

Let's listen to the verse going into the chorus.

**16** Stop playback.

**17** Go to the beginning of the song and listen to both Drummer regions.

You now have a simple, straightforward beat for the verse, and then the drummer switches to the crash cymbal for the busier chorus pattern.

You have carefully crafted two eight-measure drum grooves: one for the verse and one for the chorus. They are the two most important building blocks of the song you will now start arranging.

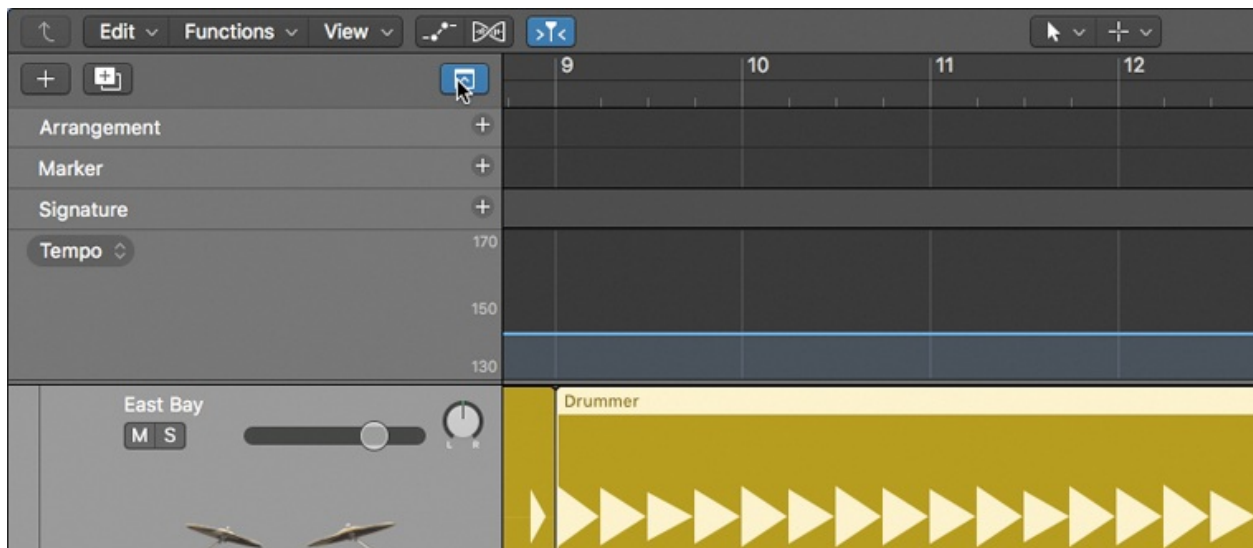
## Arranging the Drum Track

In this exercise, you will lay out the song structure and populate the Drummer track with Drummer regions for the whole song.

## Using Markers in the Arrangement Track

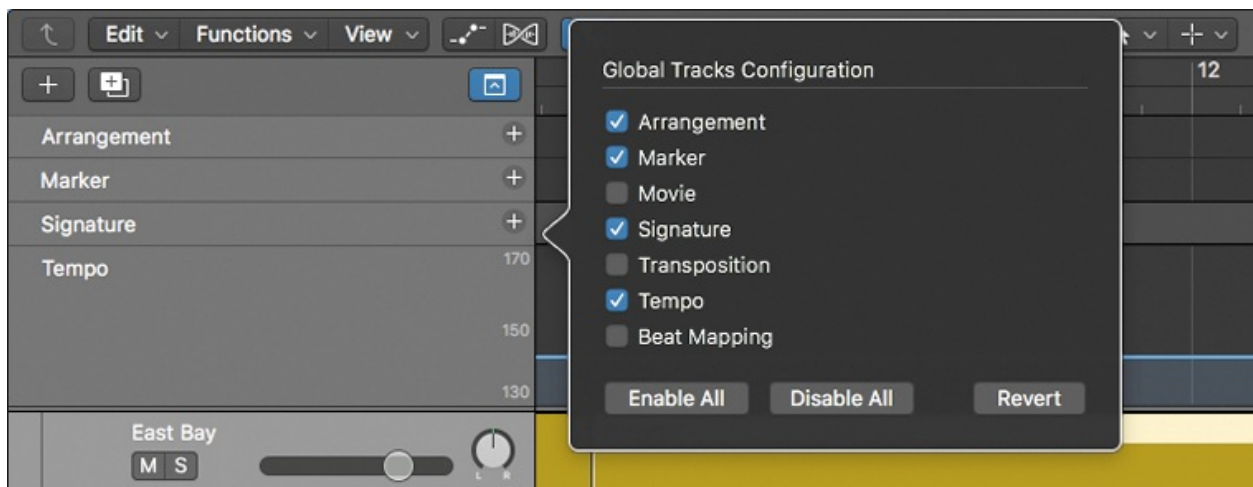
Using the Arrangement track, you will now create arrangement markers for all the sections of your song. You'll adjust their lengths, positions, and order, and fill all the new sections with Drummer regions.

**1** At the top of the track headers, click the Global Tracks button (or press G).



The global tracks open, with the Arrangement track at the top. You won't need the other global tracks, so you can hide them.

- 2 Control-click a global track header, and choose Configure Global Tracks (or press Option-G).

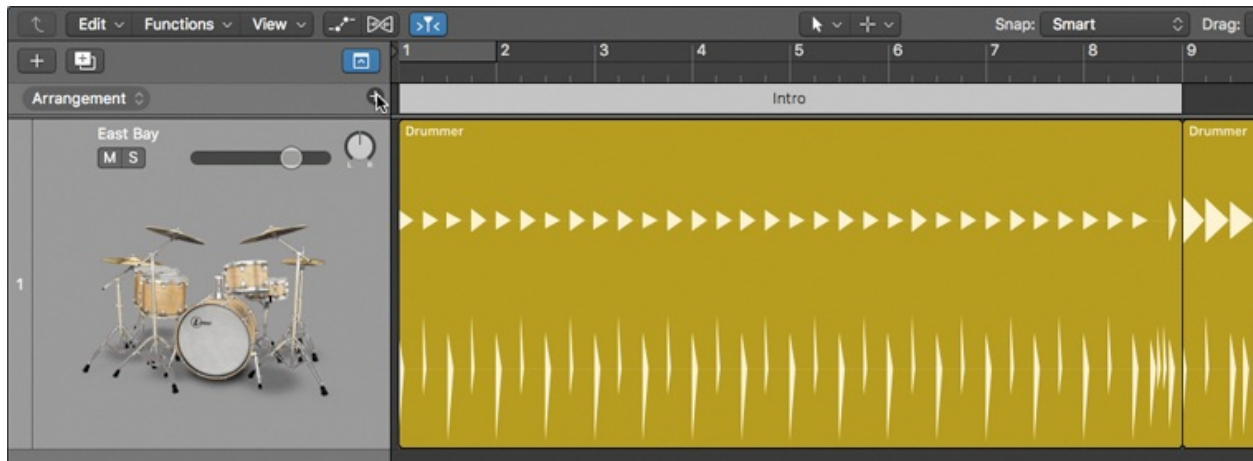


A shortcut menu opens in which you select the global tracks you want to display.

- 3 Deselect the Marker, Signature, and Tempo tracks, and click outside the shortcut menu to close it.

The Arrangement track is now closer to the regions in the workspace, making it easier to see their relationships.

- 4 In the Arrangement track header, click the Add Marker button (+).



An eight-measure arrangement marker named Intro is created at the beginning of the song. By default, arrangement markers are eight bars long and are placed one after the other, starting from the beginning of the song. Let's rename the marker.

- 5 Click the name of the marker, and from the menu, choose Verse.



- 6 Click the Add Marker button (+) to create a new marker, and make sure it's named Chorus.

You will now create a marker for a new intro section and insert it before the Verse and Chorus markers.

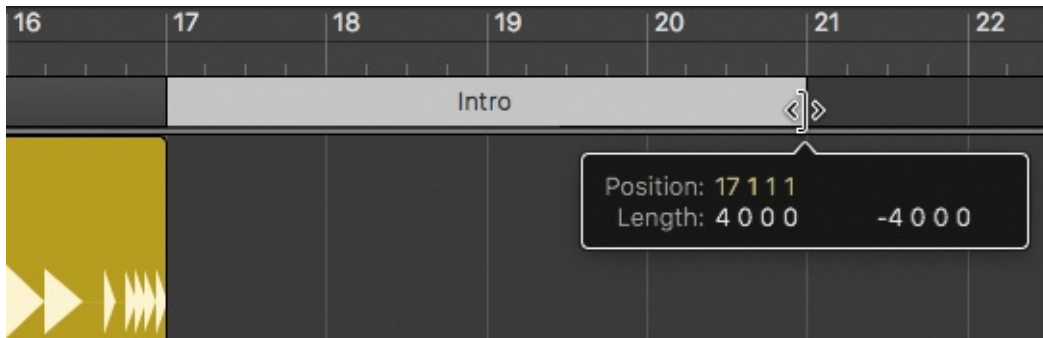
- 7 In the Arrangement track header, click the Add Marker (+) button.

An eight-bar marker is created.

- 8 Click the name of the new marker, and from the pop-up menu, choose Intro.

A four-measure intro will be long enough, so you can resize the Intro marker before moving it.

- 9 Drag the right edge of the Intro marker toward the left to shorten it to four bars.



- 10 Click the marker away from its name (to avoid opening the Name pop-up menu), and drag the Intro marker to bar 1.

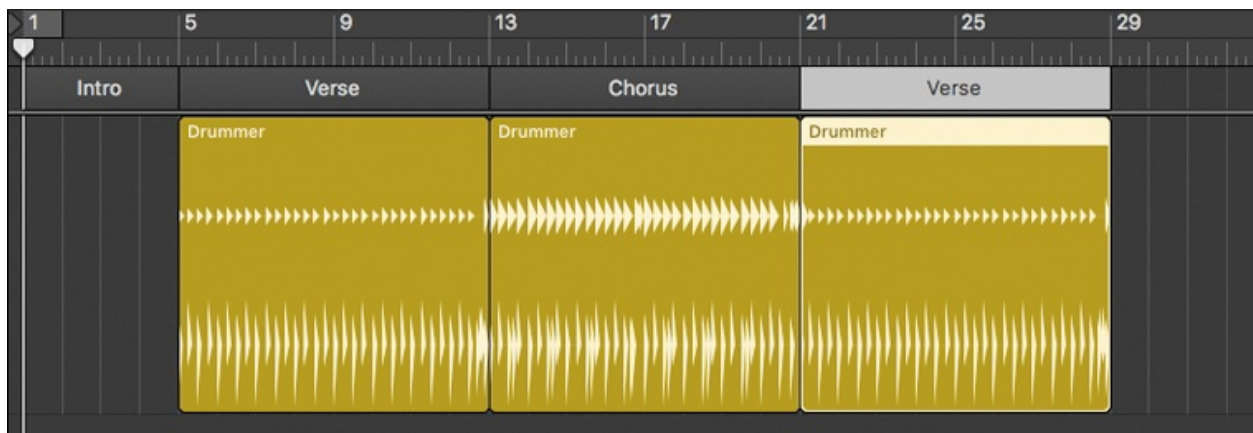


The Intro marker is inserted at bar 1, and the Verse and Chorus markers move to the right of the new Intro section. In the workspace, the Drummer regions move along with their respective arrangement markers.

As with regions in the workspace, you can Option-drag a marker to copy it.

- 11 Press Command-Left Arrow to zoom out horizontally and make space to the right of the existing song sections. Option-drag the Verse marker to bar 21, right after the chorus.

The Verse marker and the Drummer region are copied together.



- 12 Option-drag the Chorus marker to bar 29, after the second verse.

The Chorus marker and the Drummer region are copied together.

The song is taking shape. You will now finish arranging the song structure with a bridge, a chorus, and an outro section. As you place the last three

markers, continue zooming out horizontally as necessary.

- 13** In the Arrangement track header, click the Add Marker (+) button.

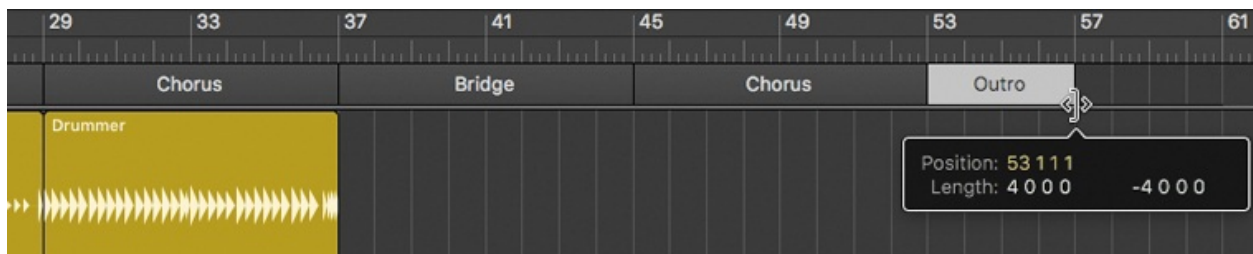
A Bridge marker is created after the last chorus.

- 14** Click the Add Marker (+) button two more times to create markers for the Chorus and Outro sections.

- 15** Make sure the two last markers have the correct names, Chorus and Outro.

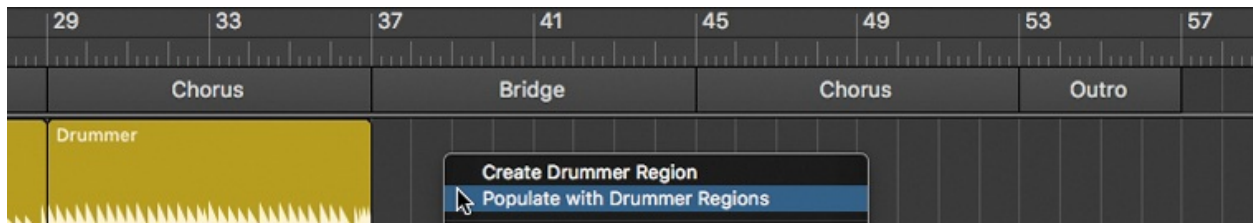
Let's shorten the outro section a bit.

- 16** Resize the Outro marker to make it four bars long.



The song structure is now complete, and you can add Drummer regions to fill out the empty arrangement markers.

- 17** On the Drummer track, Control-click the background and choose Populate with Drummer Regions.



New Drummer regions are created for all the empty arrangement markers.

- 18** Listen to the drum track, focusing on the new sections.

New patterns were automatically created for each new Drummer region.

---

### Tip

To delete all the regions below an arrangement marker, select the marker, and press Delete. To remove the arrangement marker, press Delete again.

---

Amazing as the playing is, Kyle (the drummer) might not have guessed what you had in mind for each section. You will now edit some of the new regions to adjust the drummer's performance.

## Editing the Intro Drum Performance

In this exercise, you will make the drummer play the hi-hat instead of the toms. Later, you'll cut the Intro region in two so that you can use different settings for the second part of the intro and make the drummer play a progressively louder and more complex pattern.

- 1 In the workspace, click the background to deselect all regions, and click the Intro region to select it.

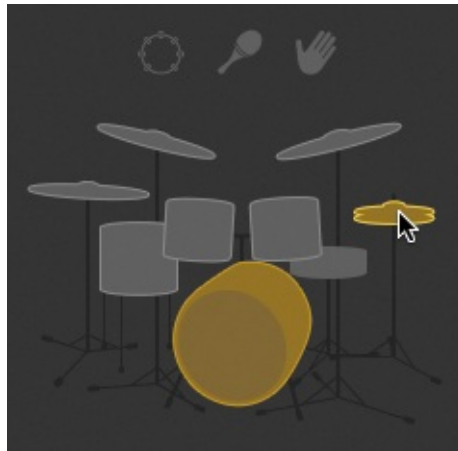
The Drummer Editor shows its settings.

Throughout this exercise you can click the Play button in the Drummer Editor to start and stop playback, or you can navigate the workspace by pressing the Spacebar (Play or Stop) and the Return key (Go to Beginning).

- 2 Listen to the Intro.

Let's make the drummer play the hi-hat instead of the toms.

- 3 In the Drummer Editor, click the hi-hat.

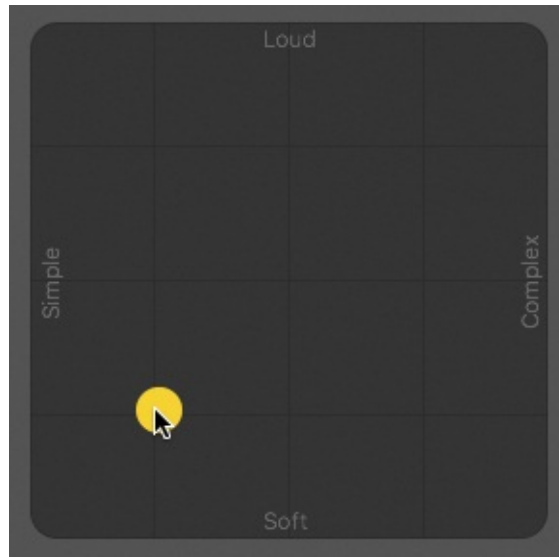


When you click the hi-hat, the toms are muted automatically. Aside from the kick and snare, the drummer can focus on the toms, the hi-hat, or the cymbals (ride and crash).

The drums are still a little too loud and busy for this intro.

- 4 In the XY pad, drag the puck toward the bottom left.

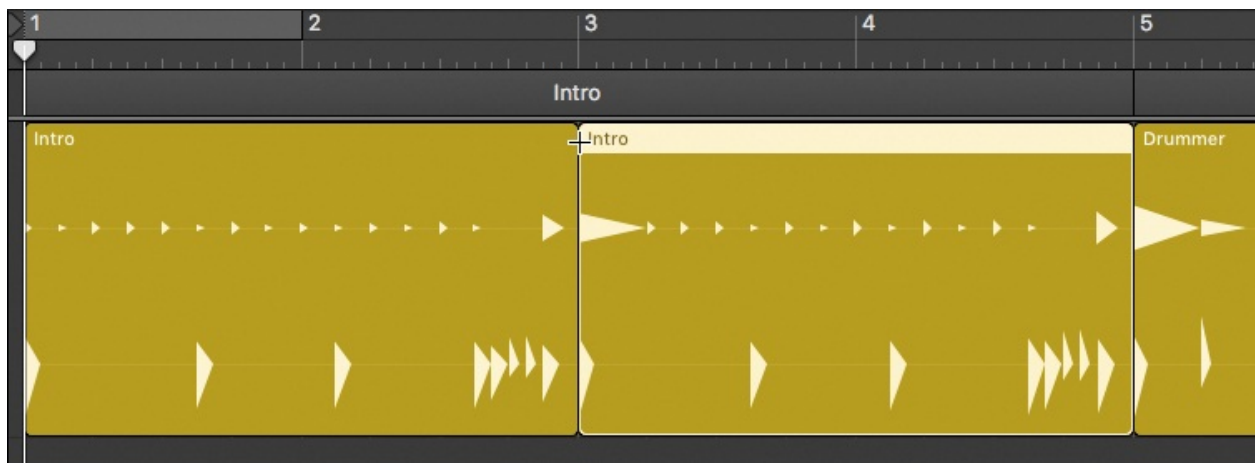




The drums are softer, but the transition into the first verse at bar 5 is a little abrupt. Making the drums play crescendo (increasingly louder) during the intro will help build up some tension leading into that verse. To make the loudness evolve throughout the intro, you will cut the Intro region in two.

5 Stop playback.

6 Hold down Command to use the Marquee tool, and double-click the Intro region at bar 3.



The region is divided into two two-measure regions. When a region is divided, the drummer automatically adapts his performance, and plays a fill at the end of each new region.

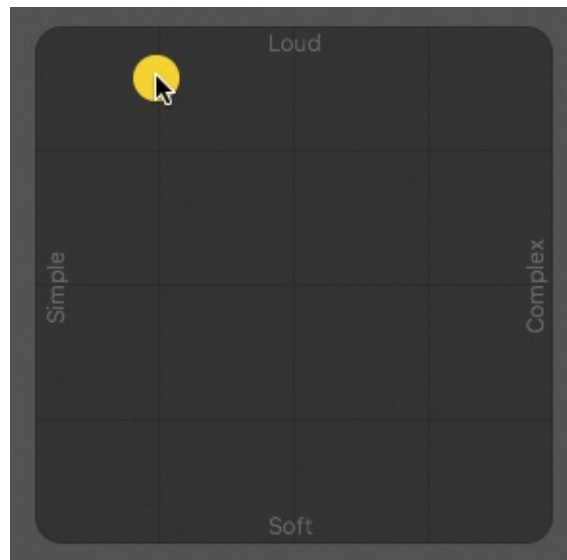
7 Select the first Intro region.

8 In the Drummer Editor, drag the Fills knob all the way down.

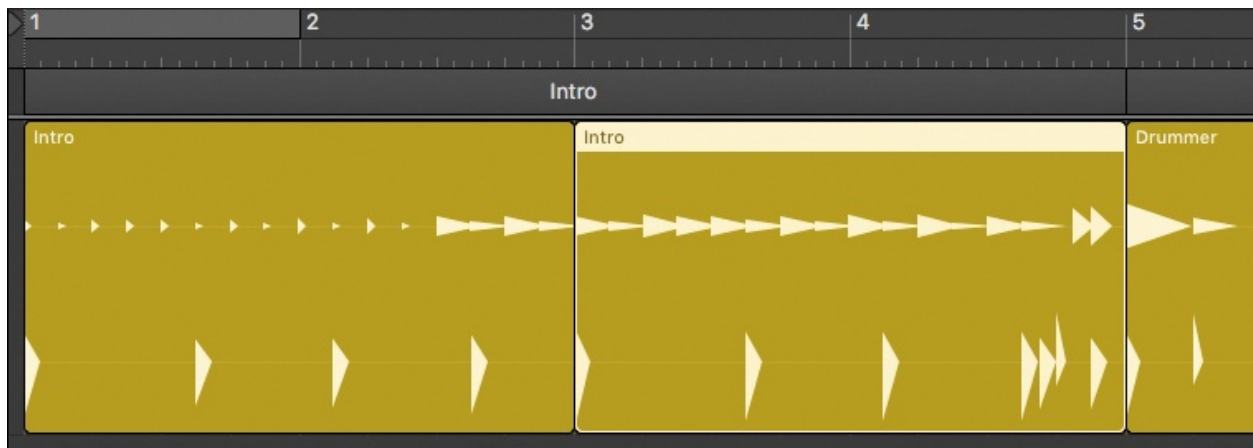
Notice how the crash disappears from the first beat of the following region. Even though it is in another region, the crash is actually a part of the fill.

Now let's create the crescendo.

- 9 Select the second Intro region, and in the XY pad, drag the puck up to make the drummer play louder.



- 10 Listen to the whole intro going into the first verse.



The drummer automatically starts playing louder before the end of the first intro region, which transitions into the louder second region and creates a nice tension at the start of the song. At bar 5, a crash punctuates the fill at the end of the intro. The straightforward groove continues in the Verse section, with the hi-hat a little less open to leave space to later add a singer.

## Editing the Bridge Drum Performance

In a song, the bridge serves to break the sequence of alternating verses and choruses. Often, the main idea of the song is exposed in the choruses, and verses help support or develop that statement. The bridge can present an alternate idea, a different point of view. Departing from the main idea of the song increases the



a different point of view. Departing from the main idea of the song increases the listener's appreciation for returning to the chorus at the end of the song—almost like taking a vacation can increase your appreciation for going back home.

For this fast, high-energy indie-rock song, a quieter bridge in which the instruments play softer will offer a refreshing dynamic contrast. Playing softer does not mean the instruments have to play less, however. In fact, you will make the drums play a busier pattern during this bridge.

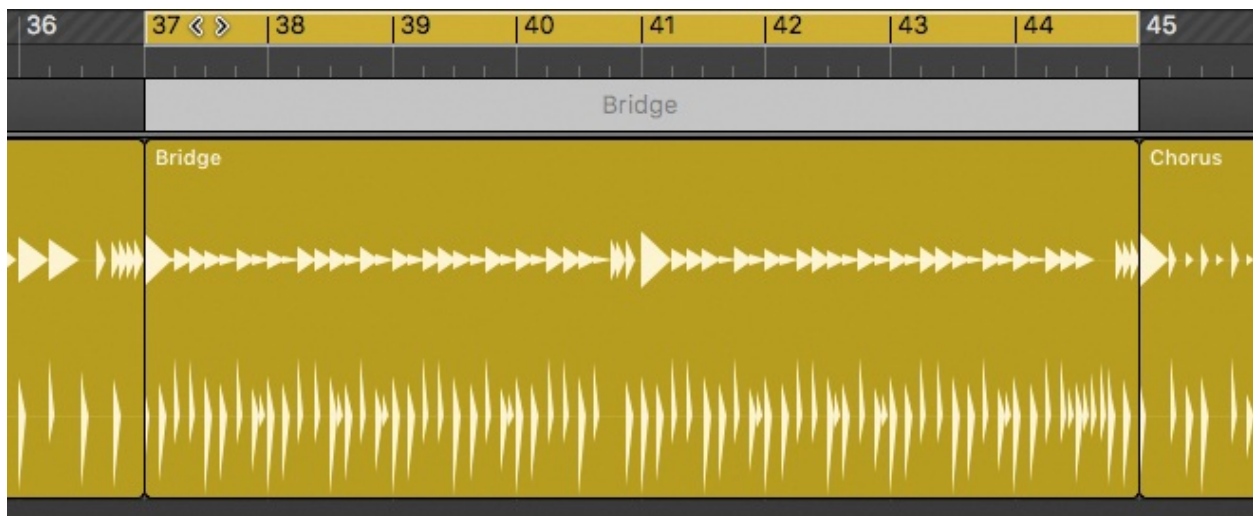
**1** Listen to the Bridge region.

---

**Tip**

When pressing the Spacebar to play a section, you can use Cycle mode to ensure that playback always starts at the beginning of the section. Drag a section's arrangement marker into the ruler to turn on Cycle mode and create a cycle area that matches the section.

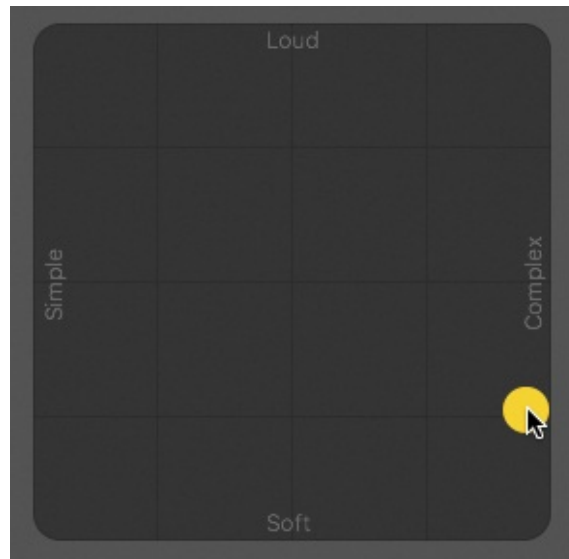
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The drummer plays at the same level as in the previous sections, but he plays more here. You need to bring down the energy level.

**2** Select the Bridge Drummer region.

**3** In the XY pad, position the puck farther down and all the way to the right.



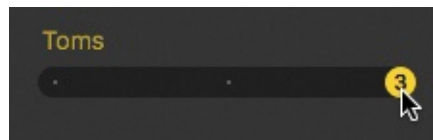
The drummer is still playing a lot, but he's much quieter. To take this bridge into a different tonal direction, you want Kyle to play toms.

- 4 On the drum kit, mute the snare and unmute the toms.

The hi-hat is muted automatically when you unmute the toms.

Let's choose a busier pattern for the toms.

- 5 On the Toms slider, click increment 3.



Kyle is now playing sixteenth notes on the toms, which creates a mysterious vibe similar to tribal percussion.

Kyle plays slightly ahead of the beat during the bridge. However, the timing nuance is subtle, and it's difficult to hear without other instruments to compare with Kyle's timing. Let's turn on the metronome and experiment with the feel of the performance.

- 6 In the control bar, click the Metronome button (or press K).
- 7 In the Drummer Editor, click the Details button to display the three setting knobs.
- 8 Try setting different positions of the Feel knob, and then listen to the results.



Listen to the way the drums play compared to the metronome. Don't be afraid to drag the Feel knob all the way up or down to hear the effect of extreme Feel settings.

- ▶ Dragging the Feel knob toward Push makes the drummer play ahead of the beat. He sounds as if he's rushing, thereby creating a sense of urgency.
- ▶ Dragging the Feel knob toward Pull makes it play behind the beat. He sounds as if he's lazy or late, and the groove is more relaxed.

Settle on a Feel knob position more toward Pull to realize a reasonably relaxed groove.

**9** Click the Details button to hide the three setting knobs.

**10** Turn off Cycle mode.

**11** In the control bar, click the Metronome button (or press K) to turn it off.

You have radically changed the drummer's performance in that region. Kyle now plays the bridge with a busy tribal pattern on the toms. He uses restraint, hitting softly and behind the beat, with a slight crescendo toward the end. The quiet and laid-back yet complex drum groove brings a welcome pause to an otherwise high-energy drum performance, and builds up tension leading into the last two sections.

## Editing the Chorus and Outro Sections

You will now finish editing the drummer's performance by adjusting the settings of the last two chorus and outro drummer regions in your workspace.

**1** Select the Chorus region after the bridge and listen to it.

That Chorus region was created when you populated the track with Drummer regions earlier in this lesson. It doesn't have the same settings as the previous two choruses and sounds busier, except for Kyle playing the ride cymbal instead of the crash.

**2** On the Cymbals slider, click the first increment.

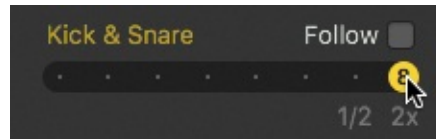
The drummer now plays the crash, and this last chorus is more consistent

with the previous two choruses.

- 3 Select the Outro region at the end of the track and listen to it.

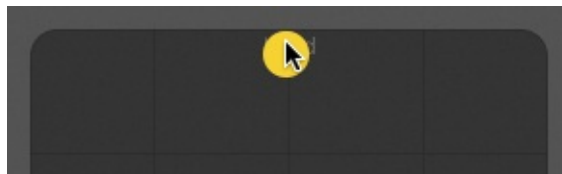
The drummer plays a loud beat, heavy on the crash, which could work for an outro. You will, however, make it play double-time (twice as fast) to end the song in a big way.

- 4 On the Kick & Snare slider, click the last increment (8).



Now it sounds like you've unleashed Kyle! Playing double-time at that fast tempo makes the sixteenth notes on the kick drum sound ridiculously fast.

- 5 On the XY pad, drag the puck toward the left until the drummer stops playing sixteenth notes on the kick drum.

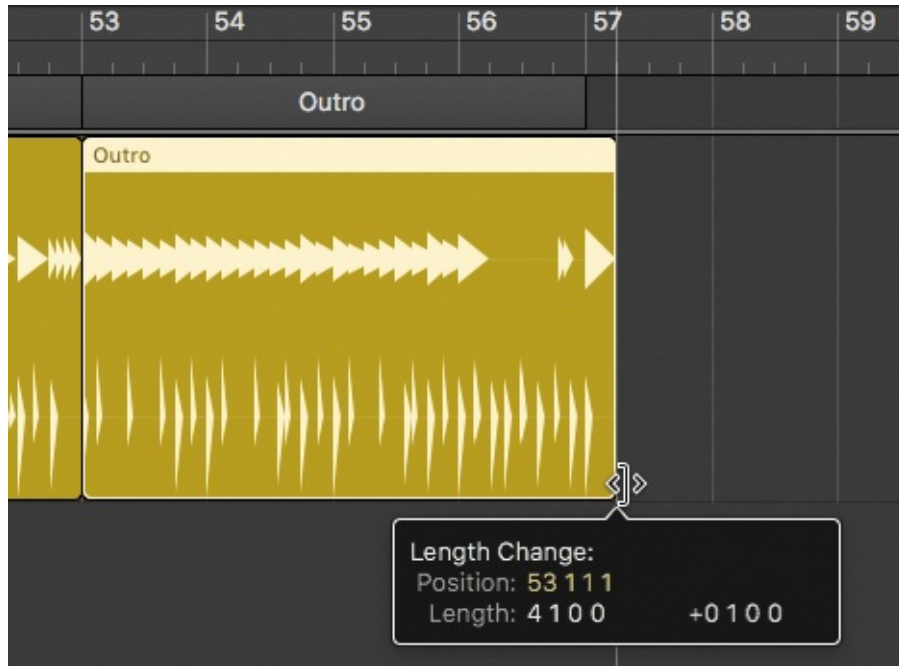


The performance now sounds more realistic while retaining the driving effect of its double-time groove.

- 6 Listen to the last chorus and the outro.

The outro has the required power to drive the last four measures; however, it seems like the drummer stops abruptly before finishing the fill. Usually drummers end a song by playing the last note on the first beat of a new bar, but here a crash cymbal is missing on the downbeat at bar 57. You will resize the last Outro region in the workspace to accommodate that last drum hit.

- 7 Resize the last Outro region to lengthen it by one beat (until the help tag reads Length: 4 1 0 0 +0 1 0 0).



A moment after you release the mouse button, the Drummer region updates, and you can see a kick and a crash on the downbeat at bar 57.

- 8 Listen to the outro. The drummer finishes the fill, punctuating it with the last hit at bar 57.

---

### Note

The final crash cymbal continues ringing until its natural sustain fades out, well after the playhead has passed the end of the last Outro region.

---

You've laid out the entire song structure by creating section markers in the arrangement track, populated each section with Drummer regions, and edited each region's settings to customize its drum pattern. You are now done editing the drum performance and can focus on the sound of the drums.

## Customizing the Drum Kit

When recording a live drummer in a studio, the engineer often positions microphones on each drum. This allows control over the recorded sound of each drum, so he can individually equalize or compress the sound of each kit piece. The producer may also want the drummer to try different kicks or snares, or to experiment with hitting the cymbals softer before he begins recording.

In Logic, when using Drummer, the sounds of each drum are already recorded. However, you can still use several tools to customize the drum kit and adjust the sound of each drum.

## Adjusting the Drum Levels Using Smart Controls

Smart Controls are a set of knobs and switches that are premapped to the most important parameters of the plug-ins on the channel strip of the selected track. You will study Smart Controls in more detail in [Lesson 5](#).

In this exercise, you will use Smart Controls to quickly adjust the levels and tones of different drums. Then you'll open Drum Kit Designer to swap one snare for another and fine-tune the crash cymbal sound.

- 1 In the control bar, click the Smart Controls button (or press B).



The Smart Controls pane opens at the bottom of the main window, replacing the Drummer Editor. It is divided into three sections: Mix, Compression, and Effects.



In the Mix section, six knobs allow you to balance the levels of the drums. To the right of each knob, a button lets you mute the corresponding drum or group of drums.

- 2 Position the playhead before the first chorus and start playback.
- 3 Turn the cymbals down a bit by dragging the Cymbals knob.



Even with the Amount knob turned all the way down in the Compression section, the compressor is still slightly processing the drum sound. Let's turn it off.

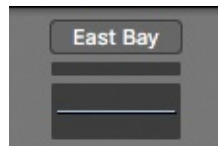
- 4 In the Compression section, click the On button.

On the left channel strip in the inspector, the Compressor plug-in is dimmed, indicating that it is turned off.

- 5 In the Effects section, drag the Tone knob up.



As you drag up the knob, the drums' sound changes timbre and becomes brighter. On the left channel strip in the inspector, the EQ curve on the channel strip's EQ display reflects the changes made to the Channel EQ plug-in.



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## More Info

You will further examine the Channel EQ plug-in in [Lesson 9](#).

---

- 6 Drag up the Room knob.

As you drag up the knob, you will start hearing the subtle reverberation of a drum booth. In the inspector, you can see the Bus 1 Send knob move along with the Tone knob.





## More Info

You will learn how to use bus sends to route an audio signal to a reverb and to change the character of the reverb in [Lesson 9](#).

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- 7 In the control bar, click the Editors button (or press E) to open the Drummer Editor.



## Tip

You can also double-click a Drummer region to open the Drummer Editor.

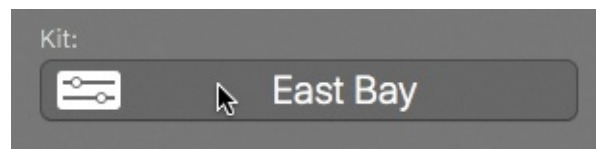
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You have adjusted the levels and timbres of the drums, and you're now ready to fine-tune the sound of the individual drum kit pieces.

## Customizing the Kit with Drum Kit Designer

Drum Kit Designer is a software instrument plug-in that plays drum samples triggered by Drummer. It allows you to customize the drum kit by choosing from a collection of drums and cymbals and tuning and dampening them.

- 1 On the character card, click East Bay to open Drum Kit Designer.

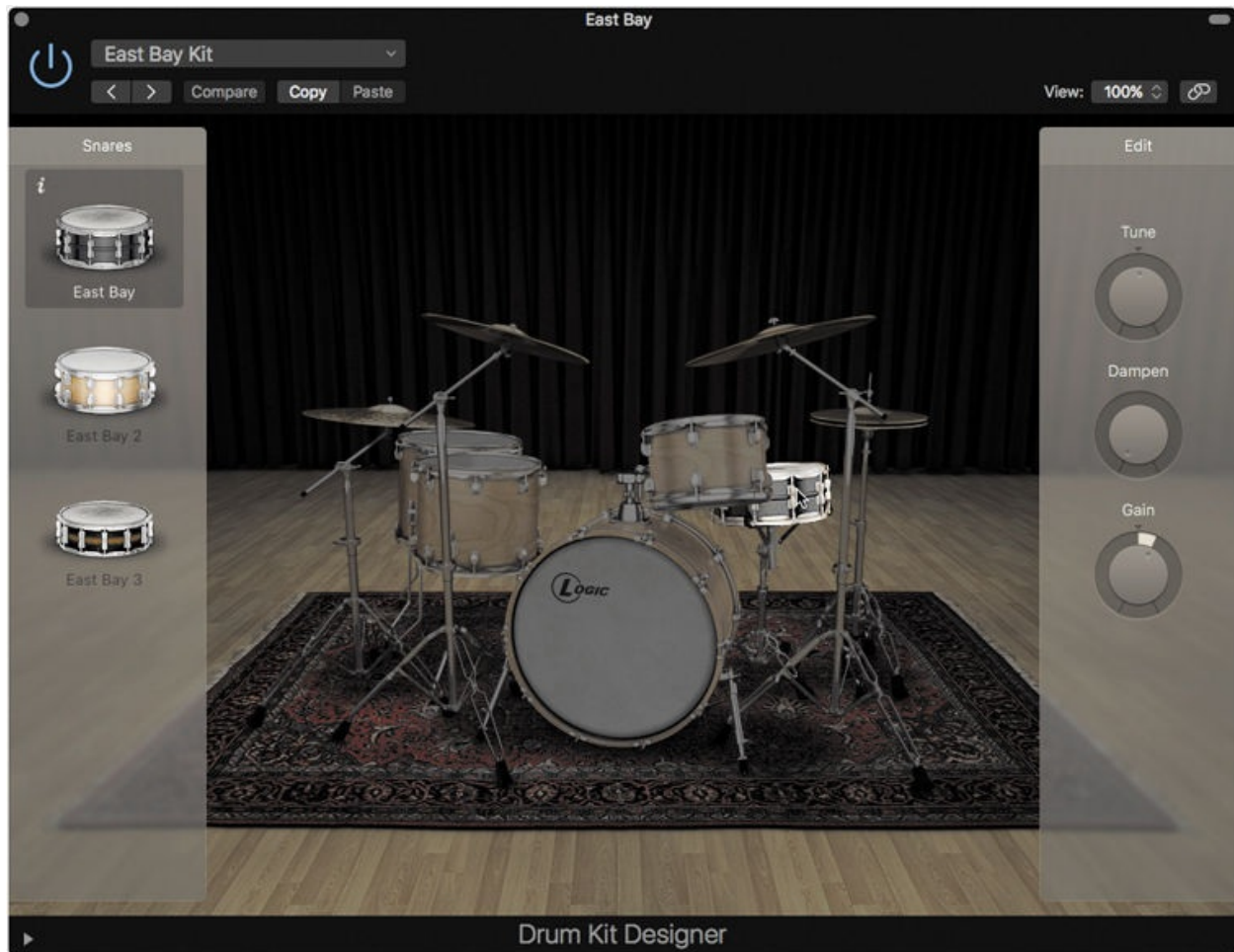


## Tip

To have the Drummer regions play a different instrument, you can choose another patch from the Library or insert another software instrument plug-in on the channel strip. You can also drag Drummer regions to another software instrument track, and they are automatically converted to MIDI regions. (You will learn more about MIDI in [Lesson 5](#).)

---

- 2 In Drum Kit Designer, click the snare.



You can hear the snare sample. The snare stays lit, and the rest of the drum kit is in shadow. To the left, a Snares panel contains your choice of three snare drums, and to the right, an Edit panel includes three setting knobs.

The left panel shows only a limited selection of snares. To gain access to the entire collection of drum samples included with Logic Pro X, you need to choose a Producer Kit in the Library.

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### Tip

To trigger Drum Kit Designer from your iPad in Logic Remote, tap the View menu and then tap Kits (you will learn how to use the Logic Remote app in [Appendix A](#)).

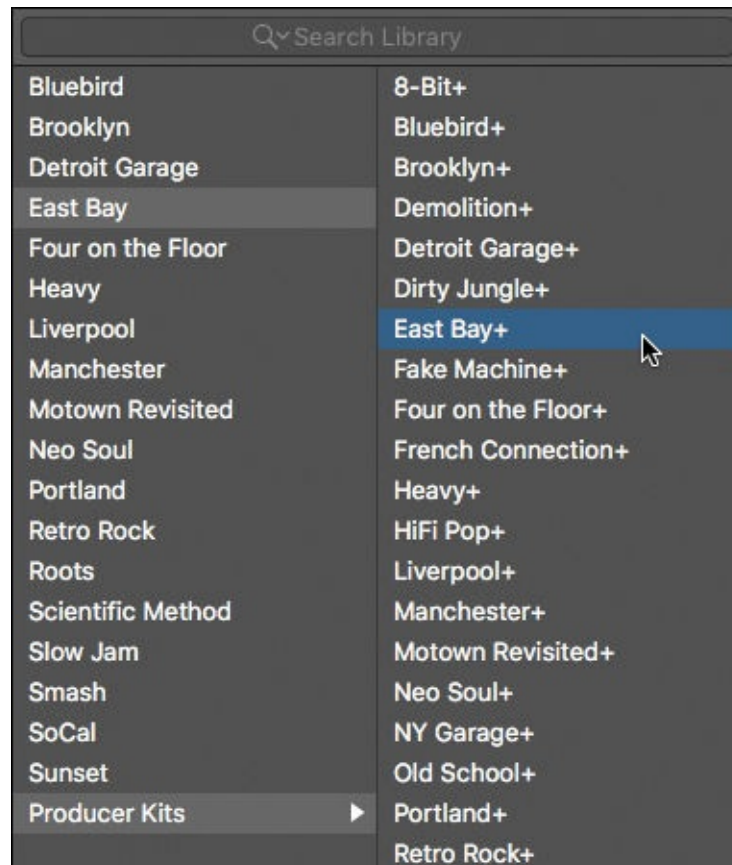
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**3** In the control bar, click the Library button (or press Y).



To the left of the inspector, the Library opens, listing patches for the selected track. The current patch, East Bay, is selected.

- 4 In the Library, select Producer Kits, and then select East Bay+.



The Drum Kit Designer window is reset.

### More Info

If the plug-in window now displays an EQ plug-in, close the plug-in window, and click the button at the bottom of the character card to open the East Bay+ Drum Kit Designer window.

---

The East Bay+ kit sounds the same as East Bay but allows a wide array of options to customize the drum kit and its mix.

### More Info

In the track header, you may have noticed that the drum icon is now

framed in a darker rectangle with a disclosure triangle: the track is now a Track Stack that contains one track for each microphone used to record the drum kit. Clicking the disclosure triangle displays the individual tracks and their channel strips. You will use Track Stacks in [Lesson 5](#).

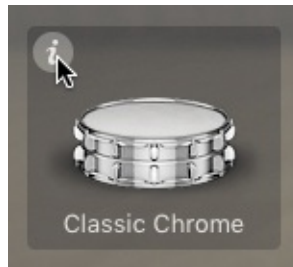
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**5** Click the Library button (or press Y) to close the Library window.

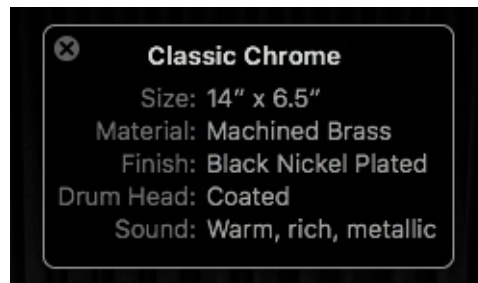
**6** In Drum Kit Designer, click the snare.

This time the left pane displays a choice of 15 snare drums (use your mouse to scroll down the list). The current snare, Black Brass, is selected.

**7** Click another snare, and then click the Info button next to it.



A description of the selected snare opens.



Continue previewing different snares, and try listening to a verse or a chorus to hear your customized drum kit in action.

**8** At the top of the left pane, click the Bell Brass snare.

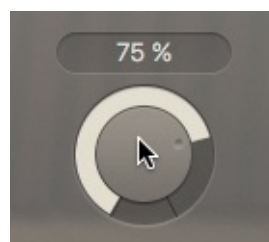
**9** In Drum Kit Designer, click the kick drum.



The info pop-up window updates to show you information on the selected kick drum.

Listen to the kick drum. This kick is the right choice for your song, but it has a long resonance. Typically, the faster the tempo of the song, the less resonance you want on the kick; otherwise, low frequencies build up and could become a problem during the mix. You may have seen drummers stuff an old blanket in their kick drum to dampen them. In Drum Kit Designer, you only have to raise the dampening level.

- 10 In the right pane, drag the Dampen knob up to about 75%, and click the kick to listen to it.



The kick's resonance is shortened.

You will now tune the toms, which are mainly used in the bridge section.

- 11 In the workspace, select the Bridge region.

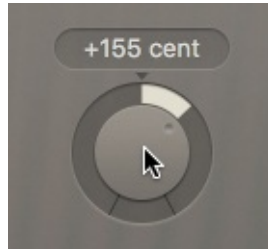
**12** In the Drummer Editor, click the Play button and mute the kick.

You can hear only the low and mid toms.

**13** In Drum Kit Designer, click one of the toms.

The Edit panel opens with four tabs: All (for adjusting settings of all three toms in the kit together); and Low, Mid, and High (for adjusting settings of each individual tom).

**14** Click the Mid tab and raise the Tune knob to around +155 cent.



You can hear the mid tom being pitched up as Kyle continues repeating the first half of the bridge.

If you want, feel free to continue exploring Drum Kit Designer and adjusting the sound of the hi-hat, ride, and crash cymbals.

**15** Stop playback and close the Drum Kit Designer window.

You have exchanged the snare for another one that sounds a little clearer, dampened the kick drum to tame its resonance, and tuned the mid tom to pitch it a bit higher. You have now fully customized both the drum performance and the drum kit.

## Working with an Electronic Drummer

When drum machines first made their appearance in recording studios, drummers feared for their careers. The 1980s produced a number of hit songs in which live drummers were replaced by electronic drums programmed by music producers.

However, many producers quickly realized that to program exciting electronic drumbeats, they needed to develop the chops of a real drummer, whereas others simply chose to hire drummers for this task. In Logic, you can use Drummer to create virtual drum machine performances, turning beat creation into a fast and fun exercise.

## Creating Hip Hop Beats

In this exercise, you will work with one of the Hip Hop drummers, adjusting its feel to control the human quality in the timing and later you'll convert the