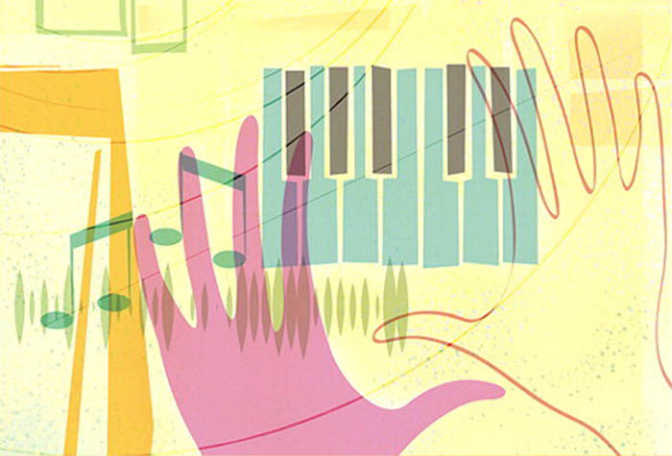




Apple Training Series

GarageBand '11

Mary Plummer



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Apple Training Series: GarageBand '11
Mary Plummer
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See the Getting Started section of this eBook for instructions on downloading your lesson files.



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Getting Started

Welcome to the official Apple training course for the iLife '11 product GarageBand, the dynamic music recording and arranging software from Apple. This is a guide to playing, recording, fixing, mixing, and sharing music projects.

Throughout these lessons you will not only record your own tracks, but you'll also explore the new Flex Time and Groove Matching features. You'll also get a chance to work with the Learn to Play lessons, and you'll perform with virtual musicians onstage with Magic GarageBand Jam. You don't need to have any special background or equipment to get started, other than having a Mac (and perhaps a healthy curiosity about what you can do with it).

This ebook comprises the entire GarageBand section of *Apple Training Series: iLife '11*, and it is based on the premise that a training book should go beyond a basic tour of an application. It provides you with practical techniques that you will use on a daily basis to add professional-quality music to your projects.

Whether you're a seasoned composer or have never written a piece of music before, you'll learn how to use GarageBand for a variety of real-world scenarios, including recording, arranging, and mixing music. You'll work with Real Instruments, MIDI Software Instruments, and prerecorded Apple Loops to edit music and add effects that sweeten your finished projects. Finally, you'll prepare your projects for iTunes and explore sharing your finished projects in other iLife applications.

What iLife Does for You

There was a time when your photographs were in a shoebox in the closet; your music equipment was in the garage; and VHS videotapes were scattered around the television. Each medium was tricky to keep organized.

But when all your media is digital—in the form of digital snapshots, digital audio (CDs, MP3s, and so on), and digital video (movie files and DVDs)—keeping it organized is streamlined, sharing content is easy, and using the material interchangeably between formats is both simple and kind of fun.

A Mac is designed to sit at the heart of your digital life. It's a computer designed for creativity and for combining all this content effortlessly. Better than that, Apple provides software—free on all Macs—that orchestrates the commingling of all this content. iLife is a family of applications designed to stand alone but also tuned to work together in remarkable ways.

What iLife teaches you is *media literacy*: the ability to communicate in a variety of powerful ways that are different from speaking or writing. Making professional-quality videos, podcasts, and slideshows, and being able to combine picture and sound effectively, is a skill that can be applied throughout your life. Once you have it, you'll be stunned by how often you use it, whether for personal pleasure or to commercial advantage.

It's too simplistic to say that iPhoto is the picture software and iMovie is the video software. iPhoto handles the organization of your pictures, true, but once your images are there, using them in slideshows, in print, and on the web is very easy. You can't build a box around each component of iLife. So rather than focus on each product in turn, this book helps you create real-world projects, which sometimes involves dipping into other iLife applications in a single lesson. Learning software is seldom fun. But making movies or podcasts, promoting your business, or building a creative report for school can be. You'll end up learning the software along the way.

The Methodology

This book emphasizes hands-on training. Each exercise is designed to help you learn the application as you use it, starting with the basic interface and moving on to advanced music editing, arranging, and mixing techniques.

If you're new to GarageBand, it will be helpful to start at the beginning and progress through each lesson in order, since each lesson builds on information learned in the previous ones. If you're already familiar with GarageBand, you can start with any section and focus on that topic.

System Requirements

This book is written for iLife '11, which comes free with any new Macintosh computer. If you have an older version of iLife, you will need to upgrade to the current iLife '11 version to follow along with every lesson. The upgrade can be purchased online at www.apple.com and is available from any store that sells Apple software.

Before you begin the lessons in this book, you should have a working knowledge of your Mac and its Mac OS X operating system. You don't need to be an expert, but you do need to know how to use the mouse and standard menus and commands, and how to open, save, and close files. You should have a working understanding of how OS X helps organize files on your computer, and you should also be comfortable opening applications (from the Dock or at least the Applications folder). If you need to review any of these techniques, see the printed or online documentation that came with your computer.

For a list of the minimum system requirements for iLife, please refer to the Apple website at www.apple.com/ilife/systemrequirements.html.

Copying the GarageBand Lesson Files

The *Apple Training Series: GarageBand '11* lesson files include all the project files and media you'll need to complete the lessons in this book. You must install the iLife '11 software before you install the lesson files.

To install the GarageBand lesson files:

- 1 Go to www.peachpit.com/ebookfiles/0132117541 and download the file called *GarageBand.zip* to your hard drive.
- 2 Drag and drop or save the *GarageBand.zip* file in a convenient location on your hard drive and double-click to access the files.

NOTE ► The lesson folders will correspond to the lesson numbers in *Apple Training Series: iLife '11* as opposed to the lesson numbers in this ebook. However, you are provided with the correct path names throughout the book.

To install additional GarageBand content:

GarageBand includes additional Apple Loops and Software Instruments that may not be installed on your computer by default. Additional content that is available but not installed appears dimmed, with an arrow in a gray circle next to the name of the loop or instrument. You can install this additional content after you install GarageBand by downloading the content from the internet. To begin the installation process, click the arrow and follow the instructions that appear. If you are upgrading from a previous version of GarageBand, the additional content may already be on your computer. You do not need to install again.

Resources

Apple Training Series: GarageBand '11 is not intended to be a comprehensive reference manual, nor does it replace the documentation that comes with the applications. Rather, the book is designed to be used in conjunction with other comprehensive reference guides. These resources include:

- Companion Peachpit website: As iLife '11 is updated, Peachpit may choose to update lessons as necessary. Please check www.peachpit.com/ats.ilife11.
- The Apple website: www.apple.com.
- *Apple Training Series: iLife '11*, by Dion Scoppettuolo and Mary Plummer, a complete guide for learning about the entire iLife suite.
- *Apple Training Series: iMovie '11* (ebook), by Dion Scoppettuolo, is derived from *Apple Training Series: iLife '11* for those who want to focus specifically on iMovie.
- *Apple Training Series: iPhoto '11* (ebook), by Dion Scoppettuolo, is derived from *Apple Training Series: iLife '11* for those who want to focus specifically on iPhoto.
- *Apple Training Series: iWork '09*, by Richard Harrington, is an excellent companion to this book. Learn how to use iLife applications with iWork to create first-class presentations, slideshows, newsletters, publications, and spreadsheets.
- *Apple Training Series: GarageBand '09*, by Mary Plummer, is an in-depth look at GarageBand, in which you build songs, podcasts, and movie scores from scratch, and explore some of the advanced mixing and arranging features of GarageBand.
- *The Macintosh iLife*, by Jim Heid (Peachpit Press), an accessible and popular reference guide for the iLife products.



1

Time

Goals

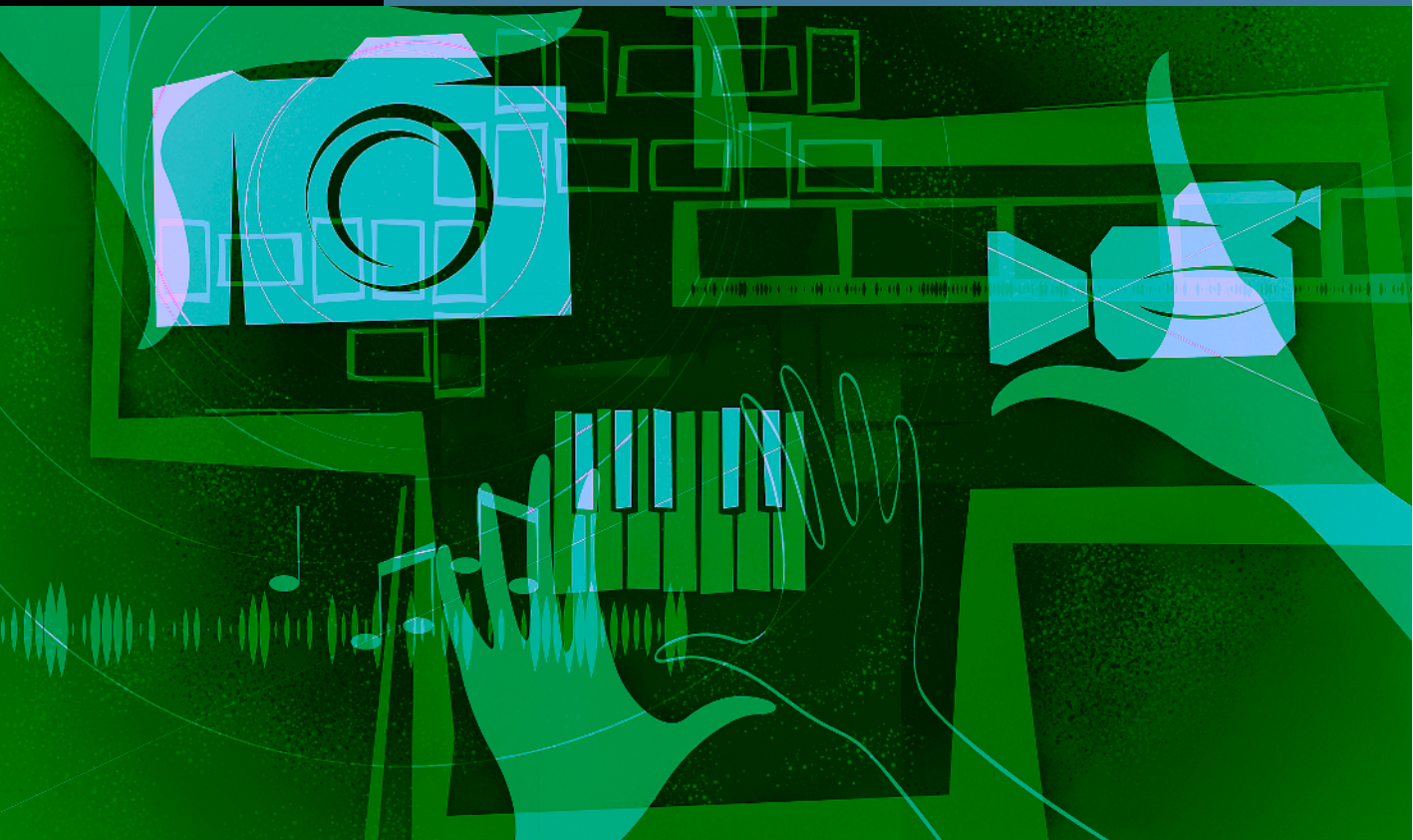
This lesson takes approximately 40 minutes to complete.

Connect instruments to the computer

Explore and customize the Learn to Play interface

Record a practice session and view progress

Download additional Learn to Play lessons



Lesson 1

Learning to Play Music with GarageBand

Are you one of the millions of people who wish you had learned how to play piano or guitar? Well, if you have a Mac with GarageBand '11 and a guitar, a piano, or MIDI keyboard, this is your chance! Many of you already have an instrument in the house (or collecting dust in the attic), and if not, you probably know someone who will loan you one.

Whether you're an accomplished musician or hobbyist, or just starting out, GarageBand can empower you to take your musical aspirations to the next level—no experience required!

This lesson focuses on the Learn to Play features that can help teach you to play an instrument. If you already play, they can improve your playing and track your progress. Also, the built-in tuner and new Chord Trainer gives guitar players a hands-on resource for picking and mastering chords.

If you don't have an instrument at this time, read along with the lesson to see how Learn to Play works.

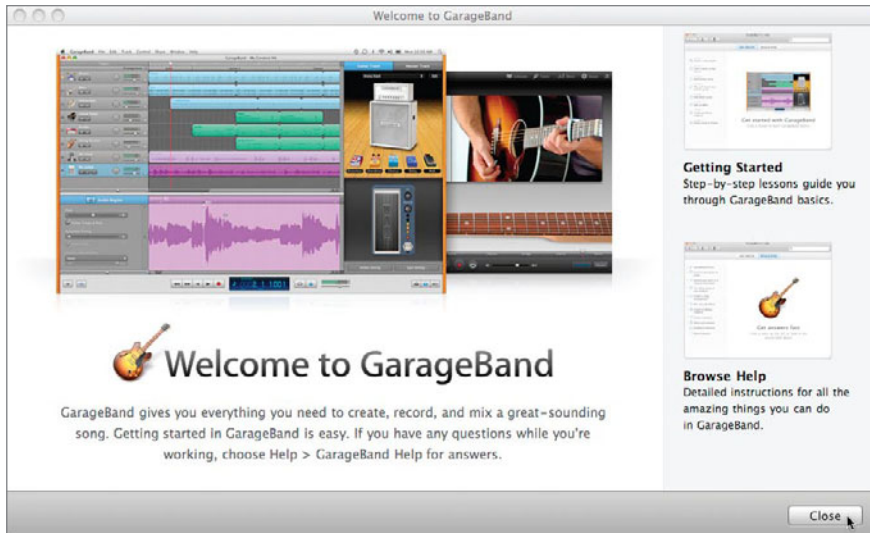
Opening GarageBand

In this section, you're going to open GarageBand and look at the options available for learning, playing, composing, and recording music.

- 1 In the Dock, click the GarageBand icon to open the GarageBand welcome screen.



NOTE ▶ If you do not see GarageBand in your Dock, choose Go > Applications > GarageBand.



This window includes links to play the GarageBand video tutorials, as well as information on getting hands-on help.

For now, let's close the window and move on to the interface.

- 2 In the lower-right corner of the welcome screen, click Close.

The New Project dialog appears with buttons for the various project types such as New Project, Magic GarageBand, and iPhone Ringtone.



- 3 Click the New Project button to see a list of project templates. Templates are included for piano, electric guitar, voice, loops, keyboards, acoustic instruments, songwriting, podcasts, and movie scoring.

You'll work more with project templates in the next lesson. For now, leave the New Project dialog open while you connect your instrument.

Connecting Instruments to the Mac

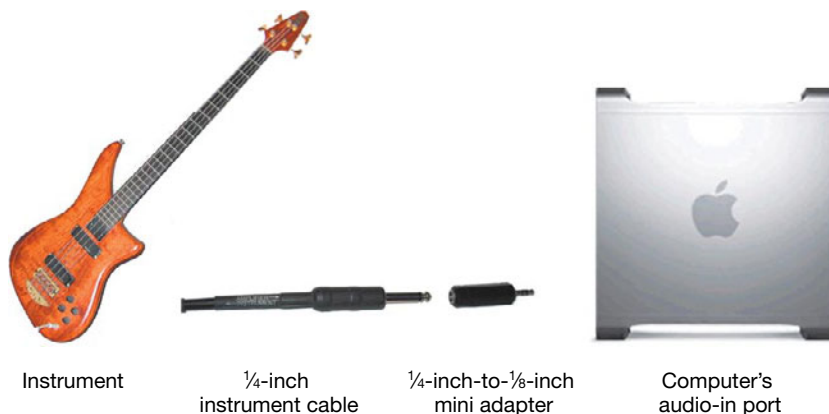
To play along and record with a Learn to Play lesson, you will first need to connect your guitar or MIDI keyboard to the Mac.

Setting Up Your Guitar

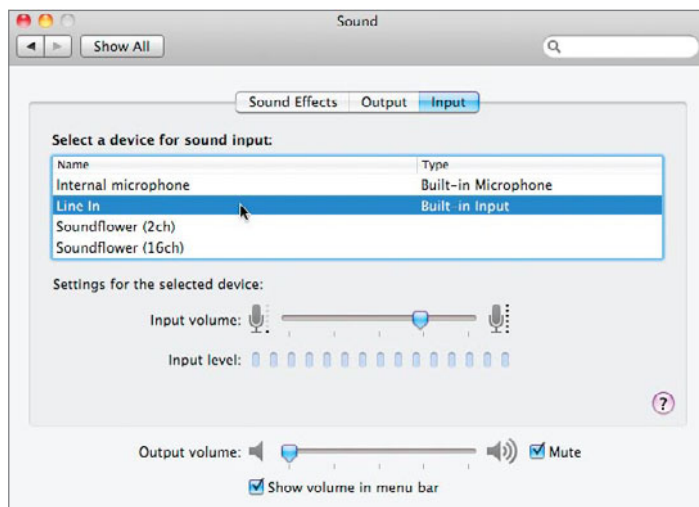
You can record your guitar for a lesson in one of three ways:

- ▶ If you are playing a traditional acoustic guitar without a built-in audio jack or microphone, use an internal microphone on your computer.
- ▶ If you are playing a guitar with a built-in $\frac{1}{4}$ -inch jack, you can plug a standard $\frac{1}{4}$ -inch audio cable to the guitar, and plug an additional $\frac{1}{4}$ - to $\frac{1}{8}$ -inch adapter into the computer's audio-in port. Or, you could add a $\frac{1}{8}$ - to $\frac{1}{4}$ -inch adapter to a $\frac{1}{8}$ -inch mini audio cable.

- If you are using a guitar pick-up microphone on the instrument's sound hole, or an external microphone, connect the microphone to the computer's $\frac{1}{8}$ -inch audio-in port. This will probably require the addition of a $\frac{1}{4}$ - to $\frac{1}{8}$ -inch adapter or audio interface to the computer.



- 1 To set up the recording input on your computer, *do one of the following*:
 - If you are using the audio line-in port, choose System Preferences > Sound > Input, and choose Line In > Audio line-in port as your sound input device.
 - If you are using the internal microphone on your computer, choose System Preferences > Sound > Input, and choose Internal microphone > Built-in Microphone as your sound input device.



- 2 Play your instrument and adjust the Input volume slider until you achieve a good level without *peaking* or *clipping*. Try to achieve a strong input level—well over the halfway mark on the meter, but never reaching the highest marks on the meter.

NOTE ► The highest amplitude (loudest level) recorded is considered the peak. If levels are consistently loud, it is referred to as peaking. If levels are recorded so loudly that they exceed 0 dB, the part of the waveform above 0 dB is cut off. The resulting sound may be distorted. When this happens it is referred to as clipping.

Setting Up Your MIDI Keyboard

MIDI stands for Musical Instrument Digital Interface. It's an industry standard that allows devices such as synthesizers, electronic drum kits, and computers to communicate with each other.

A USB MIDI keyboard or other MIDI controller can connect directly to the Mac with a USB cable and port.

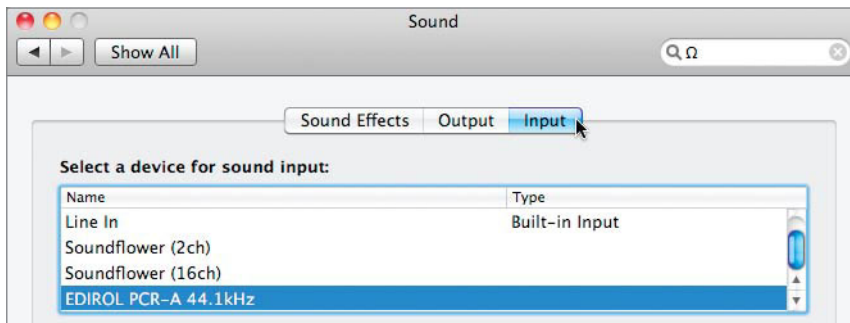
To connect a standard MIDI controller such as a keyboard, you'll need a USB-to-MIDI interface. Connect the keyboard to the MIDI interface using standard MIDI cables. Then connect the interface to the Mac USB port using the USB cable.

Carefully read the instructions that come with the keyboard and MIDI interface, and be sure to install all of the necessary drivers.

MORE INFO ► To learn more about GarageBand accessories—including MIDI keyboards, USB keyboards, or MIDI interfaces—visit www.apple.com/ilife/garageband/.

To set up recording using a USB MIDI keyboard, do the following:

- 1 Download and install any drivers required for your MIDI keyboard.
- 2 Connect your USB MIDI keyboard to a USB port on your Mac. Once connected, turn on your keyboard. If it is USB powered, it will turn on automatically when connected.
- 3 Choose System Preferences > Sound > Input, and select the driver for your keyboard, if necessary.



When you've connected your instrument, you're ready to explore the following Learn to Play exercises, or move on to Lesson 2, "Jamming and Creating Music with GarageBand." If you'd rather get right to recording and editing music, feel free to skip to Lesson 3, "Recording Music in GarageBand."

Learning to Play Guitar or Piano

The GarageBand Learn to Play lessons are perfect for anyone who is ready to start taking lessons, or who took lessons a long time ago and needs a refresher. It's even useful for a student who is currently taking lessons and would like some additional tutoring at home.

Rather than guide you through an entire basic lesson, the next few exercises will introduce you to the Learn to Play lessons interface and features so that when you sit down for your first Learn to Play lesson you'll be ready to rock and roll (literally).

Along the way, you'll also explore the new "How Did I Play?" feature that offers feedback on your progress and tracks your performance history.

Taking a Guitar or Piano Lesson

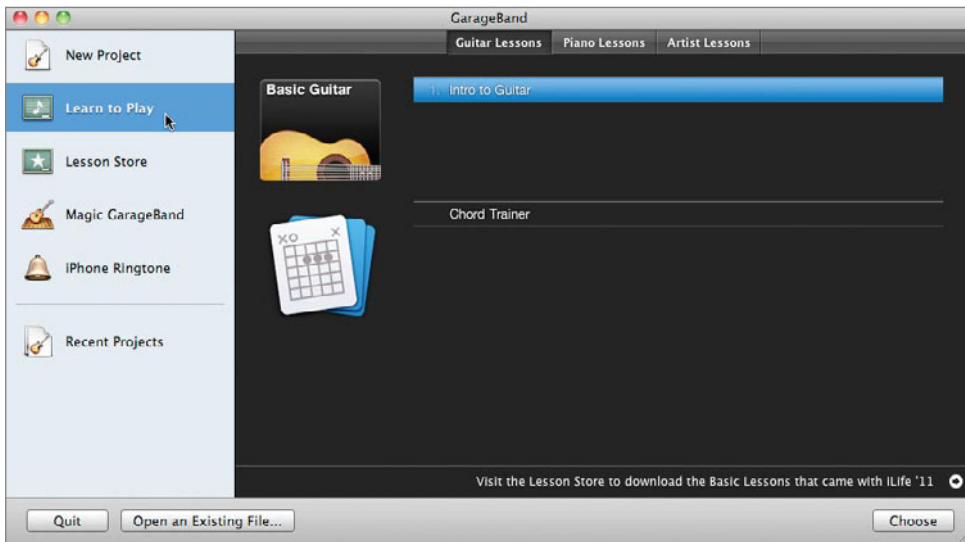
GarageBand '11 includes 22 basic guitar and piano lessons that can be completed in any order so that you can fully customize your training. With so many lessons from which to choose, you can work at your own pace, and skip or repeat specific lessons as needed. The first lesson for both instruments is automatically installed on your computer when you install iLife '11.

NOTE ► This section covers the features of both the “Intro to Guitar” and “Intro to Piano” Learn to Play lessons. If you have an instrument connected to the computer, follow along with the steps appropriate for that instrument. Most of the steps will be the same for both guitar and piano.

Even without an instrument, you can follow along with a Learn to Play lesson. However, to fully explore interactive features such as tuning and recording your practice, you’ll need to connect your instrument to your Mac.

NOTE ► If you are working with an acoustic piano or guitar without a microphone, you will still be able to play along and follow the Learn to Play lessons without the interactive features. In the case of a large piano, it will probably be easiest to move your Mac computer or laptop to the piano than vice versa.

Now let’s open the first Learn to Play lessons from the GarageBand project window.



- 1 Open GarageBand, and from the projects list in the GarageBand project window, select Learn to Play.

- 2 Choose Guitar Lessons or Piano Lessons from the top of the project window. Guitar 1 and Piano 1 lessons should already be installed on your computer.



- 3 Choose Intro to Guitar or Intro to Piano to select that lesson, then click Choose or press Return to open the lesson.

TIP You can also open a Learn to Play lesson by double-clicking a lesson name in the GarageBand project window.



- 4 In the control bar, click the Play/Stop button to start the Learn chapter of the lesson, if it is not already playing. The Play button turns blue to indicate that it is turned on and the lesson is playing.

NOTE ▶ If you previously opened the Learn to Play lessons, the most recently active lesson will open to its Learn or Play chapter, depending on the chapter you were studying. You can switch to the Learn lesson by clicking the Learn button (the word “Learn” on the chapter overlay).



The video instructor, Tim, introduces himself and explains the goal of the lesson. You can finish the lesson later. For now, let's stop the playback and get to know the interface.

- 5 Press the Spacebar, or click the Play/Stop button to stop playback.

Exploring the Interface

Now that your first guitar or piano lesson is open, you can see the default interface. It includes a Video area in the upper part of the screen and an animated guitar fretboard or piano keyboard in the lower part of the screen. Transport controls are located in the dark-gray area at the bottom of the screen. You can use them to record, play/pause, or repeat parts of the lesson.



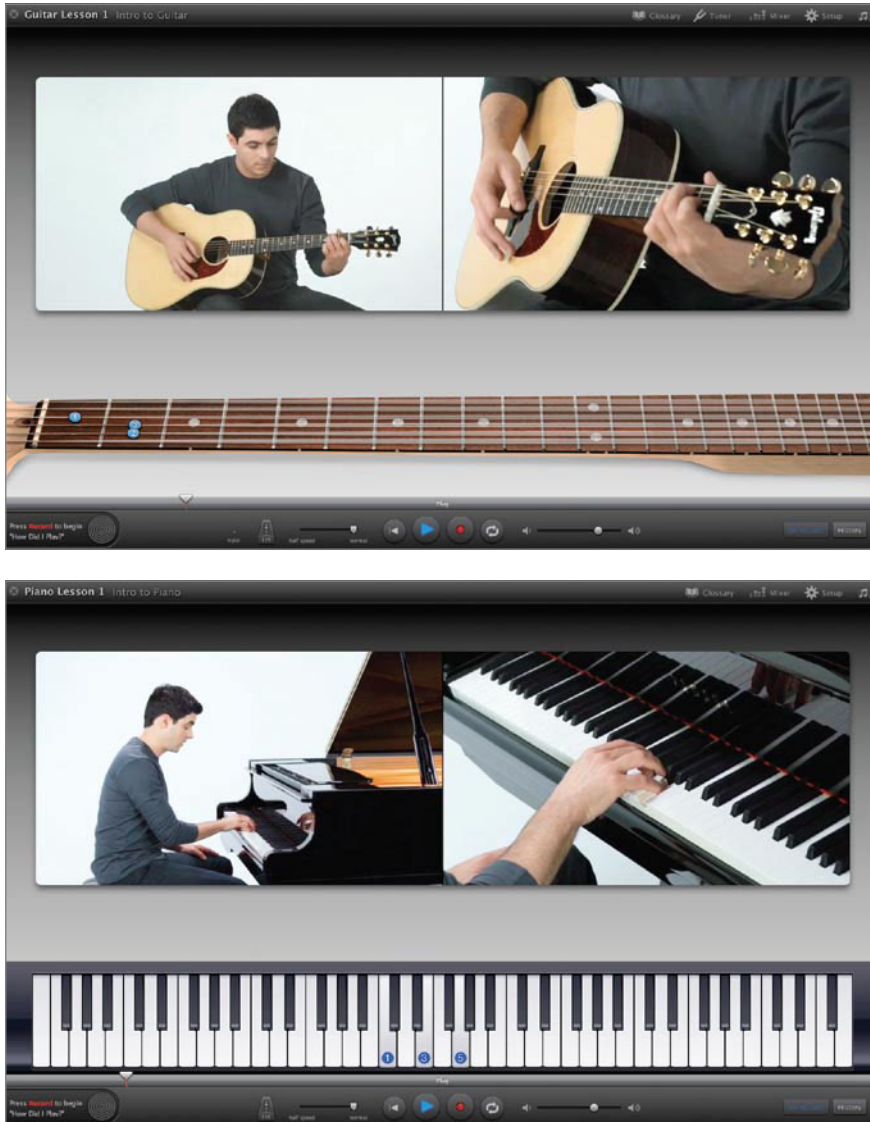
Each lesson includes two chapters: Learn (take a lesson) and Play (watch and listen to the instructor playing the lesson song). It's a good idea to start with the Play chapter to familiarize yourself with the music that you'll be studying during the lesson.

Let's play the music, and explore some of the playback controls.

- 1** In the upper-left corner of the Video area, double-click the Play chapter button to open the Play chapter interface.
- 2** Press the Spacebar, or click the Play button in the control bar to play the music.

When music starts, the Video area shows two views of the instructor playing the guitar or piano.

NOTE ► To exit the lesson at any time, press Escape or click the Close button (the X) in the upper-left corner of the screen.



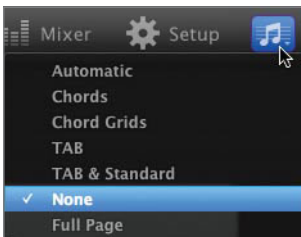
The left side of the Video area will always show the instructor and the full guitar or piano. For guitar lessons, the right side can show either the guitar and the instructor's hands, or the top of the fretboard.

- 3 If you're following the guitar lesson, move the pointer to the lower-right corner of the Video area and click the two view buttons to change views of the guitar.

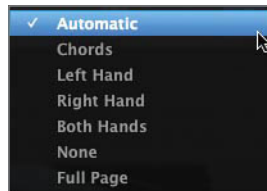


Not only can you show the musical notation or chords as the music plays, but you can also change it instantly from the Notation View menu.

- 4 Click the Notation View menu located in the upper-right corner of the screen, and choose a different notation or chord view.



Notation menu for guitar



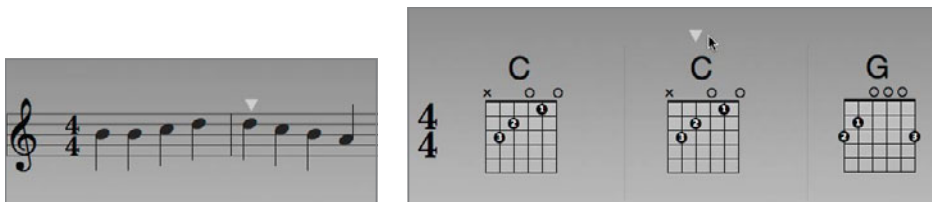
Notation menu for piano

The Notation view appears in the middle of the screen whenever the instructor plays the guitar or piano.

TIP You can also press the numeric keys 1–6 to select the notation choices in the same order as they are listed in the Notation View menu. These keys can change the lesson appearance instantly without interrupting playback.

When you've selected which musical notation to display, you can follow the white arrow as it travels along from left to right as the song plays. This is a terrific way to

become familiar with these types of musical notation: standard musical notation and guitar chord symbols, also called *tablature*.



NOTE ► In the Automatic view (1), the notation appearance will change automatically depending on the content of the lesson. For the guitar lesson, because this particular lesson includes only basic picking and strumming, the automatic view actually hides the notation for most of the lesson.

Notice that the animated instrument also shows which notes are played in unison with the notation.

- 5 Look for the blue, numbered circles on the animated instrument.

The circles not only indicate which notes to play, but also the fingers, 1–5 (thumb to little finger), that you should use to play them.

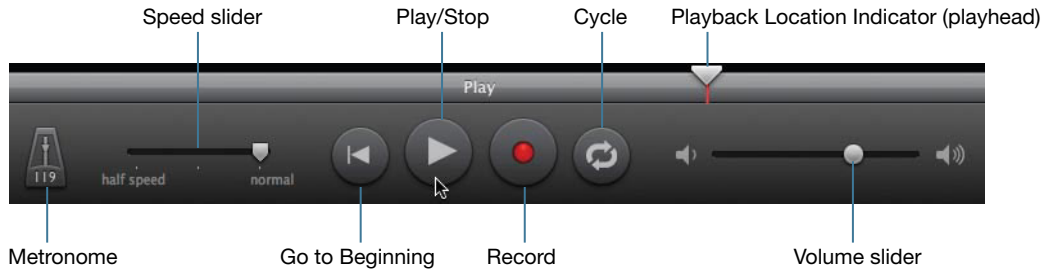


TIP ► You can see the names of the notes at the top of the keys on the animated piano keyboard by pressing E (for “Easy View”).

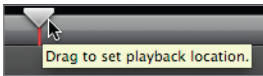
Whether you are knowledgeable in music or just starting out, you’ll have no problem following the song and how to play it.

Now, let’s try some of the ways to navigate the playhead, and work with the control bar.

- 6 Stop playback.



- 7 While playback is stopped, drag the playhead left or right to move to a point earlier or later in the song.



- 8 Press the Right or Left Arrow keys to move the playhead incrementally left or right.
- 9 Press Return to move the playhead to the beginning of the song.
- 10 Start playback again.

NOTE ► The Volume slider in the lesson interface works independently of the volume controls for your Mac, and controls only the volume level of the lesson. If you don't hear anything, check to make sure that the volume levels on your Mac are not muted or set too low.

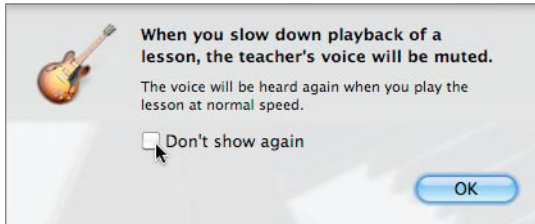
- 11 Click the Metronome button to turn on the *click track* while the music plays. This steady click is a way of keeping musical time so that musicians have an audible guide to play along with. Feel free to click the Metronome button again to turn off the metronome whenever you like.



- 12 Drag the Speed slider to the left to slow down the tempo (speed) of the music.



When you adjust the playback speed for the first time, a warning dialog appears to tell you that slowing the speed will mute the instructor's voice. If you don't want to see this warning every time you adjust the speed, select the "Don't show again" checkbox.



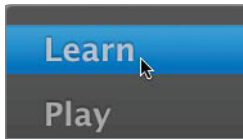
- 13** Click OK to close the dialog and slow down the tempo.

NOTE ► The number displayed on the Metronome button is the current tempo of the song shown in beats per minute (BPM). This number changes as you adjust the Speed slider to change the tempo.

- 14** Experiment with the controls (except Record—you'll do that later), and stop playback. Be sure to return the Speed slider to the normal (full right) position.

Now that you're familiar with some of the playback options and controls, let's move on to the lesson.

- 15** In the upper-left corner of the Video area, double-click the word *Learn* to switch to the lesson interface. The lesson will begin playing automatically.

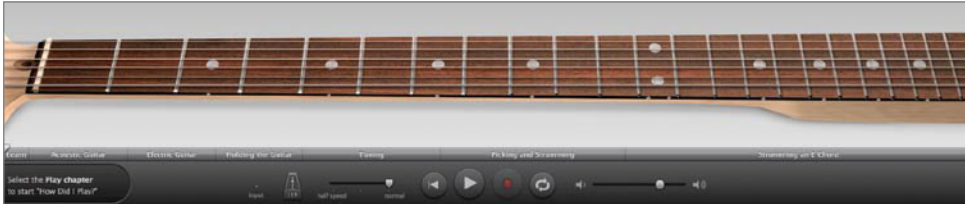


Once again, you will be introduced to Tim, your private instructor.

You can follow the entire lesson shortly if you'd like. But first, let's take a few minutes to learn how to navigate between sections, and explore some of the customizing features available to enhance your lesson experience.

Navigating Between Lesson Sections

Each Learn to Play lesson comes with at least two chapters. The sections are listed in order along the playhead scrub area above the transport controls.



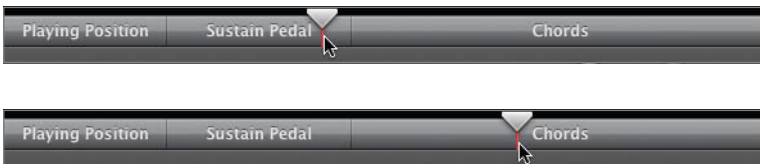
As you can see, this guitar lesson includes seven sections: Learn, Acoustic Guitar, Electric Guitar, Holding the Guitar, Tuning, Picking and Strumming, and Strumming an E Chord.



This piano lesson also includes seven sections: Learn, Black and White Keys, Playing Position, Sustain Pedal, Chords, Chord Progression, Rhythm, and Next Steps.

The playback controls and keyboard shortcuts work the same in the Learn (lesson) interface as they did in the Play interface. The difference is the ability to jump around from section to section, or cycle (loop) a specific section.

- 1 Start playback of the lesson if it is not already playing.
- 2 Click anywhere in the playhead scrubber area to move the playhead to that position.

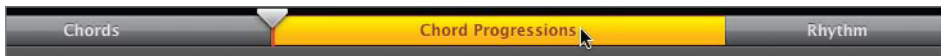


This feature allows you to jump forward or back instantly to any position in the lesson. To start at the beginning of a section in a single click, you'll need to turn on the cycle region.

- 3 In the control bar, click the Cycle button to create a yellow cycle region in the selected section.



The selected section title turns yellow to indicate that a cycle region has been created. It will cycle continuously (repeat/loop) until playback is stopped, another section is selected, or the Cycle button is turned off.



NOTE ► If all of the section titles turn yellow at once, the entire lesson was included in the cycle region. Click any specific section title to limit the cycle region to that selected section.

- 4 Press the Spacebar twice or double-click the Play/Stop button to stop, and then restart playback. Notice that playback always starts at the beginning of the cycle region.
- 5 Press C or click the Cycle button to turn off the cycle region.
- 6 Stop playback.

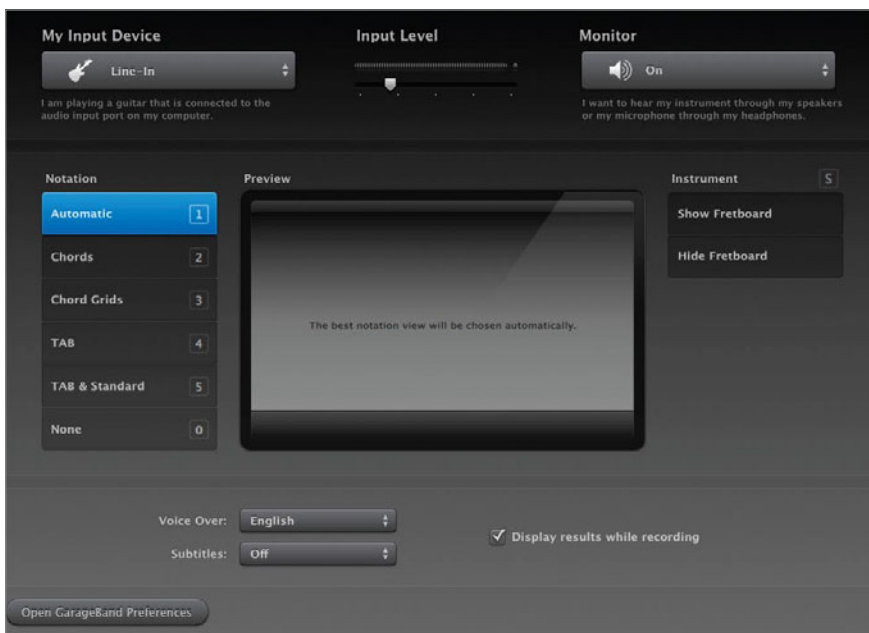
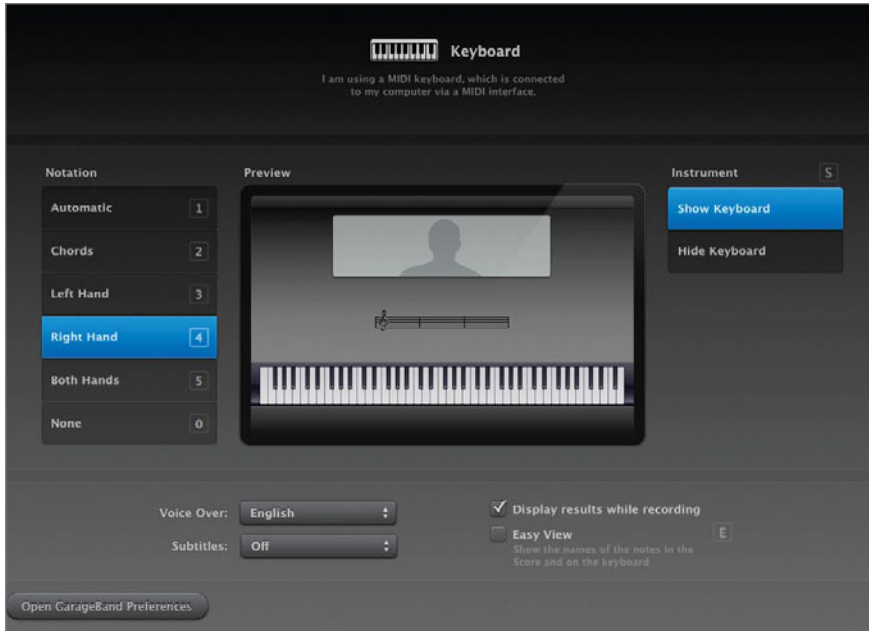
Now that you've learned how to select, navigate, and cycle through sections within the lesson, let's move on to some of the cool customizing features.

Customizing the Lesson Workspace

One of the most helpful lesson features is the ability to customize a lesson's appearance at any time to suit your specific needs. For example, you can show or hide the animated instrument, or turn on subtitles. All of the customizing choices are available in the Setup menu near the upper-right corner of the screen.

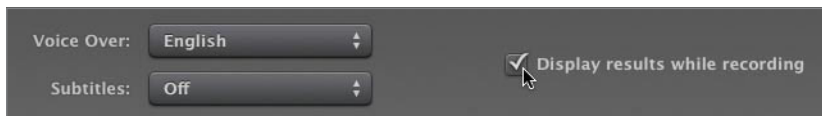


- 1 Click the Setup menu button. The Setup menu appears with choices for instrument setup, notation, language, and appearance.



If you are following the Guitar lesson, the top of the setup interface includes Input Device, Input Level, and Monitor settings for connecting your guitar or for changing settings when the lesson is open.

- 2 Near the the bottom of the interface, click the Voice Over menu to see the languages available for the lesson.



- 3 Select the the “Display results while recording” checkbox, if necessary, to display mistakes you may make as you record your practice in the next section.
- 4 Click the Setup menu button again, or click the arrow in the upper-left corner of the screen, to return to the lesson.

Tuning During a Lesson

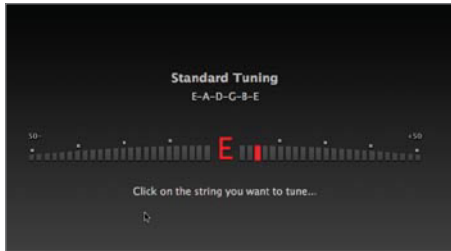
In addition to taking a lesson, you can also tune your guitar and record your performance during the lesson.

NOTE ► Because both of these features require a guitar or keyboard connected to the computer, they won’t be detailed in step-by-step exercises in this book.



The Tuner is located next to the Setup menu button near the upper-right corner of the screen.

To tune your guitar, click the Tuner button and play the string that you want to tune. The visual tuner works the same as most professional guitar tuners. Red lines appear on either side of the note name to indicate how sharp (right) or flat (left) the string is out of tune.



Out of tune (red)



In tune (blue)

Recording and Reviewing Your Practice

It's time to meet your personal musical coach, motivator, and friend who will not only grade your work, but also chart your progress and give you instant feedback on your performance.

“How Did I Play?” is an exciting new GarageBand feature that offers the personal attention to detail and praise (or criticism) that can empower you to improve your playing beyond the instruction of the lesson itself.

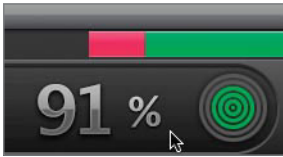
To analyze your playing and see how you did, you first need to record the practice music in the Play chapter of your lesson.

To record your practice, *do the following*:

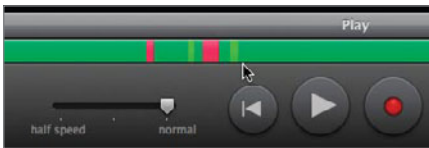
- ▶ Open the Play chapter of the lesson.
- ▶ In the control bar, click the Record button.



- ▶ Play your guitar or piano along with the music.



The multicolored bar is a visual representation of your recording. Correctly played notes are colored green; missed or wrong notes are red; and notes you played almost correctly are yellow. The percentage displayed in the lower-left corner of the control bar indicates the general accuracy of your playing.



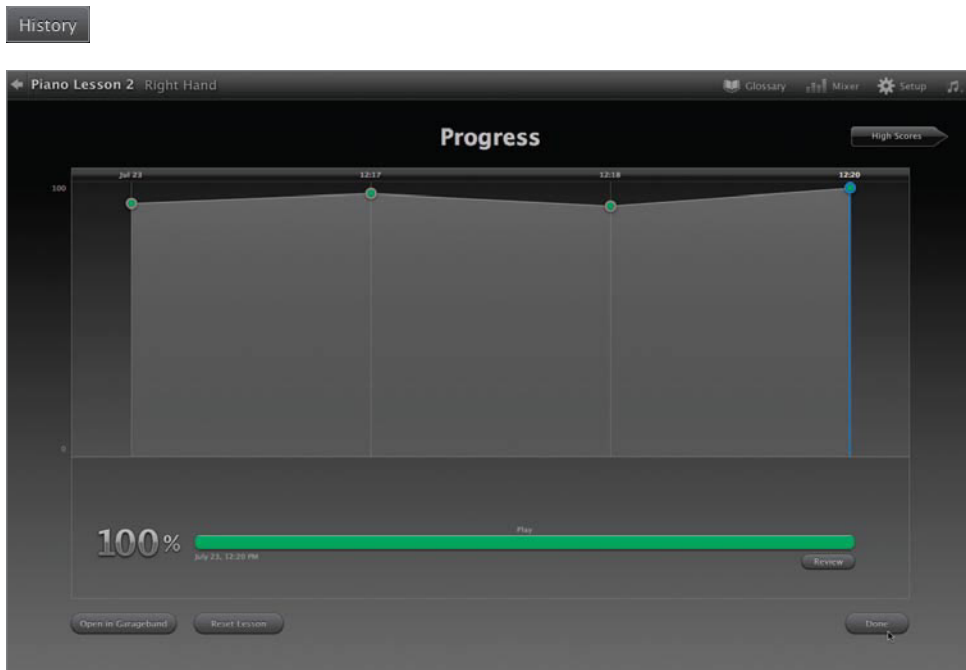
If musical notation is displayed, you will see red marks on the notation for note misses, and yellow for nearly accurate playing.

Don't worry if you see a lot of red the first time through. You know the adage "practice makes perfect." Well, it's true.

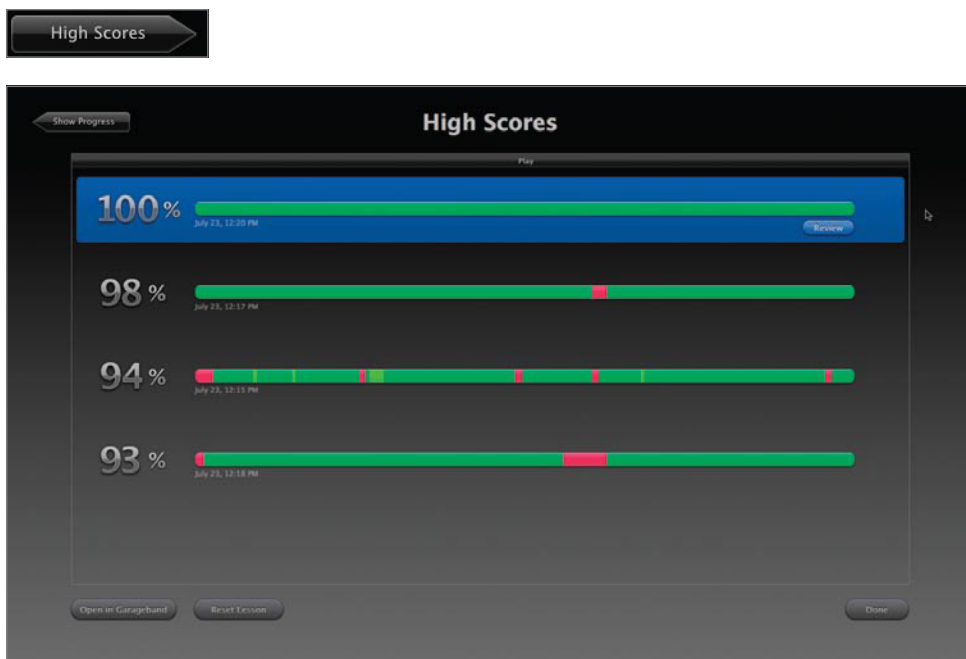
When you're finished, press the Spacebar to stop playback and recording. For a guitar recording, a purple Real Instrument region appears below the playhead; for a piano recording, you'll see a green Software Instrument region. You'll learn more about these region types in the next lesson.

Tracking Your Progress

The more practice sessions that you record, the better you will be able to track your progress. Few motivators are better than a graphic view of your performance and high scores. To see your progress, click the History button on the far-right side of the control bar.



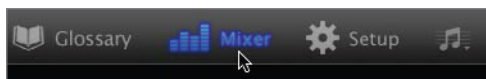
To see your high scores, click the High Scores button in the Progress window.



Changing a Lesson Mix

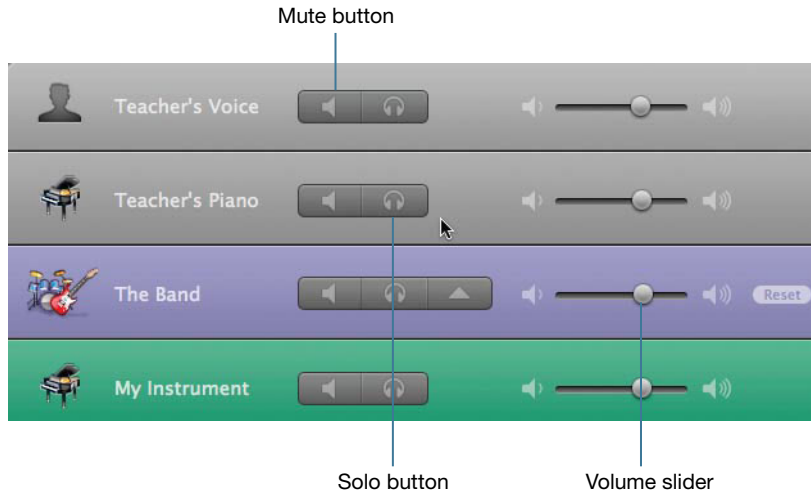
Because practice, practice, and more practice is an important part of any successful music study, you may want to adjust the lesson mix as you progress to best suit your practice needs. For example, you might grow tired of the instructor's voice saying the same thing over and over when all you want to focus on is the sound of his (or your) guitar or piano. Let's look at the Mixer and see how to change the lesson mix.

- 1 Click the Mixer button, located in the upper-right corner of the screen.



The Mixer appears as an overlay in front of the lesson window.

Each track includes a Mute button to silence a track, a Solo button to play only that track, and a Volume slider to adjust the track's volume.



NOTE ► The Mixer for the Play chapter includes a My Recordings track if you have recorded your instrument during the lesson.

- 2** For the guitar lesson, play the Picking and Strumming section.
- 3** For the piano lesson, play the Chord Progressions section.
- 4** While the lesson plays, click the Mute button on the Teacher's Voice track to mute the track. The Mixer buttons, like other controls within GarageBand, turn blue to indicate that they're on.
- 5** Click the Mute button again to unmute the track. It may take a moment for Tim's voice to return after you unmute the track.
- 6** Experiment using the Mixer controls. When you're finished, click the Mixer button to hide the Mixer.
- 7** Close the lesson window to close the lesson.

That's it. Now you know your way around a Learn to Play lesson.

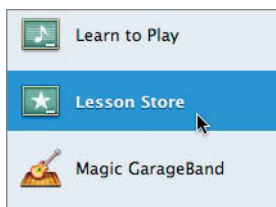
Downloading Additional Learn to Play Lessons

So you've finished the first Learn to Play lesson. Are you ready for more? GarageBand has 21 more Learn to Play basic guitar or piano lessons that you can download right to your Mac—and they're free!

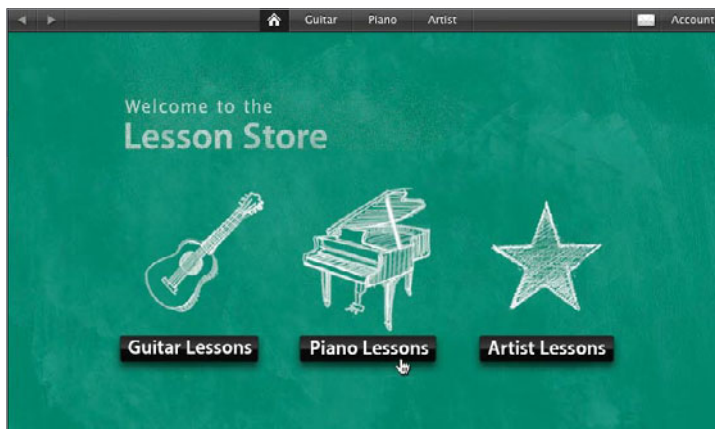
To download your next lesson, you'll need to choose it from the Lesson Store.

NOTE ► If you don't want to download another lesson, you can still follow along with this exercise; just don't click the Download button when prompted to do so.

- 1 In the GarageBand project window, choose the Lesson Store.



The Lesson Store home screen appears in the project window. To download lessons, you first need to select the type of lesson.



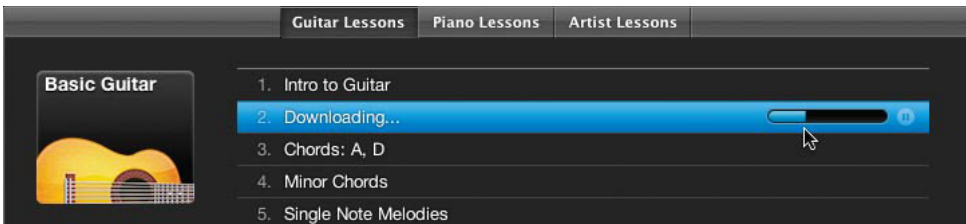
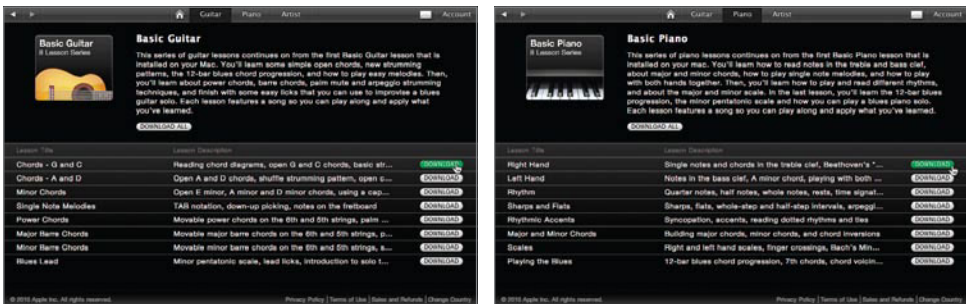
- 2 Choose Guitar Lessons or Piano Lessons from the Lesson Store home screen to open that instrument's lesson screen.

- 3 When the screen features the instrument of your choice, choose the series of basic lessons that you'd like to download.



A list of lessons available for download appears. You can download one at a time as needed, or click the Download All button to download the entire set. Keep in mind that downloading can take some time, so if you want to start a lesson right away, start by downloading just one.

- 4 Click the Download button for the basic guitar or piano lesson you want.



A blue bar appears in the Learn to Play lessons list to show the download progress.

Now one or more new lessons have been downloaded to your Mac, and corresponding icons for each lesson appear in the Learn to Play lessons list in your project window.

Taking an Artist Lesson

If your piano and guitar skills have grown beyond the basic lessons, you're ready to learn from the pros. Artist Lessons use the same interface as the basic Learn to Play lessons with the advantage that your instructor is the actual recording artist who made the music a hit. Want to learn "Roxanne" from Sting, "Spirit of Radio" from Rush, "Thinking About You" from Norah Jones, or "Proud Mary" from John Fogerty? You can do it in GarageBand. The Artist Lessons also include personal stories told by the artists about their songs.

These more advanced lessons are available for purchase from the Lesson Store.



To purchase an Artist Lesson, click the Lesson Store button in the New Project dialog, then click the Artist Lessons button to see the list. You can view the choices and click Add to Cart for the lessons you want to buy; then follow the instructions to purchase and download the lesson.

Lesson Review

1. Which instruments have Learn to Play lessons included with GarageBand?
2. How do you download additional lessons?
3. Do you have to have an instrument connected to the computer to take a Learn to Play lesson?
4. What two chapters come with every Learn to Play lesson?

Answers

1. GarageBand includes Learn to Play lessons for piano and guitar.
2. In the GarageBand project window, choose Lesson Store, then choose the lessons that you want to download.
3. You can take a Learn to Play lesson with or without an instrument; however, having a guitar or keyboard connected to your Mac allows you to tune a guitar and play along with the instructor during the lesson.
4. Every Learn to Play lesson comes with the Learn and Play chapters.

2

Lesson Files

Time

Goals

GarageBand > Lesson 16 > Magic Rock Song

This lesson takes approximately 40 minutes to complete.

Choose a Magic GarageBand Jam genre

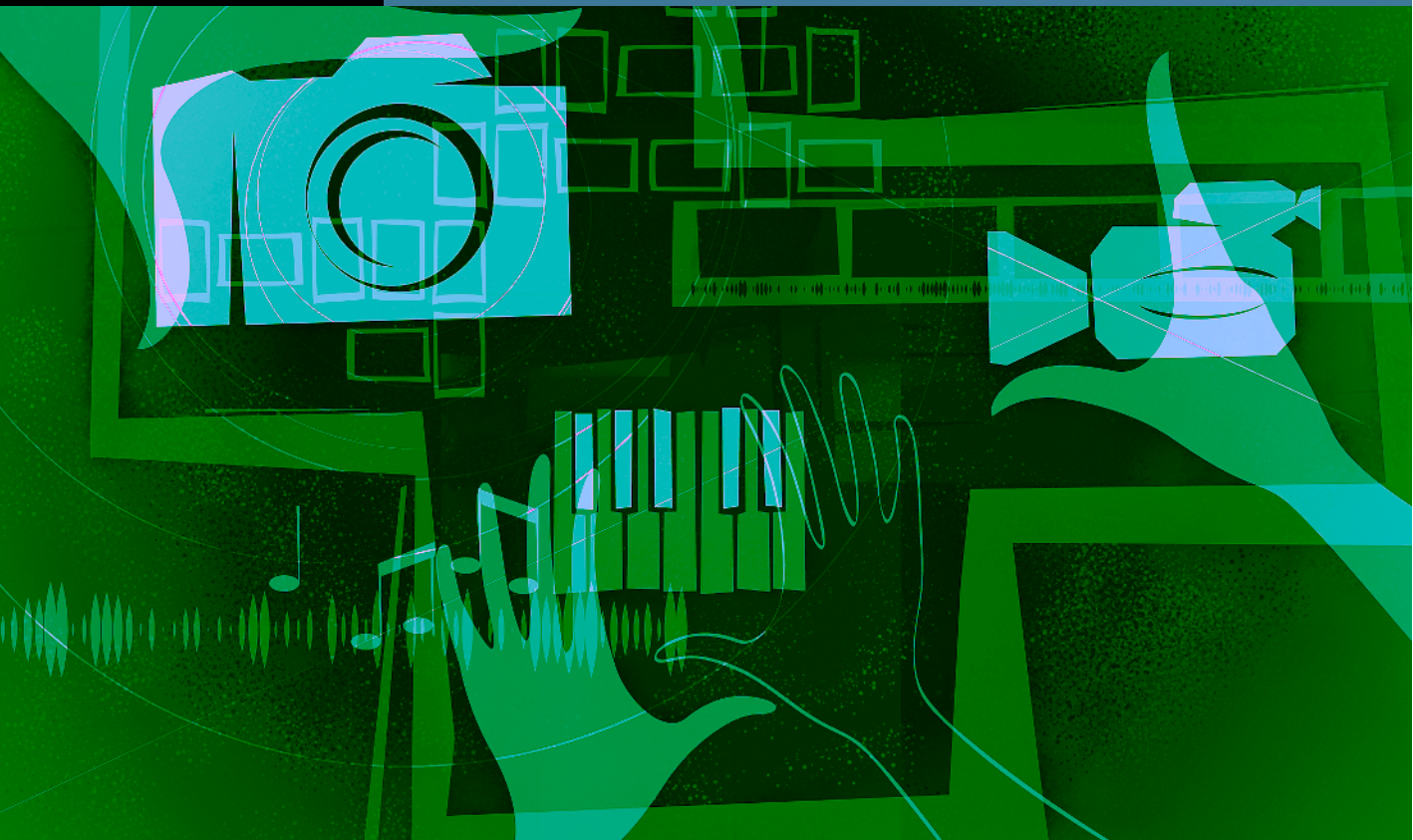
Audition and select instrument parts

Work with the Mixer during an audition

Select and customize your instrument part

Record a keyboard part using musical typing

Open and save a finished song



Lesson 2

Jamming and Creating Music with GarageBand

One of the greatest pleasures of being a musician is performing with a band on stage in front of a huge crowd of screaming fans. That might not be a reality for everyone, but playing along with virtual musicians in GarageBand is a great way to practice, create music quickly, play and record original riffs, or just jam along and enjoy the process (screaming fans optional). Magic GarageBand Jam puts you at center stage as the leader of a virtual band.

Whether you're a professional musician, or have just finished your Learn to Play lessons, Magic GarageBand Jam offers a flexible performance experience to take your musical skills to the next level.

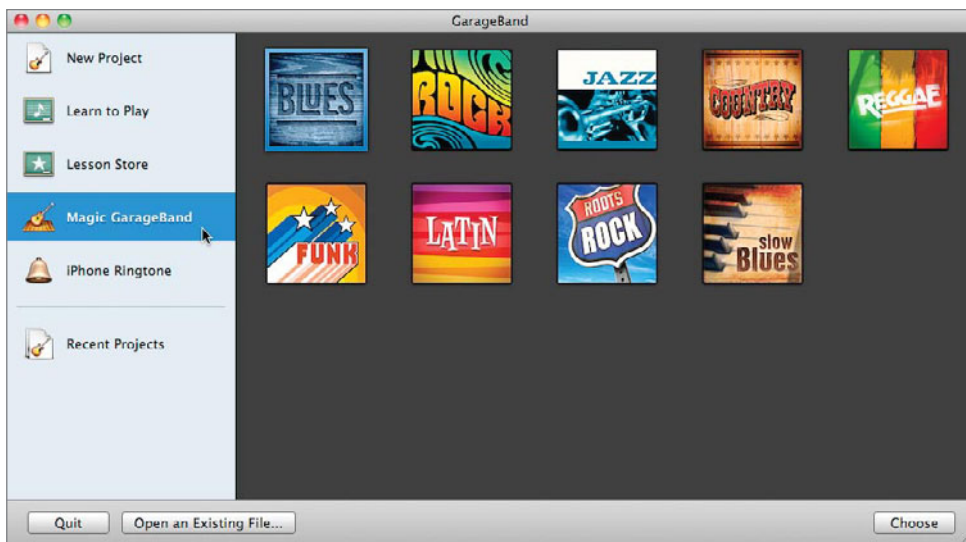
The following series of exercises will lead you through a hands-on tour of Magic GarageBand Jam. Along the way you'll choose a genre, audition musicians, select your own instrument, record a simple part, and finally open and save the finished song in GarageBand.



Selecting a Musical Genre

Magic GarageBand Jam offers nine musical genres to choose from including Blues, Rock, Jazz, Country, Reggae, Funk, Latin, Roots Rock, and Slow Blues. You can preview these genres in the GarageBand project window.

- 1 Open GarageBand. If a GarageBand project is already open, choose File > New. Only one project can be open at a time so you may be prompted to save and close the current project—if there is one—before the GarageBand project window opens.
- 2 In the GarageBand project window, select Magic GarageBand.



An icon presenting each of the nine genres appears in the project list. To preview a genre, hover your pointer over a genre icon until the preview overlay appears. Then click the small Play Preview button.

- 3 Hover your pointer over the Blues icon and click the Play Preview button to hear the blues song. Click the button again to stop the preview.



TIP You can use your Mac volume level controls to adjust the preview volume levels.

- 4 Preview several of the genres to hear the variety of music that you can jam along with in Magic GarageBand Jam. For this lesson, let's choose the Rock genre.
- 5 Double-click the Rock genre icon to open that project.

After a moment The Magic GarageBand stage appears along with the default instruments used in the Rock genre song.

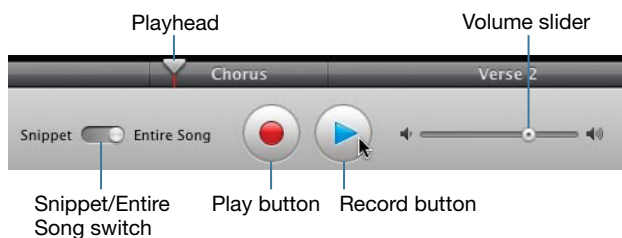


Navigating and Controlling Playback

Now that you've opened a Magic GarageBand project, you should learn how to navigate around a song and control its playback.

If you already completed the Learn to Play exercises earlier in this section, you'll see some familiar features in the Control bar. If you skipped ahead to this lesson, no problem; you'll get acquainted with the controls soon.

- 1 Press the Spacebar, or click the Play button in the Control bar to play the song.



The music plays in its default arrangement. You can drag the Volume slider if you temporarily want to increase the song's volume.

- 2 Press the Spacebar to stop playback.
- 3 Press Return to return the playhead to the beginning of the song.

Each Magic GarageBand song includes an Intro, two Verses, a Chorus, and an Ending. You can quickly navigate to the beginning of one of these sections by clicking the corresponding part above the Control bar.

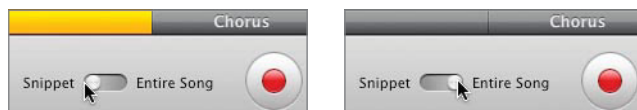
- 4 Click Verse 1 to select that section of the song. The selected section turns yellow, and the playhead jumps to the beginning of that section.



- 5 Press the Spacebar or click the Play button to restart playback.

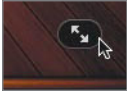
Notice that this time the playback includes only the selected snippet of the song. This feature is handy when you want to practice or play along with just one part of the song.

- 6 Click the Snippet/Entire Song switch to set it back to Entire Song and pause playback.



The yellow highlighted section of the song disappears, and you can now work with the entire song.

You can also play the project full screen by clicking the View button in the lower-right corner of the stage.



You can click the View button again at any time to return to the window view.

NOTE ► If you're using the full-screen view, you can click the close button (X) in the upper-left corner of the screen to close Magic GarageBand at any time.

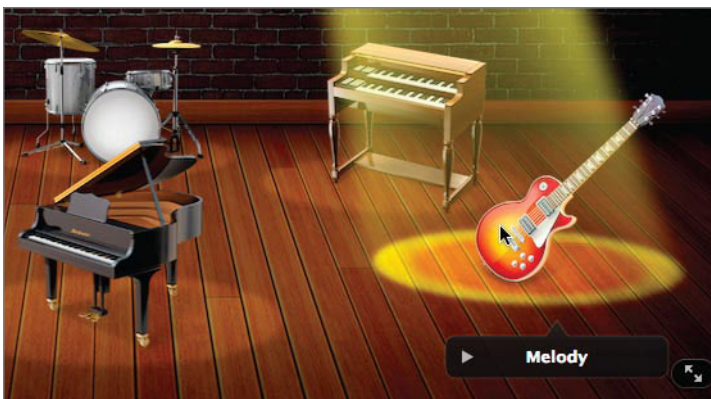
Auditioning Virtual Musicians and Instrumental Parts

Now that you've opened the song and know how to control playback, you can audition the instrument parts.

Each Magic GarageBand song includes Guitar, Bass, Drums, Keyboard and Melody instruments, and a place for you (My Instrument) at the center of the stage. As the leader of the virtual band, you control which musicians get to play, and with which instruments and playing style.

The good news is that your job is much easier than auditioning musicians in the real world. In Magic GarageBand the virtual musicians are very professional, which means you don't have to deal with egos, tardiness, attitude, or poor playing. Instead, you can focus on choosing the right parts for your version of the song from more than 3,000 possible combinations of sounds for each genre.

- 1 Roll the pointer over each instrument on the stage. A spotlight illuminates whichever instrument you roll over, and the name of the instrument or part appears.



- 2 Click the Guitar to select that instrumental part.



The instrument list below the stage changes to show the other instrument choices for the song's guitar part. In this case, you have seven guitar styles from which to choose: Jangle, Strumming, Honky Tonk, Punk, Windmills, Big Stack, and Glam.

The No Instrument choice to the far right of the instrument list is also available if you want to exclude that instrument from your arrangement.



If you aren't familiar with these guitar styles, don't worry. You can change them while the song is playing to hear how they modify the feel and sound of the song and then choose your favorite.

TIP It's a good idea to audition instruments against the same section (snippet) of the song, such as the Verse or Chorus, so that you hear all of the choices in the same context.

- 3 Play the song, and click Verse 1 to loop playback of that section (snippet) of the song.



- 4 Click each of the guitar styles in the list to audition them with the first verse of the song.

When you change instrument styles, the new instrument (virtual musician) needs to wait until the next measure to jump in—so be sure to give each guitar a chance to play before moving to the next one.

You should notice a clear difference in the sound of the guitars.

NOTE ► GarageBand comes with an awesome set of guitar amps and stompbox effects to create these sounds—and more—with your own guitar recordings. You’ll learn more about using these guitar effects in the next lesson.

- 5 Choose your favorite guitar style.

If you’re having trouble deciding, try the Big Stack for a nice, over-the-top, heavy electric guitar with plenty of effects. I like this one because it reminds me of the “check out my big amp and effects” sound of the guitars in every band I played keyboards for in high school and college (way back in the ’80s, long before GarageBand, though we did practice and record music in the garage).

- 6 Stop playback.

Mixing Instruments in Magic GarageBand

Auditioning instruments while listening to the other parts works well to get a feel for the way a part fits into the overall sound. However, sometimes you may want to solo or mute a particular instrument before you make your final decision.

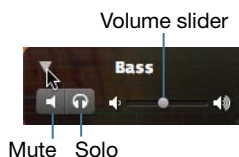
Each instrumental part includes a mixer that allows you to control the volume of that instrument in the mix, as well as solo and mute controls.

In this exercise, you’ll use the mixer to audition the bass part.

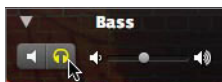
- 1 Click the Bass to select it.



- 2 Click the disclosure triangle to the left of the Bass overlay to open the Mixer.



- 3 Start playback. Feel free to choose a different part of the song for the bass audition.
- 4 Click the Solo button to isolate the sound of the bass.



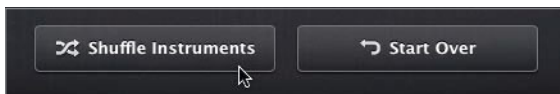
You should hear only the sound of the bass instrument. This is a great way to hear the part clearly.

TIP If you want to learn a specific instrumental part so that you can jam with the Magic GarageBand songs, start by soloing that part. When you can play along with the virtual musician, you'll be ready to unsolo the part and join in with the rest of the band.

- 5 Choose a different bass instrument style from the instrument list and listen to it.
- 6 Click the Solo button again to unsolo the new part.
- 7 Toggle the Solo button on and off as needed while you audition the remaining bass instrument styles. Select different parts of the song to hear the bass in the Intro, Chorus, Verses, and Ending. Stop playback when you're happy with your bass selection.

If you can't decide on a bass part, try the Driving bass. It has a nice presence without overshadowing the Guitar. The good news is that there is no right or wrong choice. All of the parts sound great; that is part of the "magic" of Magic GarageBand Jam.

TIP A fast way to find a new combination of instrument parts is to click an empty part of the stage, then click the Shuffle Instruments button. Voila! Now the song has a fresh sound with a new set of instruments. You can also click Start Over to reset the song to the original instruments.



Project Practice

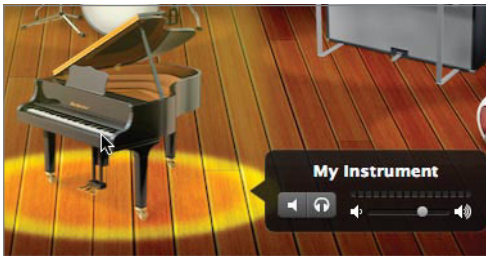
Take a few minutes to practice what you've learned so far, and select new instruments for the Drums, Keyboard, and Melody parts. For a unique sound, try the Sitar for the melody instrument. Now there is something you don't see or hear on stage every day. If you like the way the song sounds as is, you can leave the default instruments and move on to the next section.

NOTE ► Magic GarageBand Jam automatically saves your changes to the song as you go. If you want to close the project and come back to it later, double-click the Rock genre icon in the Magic GarageBand Jam genre list and it will open exactly the way you left it.

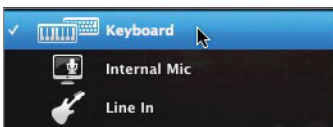
Setting Up Your Instrument

Now that you've selected your musicians and instruments, you should choose the instrument that you'll play. After you've set up your own instrument, you can play along and even record your part.

- 1 At the center of the stage, click the Grand Piano labeled My Instrument. The default instrument for the Rock genre is a Grand Piano.



- 2 Click the My Instrument menu to see the instruments that you can connect to the computer.

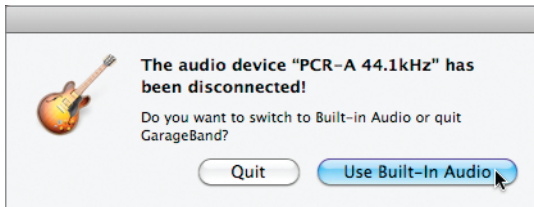


Your choices are:

- ▶ **Keyboard** is for a MIDI instrument such as a piano or organ. If you don't have an external MIDI instrument, you can also play along using your computer's keyboard.
- ▶ **Internal Mic** allows you to record your voice or another instrument using the computer's built-in mic.
- ▶ **Line In** is for an instrument such as a guitar or bass that is connected through the audio-in port or another approved audio interface. This could also include a microphone that you use to record vocals or other acoustic instruments.

For this exercise let's choose the Keyboard setting and play a part using the computer keyboard.

- 3 If you have a MIDI keyboard connected to the computer, disconnect it now. When the dialog warns you that your device has been disconnected, click Use Built-In Audio.



- 4 From the My Instrument pop-up menu, choose Keyboard, if it isn't already chosen.

Magic GarageBand Jam includes three default keyboard style choices: Grand Piano, Electric Piano, and Arena Run.



- 5 Choose the Electric Piano instrument. To play this instrument using your computer keyboard, you need to turn on Musical Typing.
- 6 Click the Tuner button to turn on Musical Typing.



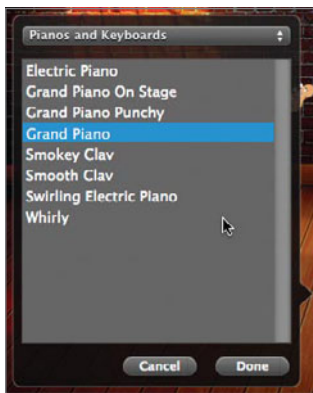
The Musical Typing keyboard appears below the stage. You can click the keys on the Musical Typing keyboard to play them, or type the corresponding keys on your computer keyboard. Notice that the Tab key works as a sustain pedal, and the Z and X keys will shift the notes up or down an octave.

- 7 Start playback and play a few notes on your computer keyboard to hear how they sound. Don't worry if they aren't the right notes. This is just to illustrate how it works. When you're finished, stop playback.

Adding a Custom Instrument

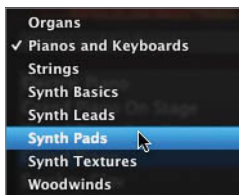
Unlike the instrument choices specified for other parts of the song, an advantage of the My Instrument part is that you can choose from any sound available in GarageBand. In this exercise, you'll customize the choice and add a new sound that you can play on your computer keyboard, or with an external MIDI keyboard.

- 1 Click the Tuner button to open the My Instrument keyboard instrument list.
- 2 Click Customize to show all of the available Pianos and Keyboards in the Instrument menu.

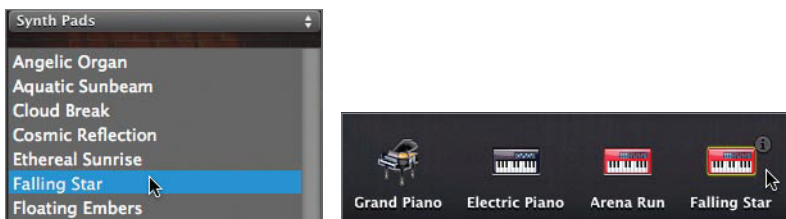


For this exercise, let's choose an interesting Synth Pad to add some electronic '80s texture to this rock song.

- 3 Click the Pianos and Keyboards pop-up menu to see a full list of Software Instrument categories.
- 4 From the Instrument menu, choose Synth Pads.



- 5 From the Synth Pads instrument list, choose Falling Star. Then click Done to close the Instrument menu.



The Customize button is replaced in this list by the Falling Star instrument.

NOTE ► You can click the information button (i) in the upper-right corner of the Falling Star icon to open the Instrument menu and choose a different customized instrument.

- 6 Click the Tuner button to turn on Musical Typing and play a few notes along with the song. When you're finished, stop playback.

The Falling Star sound is easy to work with—even if you aren't a musician. Sure, it isn't a very good choice for showing off your finger work or composing a keyboard solo, but it's perfect for adding a little excitement to the Intro and Ending of the song.

TIP ► Clicking the Tuner button opens a digital guitar tuner that you can use whenever you have a guitar connected to the computer and the Line In setting selected in the My Instrument window. If you have a MIDI keyboard connected to the keyboard, the Musical Typing area will appear blank.

Recording a Part

You are now two clicks away from recording a part. First you'll need to change the playback to Entire Song, then click the Record button and let the magic begin.

When you record a part in Magic GarageBand it's important to set the playhead position first. The recording will always start at the current playhead position.

Also, if a section of the song is selected, you can record multiple takes of that snippet over and over as the section loops, then choose the take that you like best. You'll work more with multiple-take recordings in the next lesson. For this exercise, a single take should do the trick.

- 1 Change the playback setting to Entire Song, if necessary.
- 2 Press Return to move the playhead to the beginning of the song.
- 3 Play the song once from the beginning and practice playing the Falling Star part wherever you think it will sound good.

If you aren't sure when to play, remember that for a sound like this, less is more. Try playing once during the intro after the other instruments have started. Play a note again at the end of the first verse or beginning of the chorus, then another at the end-
ing as the other instruments are playing their final notes.

Too much of this Falling Star sound will make it more of an annoyance than a musical surprise. When in doubt, keep the audience guessing, or wanting more.

- 4 Click the Record button to start recording. A red recording region appears above the Control bar.



TIP When you play single notes, the name of the note and octave appears next to the Musical Typing interface. When you play multiple notes, the name of the chord appears instead.

- 5 Click the Play button to stop recording. A green Software Instrument region appears above the Control bar. The horizontal lines within the region represent the MIDI note events.



If you're really unhappy with your recording and want to do it again, choose Edit > Undo (or press Command-Z), and repeat steps 4 and 5.

NOTE ► Guitar, Vocals, or other Real Instrument recordings appear as purple regions. You'll learn more about the different types of GarageBand regions in the next lesson.

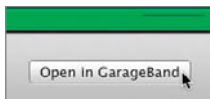
Congratulations! You've recorded an original keyboard part. Next, let's open the song in GarageBand to hear the finished rock song.

Opening and Saving the Song in GarageBand

Now that your Magic GarageBand song is finished, you can open it in GarageBand to see the finished project, edit the arrangement, add additional tracks, save the project, or share it with iTunes.

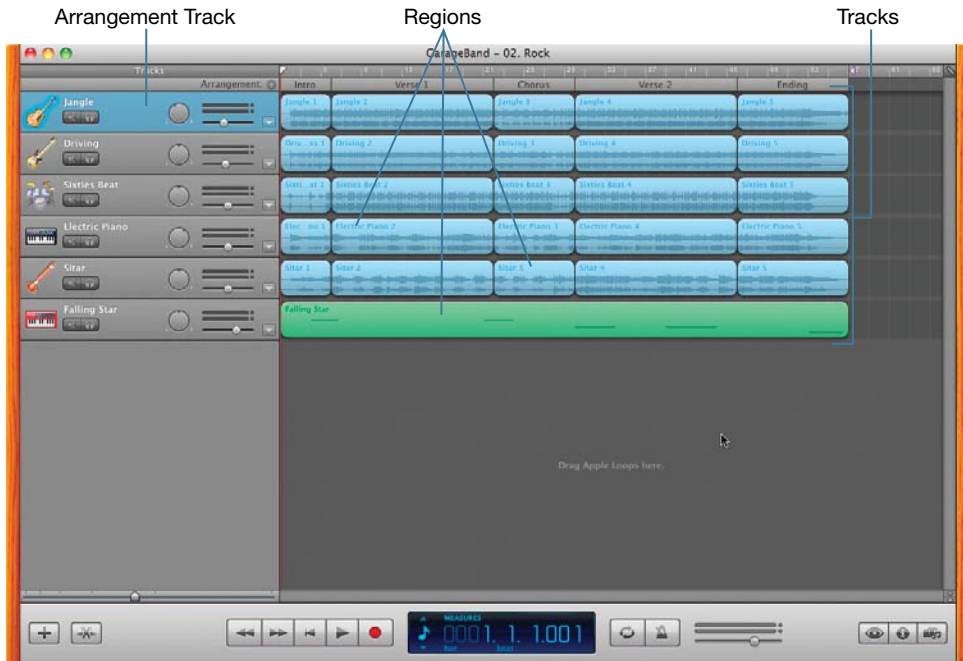
In this exercise, you'll open the song in GarageBand and save the finished project.

- 1 In the lower-right corner of the window, click the "Open in GarageBand" button.



The song opens in the GarageBand window.

NOTE ► The song in GarageBand is assigned the name "02. Rock." This naming convention is based on the way Magic GarageBand saves your work behind the scenes. 02 and Rock represent the genre. The next Rock Magic GarageBand Jam session you open and change will be named "02. Rock 2" to indicate that this is the second version and so on. Magic GarageBand projects are saved to User > Library > Application Support > GarageBand > Working Copies.



You'll see a timeline with a separate track for each instrument part, and the track names corresponding to the Magic GarageBand instruments that you selected earlier.

The Arrangement track at the top of the window shows each of the sections of the song (Intro, Verse 1, Chorus, Verse 2, and Ending), and can be edited to rearrange or extend the song length.

The short blue regions represent the pre-recorded Magic GarageBand parts. The long green region represents the Software Instrument part that you recorded.

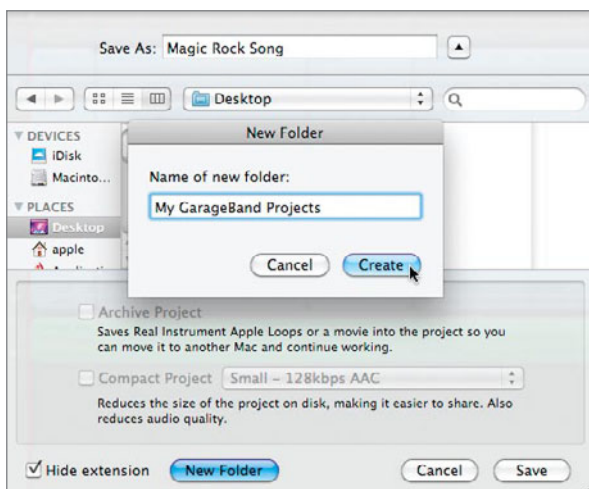
In the next lesson you'll learn how to record and arrange music in GarageBand. For now, let's save this project as is. Later you can re-open this project and edit, arrange, and mix this song on your own.

For this exercise, you'll perform a basic save. In the later lessons, you'll learn about other GarageBand save features.

- 2 Choose File > Save As to open the Save As dialog.
- 3 In the Name field, type *Magic Rock Song*.

NOTE ► To expand the Save As dialog, click the downward-pointing arrow at the right side of the Save As field.

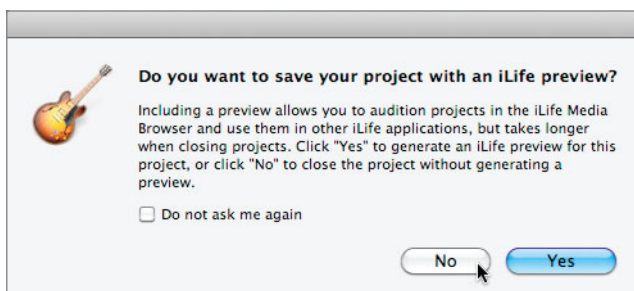
- 4 Click the Desktop icon in the Sidebar (left side) of the Save As window to select the desktop as the location to save your project.
- 5 In the lower-left corner of the window, click the New Folder button. A New Folder dialog opens.
- 6 In the “Name of new folder” field, type *My GarageBand Projects*. Click Create.



The new folder appears on your desktop.

- 7 In the Save As window, click Save.
- 8 Press Command-W, or choose File > Close.

An alert dialog appears asking if you'd like to save your project with an iLife preview.



- 9 Click No to save and close the project without generating an iLife preview.

Your project is successfully saved to the folder you created on your desktop and then closed.

NOTE ► iLife preview is a saving method that is great for finished projects, but takes longer to save and isn't necessary until you're ready to share the project with other iLife applications. You also need to be careful about saving recording projects with an iLife preview because it will delete unused recordings that you may have wanted to archive. You'll save files with an iLife preview in Lesson 5.

That's it! You've created and saved a rock song. And you have a good working knowledge of the Magic GarageBand Jam interface.

Lesson Review

1. How do you select an instrument in Magic GarageBand Jam?
2. Can you change or add a Magic GarageBand instrument?
3. How do you isolate the sound of an instrument in Magic GarageBand?
4. Can Magic GarageBand automatically change all of the instruments?

Answers

1. You can select an instrument in Magic GarageBand Jam by clicking the instrument.
2. You can change any Magic GarageBand instrument by selecting the instrument and choosing another instrument in the menu. To add an instrument in the My Instrument category, click the Customize button then choose an instrument from the list.
3. To isolate the sound of an instrument in Magic GarageBand, you can turn on the Solo button in the instrument's mixer.
4. Magic GarageBand can automatically change all of the instruments to a different combination. Click an empty space on the stage, then click the Shuffle Instruments button when it appears.

3

Lesson Files

GarageBand > Lesson 17 > Magic Rock Song 01, Magic Rock Song 02, Magic Rock Song 03, Magic Rock Song 04, Magic Rock Song 05

Time

This lesson takes approximately 60 minutes to complete.

Goals

Open a GarageBand project

Create and set up an electric guitar track

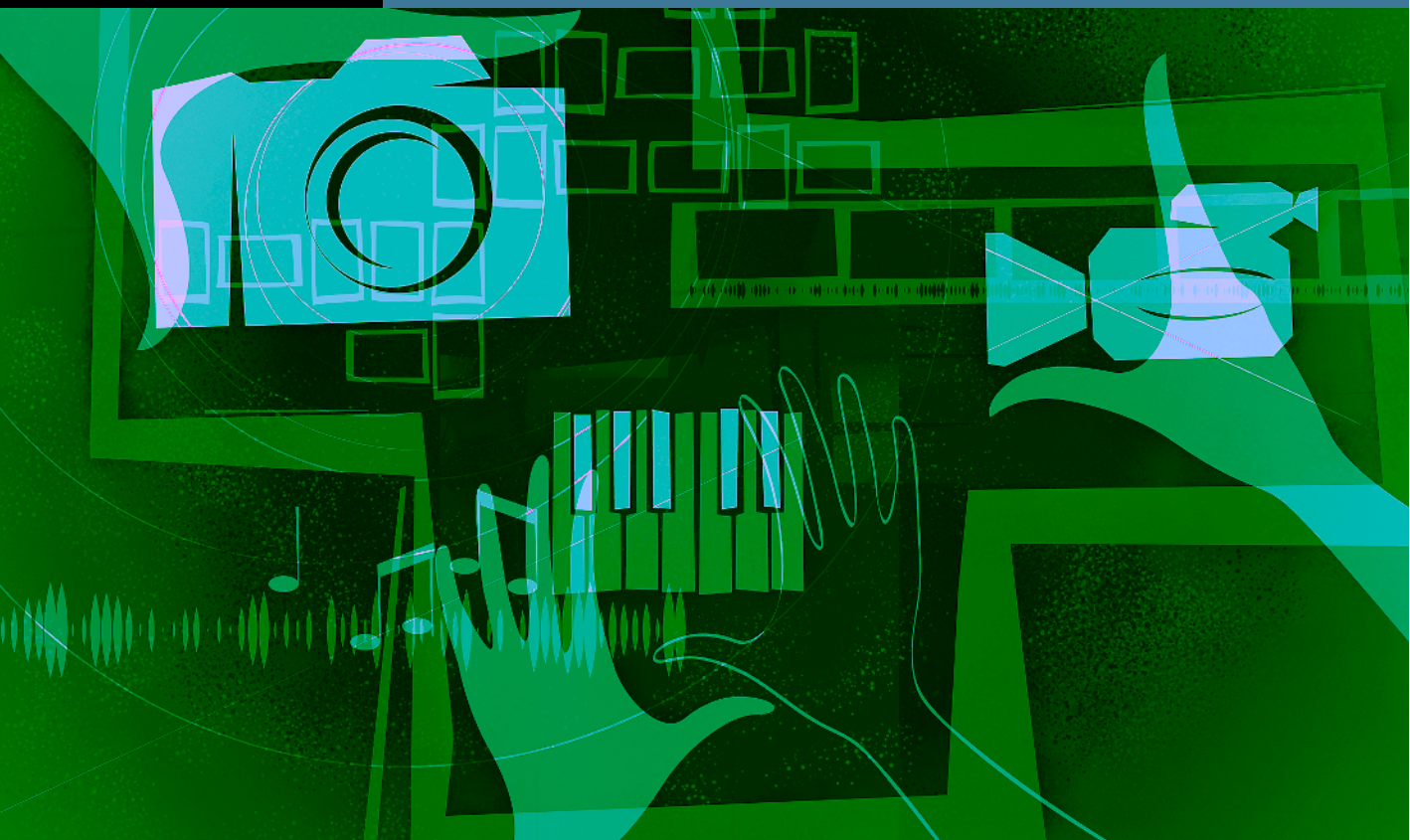
Work with single-take and multiple-take recordings

Adjust guitar amps and stompbox effects

Experiment with acoustic guitar effects

Duplicate a track and double a guitar part

Record a Software Instrument part using the onscreen keyboard



Lesson 3

Recording Music in GarageBand

GarageBand '11 has evolved into a full-function musician's workshop powerful enough to record and mix a professional-sounding music demo, podcast, or video score, yet simple enough that anyone can use it right out of the box. In fact, you don't have to be a computer science major or audio engineer to record music. You don't even have to be a musician. If you can click a mouse, you can turn your Mac into a basic recording studio—it's really that easy.

This lesson will take you to a recording session where you'll add Real Instrument guitar tracks, and a Software Instrument percussion track to an existing song. To enhance the song, you'll also apply amp effects and stompboxes, adjust input settings, and change instrument sounds.



Recording Music Tracks in GarageBand

This lesson is designed to walk you step-by-step through a GarageBand recording session. In the next several exercises, you'll follow along with a pre-recorded session; however, you'll also be invited to play along or record your own tracks. If you don't have an instrument connected to the computer, you needn't worry. You will still be able to do everything except tune an instrument and record optional guitar parts.

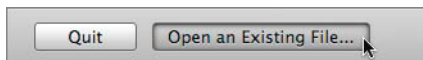
Opening a GarageBand Project

For this recording lesson, you will be working with a version of the Magic GarageBand Rock song that you explored in Lesson 2. Before you can begin, you'll need to open the **Magic Rock Song 01** project and save it to your projects folder.

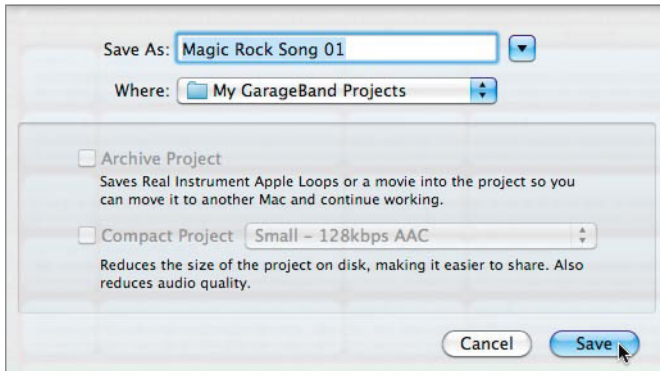
- 1 Open GarageBand, if necessary. Close the welcome screen if it is showing. The New Project dialog appears.



- 2 Choose File > Open, or click Open an Existing File.



- 3 In the Open dialog, choose Lesson 17 > **Magic Rock Song 01** (from the GarageBand folder you downloaded), then click Open.
- 4 Choose File > Save As, and save the project to your desktop in the My GarageBand Projects folder, and click Save.



NOTE ► If you did not create a My GarageBand Projects folder in the previous lesson, you can make one at this time. In the Save As dialog, select the desktop for the location, then click New Folder and name it *My GarageBand Projects*.

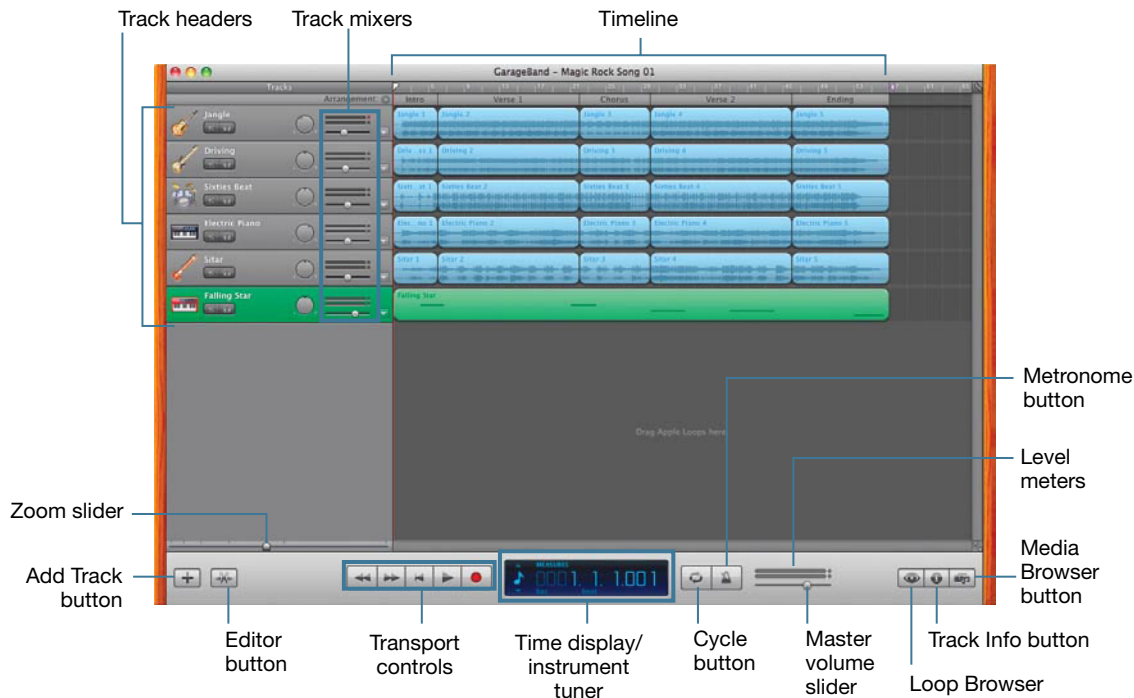
You saved a copy of the project that you can freely modify throughout the lesson, while retaining the original version in the Lessons folder.

Exploring the GarageBand Window

Among the many advantages of GarageBand is the simplicity of its interface. As with all the iLife applications, GarageBand uses one window as the base of operations. This window is your recording studio.

The elements of the GarageBand window are:

- **Track headers**—Show the instrument icon and name to the left of each instrument track. The track headers also include a Mute button to silence a track, a Solo button to silence all other tracks, a Record Enable button that allows you to record to a specific track, and a Lock button to protect the track and its contents from unintended changes.
- **Track Mixer**—Includes a Volume slider for adjusting the track volume and a Pan wheel to adjust the position of the track in the left-to-right stereo field.

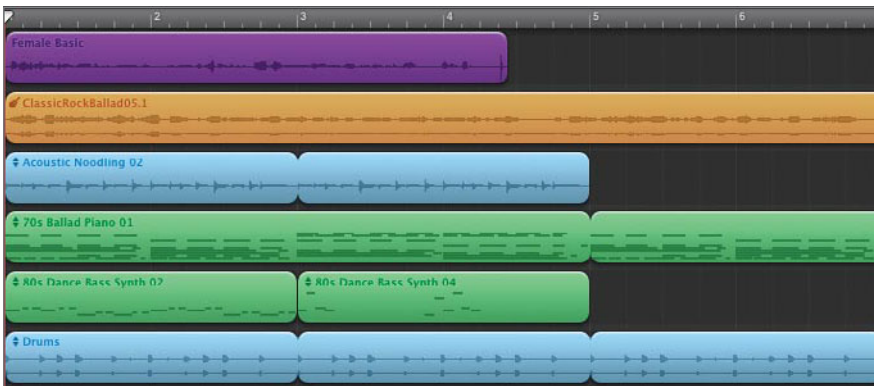


- ▶ **Timeline**—Acts as your music recording and arranging workspace. The Timeline consists of a horizontal track for each instrument. The Timeline graphically represents linear time from left to right using a Beat Ruler at the top of the window. The far-left edge of the Timeline represents the beginning of a song.
- ▶ **Zoom slider**—Zooms in to or out of the Timeline.
- ▶ **Add Track button**—Adds a new track in the Timeline.
- ▶ **Loop Browser button**—Opens the Loop Browser.
- ▶ **Editor button**—Opens the editor.
- ▶ **Transport controls**—Provide the standard recording and playback buttons to navigate in the Timeline—including Record, Go To Beginning, Rewind, Start/Stop Playback, and Fast Forward.
- ▶ **Cycle button**—Turns the cycle region on and off for looping playback.
- ▶ **Metronome button**—Turns the click track on and off.
- ▶ **LCD display**—Shows the song's properties, current playhead position in musical time (measures, beats, ticks), absolute time (hours, minutes, seconds, fractions), or the instrument tuner.

- **Master Volume slider**—Adjusts the output volume level of the project.
- **Level meters**—Indicate the output volume level of a project and include red warning lights if levels are too loud and distorting, or *clipping*.
- **Track Info button**—Opens the Track Info pane.
- **Media Browser button**—Opens the Media Browser.

Identifying Regions and Tracks

Regions and tracks come in a variety of sizes and colors (according to type):

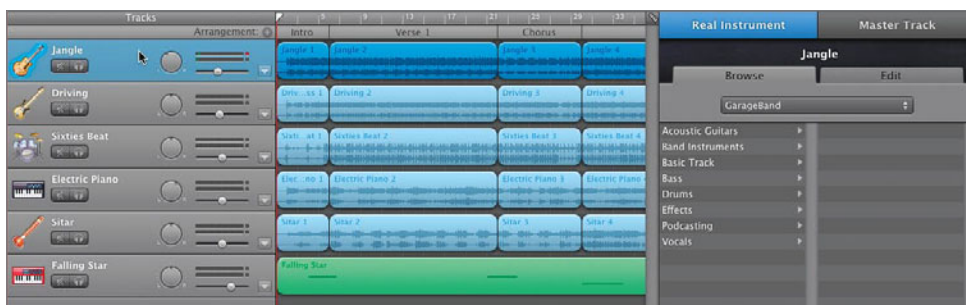


- **Real Instruments**—Appear as purple, blue, and orange regions. You can record Real Instrument parts into GarageBand using a microphone, or a guitar or keyboard that's plugged into the microphone jack on your Mac. You can also record Real Instrument parts through other input devices that you connect to your computer. Imported audio files appear as orange regions.
- **Software Instruments**—Appear as green regions and are recorded using a USB music keyboard, a MIDI synthesizer-type keyboard, the GarageBand onscreen keyboard, or using Musical Typing with the GarageBand software and your computer's keyboard as the MIDI instrument.

This song includes six tracks representing each of the instrument parts selected in the Magic GarageBand song in the previous lesson. Each track, in turn, contains individual musical parts, or regions, as performed by a particular instrument. An instrument track may contain only one region, or it may contain many smaller regions—individual takes and retakes, often called *overdubs*—which, when arranged in a track, are the basic building blocks of an entire instrument's part for a song

A track can include a Real Instrument or a Software Instrument and can be easily identified by the color of the track header when selected, or the regions within the track.

- 1 Click the Jangle track header, if it is not already selected, to see the color (type of instrument) assigned to that track. The blue track header indicates a Real Instrument track.
- 2 Double-click the Jangle track header, or press Command-I to show the Track Info pane on the right side of the window. The Track Info pane includes details about the selected track instrument and effects.

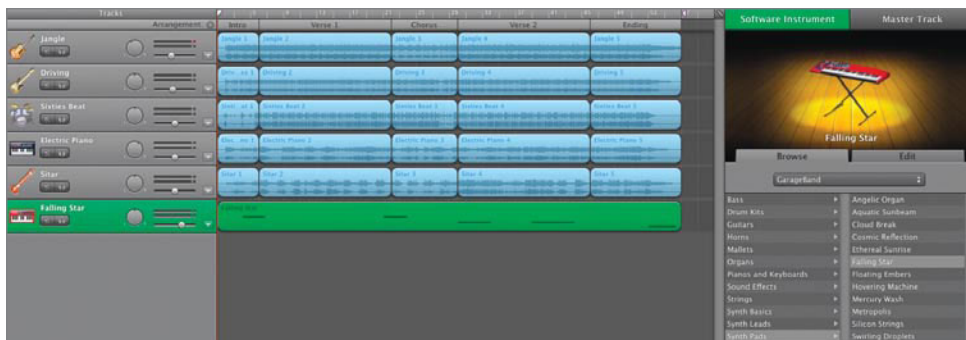


- 3 In the upper-left corner of the GarageBand window, click the green Zoom (+) so the application fills the entire Mac screen.



With the larger GarageBand window, you'll not only have more room to work, you'll also see a picture detail for each instrument at the top of the Track Info pane.

- 4 Click the Falling Star track header to see an example of a green Software Instrument track.



Notice that the Track Info pane shows a picture of the instrument and the type of instrument (Software Instrument), and lists the instrument category and specific instrument.

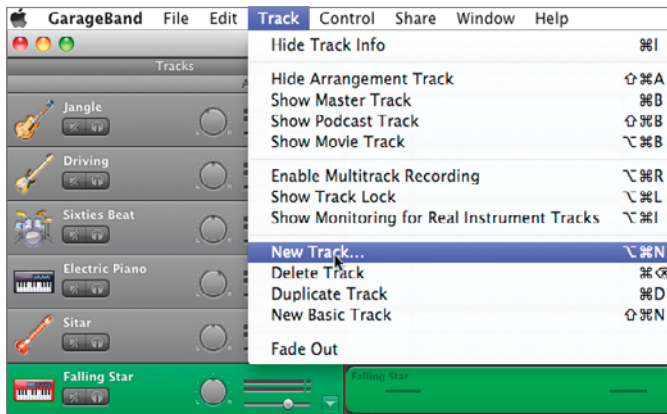
You'll work more with Software Instruments at the end of this lesson. For now, let's move on with the recording session.

Setting Up an Electric Guitar Track

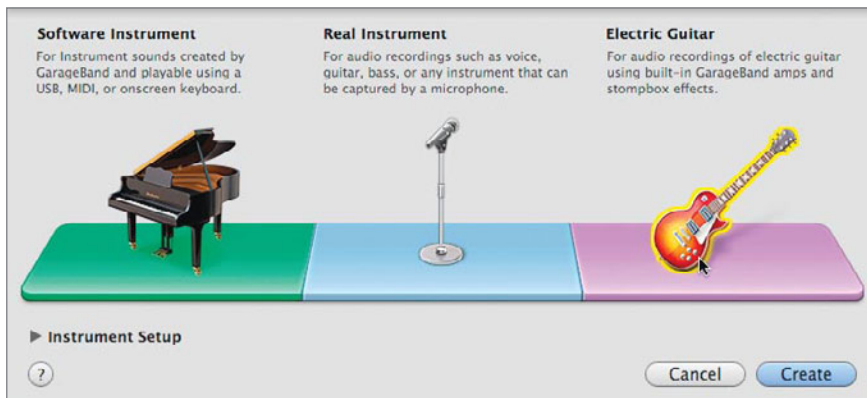
For the guitar tracks in this recording session, you'll be using what GarageBand calls Real Instruments. With GarageBand, you can record a real instrument—such as a guitar, bass, or keyboard—directly into the Timeline. You can also use a microphone to record acoustic instruments that don't have an output jack, such as a trumpet, violin, grand piano, drum kit, acoustic guitar, or even vocals.

To record a Real Instrument into the Timeline, you have to physically perform or play the part in real time. Let's set up an electric guitar track to record a strumming rhythm guitar part. The current project doesn't include an electric guitar track, so let's create one.

- 1 Choose **Track > New Track**, or click the New Track (+) button in the lower-left corner of the GarageBand project window.

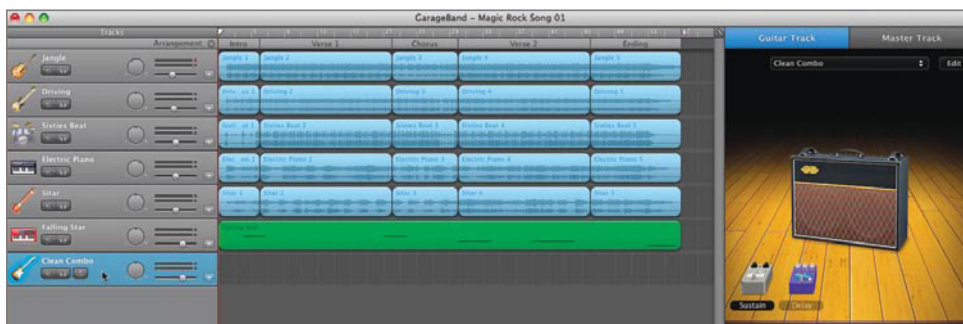


The New Track dialog appears with three track choices: Software Instrument, Real Instrument, and Electric Guitar. The Electric Guitar option is specifically designed for using built-in GarageBand amps and Stompbox effects.



NOTE ▶ The selected instrument glows yellow when highlighted in the New Track dialog. You can also click the Instrument Setup disclosure triangle in the lower-left corner of the dialog to change input settings for connecting your instrument to the computer.

- 2 In the New Track dialog, click Electric Guitar, and then click Create. A new Real Instrument electric guitar track named Clean Combo appears in the Timeline.



Notice that a tuner appears in the LCD display at the bottom of the window. The instrument tuner can tune any real instrument, even vocals, and is designed to work with one note at a time. It will not work with chords or combined notes.



In tune (blue)



Out of tune (red)

TIP It's a good idea to tune your guitar before recording any tracks. You can access the LCD tuner by selecting a guitar track header, then changing the LCD display to the tuner. You can also press Command-F to show the tuner in the LCD display. The tuner is a fabulous way to see which notes were played in a Real Instrument region so that you can follow along or improvise using the same notes.

- 3 On the right side of the window, click the amplifier to see the Amplifier controls.



These software controls work exactly like real amplifier controls, so if you play electric guitar you should feel right at home.

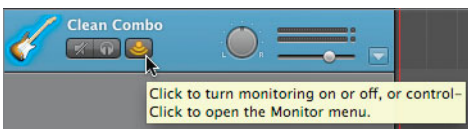
You can add additional effects before or after recording. In this case, you'll keep the recording "clean," without effects—and add effects later.

Monitoring Input

Monitoring is a musical term for being able to hear yourself play. Just as you would in a recording studio, you'll probably want to monitor your performance when you record a Real Instrument track in GarageBand. If the Monitor setting is turned off, you won't hear the sound of your instrument going to the computer.

Once any instrument part is recorded into the Timeline, you'll hear it on playback.

- 1 Select the Clean Combo track, if necessary, and click the Monitor button to turn on monitoring.



NOTE ► If you are working with a Mac with a built-in microphone configured as the current audio input device, you may hear static or yourself when the monitor button is turned on, which could cause feedback. Feel free to turn off the monitor button if necessary.

If GarageBand detects feedback, you'll see an alert dialog with the option to change the current setting. This alert is part of the built-in feedback protection that is the default whenever you monitor recordings.



- 2 Double-click the amplifier to turn it around and see the Input Source and Monitor pop-up menus.
- 3 From the Monitor pop-up menu, choose Off if you are not planning to record a guitar part at this time.



TIP ► You can Control-click (or right-click) the Monitor button in the track header to select a different monitor setting.

While you are looking at the monitor controls, take a moment to set your Input Source and Recording Level.



- 4 From the Input Source pop-up menu, choose Mono 1 if necessary. This should already be chosen as the default setting.
- 5 If you have an electric guitar connected to the computer, play a few notes and adjust the Recording Level slider as necessary.

NOTE ► If you don't hear your guitar, make sure the volume is turned up on your instrument, and that the input settings on your Mac Sound preferences are set for the correct input.

MORE INFO ► To learn more about connecting your guitar to your Mac, see “Connecting Instruments to the Mac” in Lesson 1.

Planning Before Recording

You have a few obvious yet essential things to consider before recording. First, make sure that the instruments or microphones you plan to use are connected and working properly. Second, be sure you have enough hard disk space for your recordings. Audio recordings use a fraction of the storage space of video, but they can accumulate over time, especially if you record many takes. The last thing you'd want to do is stop your recording session because you ran out of drive space.

Stereo audio recorded at CD quality (44.1 kHz) uses around 10 MB of disk space per minute. So in a three-minute song, 10 stereo tracks would require around 300 MB.

Recording a Single Take

Now that you've completed all of the instrument connections, monitor settings, and input settings, you're finally ready to record.

In this exercise, you'll walk through a single-take recording. A single-take recording begins on a selected track at the playhead position and continues until you stop recording.

This is an excellent recording method when you're practicing or just want to record a musical riff, melody, or idea so you don't forget it. Before you start, it's a good idea to set a Count In so that the metronome will click for one full bar (four clicks in this case) before the actual recording begins. In essence the count in gives you a "one-two-three-go" so that you don't have to start playing the instant you click Record.

If you don't have a guitar to play and record, feel free to jump ahead to step 9 to open a version of the song with the guitar part already recorded.

- 1 Choose Control > Count In to turn on the Count In feature. GarageBand will now count in the first bar (four beats in this song) before recording begins.



- 2 Click the Metronome button, or press Command-U to turn on the metronome click track while you record. Feel free to turn this on and off at will throughout this lesson.

NOTE ► The metronome's click track is a standard recording tool to help you play in time with the music. If you find the click track distracting, you can turn it off at any time and use the drum track as a rhythmic guide instead. The Songwriting template in the New Project dialog includes a drum track to use as a guide while you record your other tracks.

- 3 Select the Clean Combo track to make it active, if it is not already selected.
- 4 Click the ruler above the Timeline to move the playhead to the part of the song you'd like to record, or press Return to move the playhead to the beginning of the song.

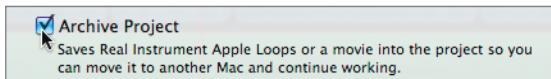
TIP ► The keyboard shortcut to start recording is the R key. Pressing this key is often easier than clicking the Record button, especially if you're holding a guitar or another instrument.

- 5 Press R, or click Record to record your musical riff. A red region appears in the track as it records.



- 6 When you're finished, press the Spacebar to stop recording. Play your recording from the beginning to hear how it sounds.
- 7 In the Clean Combo track header, click the Monitor button to turn it off.
- 8 If you recorded a guitar part, choose File > Save As. Select the Archive Project checkbox, then click Save.

NOTE ► Real Instrument recordings—such as your guitar recording will automatically be saved to the project file. The Archive Project checkbox is only needed when saving Real Instrument Apple Loops or a movie to the project.



Now let's open a project that has the guitar single-take part already recorded in the Timeline.

- 9 Choose File > Open, and open GarageBand > Lesson 17 > **Magic Rock Song 02**.

The project opens with a "Clean Single Take" guitar region on the lowest track of the Timeline. Notice that the name of the recorded region is the same as the track header.



- 10 Play Verse 1 from the beginning to listen to the Clean Single Take track in the song.

NOTE ► A new recording will always be assigned the name of the track in which it is recorded. You can change the name later in the Track Editor. In this case, I changed the name of the track to Clean Single Take before recording so that it would more obviously be seen as an example for this exercise. It's actually a supporting rhythm guitar part, and will be named accordingly later.

The guitar parts for this lesson were played by Brian O'Maille. This performance turned out great, and Brian had obviously practiced it prior to the session. However, it turns out that he had several variations that he wanted to try. Rather than try each of them as

single-take recordings on a different track, the logical choice was to create a multi-take recording.

You may also have noticed that this guitar recording is so “clean” (effects-free) that it is nearly inaudible against the other instrument parts. Before the next recording, let’s add some effects to the track.

Using Guitar Amps and Stompboxes

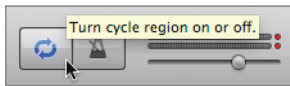
In this exercise, you’ll experiment with the GarageBand guitar amps and stompboxes to modify the sound of the Clean Single Take guitar track to bring it to life in the mix.

These guitar amps and stompboxes were designed to look and respond just like the real hardware, so musicians will immediately feel comfortable in their GarageBand recording studio. In fact, the guitarist, Brian, was so blown away by these effects that we had to stop and tweak the guitar effects before recording the multiple takes—and he did it with no previous GarageBand experience! Let’s apply those same adjustments to add sustain, delay, and distortion to the track.

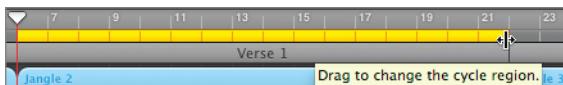
- 1 Open and save the project **Magic Rock Song 02**, if it is not already open.

Because the recorded part is only for the first verse, turn on the cycle region to loop playback for that section of the song.

- 2 Click the Cycle button, or press C to turn on the cycle region.

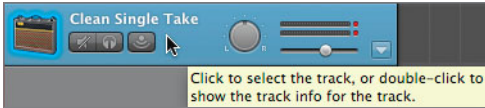


A yellow bar—the cycle region—appears below the beats and measures ruler at the top of the window. The yellow cycle region includes only the first verse (labeled Verse 1 on the arrangement track above the timeline).



NOTE ► Prior to saving, the cycle region for this exercise was resized to fit the Verse 1 section of the song. If the yellow cycle region in your project is a different length or in a different location, drag the left and right edges of the yellow region to the desired position.

- 3 Double-click the Clean Single Take track header to show the Track Info pane for that track.



- 4 In the Track Info pane, hover the pointer over the picture of the amplifier to see a description of that amplifier and hear its signature sound.

While you hover over an amplifier, you'll also see two arrow overlays on either side of the amp. You can click the arrows to change amplifiers. The best way to hear the differences in amplifiers is to compare them while the guitar track is playing. GarageBand '11 includes 12 amplifiers.



- 5 Play the song and click the arrows to the right or left of the amplifier to change amps during playback. Since the cycle region has been turned on, the song will automatically repeat as you sample the amplifiers.
- 6 Press S to solo the selected track and listen to only the sound of the lead guitar part while you audition the amplifiers. Press S again to unsolo the track once you've listened to all of the amplifiers.

- 7 Click the arrows until you return to the black Vintage Stack amplifier. It has a good tone for this type of song. You can feel free to choose a different amplifier later.



Let's raise the reverb sound of the amplifier to help the lead guitar stand out a bit more.

- 8 Click the amplifier to display its controls. The Reverb dial is in the center of the bottom row of dials.



- 9 Solo the Guitar track and start playback. Click the center of the Reverb dial, and then drag up to raise the level to around 7 or 8.

NOTE ► Dragging up or down on a control knob will raise or lower its level. Because all of the amps have the same controls, any adjustments you make to a control will be retained even if you change to a different amplifier. The amplifier settings will reset if you change instrument sounds using the menu at the top of the Track Info pane.

Great. The reverb is set. Now all that's left is to check the sustain level and turn on the delay. For that, you'll use the stompboxes.

- 10 Continue playback and click the Sustain stompbox.



Stompboxes are so named because they're placed on the floor within reach of the musicians, so that they can quite literally stomp on them to turn them on or off as needed. A light tap of the toe also works, but is much less dramatic on stage. In this example, the Sustain stompbox looks exactly like the real thing (dent included).

The button to stomp on or off is located near the bottom where it would be easy to reach with a foot in the real world, or a pointer in GarageBand. If a stompbox is turned off, the name will be dimmed on the stage, as with the Delay stompbox in this project.

NOTE ► The sustain is turned on by default for all of the guitar amplifiers. That's a good thing because in almost every musical scenario, instruments (and vocals) sound better with a little sustain or reverb.

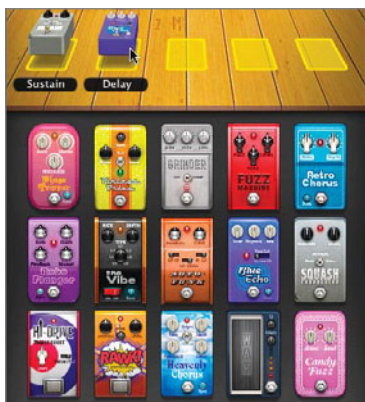
- 11** Click the On/Off switch for the Squash Compressor (sustain) stompbox to hear the track with and without the effect.

The red LED lights up when the stompbox is turned on. When you're finished comparing sounds, leave it turned on.

- 12** Click the Delay stompbox and turn it on. Then drag the Mix knob upward to about 35.50%. When you're finished, unsolo the track to hear the modified guitar sound in the track.



- 13** Double-click either stompbox on the stage below the amplifier to see all 15 stompboxes.



You can add stompboxes by dragging them up to the yellow spaces below the amplifier. To remove a stompbox, drag it from the floor.

- 14** Drag the Hi Drive distortion stompbox (the first stompbox on the bottom row) to the stage.



That guitar sound has come a long way since the original “clean” sound.

- 15** Stop playback.

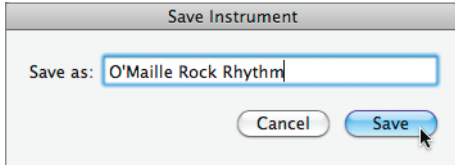
Saving Effects Settings

After you’ve adjusted the amplifier and stompbox effects to your liking, you can save those settings so that you’ll be able to use them again on another project.

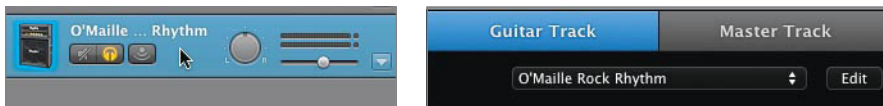
- 1** At the bottom of the Track Info pane, click the Save Setting button.



- 2 In the “Save as” field, type *O’Maille Rock Rhythm*, or your own last name plus “Rock Rhythm,” then click Save.



The track name changes to match the selected effect, and the saved effect appears in the Track Info effects menu.



NOTE ► If you do not see the saved preset name or the My Settings section in the Guitar Preset pop-up menu, click a Real Instrument track header (such as Jangle) and in the Track Info, set the Presets View pop-up menu to Show All. This will display all GarageBand and My Settings presets. The saved settings will now appear in the presets. You may need to save the effects settings again (as in step 2) to insure that they will appear in the list. If the My Settings section still doesn’t appear in the list, save and close the project. When you reopen the project, the My Settings should be visible.

TIP ► You can save as many customized effects as you’d like. You can also delete any of your custom settings if you no longer need them by clicking the Delete Setting button.

- 3 At the top at the Track Info pane, click the Guitar Preset pop-up menu to see a list of the available Electric Guitar sounds. GarageBand includes over 50 guitar effects presets.



- 4 Choose a sound from the list and listen to it during playback. The amplifier and stompboxes change automatically to match the preset.
- 5 Try as many different presets as you'd like. When you are finished experimenting, from the My Settings area at the top of the presets menu, choose O'Maille Rock Rhythm (or the name you saved) to restore the customized settings for this track.

Multiple Takes Recording

Multiple Takes recordings offer several advantages over single-take recordings. For one, you can record a part as many times as you'd like without stopping. This gives musicians an opportunity to try variations on their performances, as well as correcting any mistakes or missed notes. Another advantage is that you can choose your favorite take, or split the region and assemble a performance from sections of several takes.

Let's set up another track for a multiple-takes recording, then listen to the finished version.

To record multiple takes, you first need a cycle region for the duration you want to record. In this case, the cycle region has been created for you. Because this part of the song—Verse 1—is only 15 bars (measures) in length, the entire part can be recorded at once. It's easier to record full songs in separate sections—such as the intro, verse, and chorus separately—rather than try to record the entire song start to finish.

- 1 Press C to show the cycle region, if it is not already showing.

Next you'll want to create a guitar track for the multiple-takes recording. Rather than make a new track and adjust all of the settings, you can simply duplicate the existing track.

- 2 Select the O'Maille Rock Rhythm track, if it isn't already selected. Then choose Track > Duplicate, or press Command-D.



A duplicate O'Maille Rock Rhythm track appears below the original. Now all you have to do is change the name of the track and you're ready to record.

- 3 Click the name of the new track, and then type *Multiple Takes* in the field. When you're finished typing, click anywhere else on the track to close the field.



That's it. You're ready to record a multiple-takes guitar part. If you have a guitar handy and want to record along with this song, feel free to do so. If not, you can jump to step 6 to save this version of the project and open the next.

- 4 Make sure that the Multiple Takes track is selected, turn on the monitor button—if necessary for your setup—and click Record, or press R. Record three or four full takes of the song without interruption.

- 5 When you're finished, press the Spacebar to stop recording.

The purple multi-take region includes a yellow numbered Take menu in the upper-left corner that displays the current take number and allows you to switch between takes.

- 6 Save your project (with Archive Project if you recorded a track), then open the Lesson 17 > **Magic Rock Song 03** project to hear a finished recording.

The **Magic Rock Song 03** project includes the cycle region, the O'Maille Rock Rhythm track with the mute button active, and a multiple-takes recording in the lowest track of the Timeline.



The circled number in the upper-left corner of the region shows the current take number in the track. The number of takes that were recorded is added to the name of the region. In this case, it reads,“(4 takes)”. There were actually three full takes. The fourth take included only a few notes that Brian played after the third and final full take.

NOTE ► It's common to record an extra take at the end of a multi-takes recording because another take usually starts before you can stop recording. You can always disregard that mis-take (pun intended) when you select the best performance.

- 7 Play the song to hear the first take with the other tracks. Feel free to unmute the O'Maille Rock Rhythm track to hear both guitar tracks at the same time.

Notice that the region within O'Maille Rock Rhythm track is dimmed when the track is muted to indicate that it is not audible during playback.

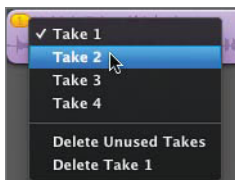
- 8 Stop playback when you have evaluated the first take in the multiple-takes track.

This performance of the guitar part sounds pretty good with the rest of the instruments.

Selecting and Splitting Takes

After you've recorded a multiple-takes region, you can use the Takes menu in the upper-left corner of the region to change to a different take. You can even split regions so that you can use the best portions of each recorded take to create the finished musical part.

- 1 In the upper-left corner of the Multiple Takes region, click the circled number (1) to see the Takes pop-up menu.



The Takes menu lists each take, plus an option to delete unused takes or delete the current take.

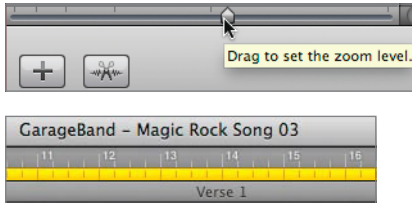
- 2 From the Takes menu, choose Take 2 and listen to it with the rest of the song. When you're finished, switch to Take 3 and listen to that performance. When you are finished, return to the region Take 2.

What if you like the beginning of one take and the end of another? In that case, you can split the take in a clean place and change the second region to the new desired take.

For this example, you will change the entire region to Take 2, and then split the region on the second beat of the 14th measure. The last step will be to change the new region to the third take.

TIP Before splitting a track, it's a good idea to zoom in on the Timeline so that you can move the playhead more precisely along the Timeline. Also, if you like using keyboard shortcuts to navigate, the more you zoom in, the finer increments of movement you can achieve when pressing the Left and Right Arrow keys.

- 3 Drag the Timeline Zoom slider near its middle to zoom in on the Timeline. When the Beats and Measures ruler shows each numbered measure, you are zoomed in enough for this exercise.



NOTE ► Because the project time signature is 4/4, you have four beats per measure. The tick marks on the ruler represent beats, and the first beat of each measure starts at the beginning of the numbered measure.

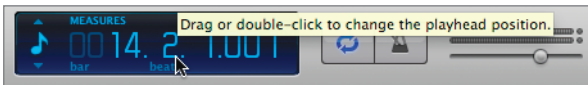
The LCD currently shows the Measures view. Your goal is to move the playhead to the second beat of the 14th measure (14.2.1.001 on the LCD).

- 4 Press Return to move the playhead to the beginning of the cycle region. Then press the Right Arrow key until the LCD shows 14.1.1.001.



NOTE ► If you zoomed in farther than the book example, and you are able to navigate through the beats as well as measures to 14.2.1.001, then you can skip the next step.

- 5 On the LCD, click the number 1 (just after the 14), representing beats, and drag upward to change it to 2.

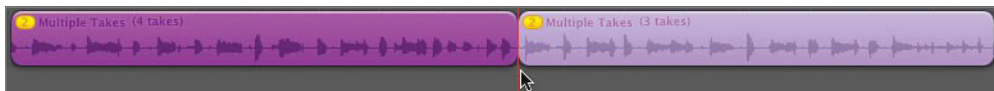


The playhead is now in a perfect position to split the track. In the visible waveform within the region, notice that the playhead is neatly placed between musical notes.

- 6 In the multiple-takes track, select the Multiple Takes region, if necessary.



- 7 Press Command-T, or choose Edit > Split to split the selected track at the playhead position.



- 8 Change the second region to Take 3 and save the project as *Magic Rock Song 04a* in the My GarageBand Projects folder.

NOTE ► The second part of the newly-split region includes only the three full takes. The fourth partial take was deleted automatically.

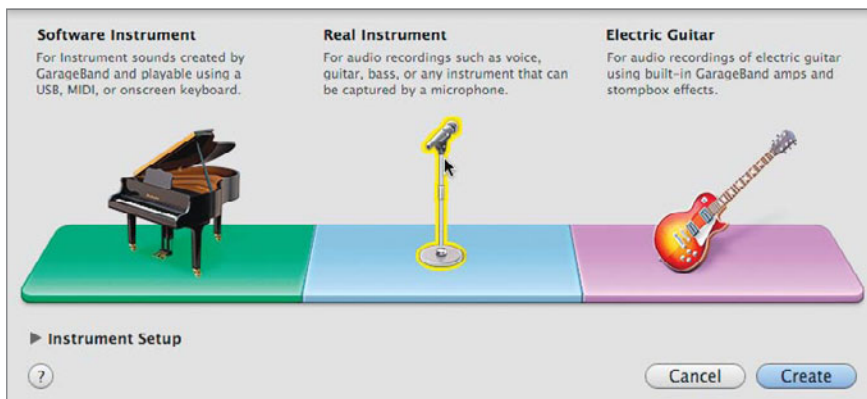
There you have it. Now you can split your multiple-takes regions so that you can use your favorite combination of performances within the same track.

Working with an Acoustic Guitar Track

The last guitar part to lay down is the acoustic guitar. In the GarageBand interface, recording an acoustic guitar is almost the same as recording an electric guitar. The difference is that acoustic guitars don't use amplifiers or stompboxes for effects, and the input and monitoring controls appear at the bottom of the Track Info pane.

Let's create an acoustic guitar track.

- 1 If you didn't complete all of the previous exercises in this lesson, open the project Lesson 17 > **Magic Rock Song 04** and save it to the My GarageBand projects folder.
- 2 Choose Track > New Track, or click the New Track button.

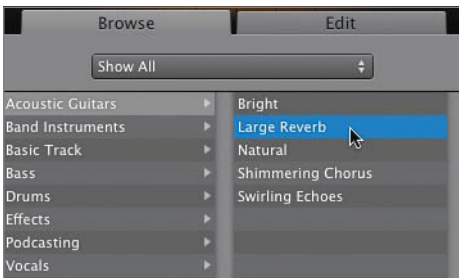


- 3 Double-click the picture of the microphone on the New Track dialog to create a Real Instrument track.



A new Real Instrument track named No Effects appears in the timeline. This track can be set up to record any type of real instrument that is recorded via a microphone connected to the Mac, including a Mac's built-in microphone. You can designate the type of instrumental sound that you will be recording on the Track Info pane.

- 4 Select the No Effects track, if necessary.
- 5 In the track Info pane, choose Acoustic Guitars. Choose Large Reverb from the Acoustic Guitars effects list.



The track header updates to match the name of the effects preset applied to that track. Rather than record an entirely new region with an acoustic guitar, let's duplicate the "Clean single take" region and place it in the acoustic track. Doubling two versions of the same part is a great way to *fatten* the sound of the part.

- 6 Select the O'Maille Rock Rhythm track, and press M to unmute the track.
- 7 Mute the multiple-takes track so that it does not compete with the duplicate rhythm tracks.
- 8 Option-drag the "Clean single take" region and drop the duplicate in the Large Reverb track, directly below the original region in the Multiple Takes track.

NOTE ► To Option-drag, hold down the Option key while dragging to duplicate a region.



NOTE ► Make sure that the duplicate region is precisely aligned with the region that you copied or you will hear an echo as they play slightly out of sync. For some songs, however, moving the doubled parts out of sync to create an echo effect is intentional. It just depends on the song and the part.

- 9 Solo the O'Maille Rock Rhythm and Large Reverb tracks to listen to them together without the other tracks. Start playback.

Feel free to unsolo the tracks (press S) at will to hear them playing with the remaining tracks. Listen to the song with the doubled guitar regions.

- 10 While the track is playing, try selecting various acoustic guitar effects in the Track Info pane.

NOTE ► Don't worry if the guitar parts seem loud in the mix. You'll adjust individual track levels and panning in the next lesson. For now, you can drag the volume level slider on each of the three new guitars to a comfortable level.



- 11 When you are finished experimenting with effects presets, stop playback and save your progress.

You created an acoustic guitar part without recording a new one. You could do the same thing in reverse and drag an acoustic guitar part into an electric guitar track to double the tracks and give the impression of two types of guitars playing the same part. Plus, you have the skills now to add stompbox and amp effects to the acoustic part if you like.

NOTE ► The Input Source, Monitor, and Recording Level controls for an acoustic guitar (Real Instrument) track are located at the bottom of the Track Info pane.

Recording a New Software Instrument Part

Now that the additional guitar tracks are recorded, it's time to lay down (add) one last track to this part, a cowbell. One thing about rock songs, there's almost always room for cowbell. Sure, you could add any kind of instrument track to the song, but a cowbell track will be a simple percussion enhancement to the music and you don't need to be a musician to try it.

In this exercise, you'll record a short cowbell part for the beginning of the first verse of the song.

You have three ways to play a Software Instrument in GarageBand:

- ▶ Connect a MIDI or USB MIDI keyboard to the computer and play the keys on a musical keyboard. (You can find instructions for connecting a keyboard in Lesson 1.)
- ▶ Use Musical Typing to turn your computer's keyboard into a musical instrument.
- ▶ Use the onscreen music keyboard in GarageBand to click the keyboard keys with your mouse.

Playing the Onscreen Music Keyboard

One option when playing music with GarageBand is to use the onscreen music keyboard to both play and record Software Instruments. First, create a new Software Instrument track that you'll use to record your part.

- 1 You can continue working with your project from the previous exercise, or open Lesson 17 > **Magic Rock Song 05**.

- 2 Choose Track > New Track, then from the New Track dialog, choose Software Instrument (Piano picture). Click Create.

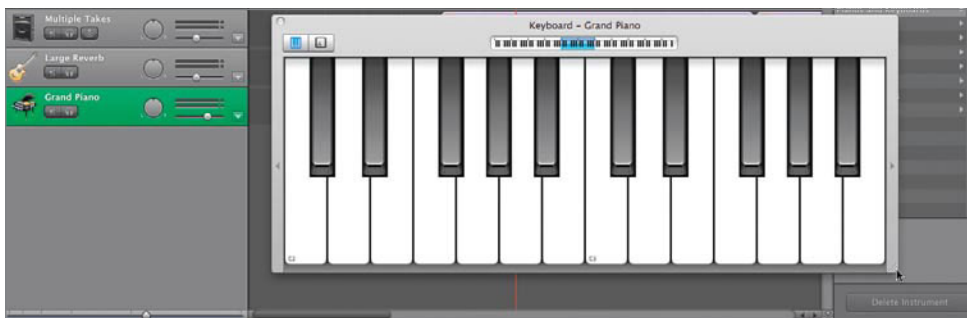
A new Grand Piano track appears below the other tracks in the Timeline. Grand Piano is the default Software Instrument; however, you can change it at any time to a different Software Instrument.

- 3 To show the onscreen music keyboard, choose Window > Keyboard. The onscreen music keyboard appears, ready for you to play the selected Grand Piano track.



NOTE ► The onscreen music keyboard works only for Software Instrument tracks.

- 4 Drag the lower-right corner of the keyboard down and to the right to resize it and create larger keys that are easier to click.



TIP ► The onscreen music keyboard is touch sensitive. Click the top of the keys near the top of the keyboard to play with a lighter velocity and get a quieter sound. Click the bottom of the keys near the bottom of the keyboard to play with a harder velocity and get a louder sound. You can always change the velocities (volume levels) of Software Instrument notes in the editor after they've been recorded.

- 5 Play the onscreen keyboard by clicking the notes on the keyboard.

Although you can play music this way, it's not the easiest way to create a complex music arrangement. However, it will work perfectly for this cowbell performance.

Let's change the track instrument to a percussion sound that works better for this project.

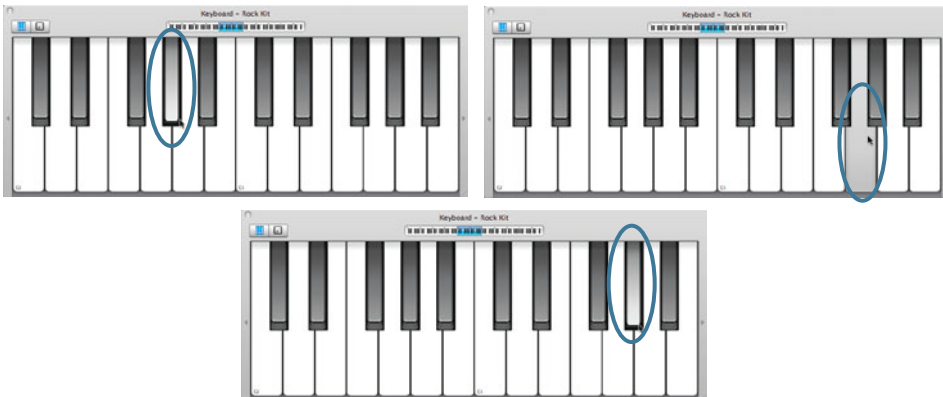
- 6 In the Track Info pane, choose Drum Kits as the instrument category (left column) and choose Rock Kit as the instrument.



- 7 Click a few notes to hear the percussion instruments assigned to each note.

NOTE ► Standard MIDI keyboards have numbered octaves to keep track of key assignments for MIDI events. Each octave includes 12 notes represented by white and black keys. The lowest octave available on the onscreen keyboard is -2 (two octaves lower than the 0 octave on standard MIDI keyboards). The GarageBand onscreen keyboard includes a label on every C key with its corresponding octave number. You can drag the blue region on the mini-keyboard at the top of the onscreen keyboard window to change the visible octaves showing onscreen.

There are actually three cowbell sounds from which to choose. G#2, G3, and G#3.



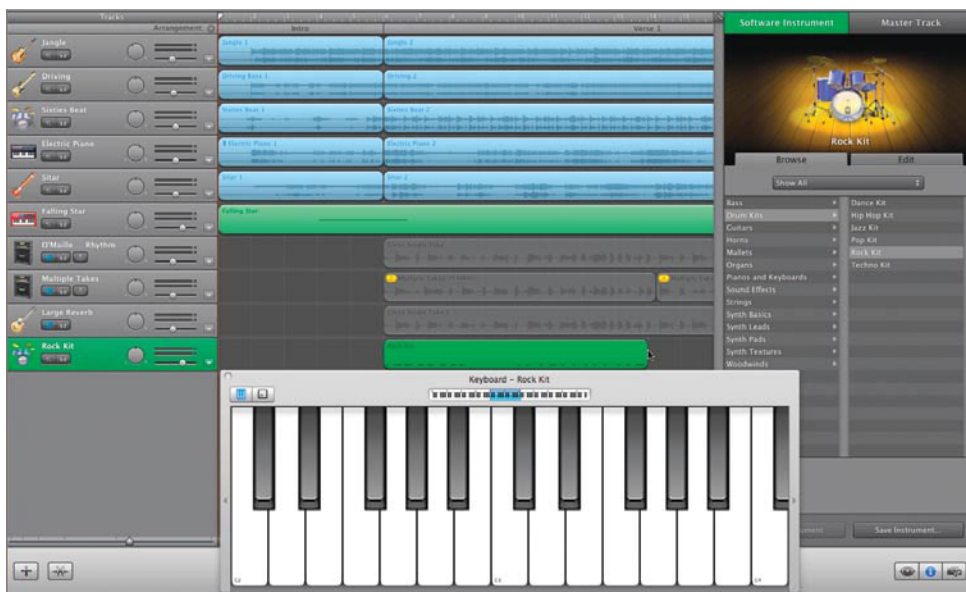
G#2 G3 G#3

- 8 Practice clicking each of the notes (G#2, G3, and G#3) to play its corresponding cowbell sound. Try again while the song is playing.

- 9 Press C to turn off the cycle region. Press Return to move the playhead to the beginning of the song. Mute the three guitar tracks at the bottom of the Timeline so that it will be easier to hear your cowbell part as you play along.

The part that you'll record will be incredibly simple. As you listen to the song, click one of the keys on the keyboard that triggers the cowbell in time with the music. Keep in mind, less is more. Feel free to record a percussion sound, other than the cowbell if you prefer. If you aren't sure when to play, try starting at the beginning of the first verse.

- 10 Press R to start recording, and play a simple part. When you're finished, press the Spacebar to stop recording.



- 11 Play your recording. If you're happy, continue to the next step. If not, press Command-Z to Undo and try again.
- 12 Press Command-S to save your project.

Nice work. You've completed the recording lesson. Whatever you played will sound fine in this composition.

Lesson Review

1. Where is the tuner located in GarageBand?
2. Identify the two most common ways to keep musical time as you record a part in GarageBand.
3. When can you change the sound of a guitar track?
4. What types of effects are unique to Real Instrument electric guitar tracks in GarageBand?
5. Where do you change the instrument for a track?

Answers

1. The tuner is located in the LCD at the bottom of the GarageBand window.
2. Turn on the Metronome or use a drum track to help you keep musical time as you record.
3. You can change a guitar track's sound before or after recording.
4. GarageBand includes amps and stompbox effects that can be used with electric guitar Real Instrument tracks.
5. You can change a track's instrument in the Track Info pane.

4

Lesson Files

GarageBand > Lesson18 > 01 Fix Timing, 02 Trim and Loop, 03 Groove Track, 04 Flex Time, 05 Name and Icon, 06 Notation Scales, 07 Tempo Scales, 08 Apple Loops, 09 Double Track

Time

This lesson takes approximately 90 minutes to complete. This includes a few extra minutes to download additional Apple Loops, Software Instruments, and effects.

Goals

Fix timing in a Software Instrument region

Edit notes in a Software Instrument region

Fix timing in a Real Instrument region

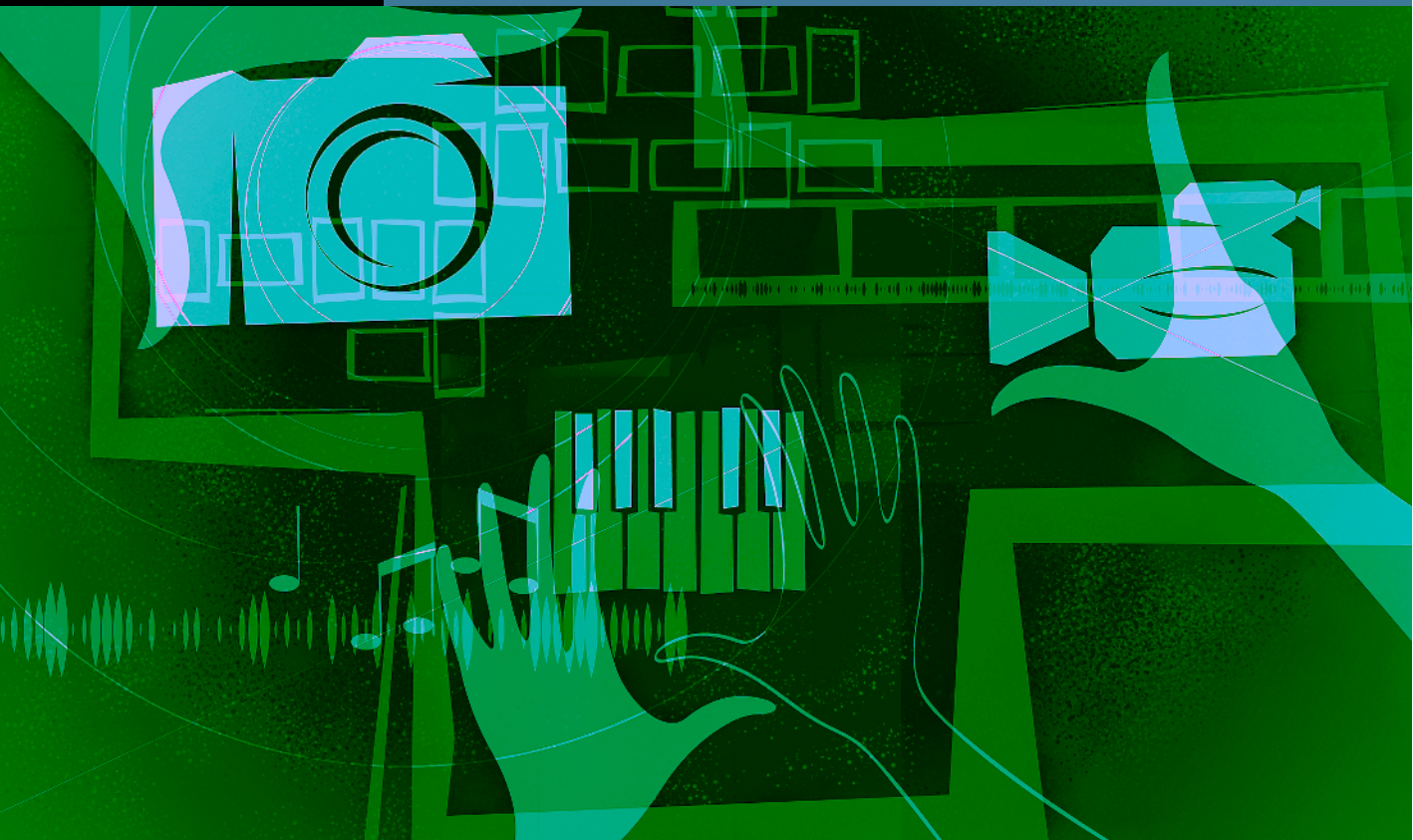
Explore Groove Matching and Flex Time

Change project tempo

Work with Apple Loops

Pan tracks

Transpose regions



Lesson 4

Fixing, Arranging, and Mixing Music in GarageBand

Anyone can make great-sounding music with GarageBand '11. Really! GarageBand '11 is packed with powerful performance-enhancing features that can help you effortlessly fix timing issues and improve your recordings.

This lesson is an in-depth tour that walks you through fixing, arranging, and mixing techniques as they are applied to three songs. Along the way, you'll get hands-on experience fixing songs, tracks, and even individual notes. Your eyes—and ears—will witness miraculous transformations of clunky performances into tracks that perfectly fit a groove. You'll explore the editor for refined changes in both Software Instrument and Real Instrument recordings. You'll also take a trip to the Loop Browser to explore Apple Loops.



Recognizing Timing Issues

In the next section, you will fix the timing of the Cowbell recording from the previous lesson. However, first it is a good idea to listen to the region in question, and evaluate it against the click track and drums to identify the timing issues. Being able to hear and locate the cause of problem performances is the first step toward fixing them and making them sound great.

In this exercise, you'll open a version of the Magic Rock song that you worked on in the previous lesson and listen to the timing of the notes—or the lack of timing in this case.

- 1 From the Lesson 18 folder, open the project **01 Fix Timing** and save it to your My GarageBand Projects folder. If asked to save with iLife preview, click No.

NOTE ► If you did not create a My GarageBand Projects folder earlier, you can make one now. In the Save As dialog, select the desktop for the location, then click New Folder and name it *My GarageBand Projects*.

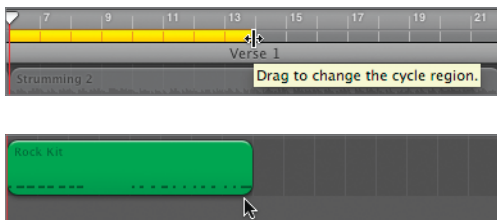
This variation of the Magic Rock song includes five blue Real Instrument tracks, and a green Software Instrument Cowbell track similar to the one that you recorded in the previous lesson.



- 2 Play the song from the beginning and listen to the Rock Kit region in the Cowbell track. Stop playback after you've heard the cowbell part.

You probably noticed that the volume level of the cowbell seemed a little loud, and the notes seemed out of sync with the drums and other rhythm instruments. The volume level was raised intentionally to make it easier to hear for this exercise. The poor performance? Well, that was just what it sounds like.

- 3 Press C to show the cycle region above the first verse.
- 4 Drag the right side of the yellow cycle region to the 14th measure so that it matches the length of the green Rock Kit region in the Cowbell track.



- 5 Press S, or click the Solo button on the Cowbell track to solo the track. Start playback.



It's hard to tell how bad the timing is when it plays by itself. Let's hear it with the click track and drums.

- 6 Click the Metronome button, or press Command-U to turn on the click track.
Yikes, the tracks aren't even close.
- 7 Solo the Sixties Beat track (drums) to hear it along with the click and cowbell. Stop playback, and press Return to move the playhead to the beginning of the cycle region.

Okay, that's just embarrassing. It's time to quantize this region and fix the performance timing.

Quantizing a Software Instrument Region

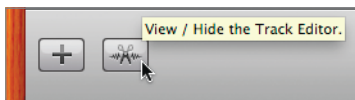
Though *quantize* sounds like a term you might hear in a science fiction movie, it actually means to divide something into tiny increments according to the rules of quantum

mechanics, or in this case, according to fractions of a beat in musical time. Fortunately, when quantizing music, GarageBand calculates the math for you as the application analyzes and fixes the timing of MIDI note events. Sound complicated? It's not. In fact, GarageBand '11 makes it so easy that you can fix an entire Software Instrument region with a single click.

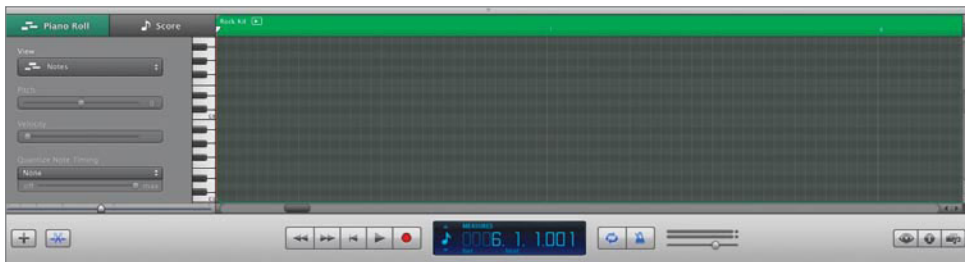
Now that you've listened to and winced at the dreadful cowbell performance, it's time to unclench your teeth and quantize (fix) the note timing so that this part plays "in time" with the rest of the song.

To do that, you'll need to open the editor.

- 1 Click the View Editor button, or in the Timeline, double-click the Rock Kit region.



The editor opens at the bottom of the GarageBand window.

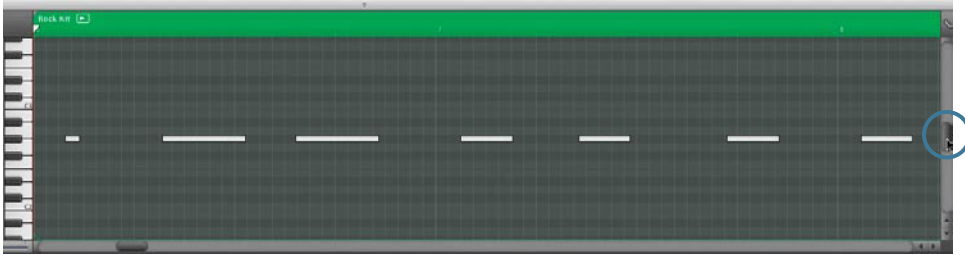


The editor can show a Software Instrument region in Piano Roll or Score (notation) view. For this exercise, you'll work in Piano Roll view.

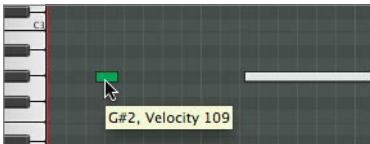
If you don't see any notes (dashes), that is because the current view shows a different octave range than the recorded notes in this region.

NOTE ► MIDI note events appear as dashes on a grid in the Piano Roll view. Each horizontal line of the grid represents a white or black note on the corresponding keyboard. In this example the notes are all G#2.

- 2 On the right side of the editor, drag the vertical scroll bar until notes appear in the editor.



- 3 Click and hold down the mouse button over the first note (dash) to hear it and to display a tooltip with the specific note and octave.



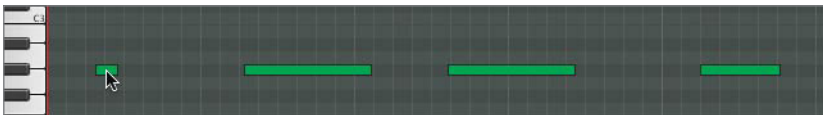
At the top of the editor, notice the numbered measures and the tick marks that indicate the increments of musical time. This song is in 4/4 meter, or 4 beats per measure with 8 tick marks per beat and 32 marks per measure.

- 4 Look at the grid in the editor to see if any of the dashes (notes) actually start on a grid line. A few do, but most aren't even close.

These are clearly out of time (visually and audibly). Notes don't have to start on a beat, but they should at least line up with the fractions of a beat.

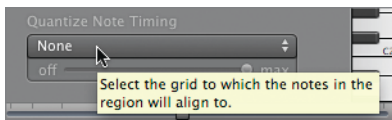
You could manually fix each dash, which would be tedious, or simply quantize the note timing. For this exercise you'll take the easy, quantize route.

- 5 In the Timeline, select the Rock Kit region if it is not already selected.
- 6 Click any note to select it. Press Command-A, or choose Edit > Select All.

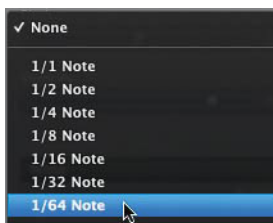


All of the notes in the region appear green to indicate that they have been selected.

- 7 Near the bottom of the editor controls, locate the Quantize Note Timing pop-up menu. The current setting is None.



- 8 From the Quantize Note Timing pop-up menu, choose “1/64 Note.”



The beginning of each selected note moves to the nearest gridline or exactly between gridlines (because the current zoom level shows tick marks at 1/32).



Before quantizing



After quantizing

Let's change the zoom level in the editor and increase the grid to an even higher level.

- 9 Drag the editor Zoom slider slightly toward the right until you see a grid line at the beginning of each note.



As you can see, the notes were indeed quantized to 1/64 of a measure.

TIP ➤ Quantizing notes to smaller fractions of a beat such as 1/32 or 1/64 will move them the least and keep them close to their original performance positions. Quantizing to larger fractions of a beat such as 1/1 (a full measure) to 1/4 (a single beat in 4/4) moves notes farther apart to reach the nearest measure or beat mark. In most cases, quantizing to these large increments will make your performance sound completely different from the original performance. If you accidentally quantize your notes too far, simply press Command-Z to undo and try again at a higher fractional number.

- 10** To hide the editor, press Command-E, or click the View/Hide Editor button (scissors), or double-click the Rock Kit region in the Timeline.
- 11** Play the region to hear it with the drums and/or click track. Unsolo the Cowbell and Sixties Beat tracks to hear the cowbell played with the other tracks. When you are finished, stop playback.

Much better. The cowbell works. In fact, what this song needs now is more cowbell!

TIP ➤ In the editor, you can change the velocity (how hard/fast a note is played) of Software Instrument notes by selecting them and dragging the velocity slider right to make them louder, and left to make them quieter.

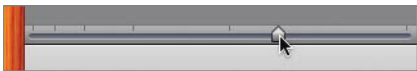
Trimming and Looping a Region

Now that the cowbell is in time with the music, it can be trimmed and looped (repeated) for the entire verse. The trick to trimming a region to turn it into a loop is to make sure that it starts and ends precisely on a measure, or a beat within a measure. Otherwise, as you loop it over and over, it will fall out of time with the other parts.

This entire process can be done in the Timeline. First, you'll need to zoom into the Timeline for a more detailed view of both the region and the Beats and Measures ruler.

- 1** If you did not complete the previous exercises, open the project **02 Trim and Loop** and save it to your folder on the desktop.

- 2 Drag the Timeline Zoom slider toward the right until you see three tick marks for each numbered measure in the Beats and Measures ruler.



For this exercise, your goal is to make this region two beats in length. To do so, you will need to trim the right edge of the region.

- 3 Move the playhead to the beginning of the eighth measure in the Timeline. The playhead will be your guide for trimming the end of the region.



- 4 Hover the pointer over the upper-right corner of the Rock Kit (the cowbell region in the Timeline.) Then watch the pointer as you move it down to the lower-right corner of the region.



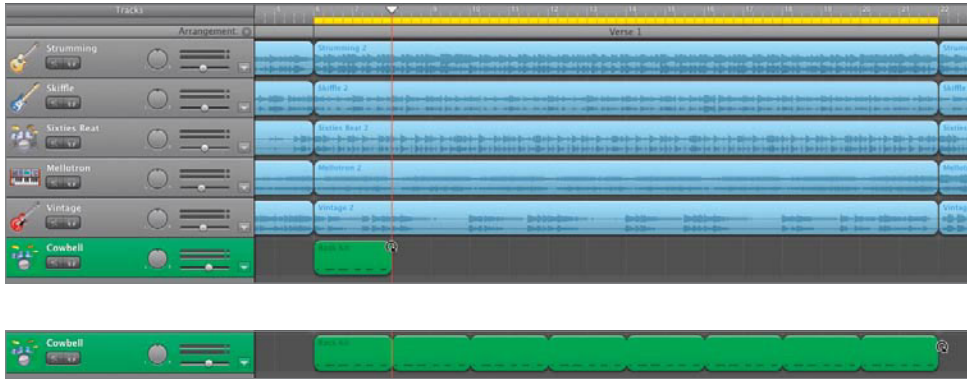
The pointer changes from a Loop tool (circular arrow) to a Resize/Trim tool (left-right pointing arrows).

- 5 Drag the lower-right corner of the region to the playhead position (at the beginning of the eighth measure).



The Rock Kit (cowbell) region is now exactly two measures (eight beats) in length.

- 6 Drag the Timeline Zoom slider toward the left until you can see the entire Verse 1 (ends at 22.1.1001).
- 7 Drag the upper-right corner of the Rock Kit region to the beginning of the 22nd measure (22.1.1001). The entire region should loop (repeat) eight times.



- 8 Play the cycle region to hear the loop throughout Verse 1.
- 9 Solo the Cowbell and Sixties Beat tracks to hear them together for the entire verse. Stop playback and save your progress.

Does it sound like the Cowbell loop isn't working well with the song anymore toward the middle and end of the verse? How can that be?

Quantizing fixed the original region, but it didn't take into account the *groove*, or *feel*, of the song. As it is, the cowbell has a predictable rhythm, as if precisely performed by a computer. The other musical parts were performed by actual musicians and have a looser rhythmic feel that the loop doesn't have or fit—yet.

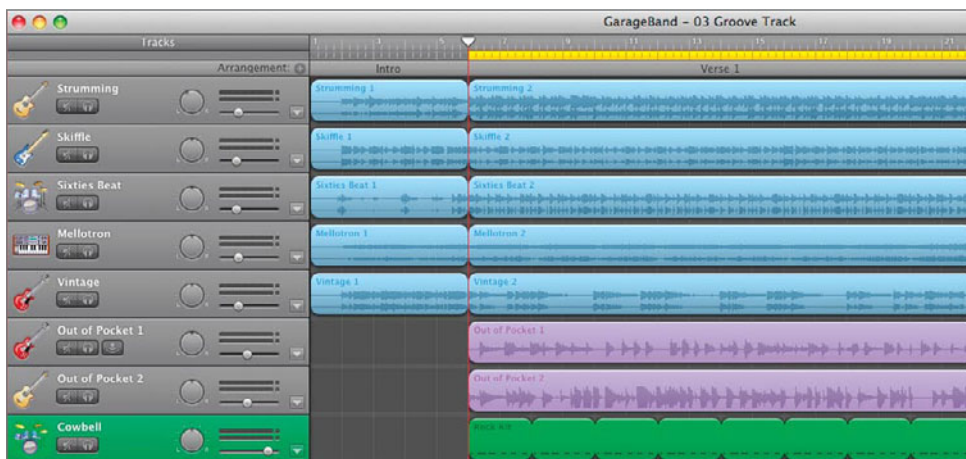
Working with Groove Matching

Prepare yourself for a very cool exercise. This feature goes way beyond what you might expect from GarageBand. Truth is, the powerful Flex-Time analysis used to make Groove Matching possible came from Logic Studio, Apple's professional music recording software. The good news for GarageBand '11 users is that all of the work is done for you.

What is Groove Matching? Well, it's a more advanced form of quantizing the music that considers the groove (meter, pacing, and feel) of a selected Groove Track and matches the other tracks to it. Best of all, it works with both Software Instrument and Real Instrument recordings. In this exercise, you'll fix the Cowbell track and two guitar tracks that might otherwise be unusable.

- 1 Open the project **03 Groove Track**, and save it to the My GarageBand Projects folder.

The project that you were working on in the previous exercise opens, with the addition of two guitar tracks, Out of Pocket 1 and 2. Also, the volume levels of the original Magic Rock Song tracks have been reduced to make it easier to hear the new tracks.



- 2 Play the cycle region (Verse 1) to hear the Cowbell track along with the two Out of Pocket guitar tracks.

NOTE ► “Out of Pocket,” “Out of the Pocket,” or “Not in the Pocket” are polite ways for a musician or music producer to say that a track or performance does not quite fit the groove of the song. In this case, the tracks are so far out of whack they sound like an acoustic train wreck.

In the old days, you might as well have rubbed a lamp and hoped for a genie to salvage those guitar tracks. Otherwise, you had no choice but to re-record them. Fortunately, the new Groove Tracks in GarageBand can perform its own magic—without the genie.

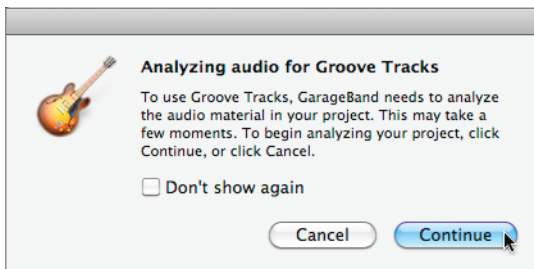
Before you turn on Groove Tracks, it’s a good idea to decide which track best represents the feel of your song. Drum tracks are usually a safe bet, but you might also choose the track that could stand alone. Do you have a track that a vocalist could sing along to “unplugged?” In that case, the rhythm guitar or a lead piano part would work. For this song, the Strumming guitar track includes all of the chord changes and rhythm of the song. If the Cowbell and Out of Pocket tracks followed the Strumming guitar track’s lead, they just might work.

- 3 Move the pointer over the left edge of the Strumming track header.



An open star overlay appears. Clicking the star turns on Groove Tracks and makes that track the “star” from which the groove will be applied to other tracks.

- 4 Click the star on the Strumming track. Then in the dialog, click Continue to analyze the audio for Groove Tracks.



You now see a gold star in front of the Strumming track, and selected checkboxes next to all of the other tracks to indicate they will be matching the groove of the Strumming track.



NOTE ► You can deselect the checkbox in front of any track to play it without applying Groove Matching. This may be necessary for vocal performances, or instrument parts such as chimes, that are intended to come in at a very specific time regardless of the rhythm tracks.

- 5 Play the cycle region again to hear the tracks with Groove Tracks applied. While the cycle region plays, solo the Strumming, Out of Pocket, and Cowbell tracks to hear how they sound together. Feel free to lower the volume levels on the bottom three tracks to better match the level of the Strumming track.
- 6 Continue playback. Select and deselect the Groove Tracks checkboxes to compare the before-and-after results. When you are finished, make sure that all of the tracks are selected and unsoloed. Save your progress.

Can you hear the difference? Sure, the guitar recordings aren't perfect, but they have certainly been improved and finally work with the other tracks in the song. The tracks now sound like musicians jamming together and having a good time.

TIP You can drag the gold star from one track to another to reassign the Groove Track.

Exploring Flex Time in the Editor

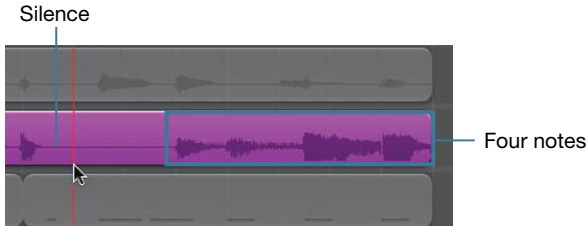
Quantizing and Groove Tracks work wonders on entire tracks or regions of tracks. However, occasionally you may have individual notes that need manual tweaking. For a Software Instrument region, that's easily done with the editor, but how do you manipulate notes in a Real Instrument recording? Once again, the answer lies in the editor. GarageBand '11 includes Flex Time technology that analyzes every note, including Real Instrument waveforms. Seeing (or hearing) is believing, so let's venture to the editor to adjust the timing of a note near the end of the Out of Pocket 2 region.

- 1 Continue working with the current project, or feel free to open the project **04 Flex Time**, and save it to the My GarageBand Projects folder.
- 2 Press C to turn off the cycle region, if necessary. Then solo the Out of Pocket 2 track.



- 3 Drag the Timeline Zoom slider toward the right until you can clearly see three tick marks between each of the numbered measures in the Beats and Measures ruler.

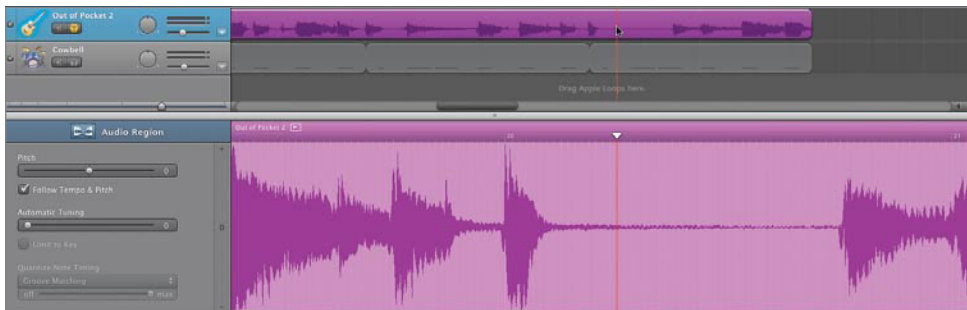
- 4 Move the playhead to the second beat (the first tick mark) of the 20th measure (20.2.1.001 in the LCD).



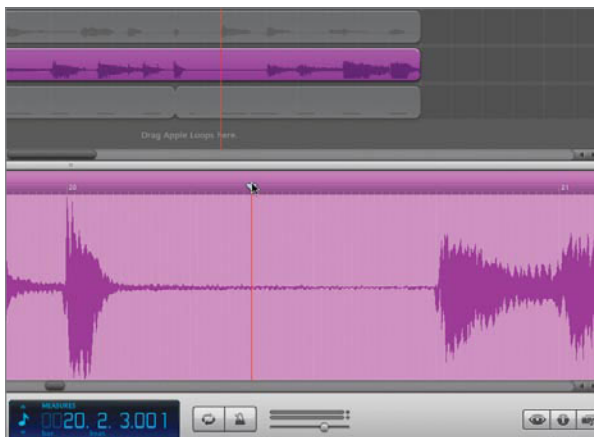
If you look at the audio waveform inside the Out of Pocket 2 track, the playhead should now be over an area with a flat line. A flat line in an audio waveform indicates that no sound is played at that point. Notice the four bumps in the waveform following the flat line that represent four individual notes.

Let's refer to those four notes as the four notes at the end of the region. Your goal is to move the beginning of the first note so that it starts earlier and in time with the notes in the neighboring tracks.

- 5 Double-click the Out of Pocket 2 region at the playhead to show it in the editor. Unlike the dashes in the Software Instrument editor, the Real Instrument editor shows the audio waveform of the recorded region.



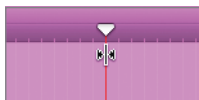
- 6 In the editor, drag the head (triangle top) of the playhead toward the right until the LCD reads 20.2.3.001.



If you look at the playhead in the Timeline, you'll see that this position is precisely when a note also begins on four of the other tracks, including the Out of Pocket 1 and Cowbell tracks.

NOTE ► Be careful where you drag in the Real Instrument editor. Clicking or dragging the waveform can select, move, or change Flex Time depending where you click. For now, just drag the head of the playhead. If you accidentally move or change something, press Command-Z to undo the error.

- 7 In the editor, move the pointer to the red part of the playhead until the pointer changes to a Flex pointer. (The Flex pointer looks like two arrows pointing inward toward the playhead, indicating that exact position.)



- 8 Click the Flex pointer at the playhead position to add a Flex marker.

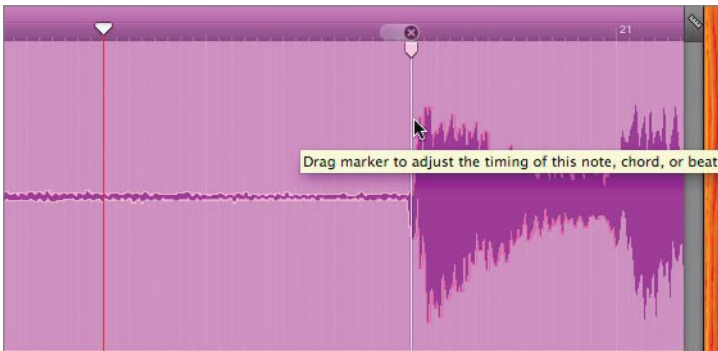


Flex markers can be moved to manipulate music or to act as barriers so that changes don't ripple down the line and affect earlier notes by mistake. Setting this initial

marker means that as you drag the next note (by means of a Flex marker) the change will affect only the music between the Flex markers.

NOTE ► The Flex marker that you created will be visible only when you hover the Flex pointer over it. Also, the Flex pointer is only available in the top half of the Real Instrument editor. The lower half of the editor changes the pointer to a Crop pointer (crosshairs) for selecting portions of a region to copy or delete.

- 9 Move the Flex pointer to the beginning of the first note (just where the waveform grows significantly). Make sure that the pointer is in the upper half of the editor with the Flex pointer showing. Click to add a Flex marker at the beginning of the note.
- 10 Drag the second Flex marker (at the beginning of the note) to the playhead position marker.



The note stretches until it starts at the first marker.



NOTE ► Stretching or moving a note using Flex editing does not change the note's pitch. The more you work with Flex Time editing, the easier it will be to use. Feel free to experiment with these tracks after the lesson. Also, to undo a Flex edit, click the (x) at the top of the Flex marker.

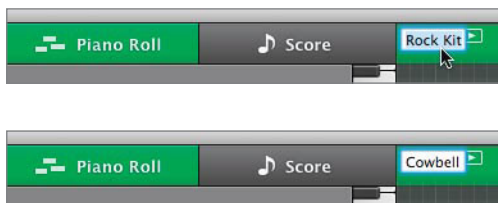
- 11** Press Command-E to close the editor, and play the end of the soloed track to hear the fixed note. When you are finished, unsolo the track, and save your progress.

Voila! Not only did you just complete a bit of musical magic, but you also have a basic understanding of how to use Flex Time to fix individual notes in the Real Instrument editor.

Naming Regions and Changing Track Icons

You'll perform two last housekeeping details for the Rock Kit (cowbell) region and Cowbell track before closing this project. First, let's change the name of the region to Cowbell. Second, you will change the icon for the Cowbell track to look like a cowbell. Though these changes don't affect the sound of the music, you'll find them helpful in organizing your projects.

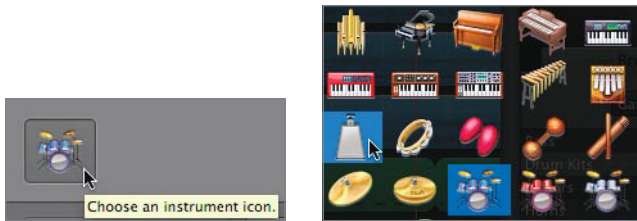
- 1** If you didn't complete the previous exercises, open the project **05 Name and Icon**.
- 2** In the Cowbell track, double-click the Rock Kit region to open it in the Software Instrument editor.
- 3** Double-click the name of the region (Rock Kit) at the top of the editor to access the Name field. Type *Cowbell* in the Name field, and press Enter.



The region name changes to Cowbell in the Timeline.

- 4** Hide the editor.
- 5** Double-click the Cowbell track header to show the Track Info pane for that track.

- 6 At the bottom of the Track Info pane, from the Track Icon menu (Drums icon), choose the Cowbell.



The Cowbell track icon now matches the track instrument, and the region within the track.



- 7 Press Command-I to hide the Track Info pane. Press C to hide the cycle region (if it is still showing). Save and close the project.

Project Practice

Now it's your turn to quantize and edit the cowbell recording that you performed in the previous lesson. Open the project **Magic Rock Song 05** (or whatever name you gave it at the end of Lesson 2). Quantize, trim, and loop your cowbell recording so that it repeats (in time) for the entire Verse 1. If you wish, try using the Groove Tracks to further enhance your cowbell region. When you are finished, change the name of the region in the editor, and change the track icon in the Track Info pane. Don't forget to save your finished project.

Working with Musical Notation

Traditionally, musicians rely on sheet music for writing and playing music. Whether you read musical notation or you are just learning, GarageBand includes a musical notation view for all of your Software Instrument tracks—and you can print them too!

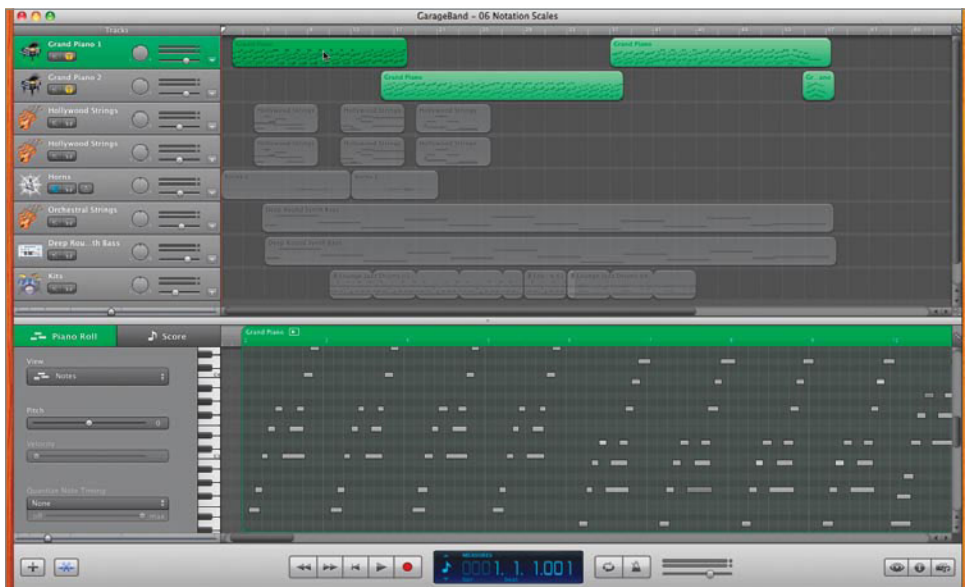
In this exercise, you'll open a routine scales exercise that was partially orchestrated to demonstrate the simplicity of the orchestration process in GarageBand. Nearly every

music student has at one time or another (perhaps daily) had to practice fingering by playing major scales (regardless of the instrument). Let's open the project and use the Score (musical notation) view in the editor to find and fix a missed note.

- 1 Open the project **06 Notation Scales** and save it to the My GarageBand Projects folder on your desktop. Keep the first two tracks soloed for now. You'll listen to them and the rest of the tracks shortly.

The scales project opens with two soloed Grand Piano tracks. The remaining tracks have been temporarily muted for the beginning of this exercise. The overall project includes seven Software Instrument tracks, and one Real Instrument Horns track. The Kits track comprises Apple Loops from the GarageBand Loops library. The other tracks were recorded.

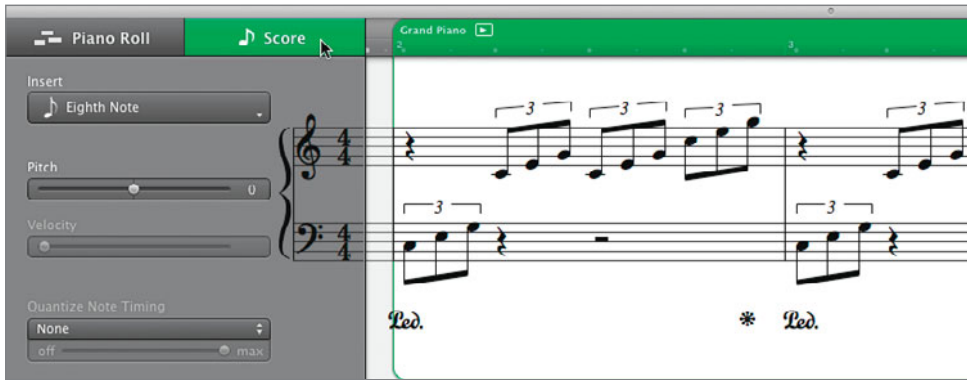
- 2 Double-click the first Grand Piano region in the Grand Piano 1 track to open it in the Software Instrument editor.



The editor opens in Piano Roll view. Notice that the played notes (dashes) follow a very methodical pattern, as would be expected in a scales exercise.

NOTE ► The term Piano Roll refers to a roll of paper containing punch hole data once used by player pianos.

- 3 Play the first few measures to hear the scales, and follow the playhead along the Piano Roll view in the editor. Pause playback, and press Return to return the playhead to the beginning of the song.
- 4 In the editor, click the Score button to change to Score (musical notation) view.

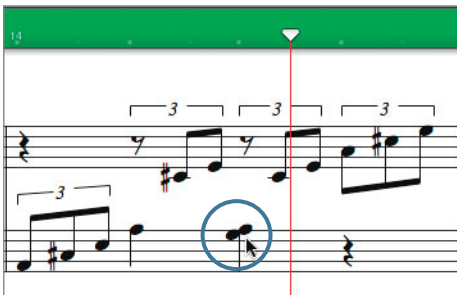


NOTE ► To print the sheet music (musical score) for a Software Instrument track, select the track, open the Score view in the editor, then choose **File > Print**.

- 5 Play through the 14th measure and then stop playback. Use the playhead or LCD as a guide.

Did you notice the *clam* (the missed note) in the 14th measure? If not, play the 14th measure again. It's hard to miss.

- 6 In the editor, play the 14th measure and pause playback when you hear the missed note (14.3.1.001). Hint: It's right in the middle of the measure and looks like two notes stuck together.



One of the two notes belongs in the middle of the 14th measure, the other does not. Because these are scales, it's easy to figure out which one doesn't belong because you won't see it played in the repeated scale notes to the left or right of the missed note in the musical notation.

- 7 Click each of the two notes to hear them. The first of the two notes (G) is the mistake.
- 8 Select the first note at 14.3.1.001, then press Delete to remove it.



- 9 Play the 14th measure again to hear the new, improved version. When you are finished, hide the editor and save your progress.

Now that you've learned how to view and edit notes in Score view, let's move on to adjusting the pace of the entire song.

TIP Not only can you select and delete notes in the Software Instrument editor, you can move a note up or down to change its pitch. In Score view, you can also Control-click (or right-click) a note to change the length of the note (quarter note, half note, and so on).

Adjusting Project Tempo

Tempo is pacing—the pulse or speed of the song—and it affects how the song sounds and feels. Software Instruments and Apple Loops automatically change tempo to match your project.

You may have noticed that the piano scales you worked with in the previous exercise played at an easy-going, medium pace. There's nothing wrong with that, especially if you are playing scales to warm up your fingers. However, those scales would be a lot more exciting if played at a faster tempo.

In this exercise, you'll listen to the orchestrated tracks with the slower version of the scales song, then speed up the tempo in the LCD and listen to the overall change.

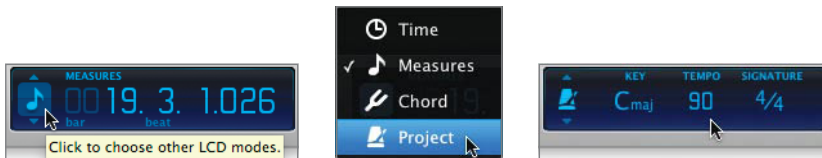
- 1 Continue working with the Notation Scales project, or if you didn't complete the previous exercise, open **07 Tempo Scales** from the Lesson 18 folder.

- 2 Press C to show the cycle region. Unsolo both of the Grand Piano tracks, if necessary. Start playback and listen to the beginning of the project. Feel free to stop playback at any time.

NOTE ► The Horns track should remain muted for now. The horns are Real Instrument recordings and were recorded at a faster tempo. Real Instrument recordings may sound stretched or distorted when played at a tempo other than the originally recorded tempo.

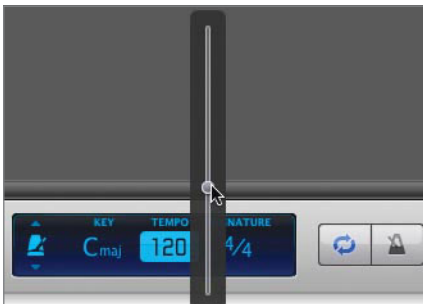
Did you notice the slow, laid-back feel of the song? It sounds okay, but not dramatic. Time to give the musicians a shot of espresso and pick up the pace.

- 3 On the LCD, locate the LCD View menu (the Note icon). From the LCD View menu, choose Project.



Stepping up the tempo of the piece is so easy. As you can see in the LCD, the current tempo is 90 beats per minute (bpm). You've already established that the current tempo feels a bit slow. A tempo of 120 bpm will be significantly faster and give the entire piece a more lively feel.

- 4 In the LCD, click the current tempo (90) and drag the Tempo slider up to 120.



- 5 Play the cycle region again at the new tempo. Unmute the Horns track to hear it played with the other tracks. When you are finished, save your progress.

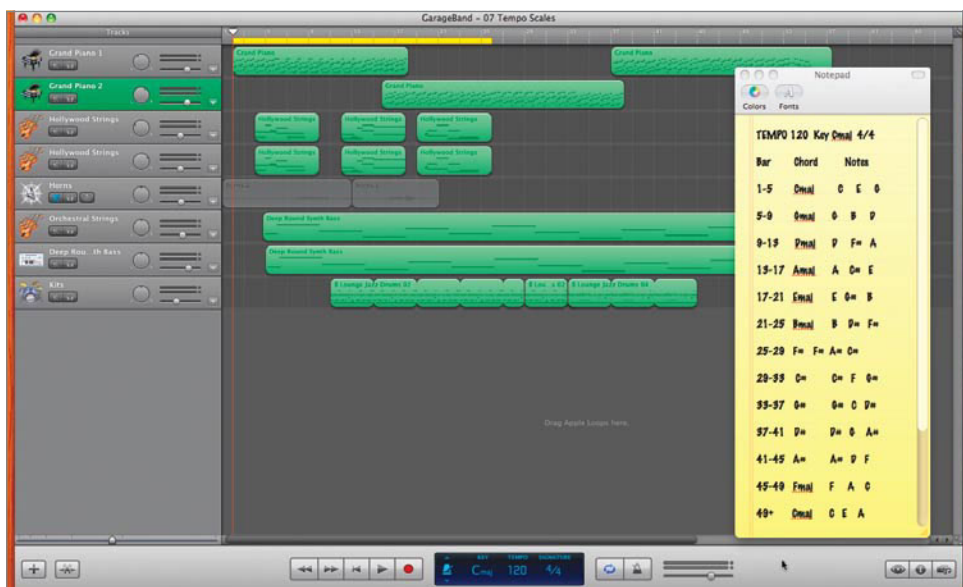
Much better. Too bad you can't actually change the tempo of a live performance that easily. As far as the partial orchestration goes, I played a variation of the chord notes for each chord change on the Software Instrument strings to draw attention away from the piano scales. That way the scales became a rhythm part, rather than the lead. The point of the song was merely to demonstrate that if you can make a scales exercise sound dramatic, then you can use GarageBand to make *any* musical idea into a song.

TIP If you are planning to record a Software Instrument part that is difficult to play, or needs to be played faster than you can physically play it, record the part at a slower tempo, then speed up the project's tempo after you're done recording.

Showing the Project Notepad

A musician's workshop/studio would not be complete without a notepad to jot down ideas and notes to yourself—or others—as you create. GarageBand '11 includes a handy onscreen Notepad for each project.

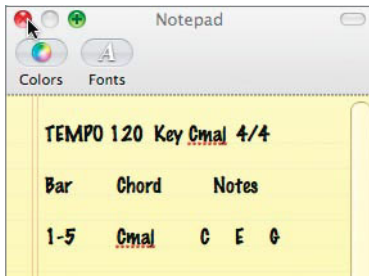
- 1 Choose Window > Notepad, or press Command-Option-P to open the Notepad.



The Notepad appears as a floating window, and looks just like a standard yellow pad. If you don't like yellow, you can change the color or font using the controls at the top.

NOTE ► For this project, I used the Notepad to keep a breakdown of which chords/notes are played during which measures (bars). This type of guide is handy for orchestrating a piece. Feel free to use these notes to finish the project. You can play a MIDI keyboard, enable the Onscreen Keyboard, or use Musical Typing to record parts for the rest of the song. Have fun!

- 2 In the upper-left corner, click the Close button (the red X) to hide the Notepad.



- 3 Save and close the project.

Working with Apple Loops

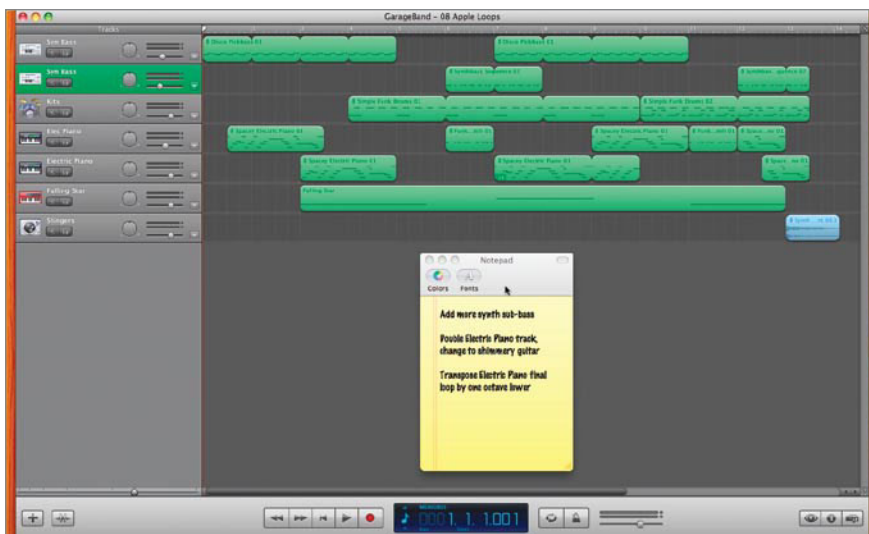
Using musical parts that can be looped over and over to build a song plays a major role in the foundation of GarageBand. In fact, GarageBand '11 includes over 1000 professional-quality Apple Loops.

Apple Loops are prerecorded music files that can be used to add drum beats, rhythm elements, and other repeating musical parts to a project. Loops contain musical patterns that can be repeated seamlessly and combined into new musical arrangements. You can extend a loop to fill any length of time in a project.

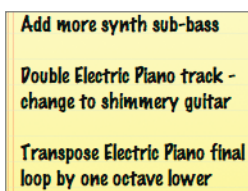
These loops are stored in the Loop Library. In the next series of exercises, you'll work with a song made almost entirely from Apple Loops. Along the way, you'll find and add a loop from the library, change a track's instrument, and transpose (change the key of) a loop to enhance the song.

NOTE ► If this is the first time that you have used the Loop browser in GarageBand, you will be prompted to download the additional Apple Loops and instruments. This may take a few minutes. If you would like to skip the download, you can move ahead to the next lesson. Otherwise, follow the download prompt when it appears.

- 1 Open the project **08 Apple Loops** from the Lesson 18 folder and save it—without iLife preview—to the My GarageBand Projects folder on your desktop.



The song opens with seven tracks assembled with Apple Loops. The only recording is the Falling Star track, which is similar to the track that you recorded in Lesson 2. Notice that the Notepad is showing a list of three things that need to be done to finish arranging this song.



- 2 Move the Notepad to the lower-left corner of the window to move it out of the way, but keep it in view as you work.
- 3 Click anywhere in the GarageBand window to make it active and listen to the song.

What did you think? Perhaps you noticed that it sounds okay, but unfinished. You may have also noticed a gap in the music around the fifth measure. No problem, you're about to find the perfect loop to fill that musical void.

Browsing and Adding Loops to the Project

Now that you've heard the work in progress, let's get to work improving it. The first order of business is to add a low pulsing beat (sub-bass) to fill that musical gap around the fifth measure. Technically, you could try any type of instrument loop to hear how it fits; however, a sub-bass part would work nicely with this song.

To start, create a cycle region from the third to the seventh measures to make it easier to find a loop that works with that section of the song.

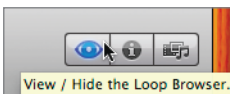
- 1 Press C to show the current cycle region.

The yellow cycle region is the correct length (four measures) for this exercise, but in the wrong position.

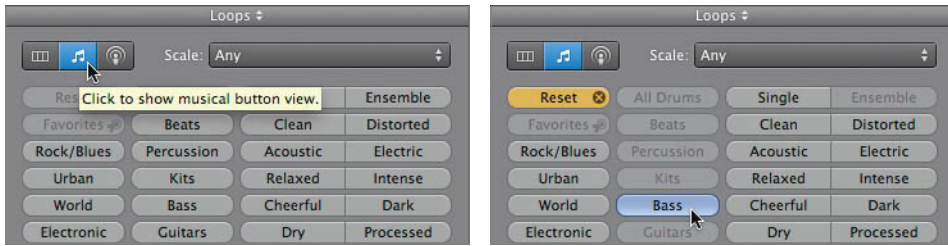
- 2 Drag the middle of the cycle region to the right until it begins on the third measure (bar 3) and ends on the seventh (bar 7).



- 3 Play the cycle to hear the section of the song that needs another musical part. Your goal is to add a loop that has the same electronic energy as the rest of the song.
- 4 Press Command-L, or click the Loop Browser button (the eye icon) to open the Loop Browser.



- 5 At the top of the Loop Browser, click the Musical Buttons View button (the eighth-note icon) if it isn't already in that view. Click the Bass button to confine the search to bass parts.



These buttons help narrow the search of over 1000 loops to just those parts that match the selected button or buttons. In this case, the search has been narrowed to 183 items, as indicated at the bottom of the browser.

- 6 Press the Spacebar to start playback, then click one of the bass loops in the list to audition it with the video. Try auditioning several loops.

NOTE ► There are two types of Apple Loops: Real Instrument loops and Software Instrument loops. The color of a loop's icon indicates which type of loop it is. Real Instrument loops (which are recordings of actual instruments) have a blue icon with an audio waveform. Software Instrument loops have a green icon with a musical note. The beats column shows the length of the loop.

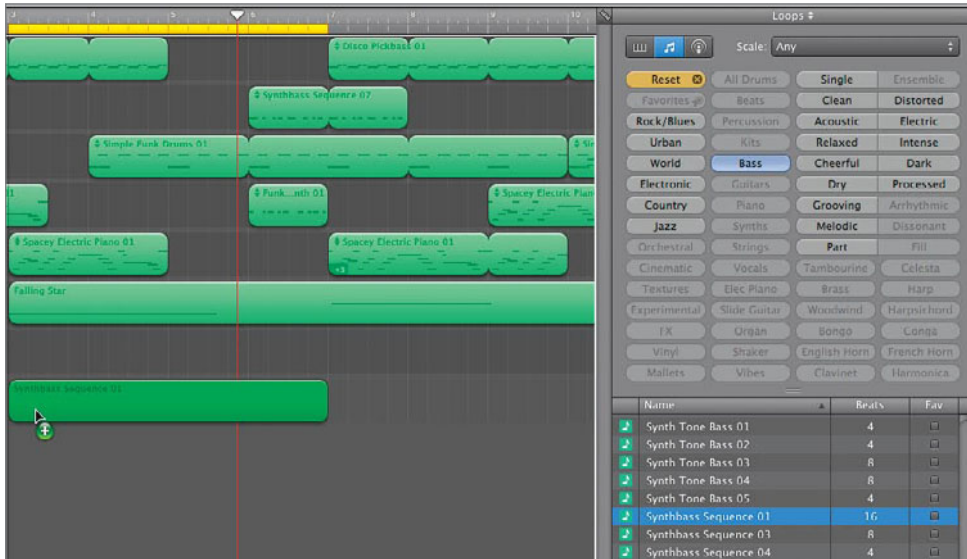
It's funny how so many loops seem to fit the song. That's because Apple Loops have been programmed in perfect musical time. Plus, they automatically change key and tempo to match the current song. However, let's dig a little deeper to find the synth-bass sound to complete the section.

- 7 Scroll down to **Synthbass Sequence 01** and audition the loop with the music. Stop playback when you are finished.

This loop will sound great, and it's 16 beats (4 measures) in length. Perfect! Of course, if a loop isn't long enough, you can always extend (loop) it to make it as long as necessary.

To add a loop to the project, you can drag a loop to an existing track or to the empty space below the tracks. By dragging the loop below the existing track, you'll automatically create a new track named after the loop instrument. Let's try it.

- 8 Drag the **Synthbass Sequence 01** loop from the Loop Browser to the empty space below the Stingers track in the Timeline. Place the loop so that it starts at the beginning of the cycle region (bar 3).



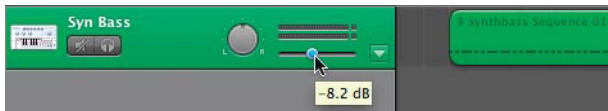
TIP Use the alignment guide (the dark vertical line that appears when you add a loop to the timeline) to align the loop to the desired position.

The loop is added to the Timeline and lasts for four measures.

- 9 Press C to hide the cycle region, and play the song from the beginning to hear the new synth bass part.

What do you think? It's cool, but too loud.

- 10 Drag the Volume slider on the new Syn Bass track header to lower the volume. A value of around -8.0 dB ought to do the trick for now. You can later finesse the levels of all the tracks.



- 11 Play the beginning of the song again to hear how it sounds with the adjusted volume. Press Command-L to hide the Loop Browser and save your progress.

Excellent! The new synth bass part works so well you should use it again later in the song.

TIP You can save your edited recordings as loops in the Loop Library by selecting the region and choosing **Edit > Add to Loop Library**. You will also be prompted to tag the loop with search metadata such as the type of instrument, style, or genre that will group it with other similar loops in the library.

Arranging Loops and Tracks in the Timeline

You can copy, paste, and delete regions in the Timeline as easily as editing text in a word processor. As a matter of fact, GarageBand uses the same shortcut keys for those editing features as most other applications. In this exercise, you'll copy the Synthbass Sequence 01 region and paste it in the same track so that it starts at the ninth measure (bar 9). Then you'll move the entire track up in the track list so that it starts below the other two Syn Bass tracks.

- 1 Click the **Synthbass Sequence 01** region at the bottom of the Timeline to select it, if necessary.
- 2 Choose **Edit > Copy**, or press **Command-C**.
- 3 Move the playhead to the beginning of the ninth measure (bar 9).
- 4 Click the lowest Syn Bass track header, at the bottom of the Timeline, to make sure that it is selected. The selected track header appears colored green or blue depending on the type of track instrument, while the deselected tracks remain gray.



- 5 Choose **Edit > Paste**, or press **Command-V** to paste the loop at the beginning of the ninth measure in the Syn Bass track.

NOTE ► Copy and paste always applies to the selected regions and selected tracks. If you accidentally paste the region into the wrong track, press **Command-Z** to undo the error, and try again.

- 6 Play the project to see and hear the results.

Sounds great. Now let's move the track up in the list to keep the synth bass parts together.

- 7 Drag the new Syn Bass track header upward and release it below the other two Syn Bass tracks.



Now that the new part is finished, it's time to move to the next item on the Notepad list.

Duplicating Tracks

One of the most exciting things about Software Instruments parts is that they will change to any Software Instrument that you assign to the track. For this exercise, you'll duplicate the second Electric Piano track, drag copies of the parts to the duplicate track, and change the track instrument to a guitar. Doubling tracks like this is a sure way to “fatten” the sound and make a particular musical line stand out.

- 1 If you didn't complete the previous exercises, open the project **09 Double Track** and save it to your folder. Close the Notepad if it is still showing.
- 2 Select the second Electric Piano track header (the third track from the bottom).

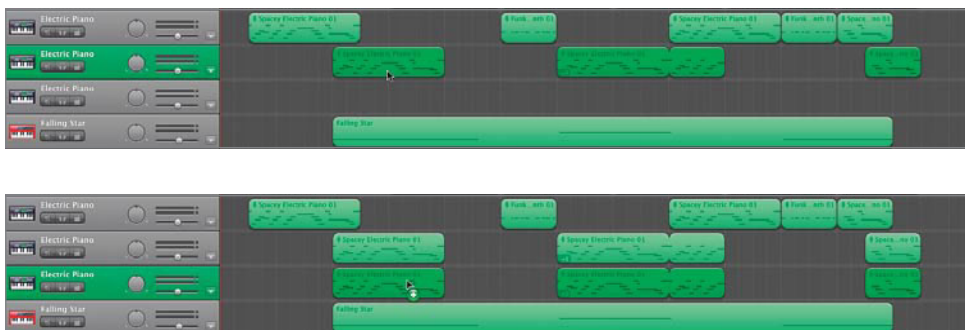
TIP When you select a track, the regions within that track are also selected. You can press the Up and Down Arrow keys to change which track is selected (Up Arrow selects the previous higher track, and Down Arrow selects the next lower track).

- 3 Choose Edit > Duplicate, or press Command-D to duplicate the selected track.



A new duplicate Electric Piano track appears. Now you'll duplicate the regions and drag them to the new track.

- 4 Select the original (middle) Electric Piano track to automatically select all of the regions within that track.
- 5 Option-drag the selected regions down to the same position on the new Electric Piano track.



Now that you've duplicated the track and regions, let's change the track instrument.

- 6 Double-click the new (lowest) Electric Piano track header to show the Track Info pane for that track.
- 7 In the Track Info pane, select Guitars as the instrument category (left column) and Nylon Shimmer as the specific instrument sound (right column).



NOTE ► You may see a dialog to warn you that you're changing the track instrument. If so, click *Continue*.

- 8 Notice that the track header changes to Nylon Shimmer. Play the song and listen to the newly doubled tracks.

The part is really working, but could stand to be a little louder in the mix.

- 9 Drag the Volume sliders on the lowest Electric Piano and Nylon Shimmer tracks to zero (0.0 dB). Setting the tracks to 0.0 dB plays the loops at the default level (loudness). Feel free to adjust the levels of the other tracks to taste.

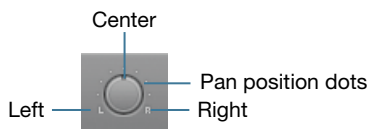
You have successfully doubled the part, which sounds great in the song. Now all the tracks need is a little finessing.

Panning Tracks

Not only is it important to adjust the volume of a track, you also need to consider the position in the stereo field that the track is perceived in the listener's ear.

The Pan Wheel controls the left-to-right placement of a track within the stereo field. The *Pan* in Pan Wheel stands for *panoramic*. A panoramic photograph is an image that includes everything you can see without turning your head. A stereo field is everything you can hear from the far left to the far right, without turning your head.

Imagine a panoramic photograph of the Rocky Mountains with a train cutting through the far-left side of the image. Visually, you place the train on the left side of your field of view. You would also place the sound of the train on the far-left side of the stereo field.

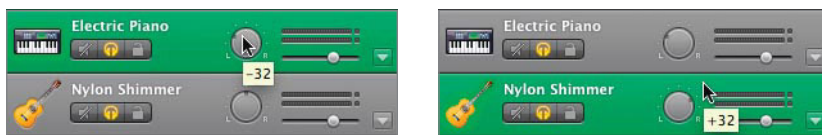


By default, all of the tracks in GarageBand start with the pan position set to the center (0). When at center pan position, a sound is heard equally out of both speakers as though it's directly in front of you in the middle of the audio space.

Your goal is to adjust the pan position of the doubled tracks so that they are separated acoustically.

This exercise works best if you're listening through headphones, so take a minute and put on your headset before you start. Make sure your headphones have the right speaker (R) on the right ear and the left speaker (L) on the left ear.

- 1 Solo the Electric Piano and Nylon Shimmer tracks that you doubled earlier.
- 2 On the Electric Piano track, click the second dot to the left of center, -32 degrees (the 10 o'clock position) on the Pan Wheel.



- 3 Pan the Nylon Shimmer track in the opposite position, the second dot to the right of center, +32 degrees (the 2 o'clock position).

TIP You can set specific increments on the Pan Wheel by dragging up or down accordingly. To quickly reset the volume and pan controls to their default settings, Option-click the controls. The default volume level is 0 dB, and the default pan position is Center.

- 4 Play the soloed tracks to hear them in the stereo field. They should each sound like they are coming from different positions on stage. Unsolo the tracks to hear them in the mix with the other tracks. Save your progress.

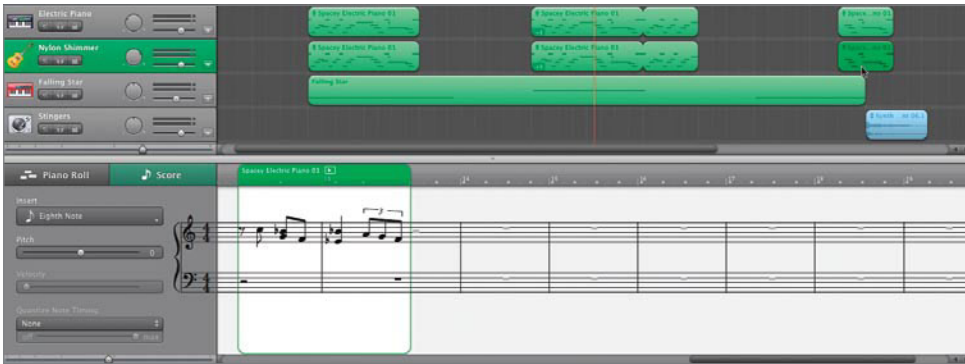
Now that you have adjusted the volume, and panned the tracks, you're ready for the last order of business on the Notepad.

Transposing a Region in the Editor

Transposing music means to change the key and pitch. This is often done to more closely match a song to a vocalist's range, or with a lead instrument. In this case, you'll simply change the pitch of a region so that it plays the same notes, just an octave lower.

Up to this point you have fixed the timing of regions in the editor, but you haven't actually changed their pitch. Now is your chance. As the Notepad suggested, your goal is to lower the last region in the doubled part by one full octave. Let's start with the Nylon Shimmer track.

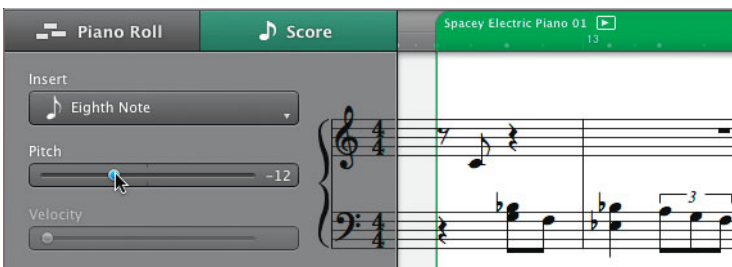
- 1 Double-click the last region in the Nylon Shimmer track to show it in the editor.



- 2 Select the bass region in the last region in the Nylon Shimmer track to show it in the editor. The Software Instrument region appears in the Score view, in the editor.

NOTE ► A common scale has twelve notes, including sharps and flats, before a note repeats an octave higher or lower. To play the same note one octave higher, you simply change the pitch to 12. To play it one octave lower, you would change the pitch to -12. Changing the pitch of a musical part is called *transposing*.

- 3 In the editor, drag the Pitch slider to the left until it reads -12.



The musical notation adjusts accordingly, and a small –12 appears in the lower-left corner of the region that you transposed. Notice the small –5 in the previous region on the doubled tracks. That part was transposed to make it sound less repetitive.



- 4 Repeat the process to transpose the same part in the Electric Piano track to –12.
- 5 Press Command-E to hide the editor. Unsolo the tracks and play the song to hear the finished piece. When you're finished, save your progress.

Congratulations. You now have hands-on experience working with many of the powerful and exciting editing, fixing, arranging, and mixing features in GarageBand '11. Have fun applying what you have learned to your own projects.

Lesson Review

1. Where do you find the pan and volume controls for a track?
2. What methods are available in GarageBand '11 for fixing timing issues in recorded regions?
3. How can you view the musical notation for a Software Instrument region?
4. Where can you change the musical icon for a track?
5. Can you adjust the tempo of a song *after* recording musical parts?
6. How do you transpose (change the key of) a region?

Answers

1. The pan and volume controls for each track are located in the Track Mixer.
2. GarageBand '11 includes quantizing, Groove Tracks, and Flex Time editing for fixing timing of regions or individual notes.
3. Double-click the region to show it in the Software Instrument editor, and change the view to Score to see the musical notation. Piano Roll view shows the notes as dashes.

4. You can change a track's musical icon in the Track Info pane.
5. Yes, you can adjust the project tempo in the Tempo menu on the LCD. Software Instrument recordings and Apple Loops follow project tempo changes without changing the key or quality of the sound.
6. To transpose a region, open it in the editor, then drag the Pitch slider in the editor controls.

5

Lesson Files

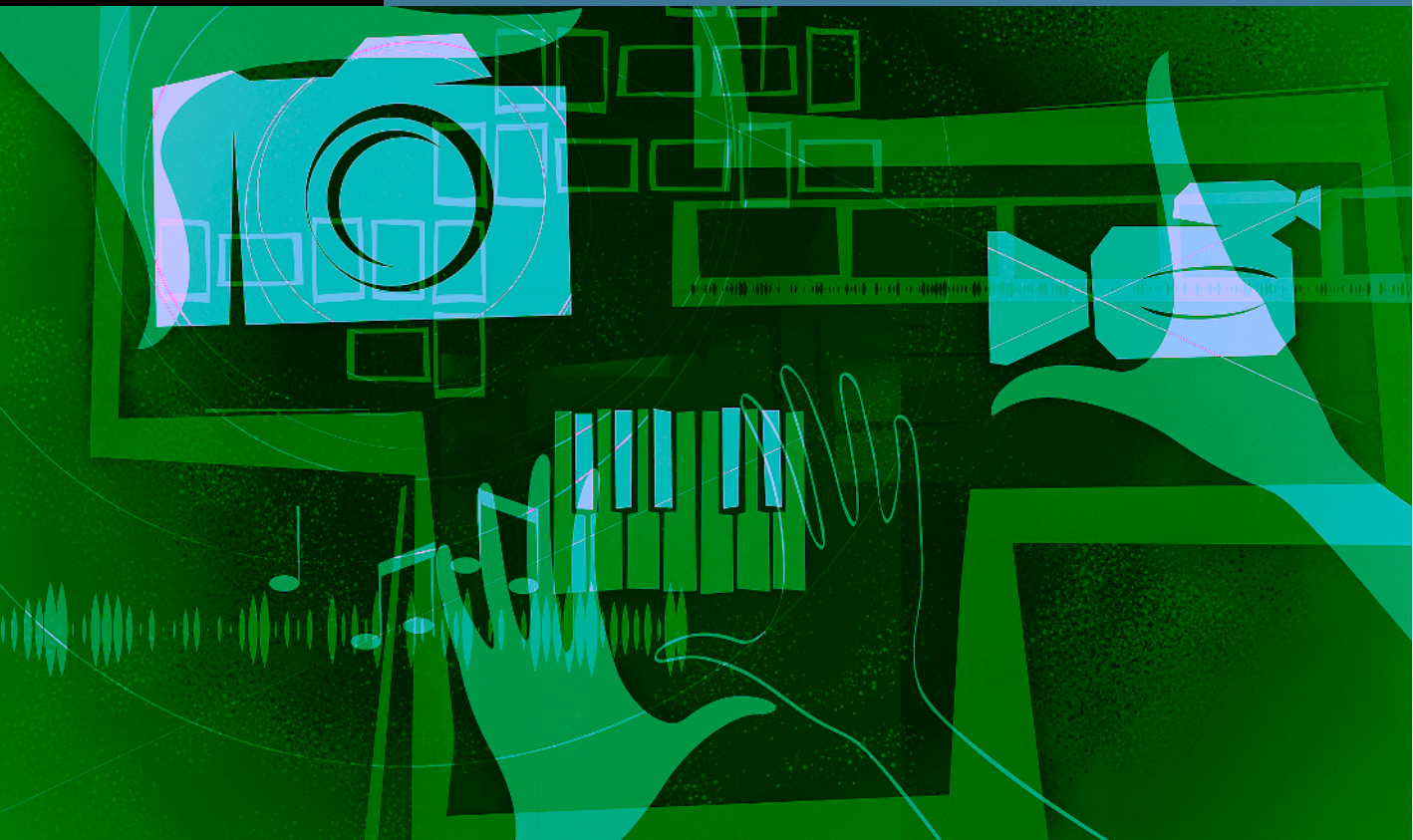
GarageBand > Lesson 19 > 01 RootsRockArrange, 02 RootsRockEffects, 03 RootsRockCurves, 04 RootsRockFinal, 05 PodcastTheme, 06 Podcast, 07 PodcastArt, 08 PodcastFinal, 09 TouchPetsScore

Time

This lesson takes approximately 60 minutes to complete.

Goals

- Work with the arrange track
- Add effects and automation to a song
- Prepare a project for iTunes
- Evaluate a song's output
- Share a finished song with iTunes
- Finish a podcast
- Edit podcast artwork and add a URL link
- Export a movie project to disk



Lesson 5

Finishing and Sharing Projects

Now that you know the basics of recording, arranging, and mixing your projects in GarageBand, you're ready to learn some finishing techniques. When your projects are finished, you can share them with other iLife applications and export them to iTunes, where they can be downloaded to your iPod or burned to a CD.

All the iLife '11 applications are designed to work together seamlessly. You can write music in GarageBand and export your songs to iTunes; score your iMovie video and export it as a QuickTime movie or send it to iDVD; send your finished podcast to iWeb to publish on the Internet; or create a whole playlist of original songs to be shared with any of your applications.

The focus of this lesson is learning how to finish and prepare your GarageBand projects to share with other iLife applications.

Finishing a Song

Even after you've mixed and refined your tracks, you may have to answer several more questions to finish a song. First, does the song need to be lengthened or shortened? Would the song benefit from some added effects to the tracks, or to the overall song? Finally, does it need some automation—adjustment to levels within the tracks? The Roots Rock song that you will be working with in the upcoming exercises actually needs all three of these finishing touches before you share it with iTunes. As you follow along, you'll not only see how easy it is to apply these advanced techniques, but you'll also hear the difference in the final song.

Let's get started.

- 1 Open the project Lesson 19 > **01 RootsRockArrange** and save it—without iLife preview—to the My GarageBand Projects folder on your desktop.
- 2 Play the project once to hear the song as it is, and then stop playback.

Chances are you won't hear anything obviously *wrong* with the song. The trick to making great-sounding music is to recognize what *is* working, and know how to improve what isn't. In this case, the song needs to be a little longer to fit the title sequence of a video project. Also, a few of the instruments could use some effects to help them stand out in the mix.

Using the Arrangement Track

Most songs are arranged in distinct sections such as introduction, verse, and chorus. The Arrangement track—which appears below the time ruler—makes it easier to see these parts of your song and to move, duplicate, or delete those sections at any time.

In this exercise, you'll use the Arrangement track to duplicate the chorus section of the song and extend the overall length of the piece.

- 1 Click the Chorus arrangement region located at the top of the GarageBand window. The Chorus arrangement region brightens to show that it's been selected.

NOTE ► If the Arrangement track isn't visible, choose **Track > Show Arrangement Track**.



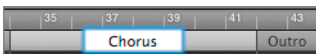
- 2 Option-drag toward the right to create a cloned version of the section. Place the Chorus copy region between Verse 2 and the Outro section.



NOTE ► If you moved the original chorus section rather than a duplicate, press Command-Z to undo your work, and then try again. Be sure to hold down the Option key before dragging the Chorus section to duplicate as you drag.

Because the song's chorus is the same part, you can change the name to remove the word "copy" from the second chorus.

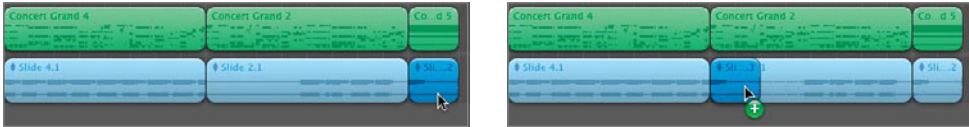
- 3 Double-click the Chorus Copy arrangement region's title. Change the title for the region to *Chorus*.



- 4 Play the last half of the song to hear the modified ending.

Well, it's almost there. The song is indeed longer, but the lead guitar in the Slide track cuts off abruptly as the song progresses from Verse 2 to the Chorus. Fortunately, there is an easy fix. You can simply duplicate the piece of slide guitar in the Outro region and place it at the beginning of the second chorus.

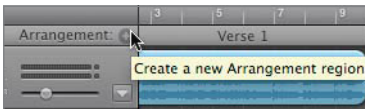
- 5 Option-drag the Slide section in the Outro region and place the duplicate copy at the beginning of the second Chorus section.



Make sure that you place the duplicate over the silence at the beginning of the chorus and do not overlap the end of the Verse 2 region. If you make a mistake, choose Edit > Undo and try again.

- 6 Play that section again to hear the finished arrangement. When you are done, press Command-S to save your progress.

TIP To add a new region, click the plus sign in the Mixer area of the Arrange track.



Adding Effects to a Track

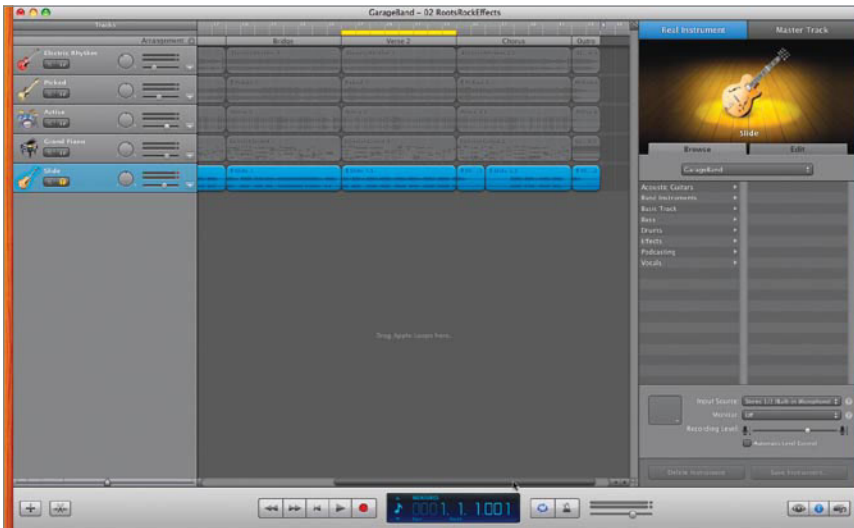
Effects are the secret to perfecting your sound. GarageBand is fully loaded with professional-quality effects. You can choose from the effects presets included with each Real Instrument and Software Instrument, or customize the effects and save your own preset.

Let's add some effects to bring out the Slide track and bring the Grand Piano forward in the mix. You'll start by soloing the track you're working with and creating a cycle region to hear how the track sounds before and after you adjust the effects.

- 1 If you didn't finish the previous exercises, open Lesson 19 > **02 RootsRockEffects** to catch up.
- 2 Select the Slide track and press S to solo the track. Then, press C to open the cycle region.
- 3 Create a cycle region over the Verse 2 region if the cycle region isn't positioned over that section of the song.



- 4 Press Command-I or double-click the Slide track header to open the Track Info pane.
- 5 If the Track Info pane is hiding at the end of the song, drag the horizontal scroll bar at the bottom of the Timeline toward the right until you can see the Verse 2 section.

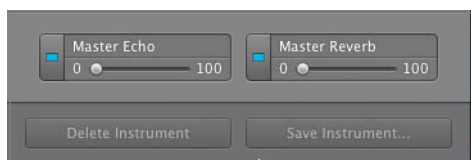


- 6 In the Track Info pane, click the Edit tab to display the track's effects.



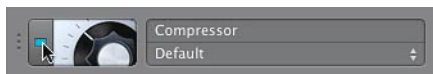
Each track includes Noise Gate, Compressor, and Visual EQ effects, along with four empty effects slots.

NOTE ► If you'd like to add more effects to a track, you can click an empty slot and choose another effect.



The two Sends sliders near the bottom of the Track Info pane control the amount of the track's output that is sent to the master Echo and Reverb effects. Notice that the blue LEDs on the Echo and Reverb sends indicate those effects are active. For this exercise, you'll use the Compressor, which can modify the instruments' frequencies to improve the sound in the mix.

- 7 Click the LED on the Compressor to make it active (blue).



- 8 Click the Presets menu, currently set to Default, to see the Compressor presets, and choose Electric Guitar Smoothen.

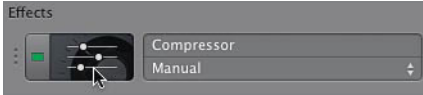


A dialog warns you that you're changing the track's instrument setting.

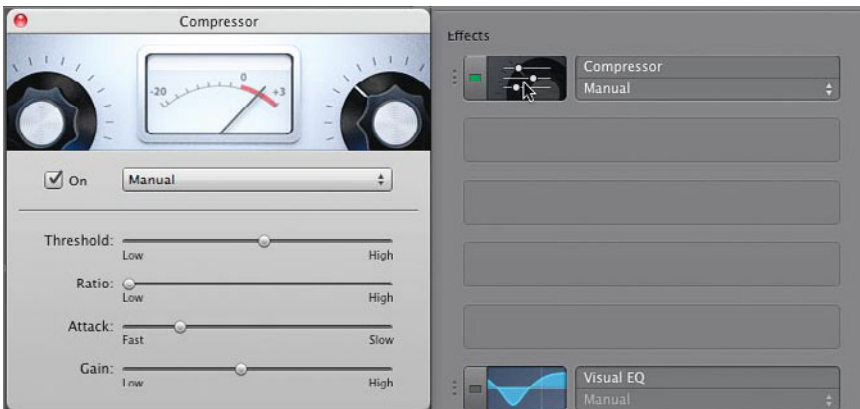
- 9 Click Continue and start playback to hear the sound of the Slide guitar with the new Compressor setting. Press S to unsolo the track and hear it with the other tracks. Click the Compressor LED to turn off the effect and hear the guitar without it. Click the LED again to turn it back on.

What a difference a little compression can make! The guitar sound really feels like a lead instrument now. In fact, it sounds so good that you may want to turn it down a bit in the mix. It isn't uncommon to need to tweak volume levels after effects are applied.

- 10 Lower the volume of the Slide track to around -4.8, and then pause playback.
- 11 Select the Grand Piano track. Press S to solo the track. Then turn on the Compressor effect for the Grand Piano track in the Track Info pane.



- 12 Click the rectangle next to the LED to open the manual controls for the current effect.



The Compressor controls window appears. You could manually adjust the parameters here, or add a preset. Feel free to experiment with the controls before choosing the preset in the next step.

- 13 In the Compressor controls window, from the Preset menu, choose Piano Upfront. Click Continue in the warning dialog, and then listen to the Grand Piano track with the Compressor.



- 14 Unsolo the Grand Piano track and listen to it with the song. When you're finished, hide the cycle region, pause playback, and close the Compressor controls window.

Once again, the results are quite extraordinary. For the first time, you can really hear the piano in the song and it doesn't step all over the lead guitar. As you can plainly hear, effects such as the Compressor presets can really make your music sound better.

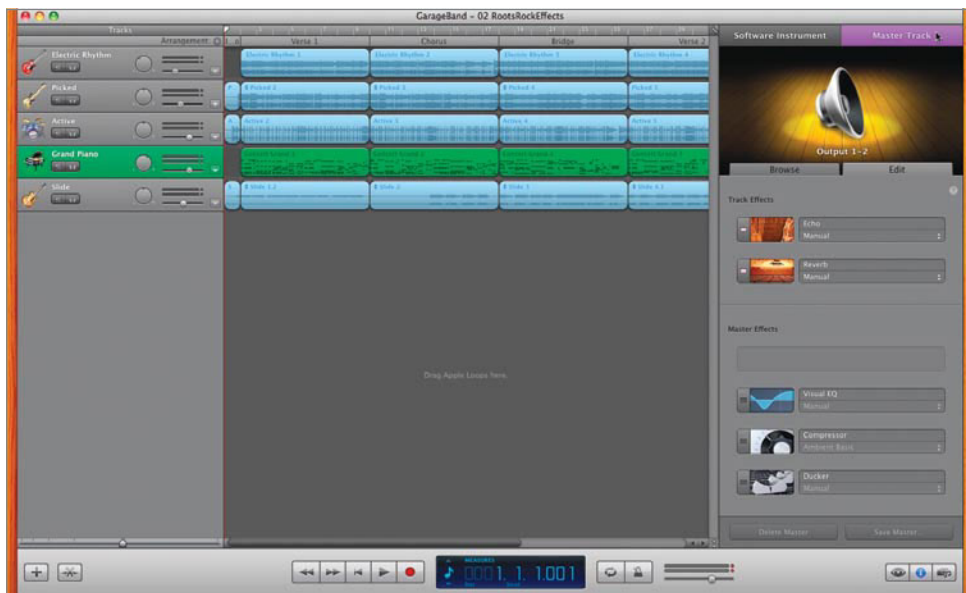
NOTE ► If you manually adjust an effect, you'll see a dialog asking if you want to save the instrument settings. If you think you'll use those settings again, go ahead and save.

Adding Effects to the Overall Song

To add an effect to a specific track, you used the Track Info pane for that track. The Track Info pane for the Master track shows the effects settings for the overall project.

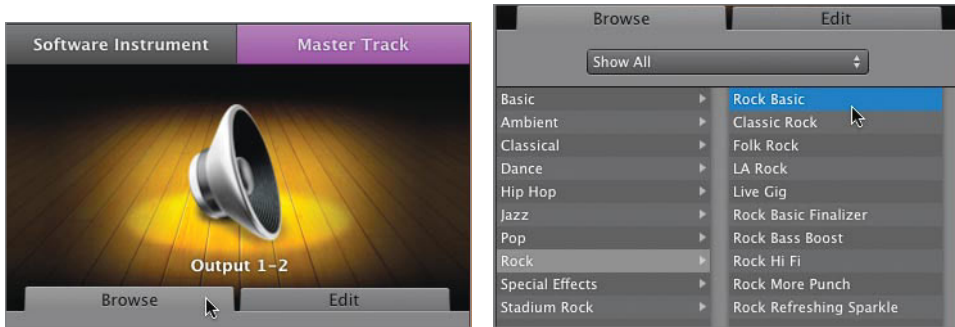
Let's open the Master Track Info pane and add an effects preset to the entire song.

- 1 Press Command-I, or click the Track Info button, if it isn't already visible.
- 2 In the upper-right corner of the Track Info pane, select Master Track to show the Master Track effects.



You can add and modify effects in the Edit pane of the Master track just as you work with effects for an individual track. You can also click the Browse tab to choose a preset that fits the song.

- 3 In the Track Info pane for the Master track, click the Browse tab.



- 4 Choose Rock as the Master category, and then choose Rock Basic as the specific master preset. If a dialog appears, click Continue to apply the preset.
- 5 Start playback. While the song is playing, press the Down Arrow to hear other Rock preset effects applied to the song. Stop playback when you've selected an effect.

Did you find a favorite preset? They all sound good, but the Classic Rock and LA Rock presets stand out. You can select whichever preset you like best.

NOTE ► The master presets are combinations of EQ and Compressor effects. You can turn the effects on and off, or modify them under the Edit tab of the Track Info pane, just like the effects applied to a track.

- 6 Press Command-I to hide the Master Track Info pane. Now that you've finished your mix and added effects, it's a good idea to update the name of the project.
- 7 Choose File > Save As and change the name of the project to *RootsRockFX*. Close the project.

Your mix sounds great. The last step is to adjust the volume of the tracks dynamically so that they raise or lower at different points of the song.

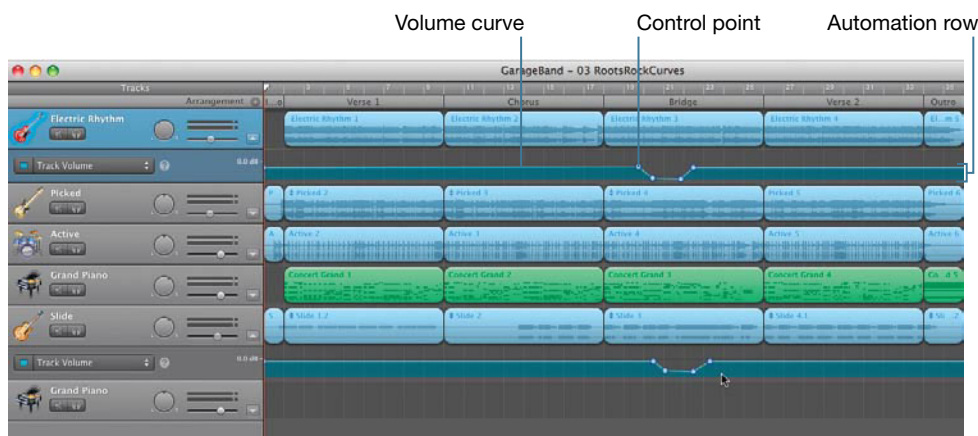
Working with Volume Curves

So far, you have adjusted the volume and pan levels for individual tracks using the controls in the track mixer. This method is great for setting one volume or pan level for an entire track. But what if you want the level to change during the song? Dynamically changing pan, volume, or effect levels over time is called *automation*.

In the next exercise, you'll change volume within a track by using control points along the volume automation curve.

First, let's check out a version of the song that already has a prominent set of automation curves.

- 1 Open the project Lesson 19 > **03 RootsRockCurves** and save it to the My GarageBand Projects folder without iLife preview. The project opens with the volume curves visible on both guitar tracks.



The volume curve appears as a line below a track in the automation row. By default, the volume curve isn't actually a curve. It's a straight line that represents the steady volume of the track. By adding control points, you can bend the curve to fade levels up or down.

- 2 Press C to show the cycle region, and play the Bridge section of the song. As it plays, watch the playhead travel along the volume curve/line below the Electric Rhythm and Slide tracks. As the levels in the curve dip down, so does the volume of those tracks.

When the control points on the guitar tracks were at their lowest level, you may have noticed that the Grand Piano became the lead instrument. Then the guitar parts faded back in and joined the piano to finish the bridge.

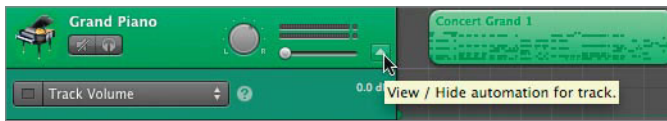
NOTE ► Carefully fading tracks up and down to shift the acoustic focus is a music producer's trick for enhancing and finishing a song mix.

Now that you've seen and heard volume curves in action, it's time to try them for yourself. First, you need to show the volume curve.

Showing Volume Curves

You have two ways to show the volume curve for a track:

- ▶ Press A to show the volume automation curve for the selected track.
 - ▶ In the track header, click the triangle in the lower-right corner.
 - ▶ Let's show the Volume curve for the Grand Piano track.
- 1 On the Grand Piano track header, click the triangle in the lower-right corner.



The volume curve appears as a green line in the automation row below the Grand Piano track. Curves are color coordinated with the track instrument: Real Instrument (blue) or Software Instrument (green).

- 2 Drag the Grand Piano track volume slider all the way to the left and watch the volume curve move.



As you can see, the volume slider alters the volume curve. However, once you turn on the volume curve (automation), the volume slider will become inactive and merely show/hide the track curve.

- 3 Option-click the Grand Piano track volume slider to reset the slider to the default position.

NOTE ▶ If the volume curve does not move to the default position, click the Grand Piano track volume slider to apply the new position to the volume curve.

- 4 On the Grand Piano track header, click the LED on the Track curve menu to turn on the track curves.



Adding and Adjusting Control Points

Now that you can see the volume curve, you can adjust it using control points. Control points set a fixed volume level on the volume curve at a specific point along the Timeline. Changing a control point's position allows you to bend the volume curve, which raises or lowers the volume between the control points.

Control points are often used to fade music in or out. Slowly increasing the song volume from silence is *fading in* the music; slowly reducing the song volume to silence is *fading out* the music.

Dynamic volume change between control points



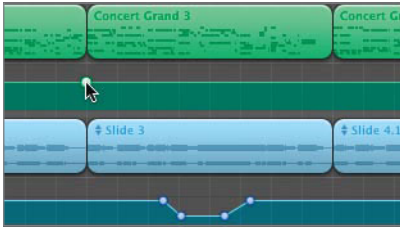
Control point at lowest volume level

Your goal for this song is to duck (lower) the volume level of the Grand Piano at the beginning of the Bridge section so the guitar parts become more prominent. Then, fade in the piano part again toward the middle of the Bridge while the guitar parts are ducked (lowered). Acoustically, this technique will change which instrument parts stand out during the bridge—first the guitars, then the piano, then all three parts play together equally to finish the Bridge.

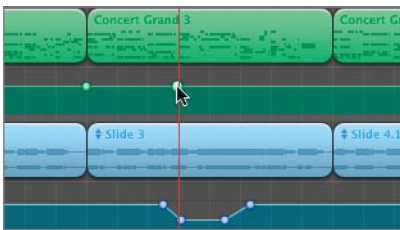
You need two control points to change the volume dynamically. The first control point sets the starting volume level. The second control point sets the new volume level. You can add a control point by clicking the volume curve, and you can move it by dragging the point.

Let's add some control points to duck the Grand Piano track at the beginning of the Bridge.

- 1 On the Grand Piano track, click the volume curve to set a point at the beginning of the Bridge section (18.1.1.001).



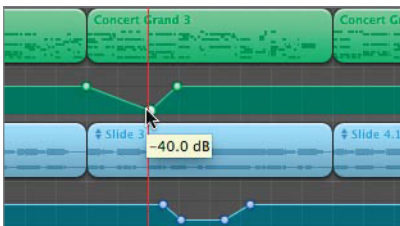
- 2 Add another control point at the beginning of the 21st measure (21.1.1.001).



TIP If you are trying to add or move control points at specific places, use the playhead and the LCD as guides. Otherwise, you can simply guess and use the ruler to place points in the general positions.

The first control point that you set marks the beginning of the ducked piano section, while the second control point marks the end of the ducked section. Notice that the second control point is placed when the Slide guitar volume curve is at its lowest level. Remember, these parts are taking turns in the spotlight, so as one is lowered, the other should be raised.

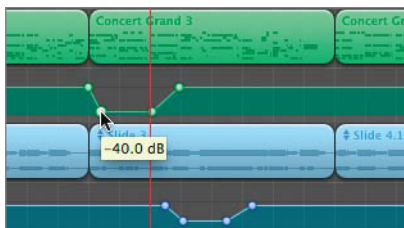
- 3 Add another control point at the beginning of the 20th measure (20.1.1.001). Once you've added the point, drag it down to around -40 dB.



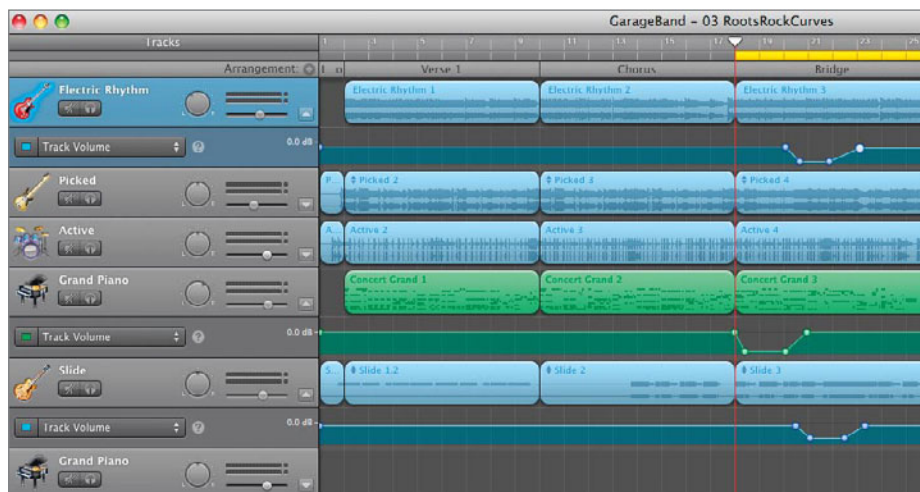
There's no need to silence the track by lowering it all the way to -144 dB. Ducking means to lower the level to change the acoustic focus to a different track, or to give another track priority.

NOTE ► GarageBand includes automatic controls for ducking entire tracks. You will see them in action shortly in the “Finishing a Podcast” section.

- 4 Add a final control point just to the right of the first one, and lower it to -40 dB.



- 5 Play the Bridge of the song to hear the piano part duck in the beginning, and the guitar parts duck near the middle.



- 6 Press C to turn off the cycle region. Select the Grand Piano track, and press A to hide the automation for that track. Hide the automation for the guitar tracks. Save and close the project.

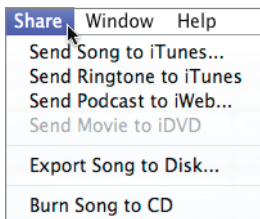
Excellent work! The parts each take turns, and you’ve successfully added another professional music finishing technique to the song.

NOTE ► You can use the Track Curve menu to show curves for volume, pan, or effects applied to a track.

Sharing with Other iLife Applications

If you haven't experienced the ease of working across multiple iLife applications, you will do so shortly as you explore the various ways to share GarageBand projects. The key to iLife integration is the Media Browser, which is accessible from both iLife and iWork (as well as many other applications).

The Share menu includes six choices that you will explore in the next series of exercises. Along the way, you'll also add a few finishing touches to a podcast, and place a marker into a movie score.



When you're ready to share your project, click the Share menu and then choose one of the following menu commands:

- **Send Song to iTunes**—Place a mixed copy of the track into your iTunes library. You'll explore this option fully in the next section.
- **Send Ringtone to iTunes**—Create a cycle region to determine the Ringtone loop, then share.
- **Send Podcast to iWeb**—Open your project in iWeb where you can choose compression settings, select a template, and publish it to the internet.
- **Send Movie to iDVD**—Open your project in iDVD where you can choose compression settings, select an iDVD template, and burn it to a DVD. If you don't have a video track, this option is dimmed.
- **Export Song to Disk**—Save an MP3 or AAC file to a hard disk.
- **Burn Song to CD**—Burn a finished song directly to an audio CD.

Sharing Projects with iTunes

Exporting to iTunes is as simple as choosing Share > Send Song to iTunes. Before you begin exporting, however, you'll need to do a few things to prepare your songs. You'll set your GarageBand preferences to create a playlist in iTunes. Then you will evaluate a song to make sure that you're exporting the whole song, and check the output level for clipping. Finally, you'll export your song to a new playlist in iTunes.

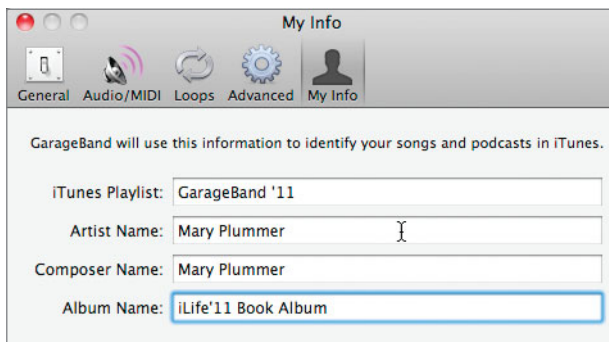
Setting Preferences for iTunes

To prepare a song for export to iTunes, set your song and playlist information in the Export pane of GarageBand preferences. For these exercises, you'll continue to use the *RootsRock* song.

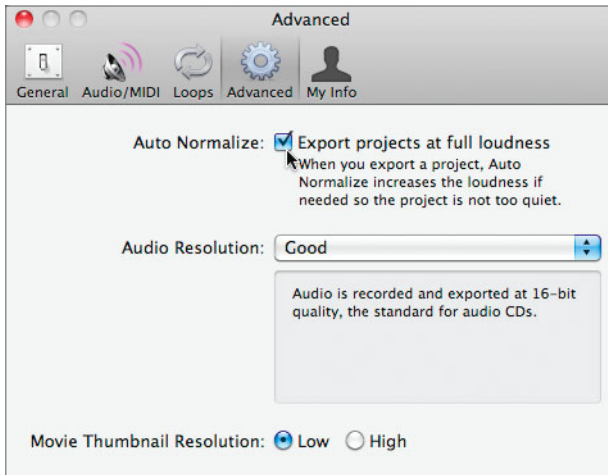
- 1 Open the project Lesson 19 > **04 RootsRockFinal**.
- 2 Choose GarageBand > Preferences to open the Preferences window.
- 3 Click the My Info button to open the My Info pane, if it's not already showing.

Next, you will name the iTunes playlist, composer, and album. By default, GarageBand names the playlist and album after the registered user of the computer.

- 4 In the iTunes Playlist field, type *GarageBand '11*. In the Artist Name and Composer fields, type your name. In the Album Name field, type *iLife '11 Book Album*.



- 5 Click the Advanced button and make sure that the Auto Normalize checkbox is selected.



The Auto Normalize feature is great for exporting songs to iTunes because it automatically adjusts the volume level to make sure that the song will be loud enough to match the maximum volume levels of professional CD's.

- 6 Set the Audio Resolution to Good, if necessary. The Audio Resolution menu offers three choices:
 - Good—Audio is recorded and exported at 16-bit quality, the standard for audio CDs.
 - Better—Audio is recorded at 24-bit quality for higher fidelity and exported at 16-bit quality. Choosing this option will take approximately 50 percent more disk space than Good for recording.
 - Best—Audio is both recorded and exported at 24-bit quality for the highest audio fidelity. Choosing Best will also take approximately 50 percent more disk space than Good for both recording and exporting.

TIP Leave the Audio Resolution setting to Good whenever you are just experimenting or you're recording simple projects or podcasts that will be compressed for CD or web distribution. The Better and Best settings use a lot of disk space. If you're laying down tracks as masters for music publishing or other high-end recording, change the setting when you start the project.

- 7 Close the Preferences window.

Now that you've set up the export information, iTunes will automatically create a playlist titled GarageBand '11 and include the other information in the playlist. Technically, this composition was crafted by Magic GarageBand Jam, but the settings on your computer will be ready for the next song that you create in GarageBand.

Evaluating a Song's Output Level

It's time to check the output level for the song to make sure it isn't clipping. Remember, the master volume level meter is located in the lower-right corner of the GarageBand window. You can drag the master volume slider to raise or lower the output level as needed.

Let's play the song and check its output level. If the level is too high, you'll need to lower the output. If the level is too low, you'll need to raise the output.

- 1 Press Return, and then press Spacebar to begin playback. As the song plays, watch the master volume level meter for signs of clipping.

NOTE ► If you don't see the master level meter along the bottom of the GarageBand window, increase the size of the window. You may need to change the resolution of your monitor to make more room. You can also hide the Track Info pane if it's visible.

If you see any clipping (red) in the meter, stop playback. If you aren't sure if you saw red, the handy clipping indicators (red dots) at the end of the meter light up to let you know that clipping did indeed happen. You'll discover red indicators and some clipping throughout the song.



- 2 Drag the master volume slider to -3.8 dB to lower the output volume and avoid clipping. Click the red clipping indicators to reset them.



- 3 Play the song again from the beginning and check the new output level in the meter.

Be careful not to set your level too low. Ideally, your level should peak between the highest green and yellow portions of the meter. Fortunately, you selected Auto

Normalize in the GarageBand preferences, so the level should still output with plenty of volume for iTunes.

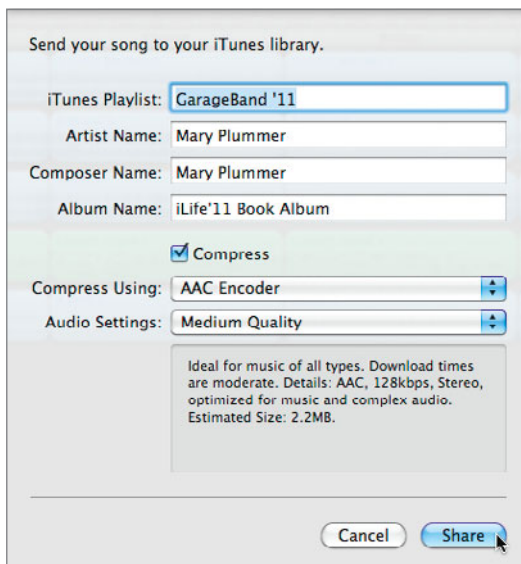
TIP If a song sounds as though it ends abruptly, you can choose **Track > Fade Out** to add a fade to the master track's volume.

- 4 Choose **File > Save As**, and save the project to the **My GarageBand Projects** folder. If you already have a version of the song saved at that location, feel free to overwrite it with this version, which has a corrected master volume level.

Sending a Song to iTunes

When you export a song to iTunes, the entire song is exported, from the beginning of the first measure to the end of the last region. (If a cycle region is active, only the portion of the Timeline included in the region is exported.) But, remember, if you mute or solo tracks, only those tracks set to play are exported. Let's export the current song to iTunes.

- 1 Choose **Share > Send Song to iTunes** to export the song.
- 2 The Share dialog opens. Here you can choose to modify the playlist information. You can also select the **Compress** checkbox, and then choose compression settings from the **Compress Using** and **Audio Settings** pop-up menus. If you don't select **Compress**, GarageBand will create a CD-quality AIFF file.



NOTE ► By default, GarageBand projects are sent to iTunes as AIFF (Audio Interchange File Format) files at 44.1 kHz (kilohertz). This is a CD-ready format so that your songs can be burned to an audio CD. You can also change the file type from within iTunes so that the file can be downloaded to an iPod, or converted to another format, such as MP3.

- 3 Click Share. GarageBand begins to mix down your song.

During the mixdown process, all of the tracks are mixed (at their current levels) into one stereo pair (left and right) for iTunes. A progress indicator shows the mixdown progress. You can cancel the export process during mixdown by clicking Cancel.

When the mixdown is complete, iTunes opens with your song in the new playlist, and plays it automatically.



- 4 Press the Spacebar to stop playing the song, and then press Command-Q to close iTunes.

After your song has been sent to iTunes, you can access it from any of the iLife applications through the Media Browser.

- 5 Select the GarageBand window to make it active, if necessary, and press Command-R to open the Media Browser. Select the Audio pane, if necessary.

The GarageBand '11 playlist appears in the iTunes library of the Media Browser. Your song can now be used in any of the iLife applications, including GarageBand and iMovie.

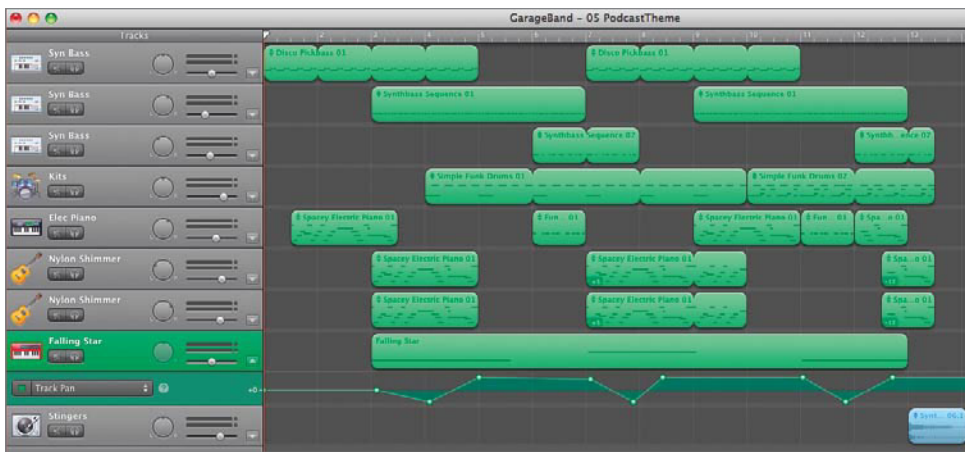
- 6 Save your project. When asked if you'd like to save with iLife preview, click Yes. Then close the project.

NOTE ► Any tracks that are muted at the time you export will not be included in the song. This can work to your advantage if you want to make a practice version that excludes certain instruments.

Saving a Project with iLife Preview

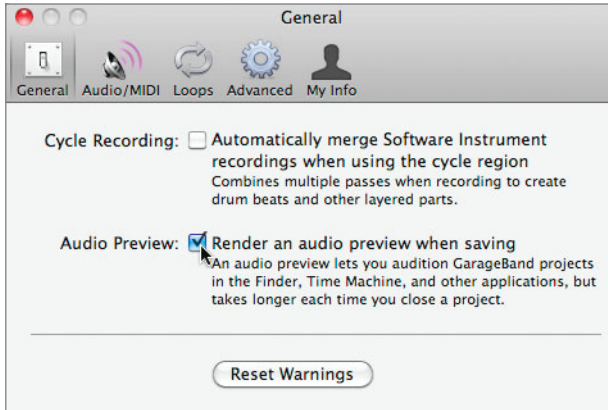
In this exercise, you'll open the project **05 PodcastTheme** and save it with iLife preview so it can be used later in a podcast project. If you've been following the exercises in the book, you've frequently been instructed not to save projects with iLife preview because it takes longer to save projects and the feature is useful only for the projects you want to share with other iLife applications—or GarageBand itself. This is the first time you've needed that feature.

- 1 Choose File > Open and choose GarageBand > Lesson 19 > **05 PodcastTheme**.
- 2 If you completed all of the exercises in Lesson 4, play the project once for nostalgia's sake. If not, this is an example of a project created in GarageBand primarily using Apple Loops.



Notice the Pan curve showing below the Falling Star track. This automation was created to dynamically pan the sound of the Falling Star track between the left and right speakers throughout the song.

- 3 Choose GarageBand > Preferences. In the Preferences window, click the General button.
- 4 At the bottom of the General preferences, select the Audio Preview checkbox, if it is not already selected.

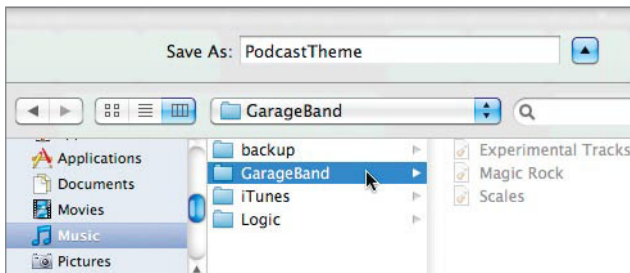


NOTE ► When you turn on this feature, an alert about saving with iLife preview will appear when you save other GarageBand projects until the feature is turned off. When the feature is on, saving each project will take longer.

5 Close the Preferences window.

Because you want to make this project available in the Media Browser, let's change the location while saving with iLife preview.

6 Choose File > Save As. In the Save As field, type *PodcastTheme*. Select the Music folder, and then click the GarageBand folder. Choose Save.



TIP ► The /Music/GarageBand/ folder is the default location for saving GarageBand projects. If you want to make all of your projects easier to locate and use them in other applications, make a practice of saving to the default location.

- 7 Choose File > Close. When prompted to save with iLife preview, choose Yes.

This project now includes a rendered preview of the project so you can preview it in other iLife applications. In fact, you'll next use that song as the title theme for a podcast.

Finishing a Podcast

Podcasts are like radio or TV shows that can be downloaded over the Internet, and they are one of the fastest-growing forms of multimedia. With GarageBand, you can create podcast episodes and then upload them to the Internet using iWeb or another application.

There are four primary types of podcasts: audio podcasts; enhanced audio podcasts with markers, artwork, and URLs; video podcasts containing a movie; and enhanced video podcasts containing a movie, markers, artwork, and URLs.

In these exercises, you'll add the finishing touches to a podcast and prepare it for sharing with iWeb. You'll add theme music, edit the artwork, and add a URL link. Then, you will check the podcast info to see if it needs updating before sharing. Let's get started.

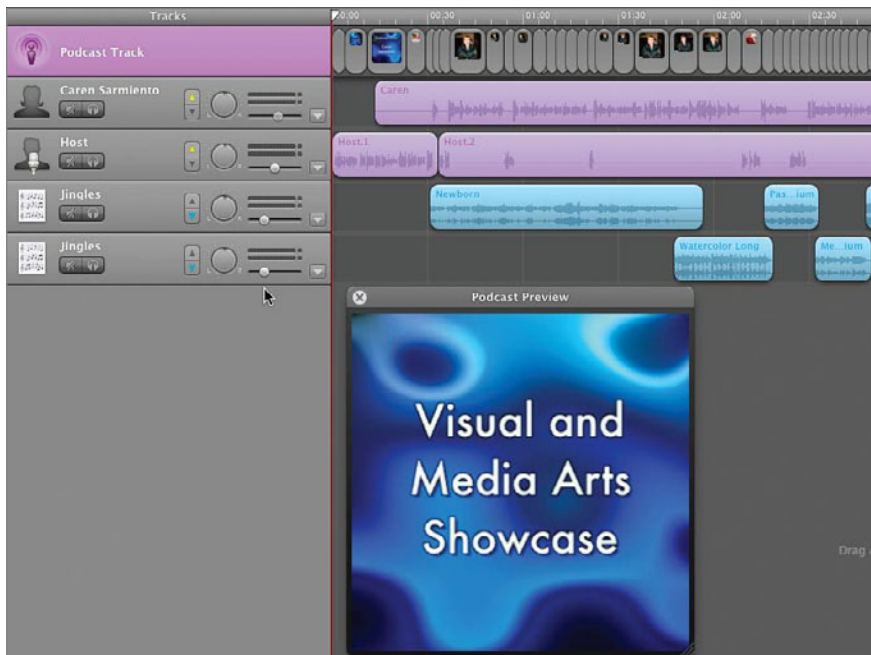
NOTE ► A project can include either a podcast track or a movie track, but not both. If you try to show the video track for a project that contains a podcast track, a dialog appears asking if you want to replace the podcast track with a video track, and vice versa.

- 1 Open the project Lesson 19 > **06 Podcast** and save it to your My GarageBand Projects folder. The project contains a lot of media files and is fairly large, so it may take a few minutes to save.



Podcast Track artwork

- 2 On the right side of the Podcast Track header, click the Preview button to show the Preview window.



- 3 After the Preview window opens, drag the lower-right corner of the window to make it larger to suit yourself.
- 4 Play the first few seconds of the podcast to see how the podcast artwork is displayed in the preview window during playback. Stop playback. You probably noticed the lack of music during the introduction at the beginning of the episode. No problem, you'll fix that in the next exercise.

This podcast project is an interview with visual artist Caren Sarmiento about her career as an art teacher, innovative professional painter, and sculptor. The podcast is an episode of an ongoing series, Visual and Media Arts Showcase, that features visual artists and musicians as well as professionals and industry leaders in film, television, and multimedia production.

The podcast episode that you will be working with includes two recorded Real Instrument voice tracks, and two Jingles tracks containing royalty-free jingles installed with the GarageBand Apple Loops. The podcast track is showing above the audio tracks, and includes artwork to be displayed as the podcast plays.

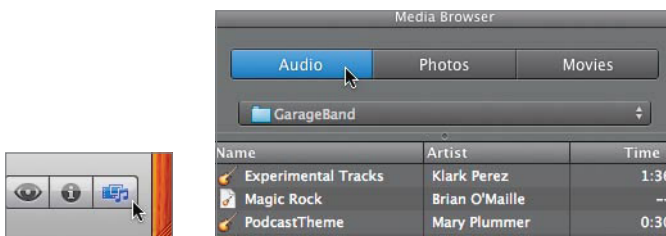
Importing a GarageBand Project

If you have listened to the beginning of the podcast, you'll notice that it's pretty darn boring without any music. Let's add the official podcast jingle to the beginning and end of the project. In the loop browser, you could choose one of the many professional jingles included with GarageBand. However, because this is a real podcast series, you'll be using the official podcast theme created in GarageBand.

When you create a piece of music in GarageBand, you could mix and export the finished song, and then import it into the podcast project; or you could simply import the GarageBand project. That's right! You can import one iLife project into another project. If you save a project with iLife preview, you can preview and use it in any of the other iLife applications, including GarageBand.

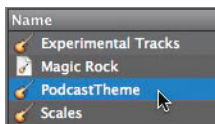
Adding a GarageBand Project from the Media Browser

To use a GarageBand project in another project, you need to place it in the Media Browser. Earlier, you saved the PodcastTheme project to the /Music/GarageBand folder, so it should be ready add to your project. Saving the project with iLife preview means that you can add it to your GarageBand Timeline. By default, the Media Browser gives you access to your iTunes library in the Audio pane of the Media Browser. You can also add other folders containing audio files, including GarageBand projects.



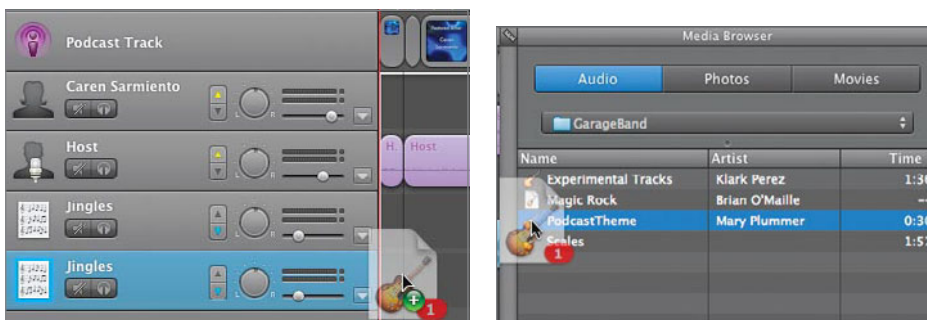
- 1 Press Command-R to open the Media Browser. Click the Audio button to show the Audio pane within the browser. Your iTunes folder and default GarageBand folder are automatically displayed in the Audio pane.

- 2 In the Media Browser, select the GarageBand folder, and then double-click the project **PodcastTheme** to preview it.



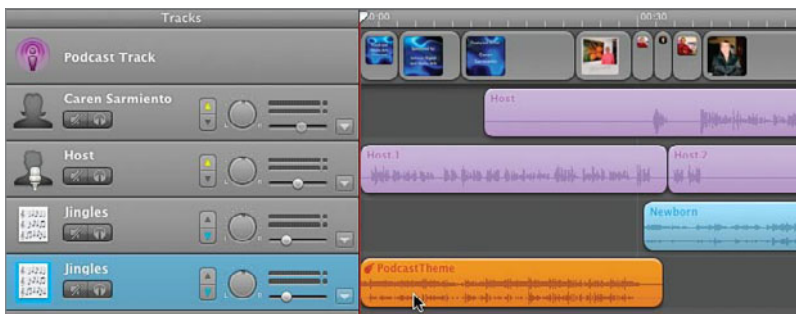
NOTE ► Normal GarageBand project file icons look like a paper document with a guitar printed on it. GarageBand project files saved with an iLife preview show only a guitar icon.

- 3 Drag **PodcastTheme** from the Media Browser to the beginning of the lowest Jingles track in the Timeline.



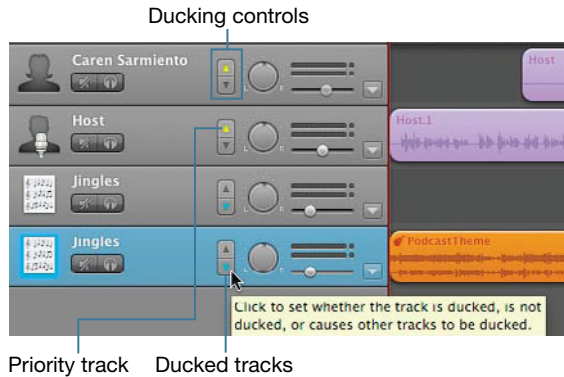
The project file appears in the Timeline as an orange (imported) Real Instrument region. The small guitar icon in the upper-left corner of the region shows that it is a GarageBand project instead of a standard audio file.

- 4 In the Timeline, move the PodcastTheme region so that it starts at the beginning of the project.



- 5 Play the first part of the podcast to hear the PodcastTheme project as the intro music.

The volume levels on the Jingles track are low to keep them in the background, rather than step over the vocal tracks. Notice the ducking controls in front of the pan controls on the track headers. In this project, these controls are automatically ducking (lowering) the volume level of the Jingles tracks to give volume priority to the narration.



NOTE ► Ducking controls can be turned on in the Media Browser or the Controls menu. They include two arrows pointing up to indicate that a track is a priority, and an arrow pointing down to indicate that the track will be ducked (lowered) any time audio is present in the priority tracks. If no arrow is selected, ducking will be ignored on that track.

- 6 Press Command-S to save your progress.

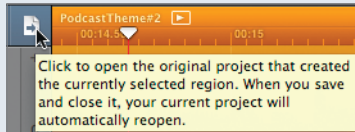
► Why Use a GarageBand Project Instead of an Audio File?

- You've successfully added a GarageBand project to the Timeline of another project. So what's the big deal? You could also export a finished mix of a song and add the mixed audio file to a project instead.
- But, wait, what if you change your mind? More importantly, what if your clients change their minds? It happens more often than not, depending on the client. What if someone wants you to make changes to the song in the Timeline? If you added an audio file, you'd have to find the original project or

Continues on next page

► Why Use a GarageBand Project Instead of an Audio File? *(continued)*

re-create it, make the changes, and export the file again. Oh yeah, then you'd still have to add the exported mix to the project. On the other hand, if you have a project in the Timeline, you can simply open the project in the editor, and click the Open Original project button.



- Voila! You're working on the original song again. Best of all, when you save the changes, the project automatically updates in the Timeline.

Working with Artwork and Markers

When you add artwork to a podcast, the artwork appears as you play the podcast episode in iTunes and work with it in iWeb.

Artwork added to the Podcast track creates a marker region the same length as the artwork in the Podcast track. Marker regions are used in podcasts to literally *mark* a specific region in the Timeline to include artwork, a chapter title, or a URL. When you publish your podcast, iWeb or other software will use these marker regions to include the designated information for that region in the project.

You can edit, move, and resize marker regions anytime while creating your podcast project. You can also add and edit chapter title markers and URL markers to the podcast track. In addition to the artwork used as marker regions in the podcast track, you can also designate the episode artwork in the editor. The episode artwork appears in the Podcast Preview window whenever no artwork is present in the current marker region.

NOTE ► If you didn't complete all of the previous exercises, feel free to open the project **07 PodcastArt** to catch up.

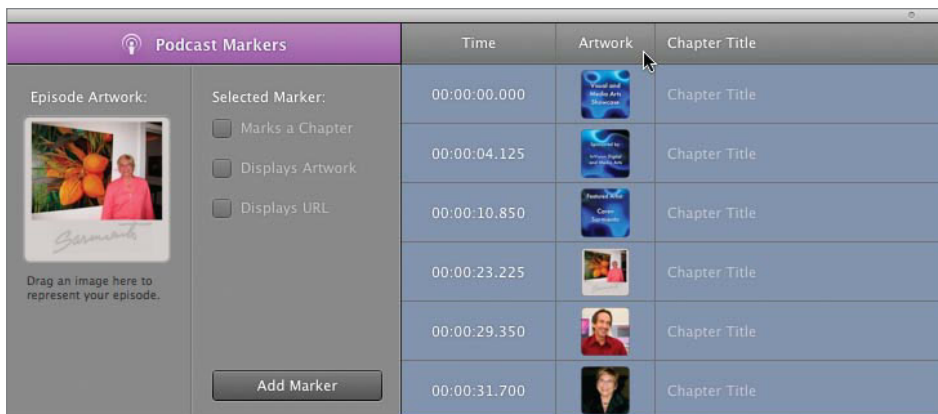
Using the Artwork Editor

The artwork for this podcast was added to the Podcast track by dragging it from a folder on the desktop. In this example, the podcast artwork has been mostly completed. However, on closer inspection at least one picture needs a little cropping and repositioning.

Fortunately, GarageBand includes a handy Artwork Editor you can use to resize and crop your artwork. To access the Artwork Editor, double-click the Artwork box in the Artwork column of the editor.

First, you'll want to open the podcast editor and locate the Artwork column.

- 1 Select the podcast track header, and press Command-E to open the editor, if necessary.

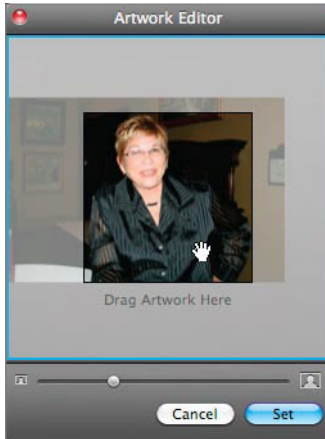


The podcast editor displays information about each marker and has an Add Marker button to create new markers. The Artwork column shows a thumbnail picture of each marker's artwork in order from top to bottom. The Time column indicates the time in the LCD when the marker starts.

- 2 Scroll down through the marker list until you find the marker starting at 00.00.57.000. Double-click anywhere in the empty space between the number in the Time column, and the thumbnail in the Artwork column to move the playhead to that marker position. As you can see in the preview window, the picture of Caren is not framed very well. Part of her arm is cut off, and she is too far to the left in the frame.



- 3 In the Artwork column, double-click the thumbnail for the selected marker. The Artwork Editor opens with the artwork. The square frame represents what will be displayed in your podcast.



- 4 Drag the image to the right to center Caren's face. Feel free to drag the zoom slider left or right to scale the image if you'd like.
- 5 Click the Set button to save the image changes. Close the Artwork Editor.

The artwork updates based on the changes you made in the Artwork Editor. As for the amount of artwork that you use in your podcast, that is left to personal preference. Some podcasts contain only the episode artwork. Others, like this example, include supporting

photographs and examples of the artist's work, in addition to photographs of the artists that are displayed during the interview.

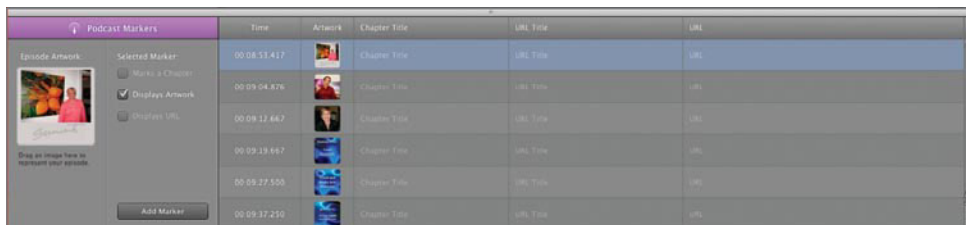
TIP ▶ If you have only a few photos for your podcast artwork, modifying them in the Artwork Editor can help add variety and keep the episode visually interesting.

Viewing Additional Marker Information

In addition to the Time and Artwork columns, the podcast editor also includes chapter title, URL title, and URL for each marker.

- 1 In the Timeline, click the podcast track header to select the podcast track. Notice that all of the marker regions appear white (selected) in the Timeline, and all of the markers are also selected in the podcast editor.
- 2 Click any empty space in the Timeline below the podcast track to deselect all of the markers. The podcast track remains selected until you select another track header or a region in the Timeline.

NOTE ▶ You can use the Track menu to show/hide the podcast track.



In the podcast editor, the marker regions are listed in chronological order from the beginning of the project. Notice the columns from left to right: Time, Artwork, Chapter Title, URL Title, and URL for each marker. You may have to scroll right to see all of the columns.

- 3 Drag the vertical scroller to look at all of the project's markers.

As you can see, a title sequence at the end of the project is similar to the one at the beginning. You'll add URL information for Caren Sarmiento's website in the next exercise.

The checkboxes in the editor show how the marker will be designated. Adding artwork to a marker region automatically selects the Displays Artwork checkbox for that marker.

Adding a URL to a Marker

You can add a website address (URL) to a marker region in a podcast or a marker in a movie and view the URL when you play the movie or podcast in iTunes. Not only will viewers see the URL when they play the finished project, they can also click the URL onscreen to open the webpage in their browsers.

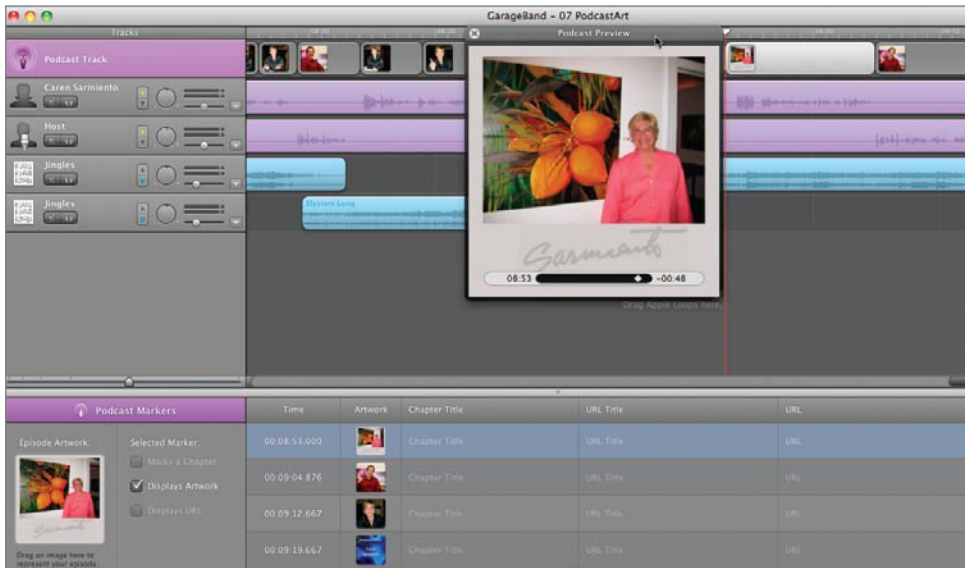
If you add a URL title, the title appears in the Album Artwork window of iTunes (in a published podcast). Clicking it opens the webpage for that URL. An example of a URL title might be “For More Information,” or “Check out our website.”

Let’s add a URL title and link to the end of the project where the guest says the web address. You’ll add the URL to an existing marker region. To get there, you can navigate in the Timeline or simply double-click the marker in the editor.

- 1 In the editor, scroll to the end of the marker list, and locate the marker that begins at 00:08:53:000. Then double-click any blank area in the marker’s row in the marker list to jump the playhead to the marker’s location in the Timeline.



You can now see the selected marker’s artwork in the Podcast Preview window. The selected marker region is also selected (and colored white) in the podcast track.



- 2 Press the Spacebar to play the project from the playhead position and listen to the dialogue that goes with the selected marker.

You can clearly hear the guest, Caren Sarmiento, giving her website address. This is a prime opportunity to add a URL title and link.

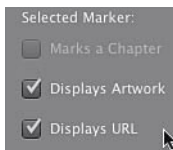
- 3 For the selected marker in the editor, in the URL Title field, type *Click here to visit CarenSarmiento.com* and press Return.



This message will appear below the podcast artwork when the podcast is published or played in iTunes.

- 4 For the selected marker, in the URL field, type *CarenSarmiento.com* and press Return. GarageBand will automatically add the *http://* to the address.

Notice that Displays URL is selected after you add a URL to the marker.



When you add a URL, the URL title for that marker appears over the marker artwork in the Podcast Preview window to show that the marker includes a URL. Don't worry if it looks like the URL title is in the middle of the artwork. In the exported podcast, it will actually show up below the artwork.



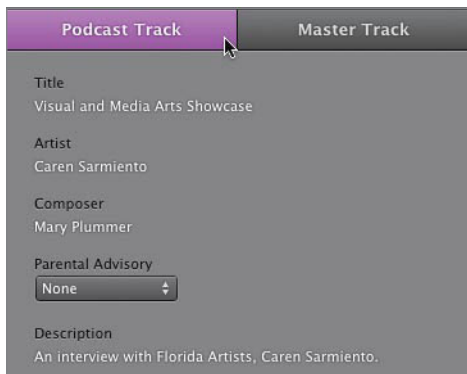
- 5 Play the marker to see the URL title appear in the Podcast Preview window.

Feel free to click the URL title in the Podcast Preview window to open the webpage. If your computer is not currently connected to the Internet, your browser will try to open the page and then tell you that you're not connected.

Adding Podcast Episode Info

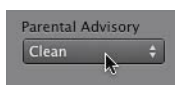
The last step to finish your podcast episode is to add the episode information, which includes the title, artist information, a description of the episode, and a parental advisory. The episode information is available when you work on the podcast in iWeb and when you view the podcast in iTunes.

- 1 Press Command-I or double-click the podcast track header in the Timeline. The podcast track appears in the Track Info pane.



For this exercise, leave the default information in the Artist and Composer fields as designated in GarageBand preferences. These fields could be modified to reflect the name of the company producing the podcast, or whatever is appropriate for this specific podcast.

- 2 From the Parental Advisory pop-up menu, choose Clean.

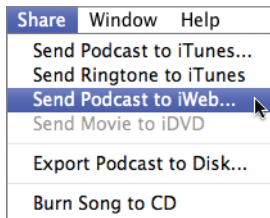


- 3 Choose File > Save As and save the finished podcast as *PodcastFinal* to the My GarageBand Projects folder.
- 4 Play the podcast from start to finish to see the completed project.

NOTE ► If you didn't complete all of the steps in this lesson and would like to see the finished version of the podcast, open the project Lesson 19 > **08 PodcastFinal**.

Sending a Podcast to iWeb

When you finish your podcast project in GarageBand, you can either send it to iWeb for publishing on the Internet, or you can export it to disk so it can be finished using another application. Compression settings for podcast episodes are available if you choose to export the podcast to disk. Let's open the finished podcast project and save it to iWeb.



NOTE ► Turning on the cycle region has no effect on the length of the exported project. When you export a project containing a podcast track, the entire project from the beginning to the end of the last region is exported.

- 1 Open the project **08 PodcastFinal** from the Lesson 19 folder.
- 2 Choose Share > Send Podcast to iWeb.

A dialog appears with options for preparing the podcast episode for delivery to iWeb.

- 3 Choose AAC Encoder, if it is not already selected, from the Compress Using pop-up menu.

For this podcast, you need to use the AAC format because it is an enhanced podcast with pictures and web links.

- 4 Choose Higher Quality from the Audio Settings menu to ensure ideal sound for this enhanced podcast.

- 5 Select the Publish Podcast option, to make sure it is active.

Deselecting this setting will publish the artwork at the current size, which may not be optimal for podcast publishing.

- 6 Click Share.



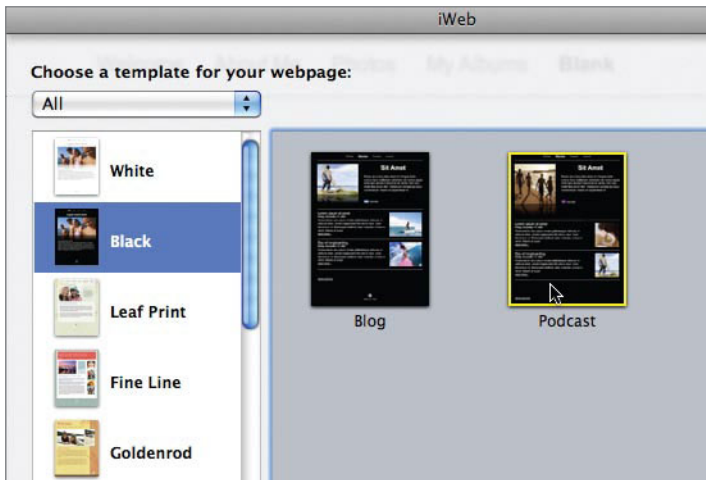
It may take a few minutes for the mixdown and conversion process since the podcast is more than eight minutes long.

You may see several dialogs on the way to iWeb, depending on how your computer is set up and whether you're currently using a MobileMe account on your computer. If you don't see any dialogs, just move on to the next step.

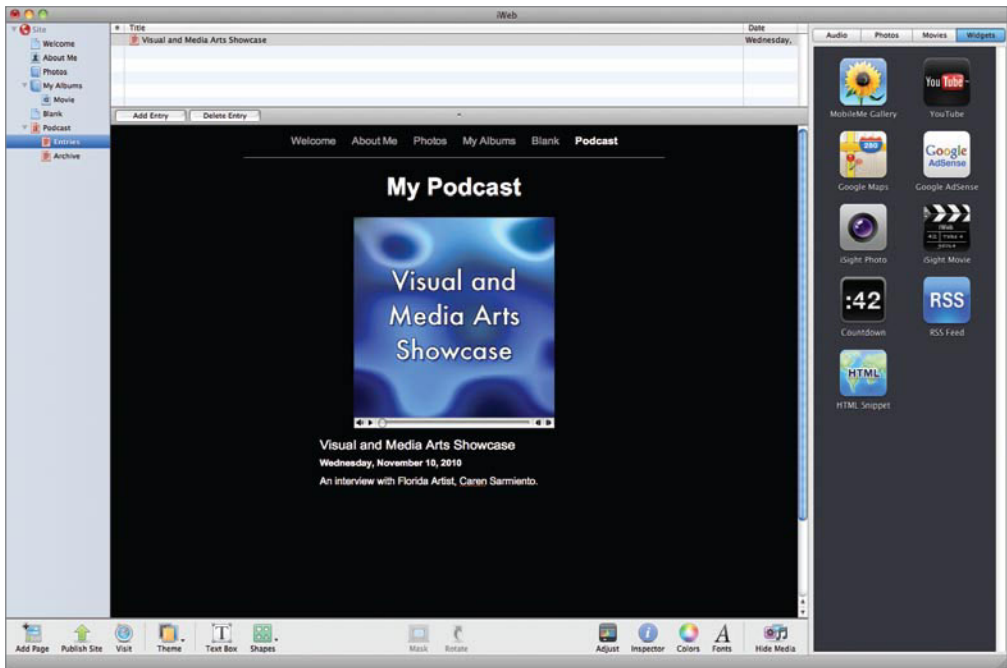
- 7 If an iWeb dialog appears asking you to allow or deny information for a keychain, click Allow for this instance.
- 8 If this is the first time you've opened iWeb, the welcome screen appears. Click Close.

Next you'll be prompted to choose a template for your webpage.

- 9 Choose Black as the template, and Podcast as the webpage. Then click Choose.



The iWeb page appears with the podcast centered on the page.



- 10 In the lower-left corner of the podcast player, click the Play button to see the compressed podcast. Feel free to stop previewing the podcast at any time.
- 11 When you're finished, save your project and quit iWeb.

Once a project is in iWeb, you can change the template, modify the text, and finish any changes you'd like to make to the project before publishing the podcast episode.
- 12 In GarageBand, close the **08 PodcastFinal** project.

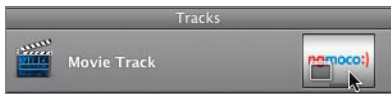
MORE INFO ► You can find more information about working with iWeb in the iWeb Help menu, or the book *Apple Training Series: iLife '11*.

Congratulations! You have completed the sharing lesson and are ready to share, send, or export your own projects.

Exporting a Project as a QuickTime Movie

GarageBand projects that contain a movie file can be exported as QuickTime movies. A QuickTime movie exported from a GarageBand project includes both the video and the soundtrack that you created. The Movie Sound track that came with the original movie file is also included in the soundtrack unless the track is muted when you export the movie. Let's export a project called **TouchPetsScore** as a QuickTime movie.

- 1 Open the project **09 TouchPetsScore** from the Lesson 19 folder.
- 2 On the right side of the video track header, click the Preview button to open the Movie Preview window, if necessary.



- 3 When the Movie Preview window opens, drag the lower-right corner of the window to make it larger.

Because you aren't currently working on the soundtrack, you might as well make the Movie Preview window larger so you can get a good look at the show. This larger

preview will also come in handy in the next section when you add markers to the video track before sending it to iDVD.



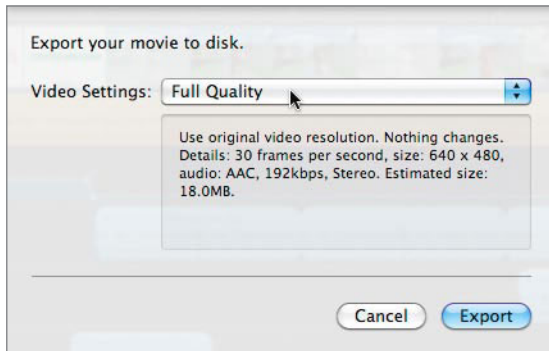
- 4 Play the project once through to familiarize yourself with the movie and the score.

What you're watching is a trailer for the TouchPets Dogs game by ngmoco:). This game is available exclusively for the iPhone/iPod Touch and iPad, and needs a score that captures the fun, energy, and personality of the virtual puppies. This type of project is a composer's dream, not only because it sparks the imagination to infinite musical opportunities, but also because it could be scored with nearly any music genre. Feel free to try composing your own score after this lesson.

Now that you've seen and heard the project, let's export it to disk.

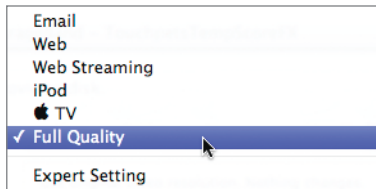
- 5 Choose Share > Export Movie to Disk.

The Export dialog appears at the top of the screen, with a pop-up menu for changing the video settings. You may need to move or resize the Movie Preview window to see the Export dialog.



- 6 From the Video Settings pop-up menu, choose Full Quality. This setting will maintain the original video resolution and settings. The file size will be only 18 MB. Feel free to experiment with the other export settings after you finish this lesson.

The other settings include Email, Web, Web Streaming, iPod, and AppleTV.



- 7 Click Export. The Export to Disk dialog opens to allow you to choose a destination for the file.
- 8 Save the project to your desktop.

You'll see a series of three progress indicators for creating a mixdown (mixing all of the audio tracks down to a stereo pair), converting the file to the specified format, and compressing the movie.

As you can see, it's incredibly easy to export a scoring project from GarageBand as a QuickTime movie.

Congratulations! You have completed the sharing lesson and are ready to share, send, or export your own projects.

Lesson Review

1. What should you do to a music project before exporting it to iTunes?
2. Where is the Arrange track in the Timeline?
3. What determines the length of the song file exported to iTunes?
4. Where do you set the information for exporting songs to iTunes?
5. What are the two ways that you can export or send a podcast project so that it can be published in iWeb or another application?
6. How do you open the Artwork Editor in a podcast project?

Answers

1. Check the master volume level to make sure the song is at a good level and not too low or too loud (no clipping).
2. The Arrange track is above the instrument tracks.
3. The length of a song exported from GarageBand is its duration from the beginning of the first measure in the Timeline to the end of the last region in the Timeline. If you use a cycle region, only the portion of the Timeline included in the region is exported.
4. You can set song and playlist information for iTunes in the GarageBand preferences window.
5. You can either send a podcast to iWeb, or save the project to disk, if you want to export it so that it can be published in iWeb or another application.
6. You can open the Artwork Editor by double-clicking a marker thumbnail in the Artwork column of the podcast editor.



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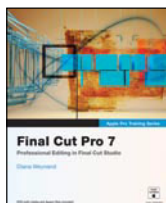
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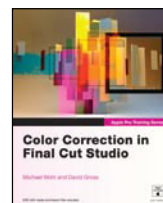
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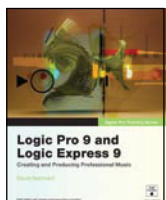
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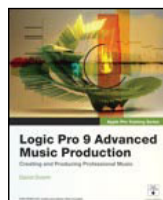
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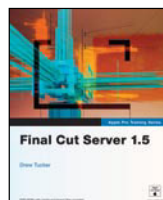
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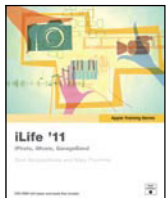


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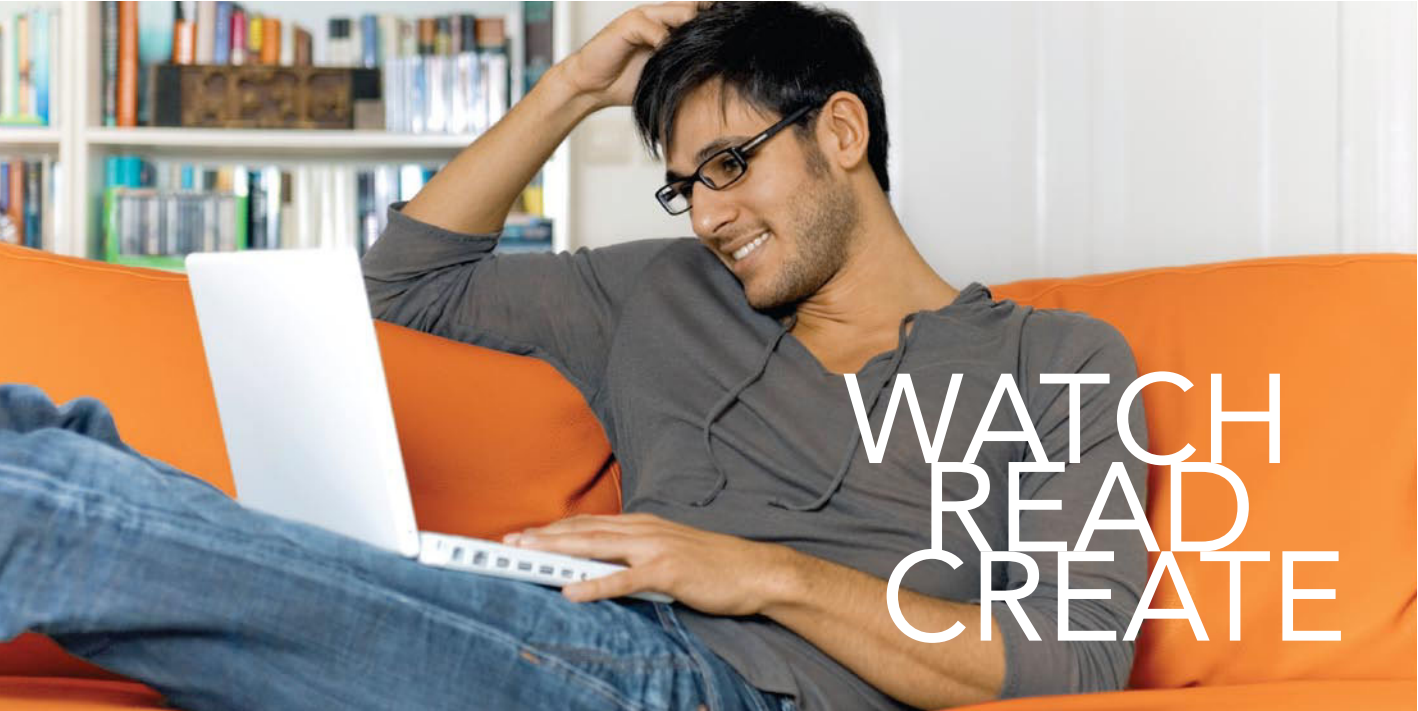


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