plug the USB connector on the other end into the USB port on your computer. (Press the same buttons on both sides of the flat connector to disconnect it.)

Most PCs already have USB 2.0, which is all you need to provide power to your sixth-generation iPod, iPod shuffle, 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.

Fifth- and sixth-generation models and iPod nano can use FireWire connections to charge their batteries but not for synchronizing with a computer. Fifth- and sixth-generation iPods, iPod nano, and iPod shuffle models use USB to connect to the computer and synchronize content, not FireWire. The iPod shuffle is supplied with a mini-dock with a USB cable attached and draws power from the USB port on the computer or from a USB power adapter.

An older USB 1.0 or 1.1 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- or sixth-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.

Don't use another USB device in a chain and don't use 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 it's not powered, so it can't provide power to the iPod and might slow down performance.

A FireWire or USB connection to a Mac provides power to an 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; to be safe, check with the card manufacturer. The smaller four-pin connections for FireWire/IEEE 1394 cards typically don't supply power to an iPod.

If your iPod shows a display but doesn't respond to your touch, don't panic. Just check the Hold switch on top or bottom 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 your 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° F (Fahrenheit) but work best at room temperature (closer to 68° F).

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 Chapter 24.

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 (Li-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.
- The fifth-generation iPod models offer between 14 and 20 hours of music playing time, between 3 and 6 hours of video playing time, or between 4 and 6 hours of photo display with music.
- The iPod nano offers 24 hours of music playing time or 5 hours of video or photo display with music. (Older models offered 14 hours of music and 4 hours of photo display with music.)

- The sixth-generation iPod classic 80GB model offers 30 hours of music playback or 5 hours of video or photo display with music. The 160GB model offers 40 hours of music playback or 7 hours of video or photo display with music.
- The iPod touch offers 22 hours of music playing time or 5 hours of video or photo display with music.
- The iPhone models offer up to 24 hours of music playing time, 7 hours of video playing time, or between 4 and 6 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 or iPhone controls and settings.

The iPod or iPhone battery recharges automatically when you connect it 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 1.5 hours. After the first hour and a half, the battery receives a trickle charge for the next hour and a half, until fully charged.

Don't fry your iPod or iPhone with some generic power adapter. Use *only* the power adapter from Apple or a certified iPod adapter, such as the power accessories from Belkin, Griffin, Monster, XtremeMac, and other vendors.

A battery icon with a progress bar in the top-right corner of the iPod or iPhone 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 or iPhone 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.
- **Yellow:** The charge is low.
- **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 or iPhone built-in, rechargeable battery is, essentially, a life-or-death proposition. After it's dead, it can be replaced, but Apple charges a replacement fee of $59 plus shipping. Some services may charge less, especially for older iPod models. If your warranty is still active, you should have Apple replace it under the warranty program (which may cost nothing except perhaps shipping). Don't try to replace it yourself because opening your iPod or iPhone invalidates the warranty. If your warranty is no longer active, compare Apple's prices and service to others — we have had very good (if more expensive) experiences with Apple's services.

Fortunately, the battery is easy to maintain. We recommend *calibrating* the battery once soon after you get your iPod or iPhone; 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 gauge displays a more accurate reading.

Unlike nickel-based batteries that require you to fully discharge and then recharge in order to get a fuller capacity, an iPod or iPhone 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 or iPhone in a hot place, such as on a sunny car dashboard, for very long.

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

The bottom of an 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. An iPod's carrying case acts as an insulator, so be sure to remove the iPod from its carrying case before you recharge it.

Keeping an iPod in its carrying case when charging is tempting but also potentially disastrous. An 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

iPod classic models 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. An 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 version 7.5): Don't use these formats with your iPod. Instead, convert the music first, as we describe in Chapter 19. These formats take up way too much space on the iPod 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 encoding formats, and Chapter 19 describes how to convert your music.)

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 Timer from the iPod Settings menu to limit backlighting 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 constantly tries to improve how 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 and iPhones.

You shouldn't try to remove or replace the iPod or iPhone internal battery yourself — and certainly not if the iPod or iPhone is still under warranty (because opening it breaks the warranty). You need Apple to replace it if it dies while under warranty, or use Apple or another service to replace it if the warranty period is over.

If your iPod or iPhone isn't responding after a reset, follow the troubleshooting steps in Chapter 24. If these steps don't restore your iPod or iPhone to working condition, you might have a battery problem. Go to the Apple support page for the iPod (`www.apple.com/support/ipod`) or the iPhone (`www.apple.com/support/iphone`) and click the Service FAQ link to read frequently asked questions and answers about support. Then click the Battery Service Request Form link on the support page and follow the instructions to request service and return your iPod or iPhone for a replacement.

Thumbing through the iPod Menus

After you bring content into iTunes and synchronize your iPod, you're ready to play. The design of the iPod classic and iPod nano lets you hold the iPod 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 touch, like the iPhone, offers a multi-touch interface that lets you tap your way into iPod heaven even faster. With an iPod touch, your fingers do the walking. You can make gestures, such as flicking a finger to scroll a list quickly, sliding your finger to scroll slowly or drag a slider (such as the volume slider), pinching with two fingers to zoom out of a Web page in Safari, or pulling apart with two fingers (also known as *unpinching*) to zoom in to the page to see it more clearly.

Touching iPod touch and iPhone displays

The first button you see on an iPod touch or iPhone display (besides the time of day and the date) is the message "slide to unlock" — slide your finger across this message to unlock your iPod touch or iPhone.

Your content is now immediately available at the touch of a finger. The iPhone provides an iPod button in the lower right corner of its main menu (refer to Figure 1-4) to provide access to your content. The iPod touch provides Music, Videos and Photos buttons that appear along the bottom row of the iPod touch main menu, as shown in Figure 1-5.

After touching a button on the iPod touch or iPhone display, a new page appears with more selections you can touch. In fact, you can touch every menu or button you see on the display. The iPod touch and iPhone run separate applications (Safari, Contacts, Calendar, YouTube, and so on), and the multi-touch interface changes for each application.

For example, touch the Music button to view a list of artists. After touching Music, buttons appear along the bottom of the display that you can touch to view a list of playlists, artists, songs, albums, and more. With a flick of your finger you can scroll the list, and touch selections to view the albums of an artist or the contents of an album or playlist. Touch any song to start playing it, and control buttons appear to control playback: Previous/Rewind, Play/Pause, Next/Fast-Forward, and a volume slider. All these buttons work by touch, and the only hard button on the front of the iPod returns you to the main menu.

The iPod touch and iPhone applications respond to gestures you make with your fingers. For example, you make the following gestures to perform the following functions:

- **Drag with finger:** Scroll up or down lists slowly.
- **Flick:** Quickly scroll up or down lists.
- **Tap an hold:** While scrolling, tap and hold to stop the moving list.
- **Flick from left to right (swipe):** Change panes on the iPhone (Safari, weather, iPod) and delete items (mail, SMS).
- **Single tap:** Select an item.
- **Double tap:** Zoom in or out with Safari and all other applications; zoom in with Maps on the iPhone.
- **Two-finger single tap:** Zoom out (Maps on the iPhone only).
- **Pinch:** Zoom out of photos, Maps on the iPhone, and Safari Web pages.
- **Unpinch:** Zoom into photos, Maps on the iPhone, and Safari Web pages.

The iPod touch menu (refer to Figure 1-5) offers the following selections:

- **Safari:** Use the Safari Web browser.
- **YouTube:** List and select videos from YouTube.
- **Calendar:** View your calendar.
- **Contacts:** View your contacts.
- **Clock:** View and set the date and time, alarm clock, and timer.
- **Calculator:** A simple calculator for adding, subtracting, multiplying, dividing, and so on.
- **Settings:** Adjust settings for Wi-Fi, sounds, brightness, and Safari usage, as well as other settings for the device.
- **Music:** Select music playlists, artists, songs, albums, and more (including podcasts, genres, composers, audio books, and compilations). The Music button also offers Cover Flow browsing, as we describe in Chapter 15.

Figure 1-5: Touch buttons on the iPod touch main menu.

- **Videos:** Select videos by type (movies, music videos, TV shows, or video podcasts).
- **Photos:** Select photos by photo album or select individual photos in the Photo Library.
- **iTunes:** Go to the iTunes online store to purchase content.

Scrolling iPod classic and nano wheels

The circular scroll wheel on iPod classic and iPod nano models 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.)

Fifth-generation iPods and sixth-generation iPod classic models, 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. The click wheel 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 sixth-generation iPod classic models and the iPod nano offers the following selections:

- **Music:** Select music playlists, artists, albums, songs, genres, or composers; or select an audio book. You can also select Cover Flow to browse by cover art, or Search to search for a song or album title or artist (as we describe in Chapter 15).
- **Videos:** Select videos by video playlist or by type (movies, music videos, or TV shows).
- **Photos:** Select photos by photo album or select all photos in the photo library.
- **Podcasts:** Select podcasts by title, and then select podcast episodes.
- **Extras:** View the clock, set clocks for time zones, set alarms and the sleep timer, use the stopwatch, view contacts, view your calendar, view notes, and play games.

- **Settings:** Adjust various settings including menu settings, the backlight timer, the clicker, the iPod's EQ, the date and time, and so on.
- **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.

The iPod main menu for fifth-generation models offers the following selections:

- **Music:** Select music playlists, artists, albums, songs, podcasts, genres, or composers; 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.

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

Activating iPod Playback Functions

The touch buttons on iPod touch and iPhone models do various tasks for playing content items such as songs, audio books, podcasts, and videos:

- **Previous/Rewind:** Tap once to start an item over. Tap twice to skip to the previous item (such as the previous song in an album). Touch and hold to rewind.
- **Play/Pause:** Tap to play the selected item. Tap Play/Pause when an item is playing to pause the playback.
- **Next/Fast-Forward:** Tap once to skip to the next item (such as the next song in an album). Touch and hold Next/Fast-Forward to fast-forward play.

- **Left-arrow button:** Tap to go back to the previous menu.
- **Bullet-list button (playing music):** Tap to view the contents of the album containing the song.
- **Menu button on front:** Press once to go back to the main menu.

The buttons on full-size iPod models do various tasks for song, podcast, audio book, and video playback:

- **Previous/Rewind:** Press once to start an item over. Press twice to skip to the previous item (such as a song in an album). Press and hold to rewind.
- **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 item. Press Play/Pause when the item is playing to pause the playback.
- **Next/Fast-Forward:** Press once to skip to the next item. Press and hold Next/Fast-Forward to fast-forward.

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.) See Chapter 24 for instructions on 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, video, audio book or podcast.** While playing an item (the display reads `Now Playing`), press and hold the Select button until the progress bar appears to indicate where you are , 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 classic or iPod nano is speaking in a foreign tongue, don't panic — you're not in the wrong country. You might have purchased one 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* at the top.**

   If pressing the Menu button no longer changes the display, you're at the main menu. With fourth-, fifth-, and sixth-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 sixth option from the top on sixth-generation iPods and the iPod nano, or the fifth option on fifth-generation iPods, or the fourth option on fourth-generation iPods, iPod mini, and the older iPod nano. Choose the third option from the top on third-, second-, and first-generation 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 21). 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 (which is not the same as simply resetting your iPod, as described in Chapter 24). Unfortunately, resetting your iPod's *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* at the top.**

   If pressing the Menu button no longer changes the display, you're at the main menu. With fourth-, fifth-, and sixth-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 sixth option from the top on sixth-generation iPods and the iPod nano, or the fifth option on fifth-generation iPods, or the fourth option on fourth-generation iPods, iPod mini, and the older iPod nano. Choose the third option from the top on third-, second-, and first-generation models. (In English, this is the Settings option.)**

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!