

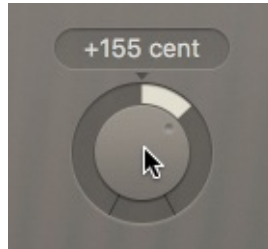
**12** In the Drummer Editor, click the Play button and mute the kick.

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.

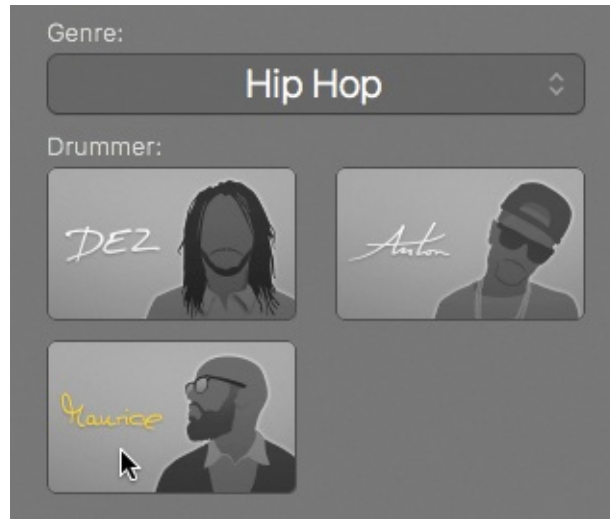
However, many producers quickly realized that to program exciting electronic drumbeats, they needed to develop the chops of a real drummer, whereas others simply chose to hire drummers for this task. In Logic, you can use Drummer to create virtual drum machine performances, turning beat creation into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

need to control the human quality in the timing, and later you'll convert the Drummer region to a MIDI region to exercise complete control over each individual drum hit.

- 1 In the Drummer Editor, from the Genre pop-up menu, choose Hip Hop.
- 2 Select the last drummer, Maurice.



In the inspector, the Drum Kit Designer plug-in is replaced by Drum Machine Designer. The Drummer Editor updates to display drum machine samples. On the track, all the Drummer regions are refreshed to reflect Maurice's playing style.

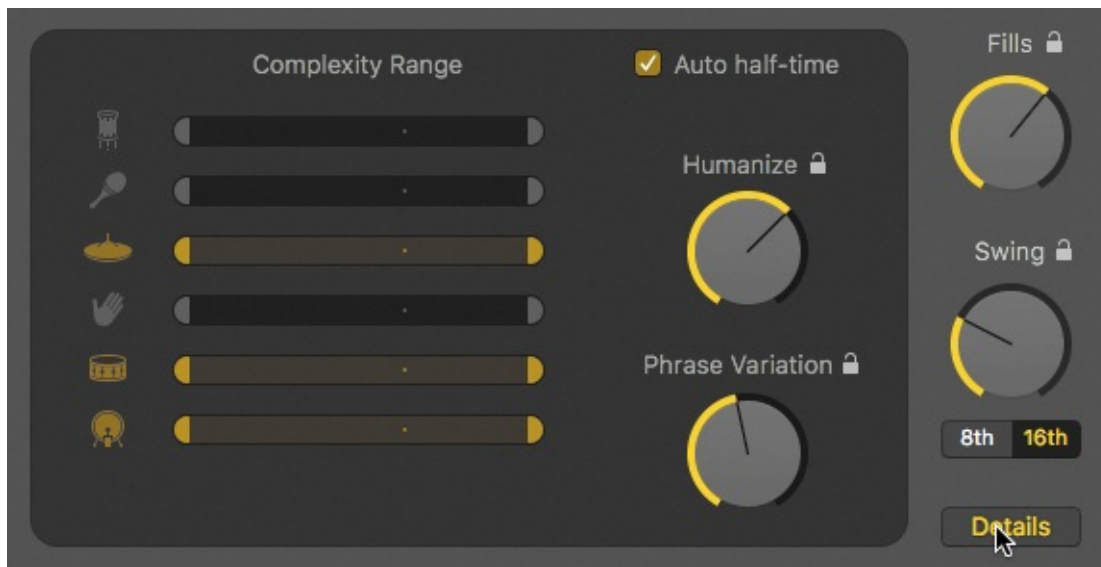
- 3 Listen to a few sections.

Maurice plays a very loose, swung hip-hop groove. Your project tempo is still set to 142 bpm, but the drummer plays half time, so it sounds like 71 bpm. Let's work with the verse.

- 4 Drag the first Verse Arrangement marker to the ruler.

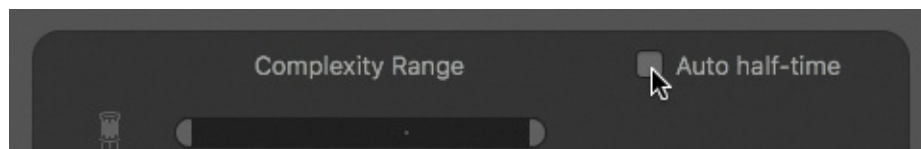
Cycle mode is on, and the cycle area corresponds to the Verse marker.

- 5 Select the Drummer region below the cycle area, and press Z to zoom in.
- 6 In the Drummer Editor, click the Details button.



When the “Auto half-time” checkbox is selected, the drummer automatically switches to half time when the project tempo is 110 bpm or faster; those fast tempos are rarely used in hip-hop.

**7** Deselect “Auto half-time.”

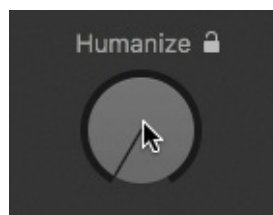


The drummer now plays at 142 bpm, which is much too fast for hip-hop.

**8** In the LCD display, set the tempo to 87 bpm.

Maurice plays a very loose, almost sloppy beat. Let’s tighten the performance.

**9** Turn the Humanize knob all the way down.



The groove is now machine tight.

**10** Turn the Swing knob up to 66%.



The drummer swings a little more, making the beat bouncier. Except for the fills at the end of the fourth and eighth bars in the region, it keeps repeating a fairly similar pattern. Let's make it vary the pattern a little more.

- 11 Turn the Phrase Variation knob all the way up.



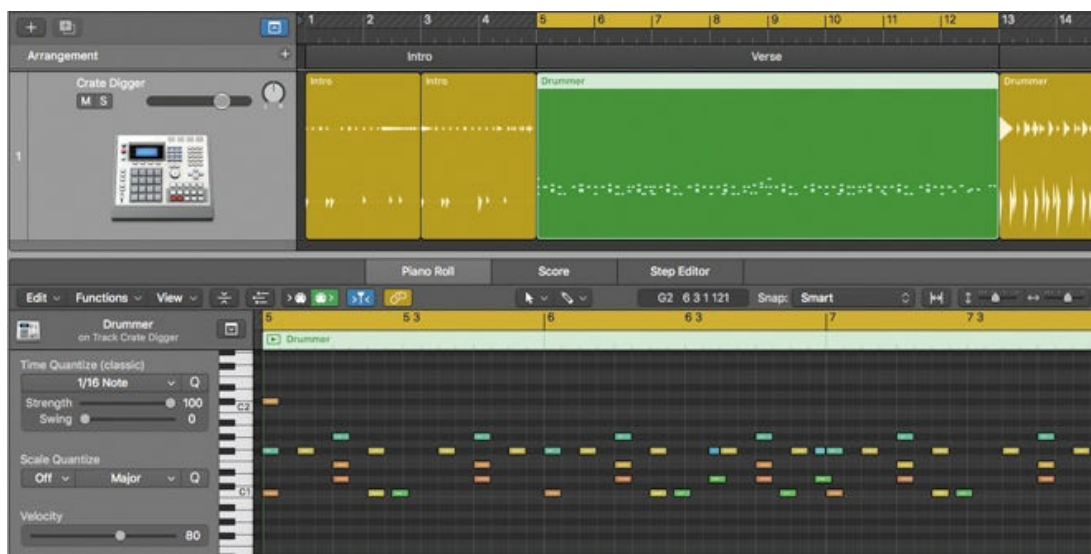
Now the beat is slightly different in every bar.

Let's get rid of the crash cymbal on the first downbeat. Since the Drummer Editor doesn't give you complete control over every single drum hit, you need to convert the Drummer region to a MIDI region.

- 12 In the workspace, Control-click the selected Drummer region and choose Convert to MIDI Region.

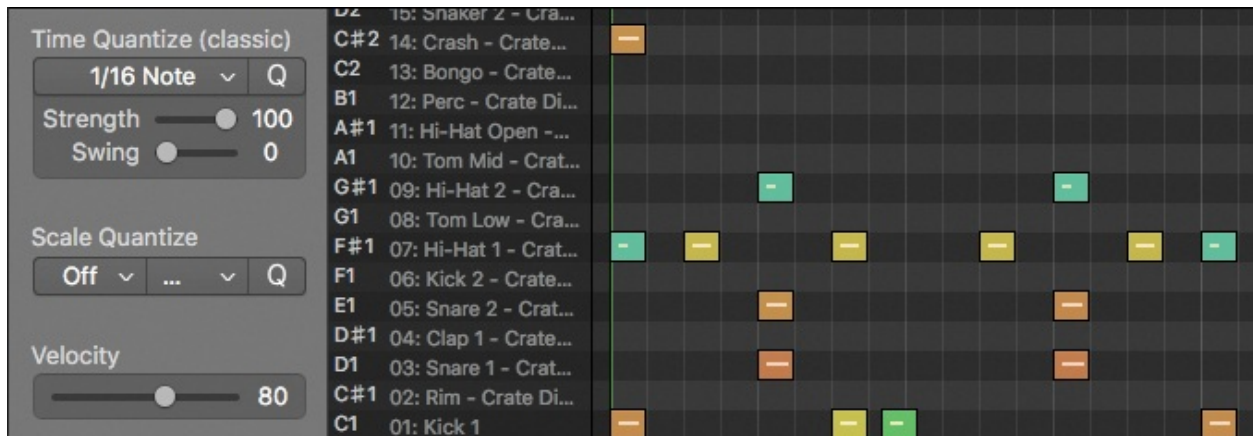


On the downbeat of bar 5, click the yellow Drummer region is replaced by a green MIDI region that plays the same performance. The Drummer Editor is replaced by the Piano Roll Editor.



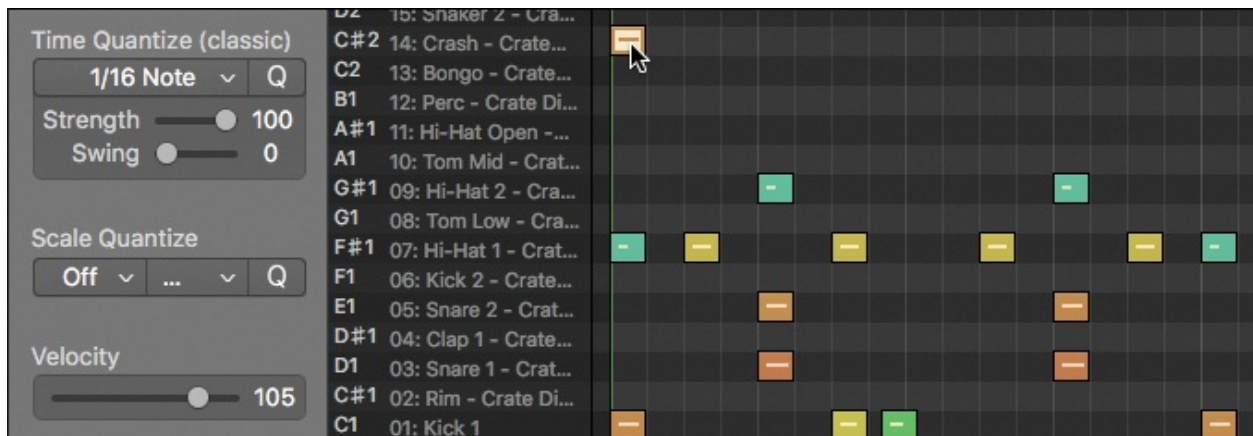
In the Piano Roll, the notes are represented by beams on a grid. The beams are positioned across a vertical piano keyboard that shows the MIDI note pitches. However, when you are working with drums, MIDI note pitches do not help identify the sound of the drums represented by each beam.

**13** In the Piano Roll, choose View > Drum Names.



The vertical piano keyboard disappears, and the names of the drums are displayed in front of the grid.

- 14 On the downbeat of bar 5, click the note representing the Crash cymbal (C#2).



- 15 Press Delete to delete the selected note.

The crash cymbal is no longer triggered at the beginning of the verse. You have replaced the acoustic drummer with an electronic drummer, adjusted the number of variations he plays, and made his playing sound tighter. Finally, you converted a Drummer region to a MIDI region to delete a single crash cymbal. In the next exercise, you'll explore the remaining parameters of the electronic Drummer Editor.

## Creating an Electro-House Track

When you are working with Drum Machine Designer, the Drummer Editor allows you to restrict the complexity range of individual samples, making it possible to have, for example, a simple kick and snare beat while another sample follows a more complex pattern.

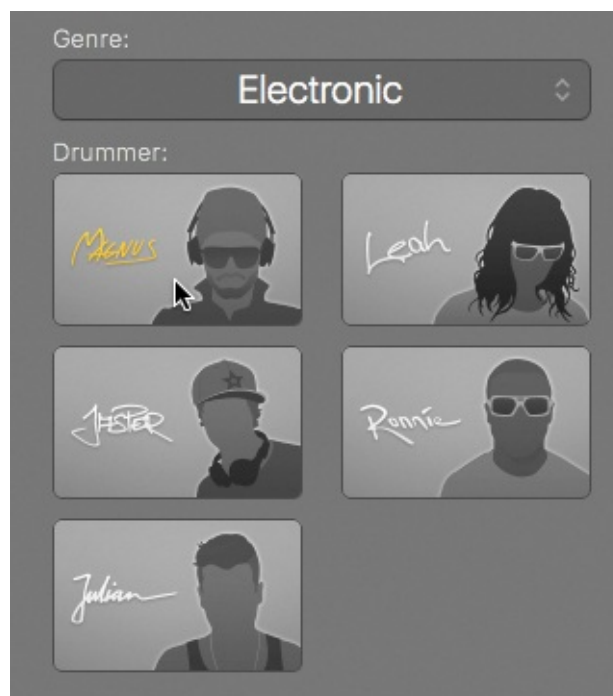
You will now switch drummers to create an electro-house drum track and you'll

You will now switch drummers to create an electronic house drum track, and you will create a ubiquitous four-on-the-floor kick and snare beat with a complex shaker pattern.

- 1 On the Drummer track, Control-click the MIDI region and choose Convert > Convert to Drummer Region.

In the Drummer region, the crash at the beginning of the region reappears. When you convert a MIDI region to a Drummer region, the region reverts to the Drummer performance you had before converting the region to MIDI.

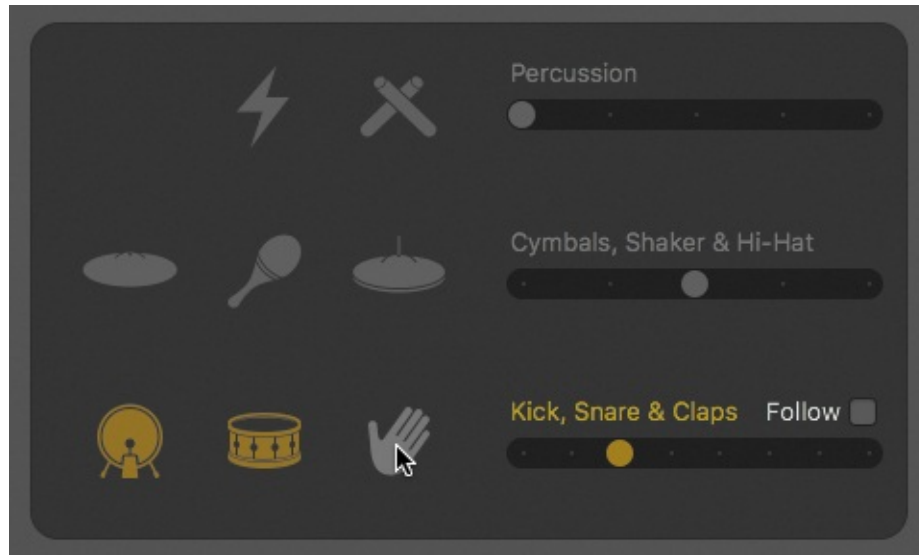
- 2 In the Drummer Editor, from the Genre pop-up menu, choose Electronic.
- 3 Select the first drummer, Magnus.



- 4 In the control bar, change the tempo to 132.
- 5 Listen to the verse.

You hear a rather straightforward dance groove. You will first work on the kick and snare beat.
- 6 In the Drummer Editor, click the Details button to go back to the basic view, and mute the shaker, hi-hat, and handclaps.





Only the kick and snare are playing. On the upper line in the Drummer region, a secondary kick plays every bar. Let's get rid of it.

- 7 In the XY pad, drag the puck to the left until the secondary kick disappears.



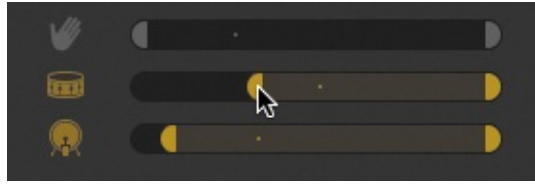
Now the snare may no longer play on beats 2 and 4 of every bar. You can fix that by adjusting its complexity range.

- 8 In the Drummer Editor, click the Details button.

You can drag the Complexity Range sliders for each individual drum piece to offset the complexity set by the puck in the XY pad.

- 9 Drag the snare's left Complexity Range slider toward the right until you hear the snare play on beats 2 and 4 of every bar.



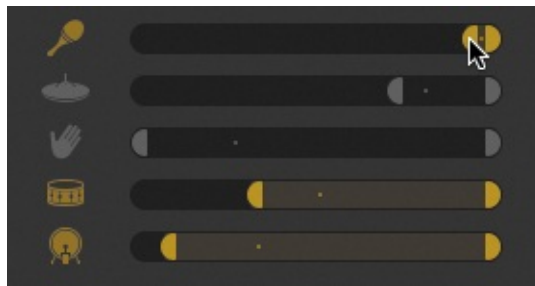


Let's add a shaker to the party.

- 10 Click the shaker to unmute it.

The shaker plays a sixteenth note pattern, and it drops for a whole beat on beat 3 of bars 5, 7, 9, and 11. You are looking for a more consistent shaker groove.

- 11 Drag the shaker's left Complexity Range slider all the way to the right.



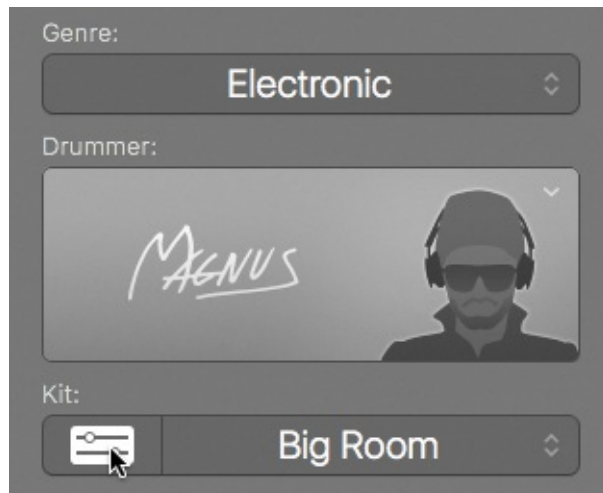
The shaker now plays the same sixteenth note pattern throughout the region.

After exploring the Complexity Range sliders, you now have a solid understanding of all the parameters in the Drummer Editor used by electronic drummers. It's now time to move on to the drum machine itself so you can customize the drum sounds.

## Customizing the Drum Machine Sounds

Now that you're happy with the drummer performance, you can open Drum Machine Designer to adjust the mix, change the snare sample, tune it, and add some reverb.

- 1 At the bottom of the character card, click the Plug-in button.



The Drum Machine Designer interface opens.



The Drum Machine Designer interface consists of two parts:

- ▶ Drums cells (at the top) to select and trigger individual drum samples ▶
- Smart Controls (at the bottom) to adjust various parameters

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**Tip**

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

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**2** In the Mix section, turn up the Perc & Shakers knob.



The shaker sounds a little louder.

**3** In the Effects section, try turning up the Pulse and turning down the High Cut Filter.



The Pulse knob controls a pulsating filter that affects the shaker pattern, whereas the High Cut Filter knob muffles the entire kit.

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### Tip

To determine which plug-in a knob controls, Control-click the knob and choose Open Plug-in Window.

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**4** Click the buttons next to the Pulse and High Cut Filter knobs.



Both effects are turned off, and you can hear the full frequency range of the drum sounds.

### Note

You will learn how to record knob movements in [Lesson 10](#).

5 At the upper right of the Smart Controls, click the Sends button.



The Smart Controls display knobs that control the amount of delay and reverb for different drum kit elements.

6 In the Group Reverb section, turn Snare & Claps all the way up.



You can hear a short reverb added to the snare; however, that's not the

type or reverb sound you're after. You will later find a more suitable reverb for this snare, so let's turn that one down.

**7** Turn Snare & Claps all the way down.

You will now swap the kit piece patch for the Snare.

**8** Click the Snare 1 cell.



The Snare 1 cell is selected, the sound for that cell plays, and the Smart Controls update to display knobs affecting that cell.

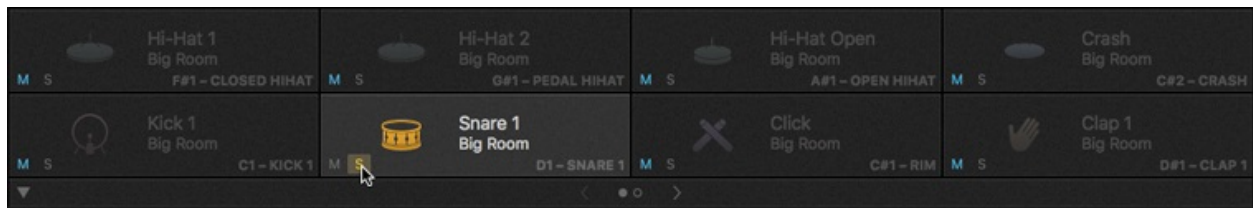
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**Tip**

At the top of Drum Machine Designer, click the drum machine icon or patch name to return to the main Smart Controls for this preset.

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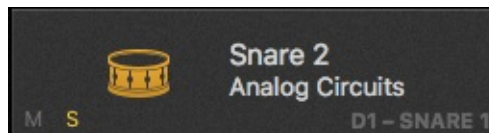
**9** In the Snare 1 cell, click the S button.



The snare is soloed.

**10** Open the Library.

**11** Choose Snare 2 – Analog Circuits.



You hear the snare you just selected. In Drum Machine Designer, the cell displays the new patch name.

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## Tip

To use a sample that is not in the Logic library, drag the sample onto the desired Drum Machine Designer cell.

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**12** In the Smart Controls, turn the Pitch knob down to A2.

**13** Turn the Length knob down to shorten the snare sound.



In the inspector, the right channel strip controls the sound of the selected cell in Drum Machine Designer. Let's add the desired reverb to the snare.

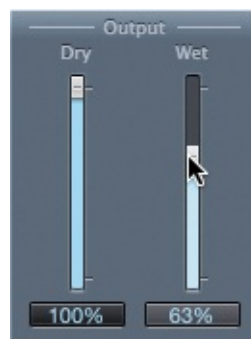
**14** On the right channel strip in the inspector, click the first empty Audio FX insert in the Snare 2 cell, and choose Reverb > PlatinumVerb.

**15** In the PlatinumVerb window, from the Settings pop-up menu, choose Live Club.





**16** In PlatinumVerb, drag the Wet slider up to increase the amount of reverb.



**17** In Drum Machine Designer, click the S button in the Snare 2 cell to turn solo off.

You have adjusted the kit mix, played with some main effects, swapped one of the drum samples, adjusted its sound, and added a plug-in to its channel strip to get the sound you wanted.

You have produced drums for a whole song, and you've learned many ways to edit the drummer's performance and change the feel. You also customized drum kits to get your desired sound. With Drummer, Drum Kit Designer, and Drum Machine Designer, Logic Pro X allows you to quickly lay down a rhythmic



foundation for a wide range of modern music genres.

## Lesson Review

1. How do you choose a drummer?
2. How do you choose a new drummer while keeping the current drum kit?
3. Where do you edit Drummer regions?
4. How do you mute or unmute drum parts?
5. How do you make the drummer play softer or louder, simpler or more complex?
6. How do you access the Feel knob to make the drummer play behind or ahead of the beat?
7. How do you open Smart Controls?
8. How do you open Drum Kit Designer or Drum Machine Designer?
9. When customizing an acoustic drum kit, how can you access all the available drum kit pieces?
10. How do you dampen or tune an individual drum?
11. How do you convert Drummer regions to MIDI regions?
12. How do you swap samples in Drum Machine Designer?
13. How can you use audio effect plug-ins for an individual cell in Drum Machine Designer?

## Answers

1. Click the drummer in the character card, or from the Genre pop-up menu, choose a genre and then click the desired drummer.
2. Option-click the desired drummer.
3. In the Drummer Editor at the bottom of the main window
4. Click the drum parts in the drum kit that is displayed in the Drummer Editor.
5. Move the puck on the XY pad.
6. Click the Details button at the bottom right of the Drummer Editor.
7. Click the Smart Controls button in the control bar, or press B.
8. Click the Plug-in button at the bottom of the character card.
9. Select the appropriate Producer Kit in the Library.
10. In Drum Kit Designer, click a drum and adjust the settings in the Edit

panel.

- [11.](#) Select the regions, Control-click one of them, and choose Convert > Convert to MIDI Region.
- [12.](#) Click a cell and choose a new sample in the Library.
- [13.](#) Click a cell and insert your plug-in on the right channel strip in the inspector.

## Keyboard Shortcuts

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### Main Window

<b>B</b>	Opens the Smart Controls
<b>G</b>	Opens the global tracks
<b>Command-Shift-N</b>	Opens a new file without opening the Templates dialog
<b>Y</b>	Opens the Library

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