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This book is your guide to the fourth-generation Apple TV and Apple TV 4K, covering the gamut from basic features to importing content, running a home audio system, giving a presentation, and even gaming! (The first edition of this book covers the second- and third-generation Apple TV; to download a free copy, visit Ebook Extras and look in the blog.)

If you want to share this ebook with a friend, we ask that you do so as you would with a physical book: “lend” it for a quick look, but ask your friend to buy a copy for careful reading or reference. Discounted classroom and Mac user group copies are available.

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**Updates and More**

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Basics

Although this book is mostly about the Apple TV, some of it describes interactions between an Apple TV and a computer. In a few cases, such as the topic about ripping DVDs, I assume you have a Mac. My Mac descriptions have been tested in macOS 10.13 High Sierra. For the most part, they’ll work fine in other versions, and in some cases I’ve called out special details about older versions. However, the older your operating system, the less likely that it will match everything in this book.

Mac Tip: To review background information that might help you understand this book better, such as finding System Preferences and working with files in the Finder, read Tonya Engst’s Take Control of Mac Basics.

Windows Tip: iTunes in Windows works nearly identically to iTunes on the Mac. The main exception? To open the iTunes preferences in Windows, choose Edit > Preferences.

Some of my discussions of Apple TV content are based on what’s available in the United States. The content on offer may differ in your country, but otherwise, the information in this book should be applicable worldwide.

What’s New in Version 2.2

This new version of Take Control of Apple TV is updated for tvOS 11, which Apple released in September 2017. It’s also generally updated to reflect the state of the Apple TV in early 2018:

• To find out what’s new in tvOS 11, see What’s New in tvOS.

• Apple has integrated an Apple TV Remote into the iOS 11 Control Center. See Using the iOS 11 Control Center.

• I discuss the new Apple TV 4K in Decide Which Apple TV to Buy.
• The Disney Movies Anywhere service has been replaced by the new, more-encompassing Movies Anywhere. See Access Purchased Movies and TV Shows.

• Single sign-on now works with many more TV providers. If you haven’t tried it yet, see About Single Sign-On.

• iOS and iTunes now offer new ways to control Apple TV playback. See Using the iOS 11 Control Center and AirPlay from iTunes.
Introduction

The nature of television is changing fast. More and more people are cutting the cord—a colloquial phrase for going without a cable or satellite TV subscription. Meanwhile, cable operators and entertainment networks are vying to stay relevant. It’s impossible to say what the TV landscape will look like in a decade, or whether it’ll even exist at all, at least as we know it.

Apple thinks apps are the future of television. The fourth-generation Apple TV, introduced in 2015, features a new voice-control remote, a faster processor, and more storage, but most importantly, it opens the door to app developers, bringing the App Store to the little big screen. The software in the Apple TV has been accordingly updated with a new operating system, dubbed tvOS. The Apple TV is no longer just a standalone device, but a platform.

But the more things change, the more they stay the same. If you’re used to the second- or third-generation Apple TV, the fourth-generation won’t feel alien. The Home screen and many of the built-in apps are as you remember them, only a bit shinier.

What is different is how you control the Apple TV. The new Siri Remote replaces the directional ring with a touchpad, adds volume control buttons, and, most notably, lets you talk to your Apple TV with Siri to find shows, play music, check the weather, and more.

AirPlay, an Apple feature that can stream content from computers and mobile devices to your Apple TV, is still around and still one of the best reasons to own an Apple TV.

Does the fourth-generation Apple TV represent the future of TV? No one can say for sure, but what it does represent is possibility. tvOS is the most flexible and full-featured TV platform ever conceived—for both content providers and end users—and it’s still getting started.
Apple TV Quick Start

You don’t want to read a book—you want to watch TV and movies, listen to music, view photos, and play games! I’ve broken this book into bite-sized chunks, so you can find what you need quickly.

**You’re new to Apple TV:**
- Plug it in, take note of what the different ports are designed for, and get started with Set Up Your Apple TV.
- Become familiar with the Siri Remote and all the other ways to Control Your Apple TV.
- Learn the basics of the Apple TV interface and find out about media that’s available through the built-in apps in Learn Apple TV Basics.
- Be sure to Master AirPlay so that you can beam the display of your Mac, iPad, iPhone, or iPod touch to your TV.

**Once you have the basics:**
- Learn how to watch movies and TV; read Apple TV at the Movies.
- Turn your Apple TV into a home audio system in Rock Out with the Apple TV.
- Learn how to View Your Photos and Home Movies.
- Give stunning presentations as you Present with the Apple TV.
- Take A Look at Apple TV Apps.

**To make the most of your Apple TV:**
- Convert your video collection in Rip DVDs for Apple TV.
- Expand your options by going In the Plex to set up a media server.
- Solve problems or prep your Apple TV for a new owner in Restarting, Resetting, and Restoring.
The Apple TV hasn’t seen any earth-shattering changes in tvOS 11, but there are a few welcome improvements.

**Tip:** To see which version of tvOS your Apple TV is running, go to Settings > General > About, and view the version number on the tvOS line; to upgrade, go to Settings > System > Software Updates.

Here’s what’s new in tvOS 11 as of February 2018:

- **AirPods support:** Apple AirPods now pair to the Apple TV via iCloud. See [Connecting Bluetooth Audio Devices and AirPods](#).

- **AirPlay:** You no longer need to be connected to the same Wi-Fi network as the Apple TV to AirPlay content to it. See [Lock Down AirPlay](#).

- **AirPlay 2:** In theory, tvOS 11 includes AirPlay 2, which offers a number of improvements over the original AirPlay. However, it hasn’t been implemented yet. Watch this space!

- **Automatic appearance switching:** You can now set tvOS to automatically switch between light and dark color schemes based on time of day. See [Dark Mode and Automatic Appearance Switching](#).

- **One Home Screen:** tvOS now syncs your home screen in iCloud so all of your Apple TVs will match. It’s enabled by default in Settings > Accounts > iCloud.

- **Right-to-left language support:** The Apple TV can now properly support languages like Arabic and Hebrew.

- **TV app:** The TV app is now supported in Canada and Australia, and is coming to France, Germany, Norway, Sweden, and the UK. It also now features news and sports content. See [TV](#).

- **Video playback tweaks:** You can now display real time in a video’s progress bar, so you know exactly when your movie will end.
You can also zoom in on 4:3 content to fill a widescreen TV. See Control Video Playback.

- **Social Music**: The Music app now lets you see what your friends are listening to. See For You and Browse.

- **Match Content**: There are options in Settings > Video and Audio > Match Content that let you adjust the frame rate and dynamic range to the original content. Consider adjusting those settings if your content doesn’t look right.
Decide Which Apple TV to Buy

Need an Apple TV? Apple now sells three varieties: a 32 GB fourth-generation Apple TV ($149), or the Apple TV 4K in 32 GB ($179) and 64 GB ($199) capacities.

First, disregard the 64 GB model. In the years I’ve been writing about the Apple TV, I haven’t heard of a single person who was glad to have the extra storage or regretted not having it. The Apple TV streams almost all content, so all the storage is used for is caching content; in theory, that might make things better if you have a slow internet connection, but the reality is that 32 extra gigabytes isn’t going to make that experience less miserable. For what it’s worth, I’ve soldiered on with a 32 GB model for years. Save your money.

The bigger question is if you should splurge on 4K. The regular Apple TV supports 1920 × 1080 resolution, otherwise known as 1080p, which is “full” high-definition, as opposed to 720p, which is technically high resolution, but not nearly as nice as 1080p. 4K, or ultra-high-definition, is the next step beyond 1080p—3840 × 2160 or 2160p—double the resolution of 1080p!

Impressed? Well, hold on, there are catches. First, your TV must support 4K resolution to take advantage of it. Second, either you must sit close to your TV or your TV has to be big before you can appreciate the difference. According to RTINGs.com, a site I trust for TV reviews, at a viewing distance of 8 feet, you need a 65-inch screen for 4K to be worth it. If you have a 55-inch screen, which seems to be the most common size these days, you need to sit 6 feet away for 4K to be worth it. That seems pretty far away, but it’s not as far as you might think!

I own a 55-inch 4K set and sit about 6 feet away. Even then, I don’t notice much difference between 1080p and 2160p content. It’s not that 4K is a ripoff, but that 1080p just looks that good!
What’s more interesting about the Apple TV 4K is that it supports high-dynamic-range (HDR) video. In the simplest terms, HDR offers more colors with greater contrast. You might need a big TV to see any benefit from 4K, but you will notice the HDR difference!

But again, there are catches. Even if your TV’s screen supports HDR, your HDMI port might not. Your TV needs to have HDMI ports that meet or exceed the HDMI 2.0a specification to deliver an HDR signal. For instance, until a recent software update was released, my Sony TV had a screen that supported HDR, and I could view HDR content via the built-in apps, but the HDMI ports were HDMI 2.0. (Check your TV’s specifications to see what it supports.) Thankfully, Sony was able to update my TV so that I get the full benefit of an Apple TV 4K. If your TV is similarly limited, there may be an update for it.

But here’s the good news: HD movies you already own in iTunes will receive free updates to 4K HDR as they become available, and many already are.

So, which Apple TV to buy? If you absolutely must have the top of the line, get the Apple TV 4K. In the long run, it won’t be much of a difference in terms of cost, and it will likely enjoy support from Apple for a little longer than the previous model. And if you own a TV that can take even a little advantage of 4K HDR, the free movie upgrades will likely make it worth it.

If you can’t take advantage of 4K or HDR, and don’t intend to upgrade your TV set in the near future, I recommend saving a little money and getting the 1080p model, especially if it’s on sale (it often is).
Set Up Your Apple TV

The Apple TV is simple to set up; just connect the proper cables and follow the onscreen instructions. But if you own an iOS device running iOS 9.1 or later—an iPhone, iPod, or iPad (except for the iPad 2) you can make that setup even easier by simply turning on your Apple TV and touching it with your device!

In this chapter, I offer advice on what to do if you own an older TV or receiver without HDMI inputs, the best places to buy an HDMI cable, whether to use a wired or wireless internet connection, and the settings you’ll want to look at right away.

Make the Connections

Before you can do anything with the Apple TV, you have to connect it to your television and to your network, as well as to power. Let’s look at the ports on the back of your Apple TV (Figure 1).

Figure 1: Fourth-generation Apple TV ports, from left to right: power, USB-C, HDMI, and 10/100 Ethernet. The Apple TV 4K lacks the USB-C port.
**Dude, Where’s My Optical Audio Port?**

Many people who rely on optical audio (also known as S/SPDIF or TOSLINK) connections to send digital audio to their sound equipment were disappointed to learn that the fourth-generation Apple TV doesn’t include an optical audio port. To work around this limitation, you can either route audio through your TV or use a device like the ViewHD HDMI Audio Extractor to extract an optical audio signal from the HDMI connection.

~ (Power)

Without electricity, the Apple TV is merely an attractive paperweight. Read through this chapter before plugging it in, as the Apple TV powers on right away. Insert one end of the included power cable into this port and connect the other end to a power outlet.

**USB-C**

You will probably never have to touch this port, and it doesn’t exist at all on the Apple TV 4K. It’s needed only if you have to restore your Apple TV from iTunes (described in Restarting, Resetting, and Restoring) or install developer betas. It’s also used for Capturing Screenshots and Video.

**About USB-C Cables**

You’ll only need to use the fourth-generation Apple TV’s USB-C port if you want to restore your Apple TV using iTunes or take screenshots with QuickTime. In that case, you must buy a USB-C cable; there’s not one in the box.

Try Apple, or shop from your favorite cable purveyor if you have a different one. Julio Ojeda-Zapata discusses a few options, as well as cables to avoid, in the TidBITS article MacBook Accessories Reduce Single USB-C Port Inconvenience.

Which type of USB-C cable you’ll need depends on your computer—the 2015 MacBook has only a single USB-C port, so you’d need a USB-C to USB-C cable—the same applies to the ports on the 2016 MacBook Pro laptops. Most other Macs don’t have any USB-C ports at all, just USB-A ports, so you’d need a USB-C to USB-A cable.
Control Your Apple TV

The Siri Remote is simple, yet highly advanced. It’s used to navigate the Apple TV’s interface, summon Siri, play games, and even to control your home entertainment center. I explain how to use it in the pages that follow.

I also look at other remote options in these topics:

- **Run the Apple TV Remote App** discusses the Apple TV Remote app. Designed for the fourth-generation Apple TV and Apple TV 4K, this app is optimized for the iPhone and iPod touch. It can do nearly anything the Siri Remote can do, plus its software keyboard eases password entry.

- **Using the iOS 11 Control Center** explains how to use a shortcut in iOS’s Control Center to operate your Apple TV.

- **Use the Old Apple Remote** describes how to use the older Apple remote that came with some older Macs or with an older Apple TV.

- **Use a Third-Party Remote** talks about mapping pretty much any remote to an Apple TV.

- **Run the iTunes Remote App** looks at how to use this iOS app as an Apple TV remote. Like the Apple TV Remote app, this app simplifies password entry.

- **Use the Remote App on the Apple Watch** explains how to control your Apple TV from your wrist.

- **Become an Apple TV Keyboard Jockey** covers connecting a wireless keyboard to your Apple TV.

**Note:** Although the Siri Remote can function as a game controller, better options are available. See *Game Controllers and the Apple TV*. 

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Meet the Siri Remote

Let’s take a look at each button on the Siri Remote (Figure 4).

Figure 4: The Siri Remote has a: touch surface, Menu button, Home button, Siri button, Play/Pause, Volume Up, and Volume Down.

Here’s what you can do with each button on the remote:

- **Touch surface (or touchpad):** Swipe up, down, left, or right to move the highlight. If you find swiping to be too fiddly, you can tap in the direction you want to move instead. To select the highlighted item, click the touchpad.
  
  **Tip:** You can adjust the touchpad’s sensitivity in Settings > Remotes and Devices > Touch Surface Tracking.

- **Menu:** In the Apple TV interface, pressing the Menu button takes you back to the previous screen, but in some apps, it brings up a menu. Long-press Menu to return to the Home screen in one jump.

- **Home:** By default, one press returns you to the TV app. A second press takes you to the Home Screen. A double press brings up the App Switcher. Long-press the Home button to bring up the sleep menu.
Learn Apple TV Basics

Now that you’ve completed the basic setup for your Apple TV, it’s time to learn how to handle your Home screen, get introduced to the Built-in Apps (including the App Store app, which you’ll use to download more apps), and find content by Searching with Siri.

Home Screen

Although it’s easy to get around the Apple TV Home screen by swiping on the touchpad, I want to bring to your attention a few subtle aspects of how it works:

- **App shortcuts:** At the top of the Home screen, you see the App Shortcuts area. This area changes depending on which app you’ve selected in the next row down on the Home screen (such as TV in Figure 19).

![Figure 19: The top of the Home screen displays app shortcuts for the selected app below, such as the TV app in this image. The app shortcuts for TV provide one-click access to items in your Up Next queue.](image-url)
With apps such as TV or iTunes Movies, you can navigate up to the app shortcuts icons and click one, or swipe left or right to access additional shortcuts. But, for some apps, such as the Settings app, the App Shortcuts area displays just a single image.

- **Moving an icon:** To move an icon, select it and then press and hold the touchpad until the icon shakes. Swipe the touchpad to move the icon, and press the touchpad to set it in place.

- **Deleting an app:** Select the app’s icon and press and hold the touchpad until the icon shakes. Press Play/Pause and choose Delete. *You can’t delete the built-in apps.*

- **Keeping it quiet:** If the sound bothers you as you scroll through the menus and apps, turn it off in Settings > Audio and Video > Navigation Clicks.

- **Making a folder:** Highlight an app icon, and press and hold the touchpad until the icon shakes. Either use the touchpad to move the icon over another icon to form a folder or press Play/Pause and choose New Folder. Press Menu to set the app in place.

- **Populating a folder:** Highlight an app icon, and press and hold the touchpad until the icon shakes. Use the touchpad to drag the app into the folder (*Figure 20*), or press Play/Pause and choose Move to *Folder Name* (*Figure 21*).

![Figure 20: To move an app into a folder, highlight it, press and hold the touchpad until the icon shakes, and then drag it into the folder.](image-url)

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Master AirPlay

With AirPlay, you can play audio and video content from your Mac or iOS device on your Apple TV, streaming it over your local Wi-Fi network. AirPlay is such a great feature that I’ve decided to use it as a verb—it’s more elegant to write “you can AirPlay a video to your Apple TV” than “you can stream a video to your Apple TV using AirPlay.”

New! As of tvOS11 and iOS 11, you no longer have to be on the same Wi-Fi network to AirPlay content to an Apple TV. See Lock Down AirPlay.

In this chapter, I first look at how to control just who gets to AirPlay to your Apple TV. I then look at the different permutations of what’s possible with AirPlay: how to AirPlay from iOS; AirPlay from Mac Apps; Mirror Your Mac Desktop, so that your entire video and audio output is copied onto the Apple TV; or Use Your TV as Another Mac Monitor.

And, for those who want to mix it up more, I talk about how to Mirror from Lion, Windows, and Chrome and how to make your Apple TV the source of an AirPlay stream, in AirPlay from an Apple TV.

The Two AirPlays

In practice, AirPlay has two primary forms: content streaming and device mirroring. AirPlay can stream audio or video content directly from a single app, or it can mirror an entire device by streaming all audio and video from all apps, so what you see and hear on the device is exactly what you see and hear on the Apple TV.

Turn On AirPlay

Although an out-of-the-box Apple TV has AirPlay on, it’s worth checking that it hasn’t been switched off. On your Apple TV, go to Settings >
AirPlay and verify that AirPlay is on. While you’re on the AirPlay screen, you can change the name of your Apple TV. The name shown here is the name that you’ll see in the AirPlay menus on your computer and iOS device.

**Lock Down AirPlay**

By default, anyone can AirPlay to your Apple TV. To balance that out, AirPlay is protected by a one-time code by default. When you try to AirPlay to a protected Apple TV, it displays a four-digit code on the TV that you must enter on the broadcasting device.

As long as Allow to AirPlay is set to Everyone in Settings > AirPlay, you must have one of three security options selected in Settings > AirPlay > Require Code: First Time Only, Every Time, or Use Password Instead. In private homes, First Time Only is a good default, but Every Time may be a better choice in public space.

If you set Allow to AirPlay to Anyone on the Same Network or Off, you can change Require Code to Never. That’s not a bad choice if your Apple TV is in your home and you don’t have a lot of guests wanting to beam things to the Apple TV.

**AirPlay from iOS**

In iOS, AirPlay is supported by many apps. In this topic, I look at two ways to turn it on from within the iOS Control Center. With screen mirroring, everything that happens on your iOS device—from the screen display to any sound—is duplicated on the Apple TV; with media, whatever is playing on your iOS device plays on the Apple TV instead.

To AirPlay with screen mirroring:

4. On your iOS device, bring up Control Center by placing your finger below the bottom edge of the display and swiping up. On the iPhone X, swipe down from the upper-right “ear.”
Apple TV at the Movies

The marquee feature of the Apple TV is watching movies and TV shows. In this chapter, I show you how to control video playback using both the Siri Remote’s touchpad and Siri, Buy iTunes Movies and TV Shows, Access Purchased Movies and TV Shows, and View Photos and Home Movies with Home Sharing.

Of course, you’re not limited to iTunes content. In addition to streaming video from Netflix, Hulu, HBO GO, and more (see TV, earlier, as well as A Look at Apple TV Apps, much later in the book), you can Rip DVDs for Apple TV, Rip TV Shows, and deal with The Blu-ray Bag of Hurt. I show you not only how to rip the discs, but also how to add cover art and metadata (and Improve iTunes Import with iFlicks). Ripped movies can be enormous, so I explain how those of you with cramped system disks can Offload Movies to Another Disk.

Control Video Playback

To watch a movie, TV show, or other video content, open a video app, such as TV, and select the video. No matter how you view a video, the playback controls are identical: to begin, press Play.

While you watch a video, to quickly find out how much has played, lightly touch the touchpad to display the progress bar for 3 seconds. Tap the touchpad again to change the times to real times, showing you the current time and the time when the video will end.

Tip: The timeline fills as video is cached by the Apple TV, so any hollow portion of the timeline represents video that is still being loaded from the server.
Basic Video Navigation

While a video is playing, you can navigate quickly to an earlier or later point in the video with a variety of techniques, which I’ve listed here with the simplest first:

- **Press to jump by 10:** To skip backward or forward by 10 seconds, press the left or right side of the touchpad (this “press” should be a quick click, don’t hold down). Playback resumes automatically.

- **Hold for rewind or playback:** Press and hold down the left or right side of the touchpad to rewind or fast-forward. Release the touchpad to resume playback.

- **Swipe to scrub:** *Scrubbing* is the modern-day equivalent of old-style rewinding and fast-forwarding. First pause, and then swipe left or right to scrub to an earlier or later part of the show. The playhead moves as you swipe and a thumbnail appears above the timeline, displaying the frame at the playhead’s current position (not all apps or videos support this feature).

When you begin scrubbing, your current position is marked, and if you move the playhead back to the mark, it locks into place so you can continue playback at your original position (**Figure 44**). Once the playhead is where you want it, press the touchpad to start playback from that frame. You can also press Menu to start playback again from your original position.

**Figure 44:** While watching a video, pause and then swipe left or right to reveal the timeline and rewind or fast-forward. A thumbnail appears over the playhead showing the selected frame. Your original position is marked (circled with red here)—move the playhead to that mark to return to your original position.
Rock Out with the Apple TV

The Apple TV isn’t just a great device for watching movies and TV—it’s also a fantastic hub for audio. This chapter kicks off with a quick look at improving sound quality and then cruises through the built-in audio apps on the Apple TV: The Music App and The Podcasts App.

Of course, you can also Listen to Music with Home Sharing, even if it’s not from Apple, or you may want to Rip CDs for the Apple TV. Finally, the chapter closes with a look at various ways to AirPlay Audio from a Mac to an Apple TV.

Take the Sound to Eleven

The Apple TV is a fantastic home audio system, but it needs speakers to sound its best. Modern flat-screen televisions don’t have great sound quality. To improve your audio, consider adding more hardware:

- **Receiver and speakers:** A home theater receiver with speakers is the traditional answer to improving the sound from your TV, but a downside to this solution is cost and complexity. Also, music is usually recorded for stereo speakers, so an entire 5.1 surround system can be overkill. If you’re interested in going this route, look at The Wirecutter’s current recommendations for receivers, bookshelf speakers, and surround-sound speaker systems. Expect to spend at least $400, though you could spend many thousands.

- **Soundbar:** A soundbar is a compact set of speakers, crammed into one bar, that addresses the problems of traditional home theater receivers. A soundbar is a better solution than a receiver for most people, since you don’t have to string wires all over your living room. Some soundbars feature “wireless” 5.1 surround, so you can have surround sound with fewer wires (These systems aren’t truly wireless—usually the only wireless connection is between the soundbar and the subwoofer, which is admittedly convenient.)
Soundbars aren’t much cheaper than a receiver/speaker combination; expect to spend anywhere from $100 to $1,000 on a good soundbar. I recommend reading The Wirecutter’s current picks for The Best Budget Soundbar and The Best Soundbar.

- **AirPlay speakers:** AirPlay speakers like the HomePod are an interesting option. Since your Apple TV can output sound over AirPlay, it can output to a wireless speaker that acts as an AirPlay receiver. The downside is that you can’t use an AirPlay speaker for the TV’s audio itself, or anything else connected to the TV. (See AirPlay from an Apple TV for setup help.)

- **AirPort Express and speakers:** Apple’s AirPort Express isn’t just a router—it’s also an AirPlay receiver. It can receive audio wirelessly via AirPlay and then route it to wired speakers. Its 3.5 mm audio minijack port (headphone jack, in plain English) can output analog audio or optical audio, depending on the type of cable you connect. For example, you can make an optical audio connection with PTC’s TOSLINK to Mini-TOSLINK cable.

- **Bluetooth speakers and headphones:** The fourth-generation Apple TV can now output audio to Bluetooth speakers and headphones. I don’t recommend Bluetooth speakers for general-purpose listening because Bluetooth audio is often inferior to the above connection methods, but Bluetooth headphones can be a handy option when you don’t want to disturb others.

For most living rooms, a soundbar is the way to go; they’re inexpensive and simple, and sound much better than TV speakers. Vizio makes good soundbars for the money—I purchased an older model 5.1 Vizio soundbar system for under $200 and have been quite happy with it.

No soundbar can approach the quality and flexibility of a receiver, but receivers are expensive and complicated. I recommend them for enthusiasts, but even then, only begrudgingly. I’ve owned receivers for many years, and it was always a pain helping family members use them. (Not to mention the utter chaos a toddler can cause by smashing the receiver’s buttons.)
Nothing says “Party!” like 700 vacation photos. All kidding aside, the Apple TV makes it easy to display your photos on your TV. And, you can easily AirPlay photos and home movies from your iPhone, iPad, or iPod touch. tvOS 10 introduced a new feature, called Memories, that helps automatically sort your best photos.

I also show you how to use your photos for Customizing the Screensaver and Making Slideshows.

Home movies are great on the Apple TV. I explain how to View Photos and Videos via AirPlay directly from your iOS devices and even view iMovie projects in The iMovie Theater App.

The Photos App

The Photos app displays photos from three different iCloud services: iCloud Photo Library, My Photo Stream, and iCloud Photo Sharing.

**Note:** If none of these iCloud-related services seem like a good option for you, you can use Home Sharing from a computer in your home or AirPlay from your iOS Device.

You may already have one or more of these photo services enabled on the Apple TV—if that’s the case, when you open Photos, you’ll see photos. But if you need to tweak your setup, here’s the basics of how to turn on each of these services (to go beyond the basics, read Take Control of iCloud).

**Note:** While iCloud Photo Library counts against your iCloud storage quota, My Photo Stream and iCloud Photo Sharing do not.
Setting up iCloud Photo Library

This Apple service can sync all your photos and videos between all your Apple devices (and Windows PCs).

To set a device to sync photos and videos with iCloud Photo Library:

- **Mac:** Open Photos, go to Photos > Preferences > iCloud, and check iCloud Photo Library. All your photos and videos in Photos will be uploaded to your iCloud Photo library.

- **iOS:** Go to Settings > iCloud > Photos, and turn on iCloud Photo Library.

- **Windows:** Install and configure the iCloud for Windows app.

To enable iCloud Photo Library on the Apple TV, go to Settings > Accounts > iCloud. Ensure that you are signed in with the same iCloud credentials that you are using with iCloud Photo Library elsewhere and turn on iCloud Photo Library. In my testing, pictures and albums appeared quickly, if not quite instantaneously.

Setting up My Photo Stream

With this Apple service, new photos taken with an iOS device or imported onto a Mac or Windows PC are automatically copied to Apple’s iCloud servers and then spread to all your other devices. There are a few fussy rules for how this works, exactly, but for most people the upshot is that My Photo Stream simply and automatically displays all your recent photos on a variety of devices, including the Apple TV.

**Note:** If iCloud Photo Library is enabled on the Apple TV, you can’t enable My Photo Stream.

To set a device to add new photos to My Photo Stream:

- **Mac:** Turn on My Photo Stream in order to add imported photos from a non-Apple camera. Go to the preferences for your app (iPhoto, Aperture, or Photos) and select the My Photo Stream checkbox (in Photos, choose Photos > Preferences and look in the
Present with the Apple TV

With AirPlay and the Apple TV, it’s easy to put what you want on a big screen, making the Apple TV fantastic for presentations.

In this chapter, I show you how to connect an Apple TV to a projector or SMART Board (an interactive whiteboard and projector commonly used in schools), suggest what a traveling presenter should assemble to Make an Apple TV Presentation Kit.

I also explain how to Run a Conference Room Display, a feature found in previous Apple TV models and reintroduced in tvOS 9.2, which displays onscreen AirPlay instructions.

Finally, I give you some ideas about how you can use an Apple TV to project paper documents, engage in video conferences, and even keep a rowdy class in line.

Connect the Apple TV to a Projector

If your projector or SMART Board has an HDMI input, you’re all set. But chances are good that you’ll need an adapter to connect from the HDMI port on your Apple TV to a VGA or DVI port on the projector or SMART Board.

It’s easy to see the difference between a VGA and a DVI port. A VGA port has 15 pins arranged in a trapezoid (Figure 91), while a DVI connector has 24 pins in a rectangular array, with an extra 4 pins on the side (Figure 92).

Figure 91: The older, more common VGA connector has 15 pins, arranged in a trapezoid.
To connect the Apple TV to a VGA port, you need a box that can convert the Apple TV’s digital signal into old-fashioned analog. The J&d HDMI to VGA with Audio Adapter Cable Converter is inexpensive and well-reviewed on Amazon. It plugs directly into your Apple TV, outputting video to your projector as VGA and audio through a 3.5 mm (headphone) audio jack. Of course, you also need a VGA cable to make the connection.

If your projector takes only DVI input, there’s good news and bad news. The good news is that the Apple TV HDMI port is compatible with DVI signals, so a simple HDMI Female to DVI Male Video Adapter will do the trick. The bad news is that it won’t carry the audio signal, so you need an HDMI audio extractor like the ViewHD HDMI Audio Extractor, which pulls the audio from an HDMI connection and sends it out either via an optical or RCA connection. Remember to get a pair of RCA male-to-male audio cables (or an optical audio cable) as well.

**Note:** To review the ports on the Apple TV, go back to Make the Connections.
A Look at Apple TV Apps

The fourth-generation Apple TV added the App Store, giving you easy access to thousands of apps, but in the face of this bounty, where do you even start?

In this chapter, I give share some of the best apps out there. I also discuss the Plex media management system, which is now native to the Apple TV. For directions for finding and downloading an app from the App Store, see Finding Apps in the App Store.

Note: This chapter is written from my perspective as a United States resident. App and content availability differ by country.

Cable TV Replacements

Have you cut the cord, miss live TV, but don’t want to go crawling back to a cable or satellite provider? The Apple TV now supports several services that can replace traditional TV packages, such as DirectTV Now, PlayStation Vue, and Sling TV. They all have different pros and cons. To learn more, see these TidBITS articles:

✦ Sling TV, a Cord Cutter’s Delight, Arrives on Apple TV
✦ PlayStation Vue Wins Cord-Cutter Option for News and Sports
✦ DirecTV Now Joins the Scrum of Cord-Cutting TV Services
✦ YouTube TV Is a Fresh and Clean Alternative to Cable

Paid Video Apps

The Apple TV offers several video apps that work independently of any cable or satellite service, for either a one-time payment or a monthly fee. Check in each app to find out what the current rates are.
CBS
Access live CBS broadcasts in select viewing areas, as well as on-demand CBS shows with the CBS app. A monthly subscription to CBS All Access is required, though a 1-week free trial is available.

Channels
This app is a bit different than the others in this section, because it requires extra hardware: an HDHomeRun tuner. If you have one, and the paid Channels app, you can access live TV via an antenna or cable subscription. For details, see Glenn Fleishman’s TidBITS article Channels App Adds Live TV to the Apple TV’s Capabilities.

Crunchyroll
If you’re an anime fan, check out Crunchyroll, which offers streaming anime for $6.95 per month. For $11.95 per month, you can purchase an Premium+ package, which includes live-action Asian dramas. A 2-week trial is available, and you can sign up through the Apple TV. Or, check the Premium Membership Plan Comparison page to sign up and compare the two paid options.

History Vault
The History Channel has an enormous archive of historical documentaries, and now with History Vault, you can watch them commercial free, without a cable or satellite subscription for a monthly fee after a 7-day free trial.

NHL
The NHL app offers free statistics and video highlights. For an annual fee, you can subscribe to NHL.TV, which provides access to live video and archives, subject to blackout restrictions. Playoff games are not available, nor is any other game that is nationally televised.

Hulu
Hulu is akin to Netflix in that it offers movies and TV shows for a monthly fee, though Hulu specializes in offering TV shows shortly after they air. Hulu unfortunately also shows ads, although there is a semi-ad-free option for an additional monthly fee. Hulu has recently boosted its selection of exclusives, like the sitcom classic Seinfeld and films from The Criterion Collection.
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Josh Centers is the managing editor of TidBITS and a freelance writer who has contributed to several publications, including Macworld, The Magazine, Boing Boing, and The Sweethome. He has been featured on Daring Fireball, The Loop, and Scientific American.

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