

## IN THIS CHAPTER

- How to use the enhanced iOS 6 AirPlay feature
- How to wirelessly connect your iOS device to Apple TV
- How to use Bluetooth to connect your iPhone or iPad to accessories

# 21

## USE AIRPLAY FOR ENTERTAINMENT CONNECTIVITY

Throughout this book, you've read a lot about how your iOS device is capable of wirelessly connecting to the Internet using a Wi-Fi connection. This connectivity is possible anytime your iOS device is within the coverage area of a Wi-Fi hotspot or wireless network. Thus, you can be in an office or in a coffee shop, a hotel, an airport, an Internet cafe, or another public area with Wi-Fi and be able to access the Internet. Likewise, if your home has high-speed Internet access and a wireless router, you have a wireless network already available to you, which is accessible from your iPhone or iPad.

With the release of iOS 6, Apple has again enhanced the AirPlay feature built in to the operating system, which enables your iPhone or iPad to connect (wirelessly) to an Apple TV device that's in turn connected to your high-definition television set or home theater system. This connection enables you to stream (wirelessly transfer) content, such as TV show



episodes, movies and music, or digital photos and videos (shot on your iPhone or iPad), that are stored on your iOS device to your HD television (and home entertainment system), so that the content can be enjoyed on a larger screen with better quality (surround sound) speakers.

**TIP**

Using Apple's 30-pin Dock Connector to HDMI adapter or Lightning Port Connector to HDMI adapter, in conjunction with an HDMI cable, you can connect many iOS mobile devices directly to an HD television set or monitor, and then use the iOS 6's Mirroring feature to showcase almost anything you see on your device's display on that TV or monitor.

This feature is great for showcasing onto a big-screen TV, photos, or digital slide presentations, for example, that stored on an iPhone or iPad. It also works with games and a wide range of other apps. It will not work, however, with certain apps that include copyrighted video content. To stream that type of content from an iOS mobile device to a television set, you'll need to use the AirPlay feature in conjunction with an Apple TV device.

**NOTE**

To utilize the enhanced AirPlay feature of iOS 6, you'll need to upgrade the operating system of your Apple TV device to the latest version. Using AirPlay, you can wirelessly transmit content from your iPhone or iPad to your home entertainment system (via Apple TV). A home wireless network is also required.

Without using Apple TV, you can still connect your iPhone or iPad to your home entertainment system and HD television, but you'll need to use optional cables, such as Apple's Digital AV Cable (\$39.99).

The Apple Composite AV Cable or Apple Component AV Cable (each sold separately for \$39.99), depending on your home-theater setup, can be used to connect your iPhone, iPad, or iPod touch to your television set or monitor. These cables do not work with the older iPhone or iPad models, like the iPhone 3Gs, iPhone 4, or original iPad. They also do not work with iOS mobile devices with a Lightning Connector port.

In conjunction with the release of the 4th generation iPad and iPad mini, Apple announced several new cable adapters for connecting these more recently released iOS devices (including the iPhone 5) to HD televisions, monitors and/or projectors.

## INTRODUCE APPLE TV TO YOUR HDTV AND HOME-THEATER SYSTEM

Apple TV is an optional (\$99.99) device that connects to your high-definition television set (and home-theater system), as well as the Internet, allowing you to access Apple's iTunes Store to rent or purchase TV show episodes or movies, and then watch them on your HD television set. (You can also listen to iTunes purchased music through your TV's speakers or home theater system.) Basically, the same content that's available from the iTunes Store via your computer or iOS mobile device becomes accessible directly from your HD television.



### TIP

Thanks to iCloud, all of your previously purchased iTunes content is readily accessible from your iOS device(s), computer(s), and Apple TV, without your having to repurchase it.



### MORE INFO

To learn more about Apple TV and the benefits it offers when the device is connected to your high-definition television and home theater system, visit Apple's website ([www.apple.com/appletv](http://www.apple.com/appletv)). Just as your iOS mobile device has improved dramatically over time thanks to upgrades to the operating system, the same is true with Apple TV, which was also updated in conjunction with the release of iOS 6.

If you're a member of Netflix or HuluPlus, your Apple TV can be used to stream Netflix or HuluPlus movies and TV show episodes from the Internet (an additional monthly fee applies), or you can use Apple TV to access and watch YouTube videos on your television for free.

Apple also has a partnership with Major League Baseball and the NBA to broadcast MLB games live and on demand, as well as NBA scores and highlights to Apple TV devices.

Thanks to iOS 6's AirPlay feature, however, you can also wirelessly stream content that's stored on your iPhone, iPad, or iPod touch to your home-theater system wirelessly (via Apple TV), including music, photos, and video clips (shot on your mobile device), as well as iTunes Store purchased content.

In fact, from your iPhone or iPad, you can begin watching a TV show or movie downloaded from the iTunes Store and that's stored on your iOS mobile device, pause it, and then continue watching it on your home-theater system with the tap

on the AirPlay icon. For this to work, your iPhone or iPad must be connected to the same wireless network as your Apple TV device (which in turn, is connected to your television or home theater system).

Or, if you're watching a TV show, a movie, or video content that's stored on or being streamed from the Internet to your Apple TV, you can use your iPhone, iPad, or iPod touch as a wireless remote control. To do this, download Apple's free Remote app from the App Store.

Available from the Apple Store, Apple.com, or Apple authorized resellers, Apple TV can be connected only to a high-definition television using a standard HDMI cable. But, for the Apple TV device to work, it must simultaneously be connected to the Internet via a Wi-Fi or Ethernet cable connection.

An Apple ID is required to access the online-based iTunes Store in order to purchase or rent TV shows, movies, and music using Apple TV, and a separate Netflix or HuluPlus account is required to stream Netflix or HuluPlus content through your Apple TV. To access Major League Baseball games, a subscription to MLB.TV is required, and a separate subscription is needed if you want to access programming from the NBA.

## USING AIRPLAY WITH APPLE TV AND YOUR IPHONE OR IPAD

If you've already invested in a fancy home entertainment system and high-definition television set, chances are you appreciate being able to watch your favorite TV shows and movies with a crystal-clear picture and state-of-the-art surround sound.

One way to enhance the capabilities of your home entertainment system is to invest in an optional Apple TV device. When it's connected to the same wireless Internet network as your iPhone or iPad, using Apple TV as a conduit, there are a handful of ways to transfer or stream content between your iOS device and your home-theater system wirelessly when you use the AirPlay feature that's built in to the iOS operating system.



### TIP

The first time you use your Apple TV, you need to set it up by entering your Apple ID password. If you want to access content from your home computer, you also need to use the iTunes software and turn on its Home Sharing feature. To learn how to turn on Home Sharing on your Mac, and configure it to work with your iOS mobile device and/or Apple TV, visit [www.apple.com/itunes/inside-itunes/2010/10/use-itunes-10-home-sharing-with-the-new-apple-tv.html](http://www.apple.com/itunes/inside-itunes/2010/10/use-itunes-10-home-sharing-with-the-new-apple-tv.html).

## STREAM DIGITAL PHOTOS FROM YOUR iOS DEVICE TO YOUR HOME-THEATER SYSTEM

Digital photos stored on your iPhone, iPad, or iPod touch (or within your iCloud Photo Stream or Shared Photo Streams) can be viewed on your television in high definition using the AirPlay feature. You also can create visually impressive digital slide shows, complete with background music (selected from your iTunes library) to showcase your photos on your television.

Here's how to use this feature:

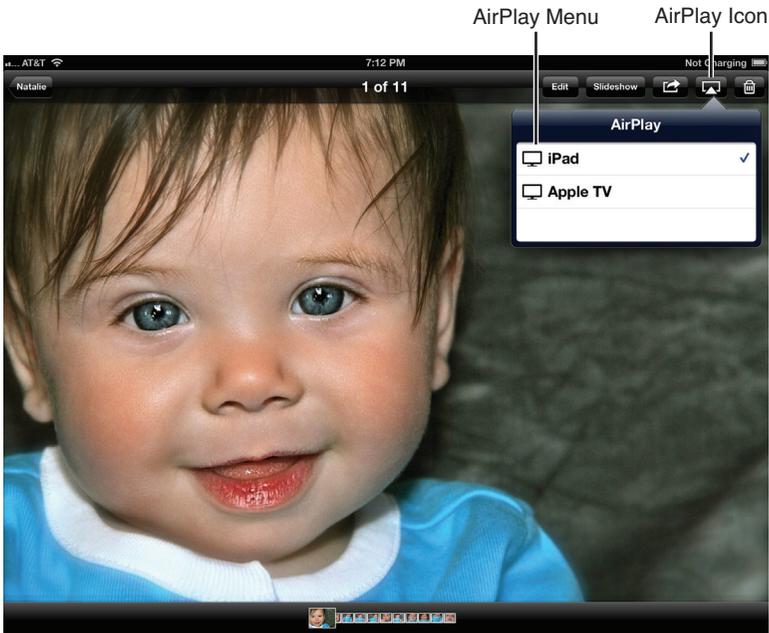
1. Turn on your television and Apple TV. Press the Menu button on your Apple TV's remote to display the main Apple TV menu.
2. On your iPhone or iPad, turn on Wi-Fi, and make sure that your iOS device is connected to the same wireless network as your Apple TV.
3. Launch the Photos app on your iOS device, and select an album that contains the photos you want to view on your television.
4. Open the first photo in that album in full-screen mode, and then tap anywhere on the screen to make the command icons associated with the Photos app appear.
5. Near the lower-right corner of the screen on the iPhone, or near the upper-right corner of the screen on the iPad, tap on the AirPlay icon (a rectangle-shaped icon with an arrow coming up from the bottom of it). This icon appears only when your iOS device is connected wirelessly to another AirPlay-compatible device, such as your Apple TV. This is shown in Figure 21.1 on the iPhone.
6. When the AirPlay menu appears on the iOS device's screen, tap on Apple TV.
7. The image you're viewing on your iPhone or iPad's screen will now also be displayed on your television set.



### NOTE

Although you'll be able to zoom in on or zoom out of photos you're viewing on your iOS device, the zoom feature does not work when you're using the AirPlay feature to view images stored on your iPhone or iPad on your television set via Apple TV.

8. Flick your finger from right to left or from left to right on your iOS device's screen to view each image in that album on your television and iOS device's screen, one at a time.



**FIGURE 21.1**

*When your iOS device is connected via a Wi-Fi network to your Apple TV, look for the AirPlay icon to appear when you're viewing photos using the Photos app.*

9. To discontinue viewing the images on your television (via Apple TV), on your iOS device tap on the AirPlay icon once again. This time, select the iPhone or iPad option (based on which device you're using).

If you want to watch a video you've shot on your iPhone or iPad on your television by streaming it to your Apple TV device, follow these same steps. From the Photos app, select the Camera Roll album where your video is stored, tap on its thumbnail, and then tap on the AirPlay icon. Select Apple TV from the AirPlay screen, and then tap the Play icon on your iPhone or iPad. The video will be viewable on your television set in a few seconds.

To view multiple images in a slideshow format, on your iPhone or iPad, tap on the Slideshow icon in the Photos app. When the Slideshow Options screen appears, make sure that Apple TV is selected, choose your favorite Transition effect, decide whether to add music accompaniment to your slideshow, and then tap on the Start Slideshow icon (shown in Figure 21.2).

Your slideshow displays on your television screen, while on your iOS device, the message "AirPlay: This slideshow is now playing on Apple TV" is displayed.

To stop the slideshow, tap anywhere on your iOS device's screen.

**FIGURE 21.2**

*After an AirPlay connection is established between your iOS device and Apple TV, you can create and show off a digital slideshow featuring photos stored on your iPhone, iPad, or iPod touch.*

**TIP**

Another option for viewing photos from your iPhone or iPad on your television set via Apple TV is to send the photos you want to view to your iCloud Photo Stream or a Shared Photo Stream. Then, from the Apple TV main menu, highlight the Internet heading and select the Photo Stream option. Choose between the My Photo Stream or a Shared Photo Stream you'd like to view.

You can then use the left- and right-arrow buttons on the Apple TV remote to scroll through your images, or use the Apple TV's Slideshow option. (To access Apple TV's Slideshow, select the Internet option from the Apple TV main menu. Next, choose Photo Stream. In the upper-left corner of the TV screen, select the Slideshow option using the Apple TV remote.)

## STREAM MUSIC FROM YOUR iOS DEVICE TO YOUR HOME THEATER

Without connecting any cables, you can stream music from your personal digital music library (that's stored on your iPhone, iPad, or iPod touch) to your home-theater system and enjoy that music in full stereo surround sound, instead of through headphones or your iOS device's built-in speaker.

Here's how to use this feature:

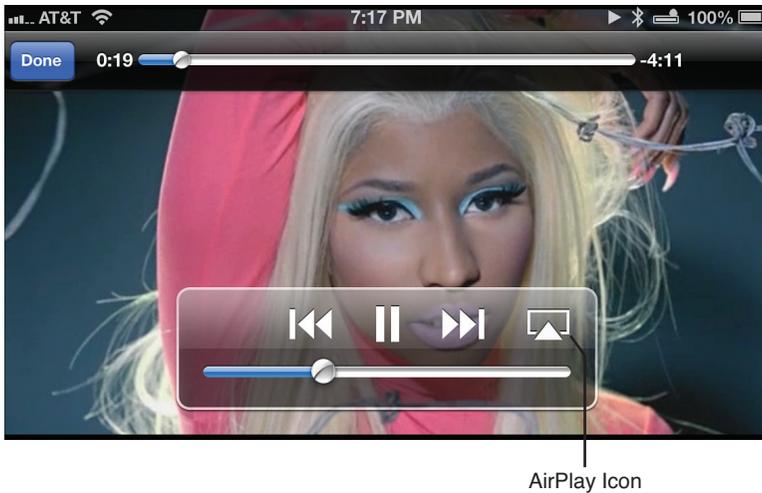
1. Turn on your television and Apple TV. Press the Menu button on your Apple TV's remote to display the main Apple TV menu.
2. On your iPhone or iPad, turn on Wi-Fi, and make sure that your iOS device is connected to the same wireless network as your Apple TV.
3. Launch the Music app on your iPhone or iPad. Choose the song, album, or playlist you want to listen to.
4. Tap on the AirPlay icon (which becomes visible only when an AirPlay connection is available). When the AirPlay window appears, tap on the Apple TV option. When using the Music app on your iPhone, the AirPlay icon is displayed near the lower-right corner of the screen. On the iPad, the AirPlay icon can be found in the upper-right corner of the Music app's screen.
5. The music from your iOS device will now begin playing through your television's speakers (or home-theater system's sound system).
6. Control your song selections from your iOS device.

## STREAM iTUNES VIDEO CONTENT FROM YOUR iOS DEVICE TO YOUR HOME THEATER

If you have purchased television shows, or purchased or rented movies from iTunes that are stored on your iPhone, iPad, or iPod touch, with a tap of an icon, you can wirelessly watch that content on your television (home-theater system) using iOS's AirPlay feature.

Here's how to use this feature:

1. Turn on your television and Apple TV. Press the Menu button on your Apple TV's remote to display the main Apple TV menu.
2. On your iPhone or iPad, turn on Wi-Fi, and make sure that your iOS device is connected to the same Wi-Fi network as your Apple TV.
3. To view iTunes purchased content (TV shows or movies), launch the Videos app on your iOS device.
4. From the Videos app's library screen, tap on the thumbnail for the TV show episode, movie, or music video you want to watch.
5. Tap the Play icon on your iOS device to begin watching it on your iPhone or iPad's screen.
6. When the video begins, tap anywhere on the screen to access the command icons for the Videos app. On both the iPhone and iPad, next to the Play/Pause, Review, and Fast Forward icons that are displayed near the bottom center of the screen will be the AirPlay icon. This is shown in Figure 21.3.

**FIGURE 21.3**

*When an AirPlay connection is made between your iOS device and Apple TV, as you're watching an iTunes-purchased video on your iPhone, iPad, or iPod touch, tap on the AirPlay icon to begin watching that video on your television set (via Apple TV).*

7. Tap on the AirPlay icon, and from the AirPlay window tap on the Apple TV option.
8. The video that's stored on your iPhone or iPad will be streamed to your Apple TV and will begin playing on your television set (home-theater system).
9. Use the Play, Rewind, or Fast Forward icons on your iOS device to control what you see on your television after an AirPlay connection is established.
10. At any time, you can return to watching the TV show, movie, or music video on your iOS device's screen and pick up where you left off. Or you can watch part of the video content on your iOS device, connect to your Apple TV via AirPlay, and then watch the remaining part of the video on your television set.

While you're watching a video or listening to music, for example, with AirPlay on your Apple TV, you can access your iOS device's multitasking bar and simultaneously begin using another app.

Instead of streaming iTunes content from your iOS device to your Apple TV via AirPlay, you can also access all iTunes purchases directly from Apple TV. From the main Apple TV menu, select the Movies or TV Shows option, and then select the Purchased option to view thumbnails for all of your iTunes purchases in that category.

Using the Apple TV remote, highlight and make your selection to begin playing specific video content. In this case, you have the option to use your iPhone or iPad as a wireless remote to control your Apple TV.

**TIP**

If you're watching a television show or movie that is stored on or being streamed through your Apple TV device directly from the Web, you can use your iPhone or iPad as a remote control for your Apple TV by using Apple's free Remote app that's available from the App Store.

Using Apple's Remote app, from your iPhone or iPad, you can rent or buy TV show episodes or movies from the App Store to watch on your Apple TV and home-theater system. You also can scroll through the Netflix catalog and access your own media collection.

As you're watching your Apple TV, the Remote app serves as a remote control to pause, fast-forward, or rewind the program.

To use this app, your iPhone or iPad must be connected to the same home wireless network as your Apple TV. The first time you use this app, you'll also need to turn on Home Sharing (in iTunes) on your primary computer, and also on your Apple TV device.

## AIRPLAY CAN ALSO BE USED TO LINK YOUR iOS MOBILE DEVICE AND WIRELESS SPEAKERS

If you want to hear audio (such as music) generated from your iPhone or iPad using external speakers, you have several options. You can plug the speakers into the iOS mobile device using the device's headphones jack and a cable. Also, you can plug the speakers into your device from the Dock Connector or Lightning Port (if the speakers offer this option). Another option is to link speakers wirelessly to your device using Bluetooth, or you can wirelessly link compatible speakers to your device using AirPlay.

Apple has begun working with a handful of popular speaker manufacturers, such as Denon, Marantz, Bowers & Wilkins (B&W), JBL and iHome, to offer for a wireless audio connection between the speakers and the iPhone or iPad using AirPlay (as an alternative to Bluetooth). Thus, instead of using your iPhone or iPad's internal speakers to listen to music, you can stream that audio to powerful stand-alone speakers that can fill a room with high-quality sound.

To learn more about optional AirPlay speakers that are compatible with the iPhone and iPad, visit [www.apple.com/itunes/airplay](http://www.apple.com/itunes/airplay).

## CONNECT YOUR iOS DEVICE TO YOUR HOME-THEATER SYSTEM USING AN OPTIONAL CABLE

Without using Apple TV as a conduit, you can plug your iPhone, iPad, or iPod touch directly into your high-definition television set or monitor using a cable that's sold separately from Apple.

**! CAUTION** This connection method requires your iOS device to remain within close proximity of your television set or home-theater system (based on the length of the cable being used to make the connection).

You cannot stream copyrighted video content (including some iTunes Store, Netflix TV or HuluPlay shows and movies) from your iPhone or iPad to your television using this cable connection method. What you can do, however, is showcase anything else on your iOS device's screen, including Keynote (PowerPoint) presentations, digital photos, and video clips (you've shot), as well as content from most other apps.

When the iPhone iPad is connected to your HD television set or monitor using the optional Apple Digital AV cable, just about everything that can be displayed on your iOS device's screen (except for copyrighted video content) appears on the television set automatically.

To make this connection between your HD television and your iPhone or iPad, you need the Apple Digital AV cable, as well as an HDMI-to-HDMI cable, which is sold separately. Connect the Apple Digital AV cable to the dock port located at the bottom of your iPhone or iPad, and then connect the separate HDMI cable from the Apple Digital AV cable to the HDMI In port of your high-definition TV or monitor. You can also use the supplied USB cable and AC adapter to plug in your iPad to electrical power while it's connected to a TV or monitor. (The Apple Digital AV cable is not compatible with the iPhone 3Gs, iPhone 4, original iPad, or iPod touch.)

Another method for connecting any recent model iPhone or iPad to a home-theater system is to use either the optional Apple Composite AV cable or the Apple Component AV cable (sold separately). Which cable you should use depends on the setup of your home-theater system, and whether a composite or component connection is available.

Connect the 30-pin dock connector portion of the Apple Composite AV cable or Apple Component AV cable to the bottom dock port of your iPhone, iPad, or iPod touch. (If you're using an iPhone 5, you'll also need a Lightning Port to Dock Connector Port adapter, which is sold separately. You may also need another of Apple's optional cables or adapters to connect the iPhone 5, 4th-generation iPad

and/or iPad mini to home theater components.) Then, connect the other end of the cable to either the composite or the component connectors on the back of your television set or monitor. After the connection is made, what you see on your iOS device's screen will also appear on your television or monitor.

**TIP**

Using the free TiVo app, you can use your iPhone or iPad to wirelessly control your TiVo digital video recorder (DVR) that's hooked up to your home-theater system. This includes the capability to search for and choose programs to record. To utilize all the features of this app, a TiVo Premiere DVR (as opposed to a TiVo Series 3, TiVo HD model) is required.

## USING YOUR iOS DEVICE WITH A BLUETOOTH ACCESSORY

Throughout this book, numerous mentions have been made about using wireless Bluetooth accessories with your iOS device, such as a wireless headset, headphones, speakers, a hands-free car kit (offering speakerphone capability while you're driving), or an external keyboard.

These optional devices add functionality to your iPhone, iPad, or iPod touch. They communicate wirelessly with your iOS device using a Bluetooth connection. You'll discover a wide range of Bluetooth accessories available for use with your iOS device.

To use a Bluetooth device with your iOS device, from Settings, you must first turn on Bluetooth, and then "pair" the Bluetooth device with your iOS device. This pairing process needs to be done just once.

Here's how to do this, regardless of the Bluetooth device being connected:

1. From your iOS device's Home Screen, launch Settings.
2. Select the Bluetooth option.
3. From the Bluetooth screen, tap on the virtual switch associated with the Bluetooth option, and turn on this feature. The Bluetooth icon appears in the upper-right corner of your iPhone or iPad's screen (next to the battery-life icon). When Bluetooth is active, this icon turns blue. When it's turned on but not paired (or connected to) another device, this icon will appear gray.
4. A new Devices option appears on the screen. Your iPhone or iPad is now looking for compatible Bluetooth devices to connect to.

5. Turn on your Bluetooth device and place it into pairing mode. How to do this is explained in the owner's manual for that particular device. If your Bluetooth device is Bluetooth 4.0 compatible, the manual pairing process is not necessary, since it will happen automatically.
6. In a few seconds, under the Devices heading on your iOS device, the name of the Bluetooth accessory will be listed. However, to the right of this listing will be the message "Not Paired."
7. Tap on this device listing on your iPhone or iPad's screen to pair the two devices. Within a few seconds, the "Not Paired" message disappears and be replaced by the message "Connected."
8. The Bluetooth device is now ready for use with your iPhone or iPad. You can now repeat this process for an additional Bluetooth device, or exit the Settings app by pressing the Home button.

For more information about pairing Bluetooth devices with your iPhone or iPad, visit Apple's website (<http://support.apple.com/kb/ht1664>).



## MORE INFO

A Bluetooth "headset" is used for making and receiving calls on your iPhone or participating in FaceTime call on your iPhone or iPad, for example. It attaches to one ear and has a speaker and microphone built in. The Jawbone Era (\$129, [www.jawbone.com](http://www.jawbone.com)) is an example of a high-quality Bluetooth headset that works nicely with the iPhone for making and receiving hands-free calls.

Bluetooth headphones or ear buds, however, cover both ears and are ideal for listening to music or audio wirelessly. The Motorola S10-HD Bluetooth Stereo Headphones (\$89.99, [www.motorola.com](http://www.motorola.com)) are an example of Bluetooth headphones that are ideal for listening to music with your iOS device, without your being hampered by cables or wires.

A Bluetooth speaker (or speaker system) allows you to connect external speakers to your iOS device for better quality and louder sound, without using headphones. The Jawbone Jambox (\$199.99, [www.jawbone.com](http://www.jawbone.com)) is an example of a wireless (Bluetooth) external speaker system that's extremely portable, battery powered, and compatible with the iPhone, iPad, and iPod touch. With an output of up to 85 decibels, the high-quality audio from this portable speaker can fill a room.

After the Bluetooth accessory has been paired once with your iOS device, any time your iPhone or iPad's Bluetooth feature is turned on and is within range of a paired Bluetooth accessory that's also turned on, a connection between the two devices will automatically be established so you can use them together.

Remember, the Bluetooth icon that's displayed in the upper-right corner of the iPhone or iPad's screen will turn blue when a Bluetooth connection with one or more devices is active.

**TIP**

Bluetooth accessories are battery powered, so for them to work with your iOS device, its battery must be charged and remain charged. A typical Bluetooth headset (used for making and receiving hands-free calls with an iPhone), for example, has a built-in rechargeable battery that lasts for between four and six hours of continuous talk time. Make sure that the battery of your Bluetooth device is fully charged before its first use.