really calls attention to the layered drum and bass groove that starts after the intro.

Remember your newly acquired navigation and zooming skills. You will continue using them to finish this arrangement, and throughout the rest of this book (and long after).

Build Up the Arrangement

Now that you have the rhythmic foundation of your project (the drums and bass), you can continue building up the arrangement and avoid monotony by adding melodic elements.

Adding Lead Synths

In the next exercise, you will add a couple of synth arpeggio loops. And rather than let them loop throughout the song, you will keep things moving by alternating between the two synth melodies.

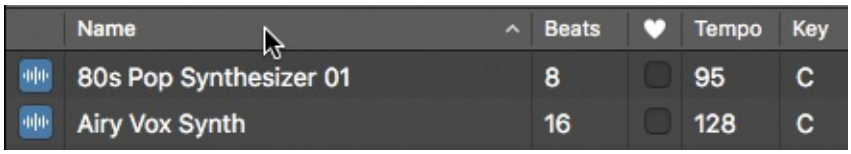
1. In the Loop Browser, click the X symbol in the search field to clear the previous search.

   You already have a solid rhythmic section with bass and low kick drums, so now you are looking for rather clean and high-pitched sounds.

2. Click the Synths and Clean keyword buttons.

3 In the search field, type *arpeggio*.

4 In the results list, click the Name column title to reorder the results by loop name.

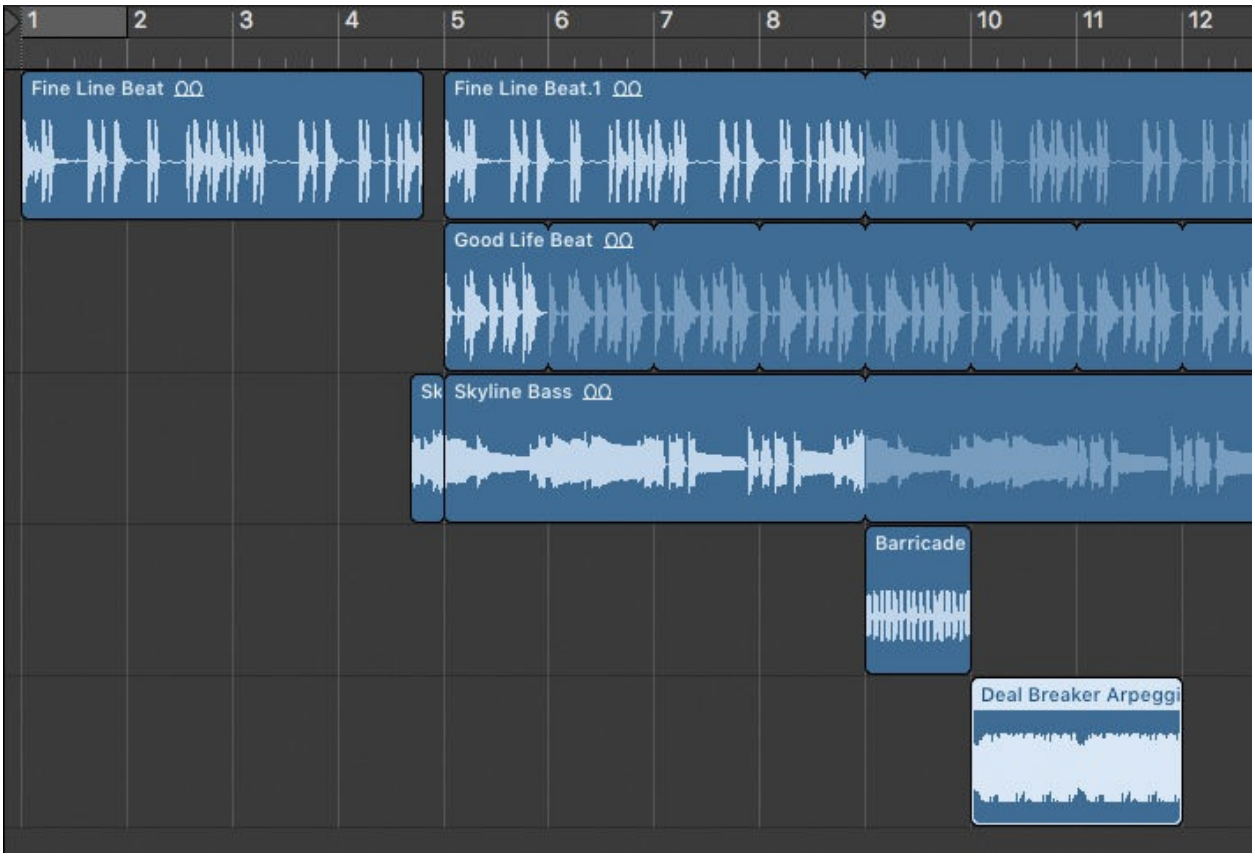


5 In the results list, click the first few loops to preview them.

Two loops fit the bill perfectly: **Barricade Arpeggio** and **Deal Breaker Arpeggio**. If necessary, adjust the zoom level in the workspace so you can comfortably drag both loops to two new tracks.

6 Drag the **Barricade Arpeggio** loop to the bottom of the workspace at bar 9.

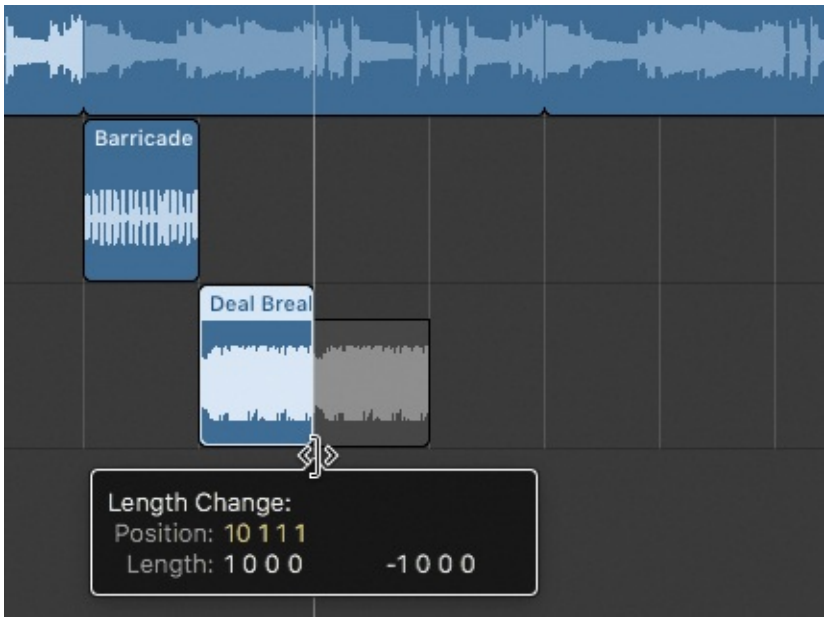
7 Drag the **Deal Breaker Arpeggio** loop to the bottom of the workspace at bar 10.



You will resize the *Deal Breaker Arpeggio* region to make it one bar long, the same length as the *Barricade Arpeggio* region.

8 Drag the lower-right corner of the *Deal Breaker Arpeggio* region to make

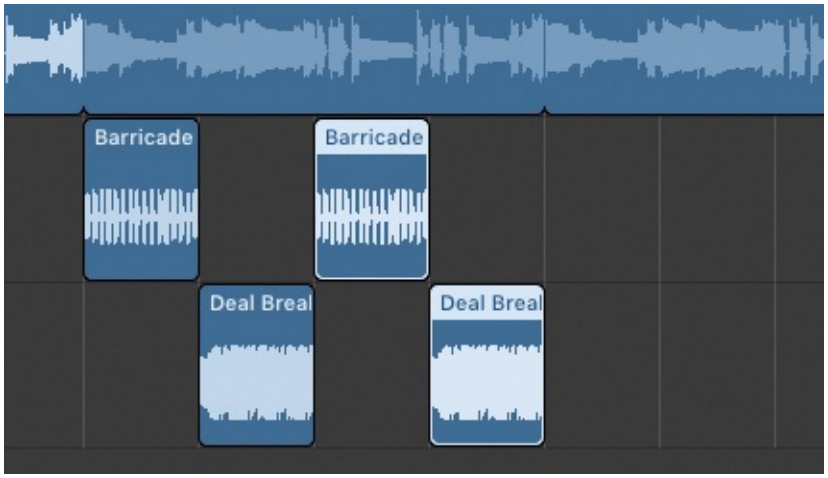
it one bar long.



You will now copy both regions so they play alternatively.

9 Drag a rectangle around both regions to select them.

10 Choose Edit > Repeat (or press Command-R).



11 Play the new synth section.

The two synths bring much-needed melody and movement to the song, and they work well in answering each other, each one successively playing its melody.

Currently, both synths sound as if they are coming from the center of the stereo field. To give them a little space, you can spread them apart acoustically by positioning them to either side of the stereo field.

12 On the *Barricade Arpeggio* track header, click the Pan knob and drag

down to turn the knob to the left.

13 On the *Deal Breaker Arpeggio* track, click the Pan knob and drag up to turn it to the right.

14 Play the synth section again.

You can now hear the two synths playing from opposite sides of the stereo field, which adds dimension to the music and helps separate the two instruments.

Creating a Break

Until now, you have kept your project interesting by introducing new elements on a regular basis: the bass at the end of the intro, the drums at bar 5, a synth at bar 9, and another synth at bar 10. But if you keep building your song by adding more elements, at some point those additions may backfire. The song can become bloated, with the arrangement losing focus, the mix becoming muddy, and the listeners tuning out. Who wants that?

So, if you can't add any more to your song, subtract! By the end of the new synth section, the listeners are so used to hearing the drums and the bass that they may no longer pay attention to them. If you remove them, you can create a big impact. So let's add a piano loop after the synth section, and then delete the drums and bass while the piano plays.

At the top of the Tracks area, look at the tool menus:

The menu to the left corresponds to the tool assigned to the mouse pointer.

The menu to the right corresponds to the tool assigned to the mouse pointer when holding down Command.

Currently the Left-click tool is assigned to the Pointer tool (arrow icon) and the Command-click tool is assigned to the Marquee tool (crosshair icon). You don't need to change those assignments, but if you're curious, feel free to click one of the tool menus to open it and see what's available. Click it again to close it.

The Loop Browser sometimes shows multiple loops with similar names, and that

usually means that the loops all follow the same groove, they all follow the same chord progression, or they are meant to work together. Let's see if we have any other Skyline Apple Loops meant to work with our **Skyline Bass** loop.

1 In the Loop Browser, click the Reset button to clear all keyword buttons.

2 In the search field, type *Skyline*.

The results list shows loops containing *Skyline* in their names.

3 Preview a few of the loops in the result list.

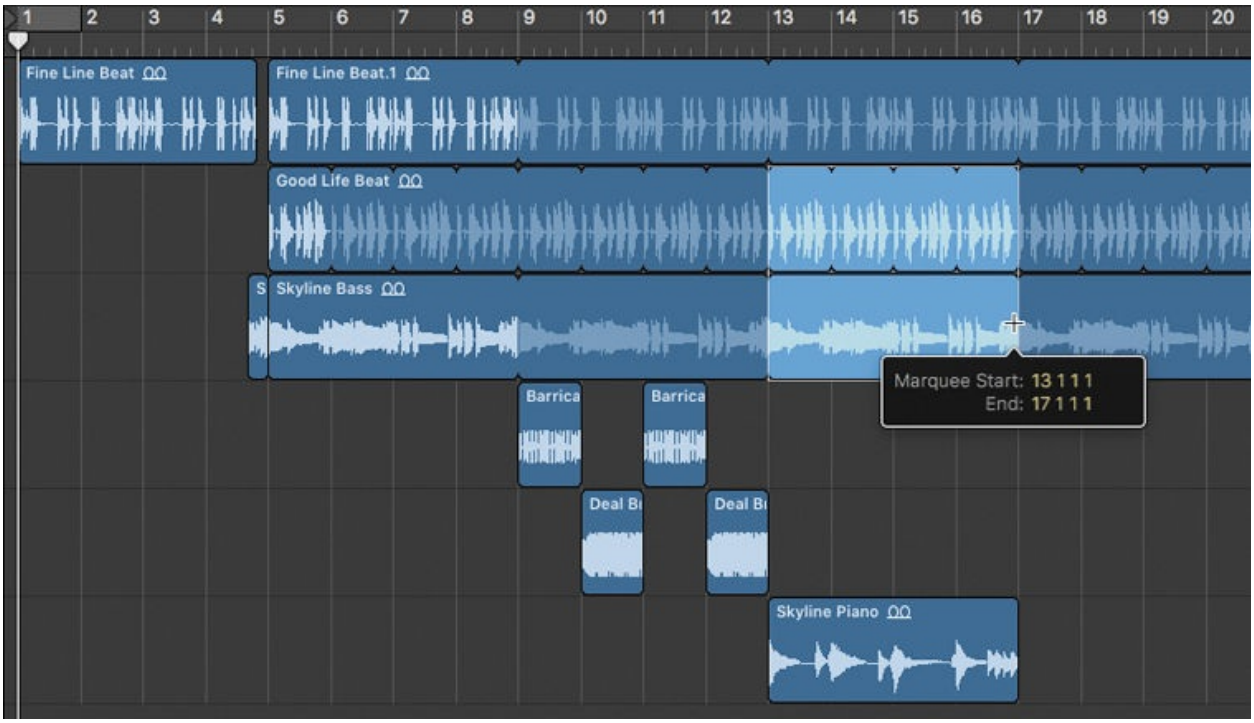
The loops sound like they would all work great together because they all follow the same harmony and rhythm.

4 Drag the **Skyline Piano** loop to the bottom of the workspace at bar 13.

You will now create the break by deleting the drums in track 2 and the bass in track 3 for the entire time the piano is playing.

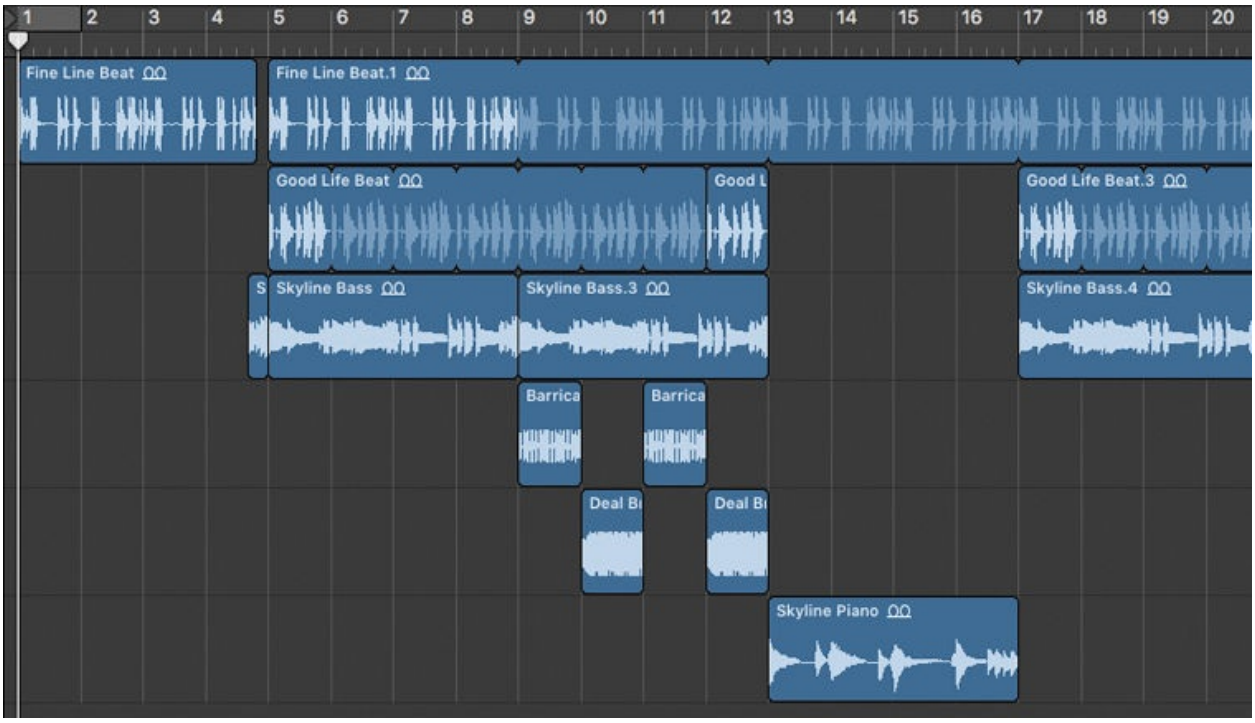
5 Hold down the Command key to turn the mouse pointer into a Marquee tool.

6 Command-drag around tracks 2 and 3 from bar 13 to bar 17.



The Marquee tool places a white highlight rectangle around the selected section of the loops.

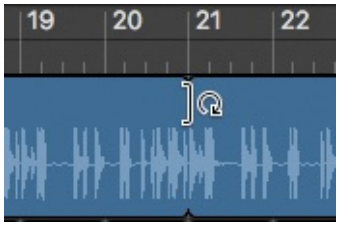
7 Choose Edit > Delete (or press Delete).



The section of the loops selected by the Marquee tool is deleted. Some loops are turned into regions before and after the empty space so the tracks stop and resume playing at the beginning and end of the removed section.

Let’s finish the song. You will let the rhythm section play four bars after the piano stops, and you’ll end the song at bar 21.

8 Move the mouse pointer to the upper part of the loops on track 1.

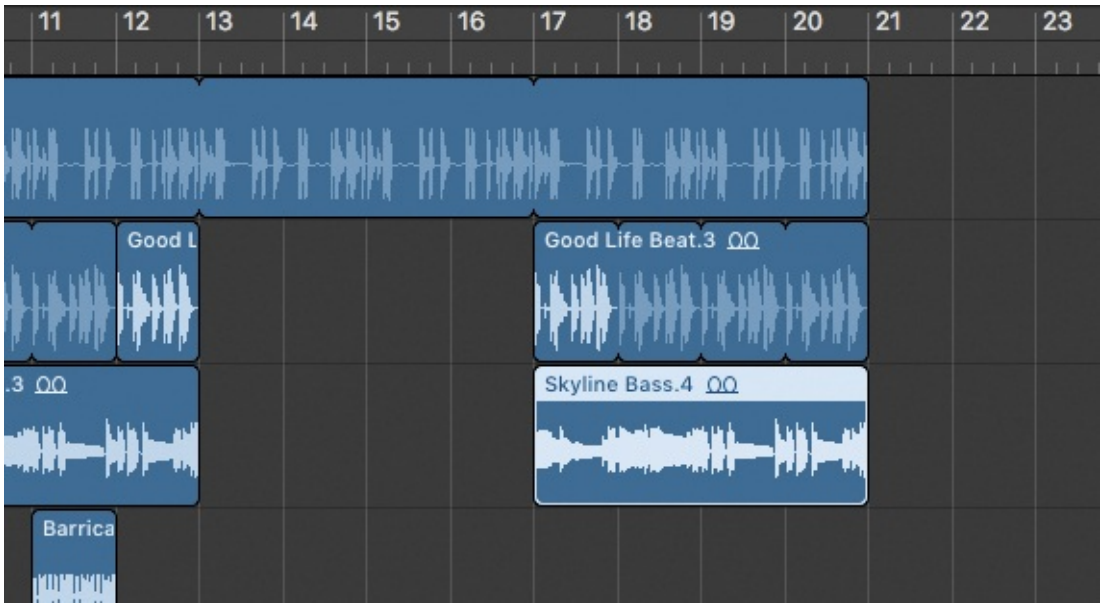


The mouse pointer turns into a Loop tool. You can click or drag the Loop tool where you want a region’s loops to end. Dragging offers the advantage of seeing the exact position in a help tag.

9 Drag the Loop tool to bar 21.

The *Fine Line Beat.1* region stops looping at bar 21.

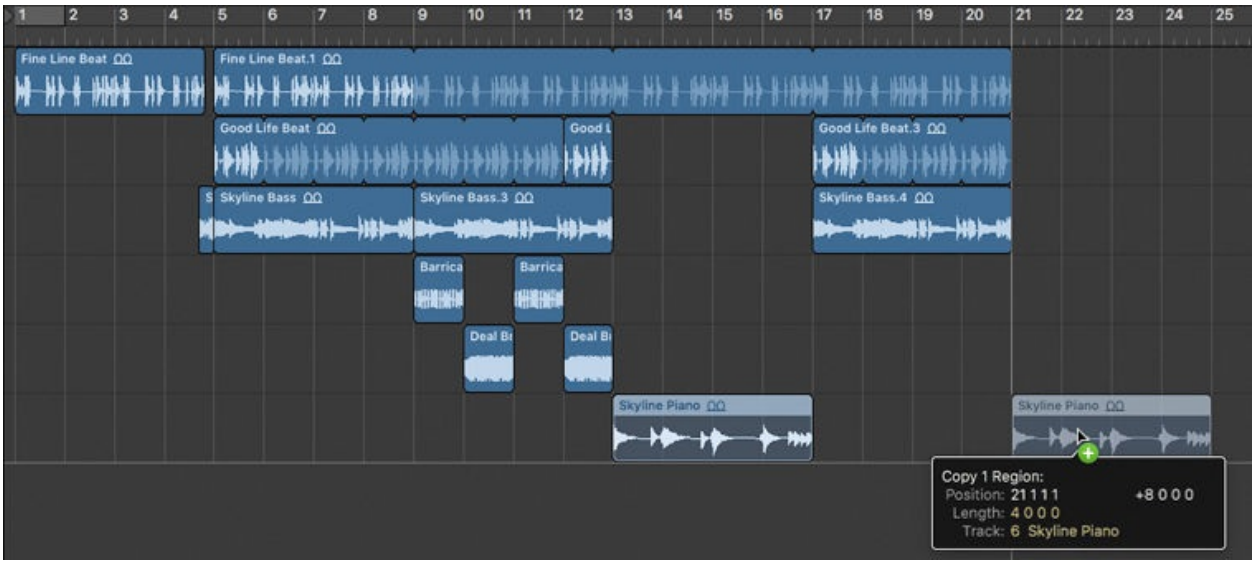
10 Repeat the same process to stop the drums on track 2 and the bass on track 3 at bar 21.



11 Move the playhead to bar 11 and press the Spacebar to play through the break and ending.

The break brings much needed space and silence, interrupts the flow of the rhythmic section, and automatically shines a light on the two remaining elements: the drum loop and the piano. After the break, the rhythmic section resumes, but the ending at bar 21 is too abrupt. Let’s bring back the piano by itself to create a quick outro.

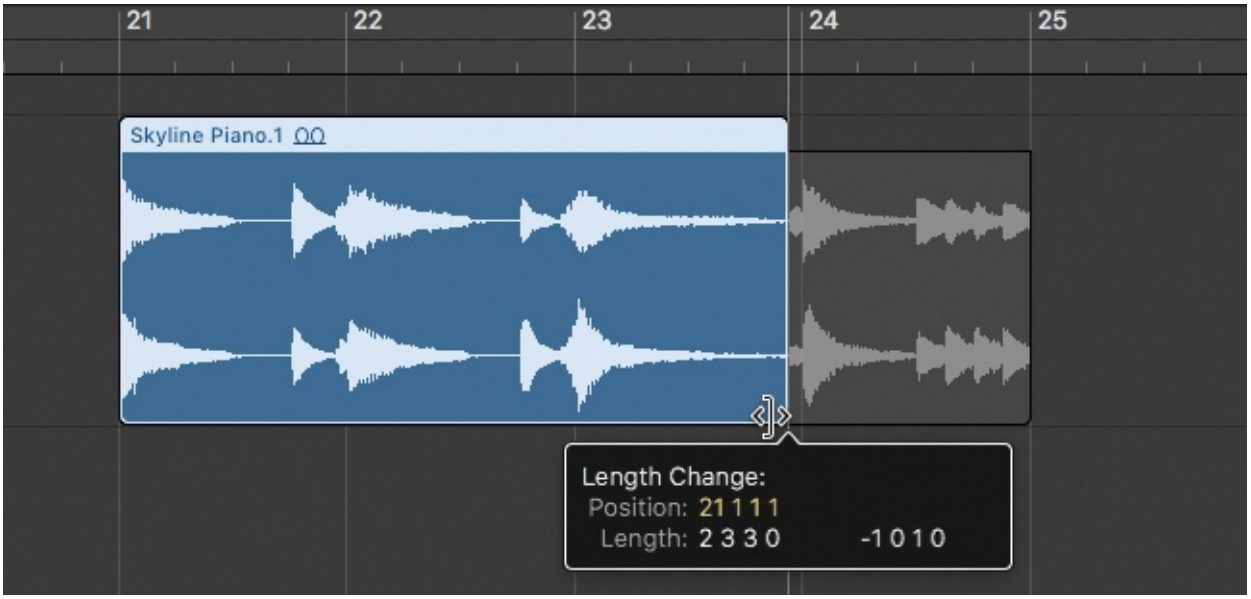
12 On track 6, Option-drag the *Skyline Piano* region to bar 21.



You will finally shorten the new copy of the piano region so it ends with a sustaining note, which will work better for an ending.

13 Control-Option-drag around the *Skyline Piano.1* region to zoom in on it.

14 Drag the lower-right corner of the *Skyline Piano.1* region to the left so that it ends with the long sustaining note in bar 23.



15 Control-Option-click the workspace to zoom out.

16 Play the entire project.

You have arranged your first song. Using only six Apple Loops, you've built a simple one-minute song that evolves from an original intro into a solid bass and drums groove. Then two synths share the lead melody for a few bars before the bass and drums abruptly stop to leave room for a piano break. Finally, the bass and drums groove returns, and the song finishes with a few sustained piano

and drums groove returns, and the song finishes with a few sustained piano notes. Really nice! You will now quickly mix the song and later export it to share it.

Mixing the Song

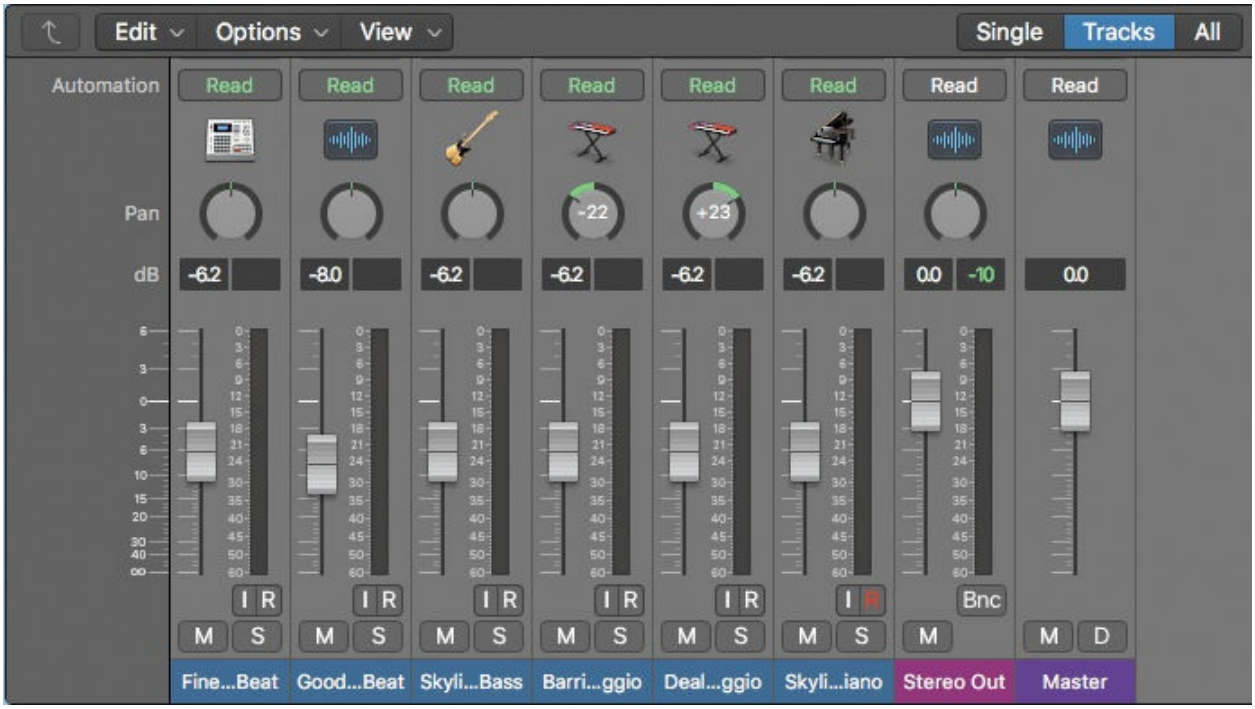
Now that you have arranged your regions in the workspace, you can focus on the sound of each instrument and how they sound as an ensemble. You can adjust each instrument's loudness and its position in the stereo field, and even modify its timbre so all the instruments blend harmoniously.

Choosing Names and Icons for Tracks and Channel Strips

You will open the Mixer, and name your channel strips so you can easily determine which instrument they control. You will then adjust the Volume faders and Pan knobs to change levels and stereo positions, and use plug-ins to process some of the instruments.

1 In the control bar, click the Mixer button (or press X).

At the bottom of the main window, the Mixer opens.



The channel strips are named after the Apple Loops that you previously

dragged to the workplace. To more quickly locate instruments, you can assign the channel strips more descriptive names.

To edit the name on a track header and on its corresponding channel strip, you can double-click either and type the new name.

2 At the bottom of the first channel strip, double-click the *Fine Line Beat* name.

A text entry box appears, and the current name—*Fine Line Beat*—is selected.

3 Type *Beat Loop*, and press Return.

Both the first channel strip in the Mixer and track 1 in the Tracks area are renamed *Beat Loop*. Renaming tracks in the track header is often easier because you can quickly identify instruments by looking at the regions you've been arranging.

4 In the control bar, click the Mixer button again (or press X) to close the Mixer.

5 In track 2's track header, double-click the *Good Life Beat* name.

A text entry box opens. This time you will enter a name and open the text entry box of the next track with a single key command.

6 Type *Drums*, and press Tab.

Track 2 is renamed *Drums*. A text entry box opens on track 3's name, ready to be edited.

7 Type *Bass*, and press Tab.

Track 3 is renamed *Bass*, and track 4 is ready to be renamed. Continue this process to change the name of the three remaining tracks as follows:

- Track 4 to *Synth 1*
- Track 5 to *Synth 2*
- Track 6 to *Piano*

Tip

In the Mixer, you can also press Tab to enter a name and open the text entry box of the next channel strip. Should you enter a name incorrectly, press Shift-Tab to open the text entry box of the previous track or channel strip.

Notice that track 2 has only a generic audio waveform icon. That's because the track was created before you dragged the **Good Life Beat** loop to it at the very beginning of this lesson.

8 In the Tracks area, Control-click the icon in track 2's track header.

A shortcut menu displays icons organized in categories.

9 In the shortcut menu, click the Drums category.

A collection of various drum icons appears.

10 Click an icon representing a drum kit.

The icon is now visible in the track header. The same icon is also assigned to the corresponding channel strip in the Mixer, as you will see in a moment.

When your creative juices are flowing and you just want to make a quick adjustment to the sound of an instrument, wasting time looking for the correct track or channel strip can be frustrating. Or worse, you could become a victim of the classic mistake: turning knobs and faders but not hearing the sound reacting to your adjustments, until you realize you were adjusting the wrong instrument!

Taking a minute to assign your tracks and channel strips descriptive names and appropriate icons can accelerate your workflow and avoid potentially costly mistakes.

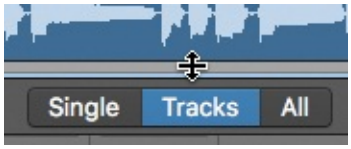
Adjusting Volume and Stereo Position

With new names and icons assigned, your Mixer is ready. You will now open it and adjust some of the instruments' volume levels and stereo positions.

1 In the control bar, click the Mixer button (or press X) to open the Mixer.

You can see your new names at the bottom of the channel strips. You can resize the Mixer area to see more of the channel strips.

2 Place the mouse pointer between the Tracks area and the Mixer area.



A Resize pointer appears.

3 Drag the Resize pointer up as far as it will go.

The Mixer is now taller, and you can see more options at the top of the channel strips. There are a lot of options, but don't worry. Just because you have many tools available doesn't mean you have to use them all. You will learn about those options as needed.

Note

Depending on the size of your display, you may not be able to open up the Mixer all the way. In that case, you can drag the vertical scrollbar to the right of the Mixer to scroll up and see all the options.

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4 Play your song.

With the Mixer open and occupying most of the main window, the workspace is much smaller. Depending on your display resolution, navigating your song efficiently may prove challenging (or nearly

navigating your song efficiently may prove challenging (or nearly impossible). To remedy that, you will now adjust the locators in the Tracks area ruler, and use Cycle mode to continuously repeat a part of the song that contains all the instruments.

5 Click the Mixer button (or press X) to close the Mixer.

If necessary, scroll or zoom out in the workspace so you can see your entire arrangement. Remember: to see all your regions, click the background of the workspace and press Z.

6 Drag the upper half of the ruler from bar 9 to bar 13.

Cycle mode is turned on, and a cycle area appears where you dragged. The cycle area spans the part of the song in which the two synths, the drums, and the bass play, so you can focus on adjusting the sounds of those instruments. Later, when you're ready to work with the piano, you will just drag the cycle area to the following four bars, where the piano plays.

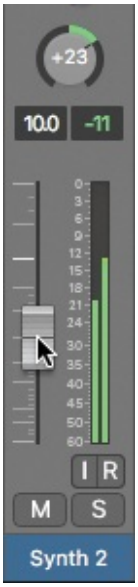
7 Press the Spacebar.

Playback starts at the beginning of the cycle area, and the playhead keeps repeating bars 9 through 13, where the two synths are playing.

8 Click the Mixer button (or press X) to open the Mixer.

Synth 2 is significantly louder than Synth 1. Let's bring its level down so that both synths are equally loud.

9 In the Mixer, click the background to deselect the channel strips, and on the Synth 2 channel strip, drag down the Volume fader.



Note

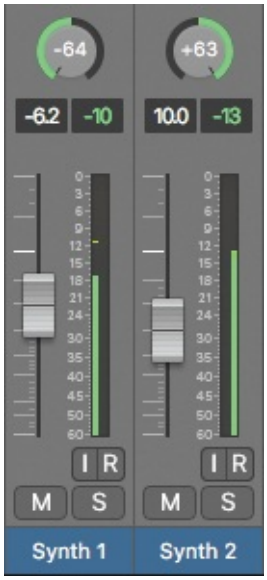
When space does not permit, negative Level and Gain values are displayed without the – (minus sign).

Continue adjusting the Volume fader until the Gain display reads 10.0. The Volume fader affects how much gain is applied to the audio signal flowing through the channel strip and, therefore, controls how loudly that instrument plays. Synth 2 is now quieter and closer to the level of Synth 1.

You will now adjust the Pan knobs on the two synth tracks to spread them farther apart in the stereo image.

10 On the Synth 1 channel strip, drag the Pan knob all the way down to –64.

11 On the Synth 2 channel strip, drag the Pan knob all the way up to +63.



The synths sound too far apart now and seem disconnected from the rhythm section. The effect is even more pronounced if you listen to the song through headphones.

Let’s bring the two synths back toward the center of the mix.

12 Adjust the Synth 1 and Synth 2 pan knobs to values of about –35 and +35, respectively.

The two synths come back closer to the center of the stereo field. Now they sound like they belong in the mix.

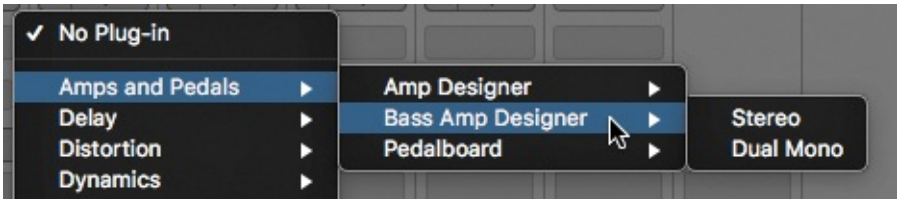
Processing Instruments with Plug-Ins

There’s more to mixing than adjusting each instrument’s volume and stereo position. Now you will apply effect plug-ins to process the audio signal flowing through the channel strip, thereby changing the tone of your instruments.

In this exercise, you will use a bass amp plug-in to add an edgier character to the bass, and a reverberation plug-in to bring warmth and dimension to the piano.

1 On the Bass channel strip, click the Audio FX slot to open the plug-in menu.

2 From the menu, choose Amps and Pedals > Bass Amp Designer.

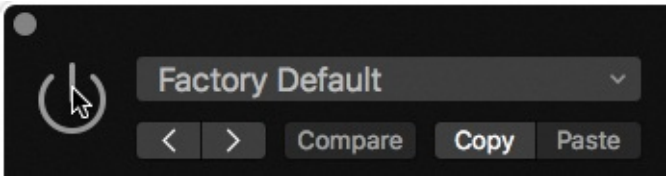


Tip

When choosing a plug-in from a pop-up menu, you need to navigate to the name of the plug-in, but you don’t have to select a plug-in format such as stereo or mono. When multiple formats are available in the menu, if you navigate to only the name of the plug-in, the most likely plug-in format is automatically used.

The Bass Amp Designer plug-in is inserted in the Audio FX slot on the channel strip, and its interface opens. Let’s compare the sound of the bass with and without the plug-in applied.

3 Click the Power button.



The Power button dims to indicate that the plug-in is off. You can hear what the bass sounds like without the plug-in. It sounds a bit muffled and vaguely distant.

4 Click the Power button again.

The attacks of the bass notes sound brighter and have a little grit to them, giving the bass character. You could experiment with different amp models, but right now the Factory Default setting works great, so let’s move on.

The bass amp also made the bass a bit louder. In fact, it is a little too loud now.

5 Close the plug-in window by clicking the close button in the upper-left corner.

6 In the Mixer, drag down the Bass Volume fader until the Gain display reads about 11.0.

Note

When space does not permit, negative Level and Gain values are displayed without the – (minus sign).

You will now add a plug-in to the Piano channel strip. But first you need to move the cycle area so you can hear the piano.

7 Stop playback.

8 In the Tracks area, in the ruler, drag the cycle area 4 bars to the right, so it goes from bar 13 to 17.

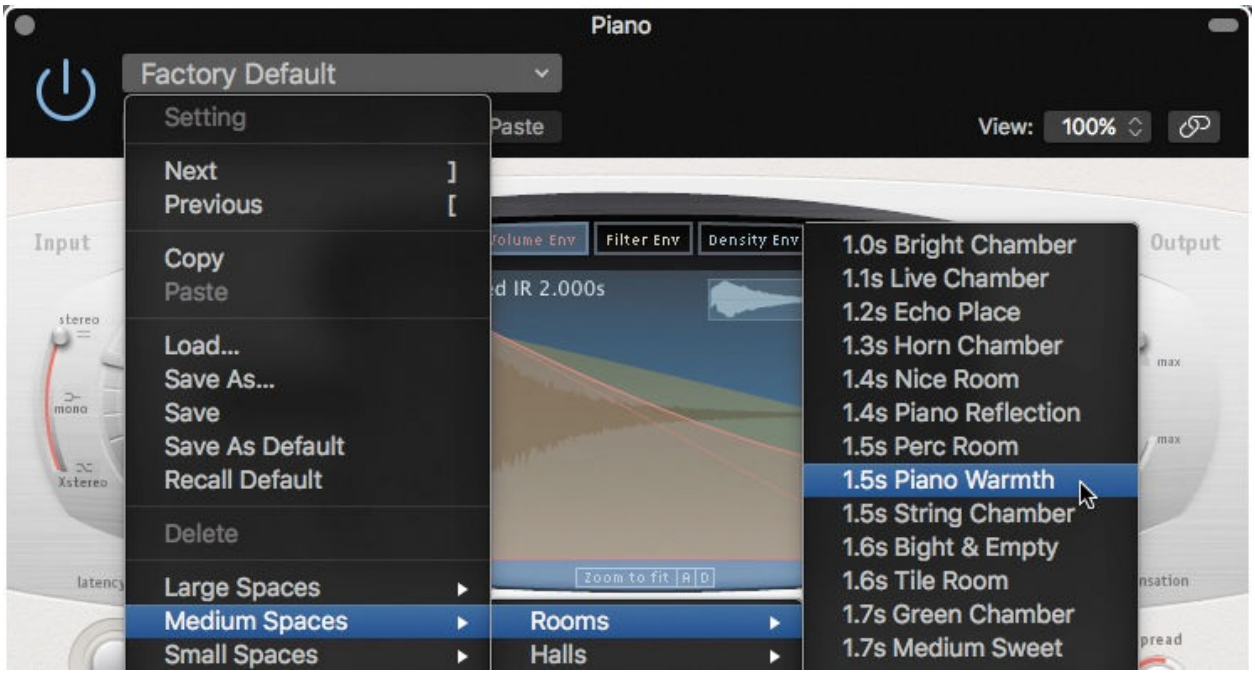
9 Start playback.

10 In the Mixer, click the Audio FX slot on the Piano channel strip.

11 From the pop-up menu, choose Reverb > Space Designer.

Now change the plug-in setting.

12 At the top of the plug-in interface, from the Setting pop-up menu, choose Medium Spaces > Rooms > 1.5s Piano Warmth.



The piano immediately occupies more space and has more body. And in your arrangement, whenever the piano plays, not many other instruments are playing, so this setting works great.

13 Click the close button to close the Space Designer plug-in window.

14 Click the Mixer button (or press X) to close it.

15 In the ruler, click the cycle area (or press C) to turn off Cycle mode.

16 Play the entire song.

In the inspector, look at the peak level display on the Output channel strip. When a part of the song is too loud, the Output channel strip peak level display shows a positive value and turns red, indicating that the audio signal is distorted. In this project, the highest peak in the song is under 0

dB FS, and no distortion is created.

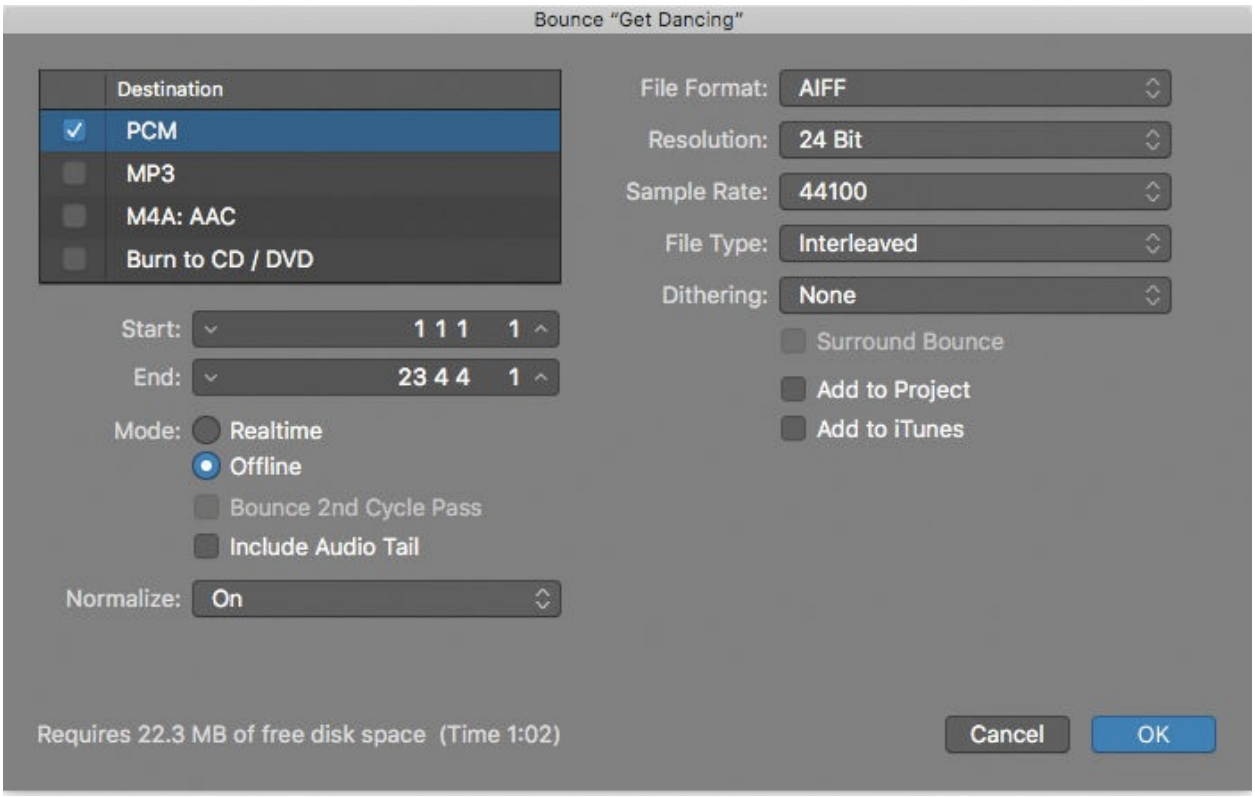
In a relatively short time, you have produced a one-minute instrumental song with six tracks, edited the regions in the workspace to build an arrangement, mixed the instruments in the Mixer, and added plug-ins to process their sounds. You now have a piece of music that would work fine, for example, during the credits of a radio or TV show or as a music bed for a TV ad.

Mixing Down to a Stereo File

The last step is to mix down the music to a single stereo audio file so that anyone can play it on consumer-level audio software or hardware. In this exercise, you will bounce the project to a stereo audio file. By first selecting all your regions, you avoid the need to manually adjust the bounce start and end positions.

1 In the Tracks area, choose Edit > Select > All (or press Command-A) to select all regions.

2 In the main menu bar, choose File > Bounce > Project or Section (or press Command-B) to open the Bounce dialog.

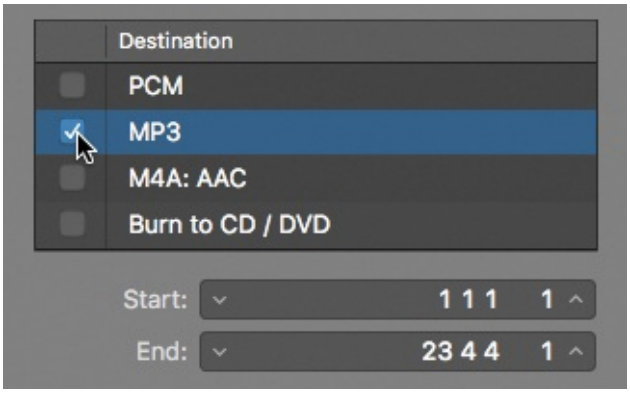


You can choose one or more Destination formats and adjust parameters for each format.

You will bounce an MP3 format file that you can easily email or upload to

a website.

3 Deselect PCM and select the MP3 checkbox.



Below the Destination box, notice that the End position is correctly adjusted to the end of bar 23, when the last piano note finishes sustaining. That's because you selected all the regions in your workspace at the beginning of this exercise.

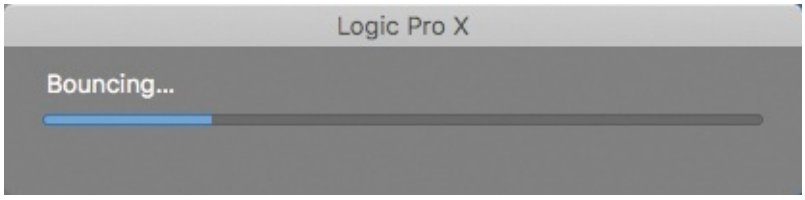
4 In the Bounce dialog, click OK (or press Return).

A Bounce dialog opens. Bouncing creates a new stereo audio file on your hard drive.

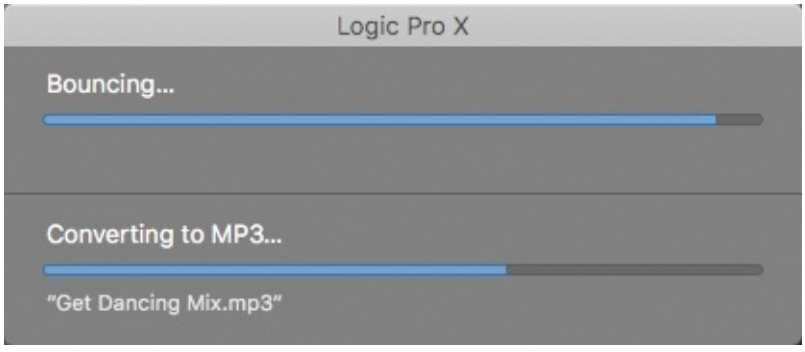
You will save the new MP3 file to your desktop.

5 In the Save As field, enter *Get Dancing Mix*, and from the Where pop-up menu, choose Desktop (or press Command-D).

6 Click Bounce (or press Return).



A Bouncing progress bar opens, and toward the end of the operation, an additional progress bar indicates the preparation of the MP3 file.



When the progress bars disappear, your MP3 file is ready on your desktop.

7 Choose Logic Pro X > Hide Logic Pro X (or press Command-H).

Logic Pro X is hidden, and you can see your desktop.

Tip

If you have multiple apps open and you want to hide them all in order to see your desktop, first click the Finder icon in the Dock (or press Command-Tab to select the Finder) and choose Finder > Hide Others (or press Command-Option-H). To unhide an app, press Command-Tab to select it.

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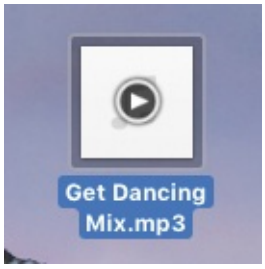
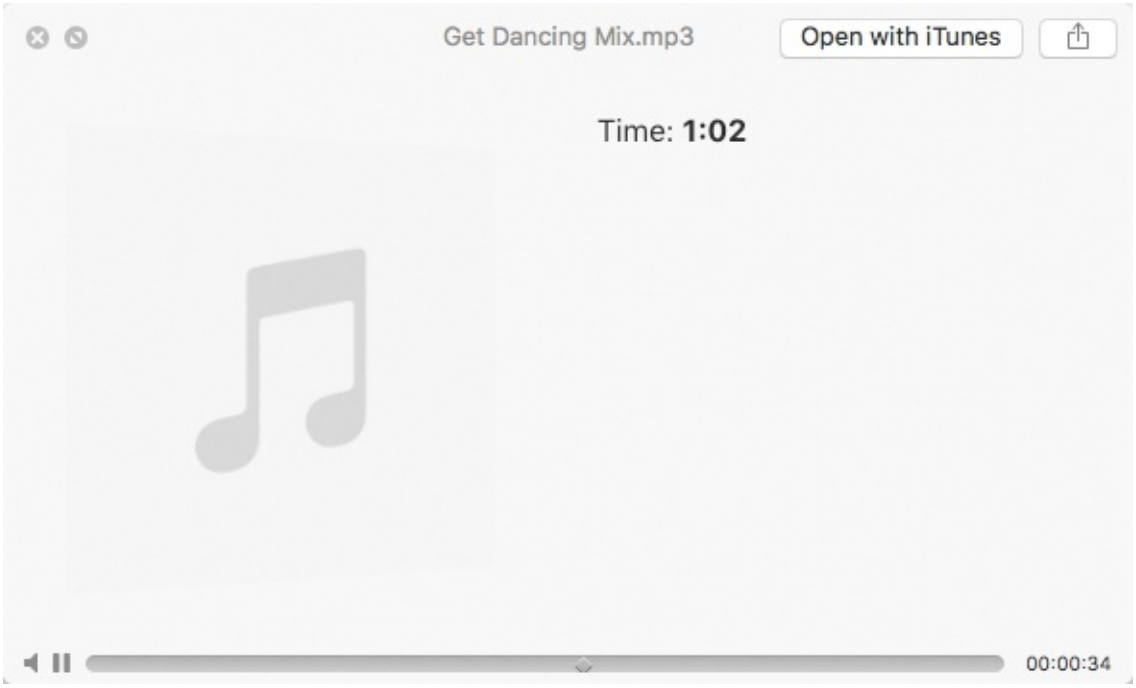
8 On your desktop, click **Get Dancing mix.mp3** to select it.



9 Press the Spacebar to play your song.



A Quick Look window opens, and your file starts playing. You can now share that MP3 file with all your friends and family!

Lesson Review

1. Where is the inspector and what are its uses?
2. Where is the Tracks area and what does it contain?
3. Where is the Control bar and what does it contain?
4. Where is the Workspace and what does it contain?
5. When multiple panes are open, how do you make sure the desired pane reacts to key commands?
6. Describe two ways to adjust a numerical value in Logic.
7. How do you copy a region?
8. How do you resize a region?
9. How do you loop a region?
10. In the Mixer, where do you add effect plug-ins?
11. In the help tag, what are the units of the four numeric values used to determine the length and position of a region?
12. How many ticks are there in a sixteenth note?
13. How do you mix down your project to a stereo audio file?

Answers

1. The inspector opens to the left of the Tracks area. Its contextual parameters adapt depending on which area has key focus, and what is selected.
2. The Tracks area is in the center of the main window. It contains the track headers to the left, the ruler at the top, and the workspace where you edit regions.
3. The control bar is the row of buttons and displays at the top of your display. It contains transport buttons, information LCD displays, and mode buttons.
4. The workspace is in the Tracks area, to the right of the track headers and below the ruler, and it contains the regions used in your project.
5. Click the area's background, or press the Tab key, to give it key focus.
6. Drag the value vertically, or double-click it and enter a new value.
7. Option-drag the region and always release the mouse button first, followed by the Option key.
8. Place the mouse pointer over one of the two lower corners so it changes to

a Resize pointer, and then drag horizontally.

9. Select the region and press L, or select the Loop checkbox in the inspector.

10. In the Audio FX slots of the channel strips.

11. Bars, beats, divisions, and ticks

12. There are 240 ticks in a sixteenth note.

13. Choose File > Bounce > Project or Section (or press Command-B) to open the Bounce dialog.

Keyboard Shortcuts

Panels and Windows	
I	Toggles the inspector
X	Toggles the Mixer
O	Opens the Loop Browser
Control-Option-Command-T	Toggles the toolbar

Navigation	
Spacebar	Plays or stops project
Control-Spacebar	Prelisten (in windows showing audio files)
, (comma)	Rewinds one bar
. (period)	Forwards one bar
Return	Returns to beginning of project
U	Sets rounded locators by selection
C	Toggles Cycle mode on and off

Zooming

Control-Option-drag	Expands the dragged area to fill the workspace
Z	Expands the selection to fill workspace, or goes back to previous zoom level, and shows all regions when no regions are selected

Command-Left Arrow	Zooms out horizontally
Command-Right Arrow	Zooms in horizontally
Command-Up Arrow	Zooms out vertically
Command-Down Arrow	Zooms in vertically

General

Command-Z	Undoes the last action
Command-Shift-Z	Redoes the last action
L	Toggles Loop parameter on and off for the selected region(s)
Command-A	Selects all
Command-R	Repeats the selection once
Command-B	Bounces the project
Command-S	Saves the project
Tab	Cycles key focus forward through open panes
Shift-Tab	Cycles key focus backward through open panes

macOS

Command-D	Selects Desktop from “Where” pop-up menu in Save dialog
Command-H	Hides current application
Command-Option-H	Hides all other applications
Command-Tab	Cycles forward through open applications
Shift-Command-Tab	Cycles backward through open applications