6 In the Region inspector, set Quantize to off. In the Piano Roll, the notes move to their original recorded positions.

7 Set Quantize back to 1/8 Note.

Merging Recordings into a MIDI Region

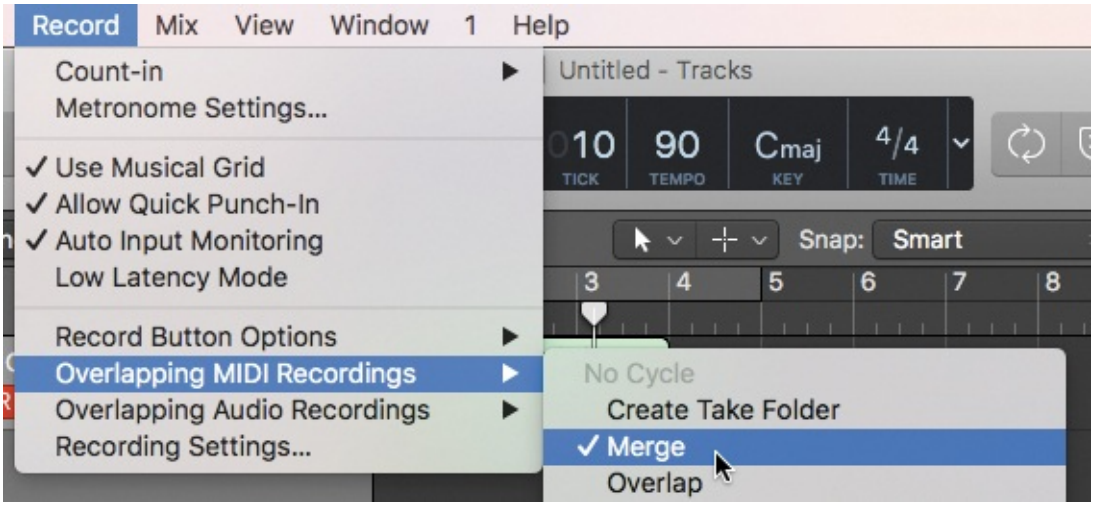
Sometimes you may want to record a MIDI performance in several passes. For example, when recording piano, you want to record just the left hand, and then record the right hand in a second pass. Or you could record drums in multiple passes, recording the kick drum first, then the snare drum, then the hi-hat, then the crash cymbal, building up a drum beat by focusing on a single piece of the drum kit at a time.

In Logic, when recording MIDI events on top of an existing MIDI region, you can choose to merge the new recording with the existing MIDI region.

Recording into an Existing MIDI Region

In the previous exercise, you recorded a simple bass line onto a piano track. Now you will record chords as you listen to your bass line, merging the new chords with that bass line inside the same MIDI region. First, you will choose the correct recording setting to merge your new recording with the existing region.

1 Make sure Record > Overlapping MIDI Recordings > No Cycle > Merge is chosen.

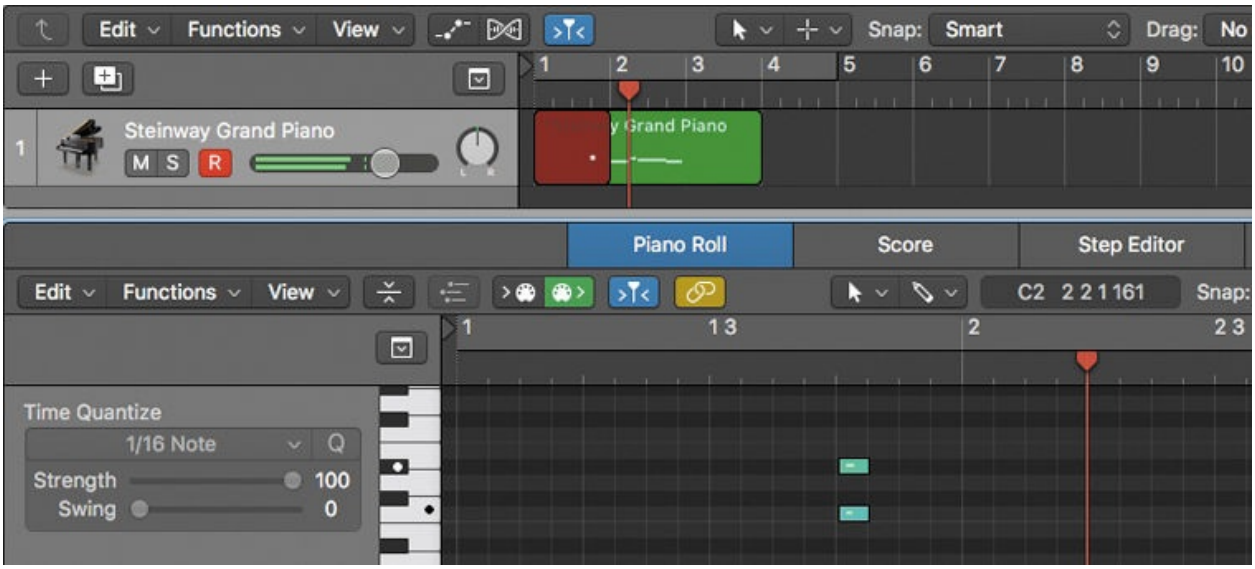


From now on the new recordings will be merged with the existing region on the track.

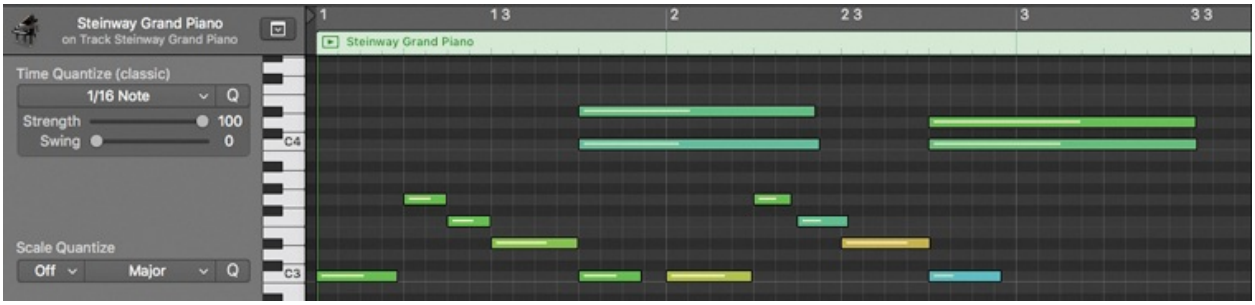
2 Move the playhead to the beginning and start recording.

This time, play only a couple of chords that complement the bass line you previously recorded

previously recorded.



3 Stop recording.



The new notes immediately snap to the nearest eighth note on the grid. On the track, the *Steinway Grand Piano* MIDI region contains all the notes recorded in this exercise and the previous one.

Tip

You can also use this technique to add MIDI controller events such as pitch bend or modulation to a region after you have recorded the MIDI notes.

Merging Recordings in Cycle Mode

Recording MIDI in Cycle mode allows you to continuously repeat the same section and record new events only when you are ready. This can be very useful when recording a drum pattern. You can loop over a section, building up the drum groove by adding new elements during each pass of the cycle while listening to the drums you have already recorded.

When you are recording MIDI in Cycle mode, notes recorded in all consecutive

passes of the cycle are merged into a single MIDI region. In this exercise, you will record drums in Cycle mode, first recording the kick, then the snare, and finally the hi-hat.

First, let’s close the current project and create a new one.

1 Choose File > Close Project (or press Command-Option-W), and when prompted, close but don’t save the existing project.

Tip

When only one window is open in Logic, you can close the project by choosing File > Close (or pressing Command-W).

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2 Choose File > New. In the New Tracks dialog, make sure Software Instrument is selected, and click Create.

In a new project, the menu option Record > Overlapping MIDI Recording > Cycle > Merge is selected by default. Recording in Cycle mode will place all recorded notes in the same region, which is the desired behavior for this exercise.

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

4 In the Library, select Drum Kit > Brooklyn.

The Brooklyn patch is loaded, including a channel strip setting that is loaded for the software instrument channel strip in the inspector. It consists of the Drum Kit Designer instrument plug-in, and the Channel EQ, Compressor, and Multipressor audio effect plug-ins. The channel strip sends to bus 1, and if you open the Mixer, you can see a new auxiliary—and its plug-ins—with its input set to bus 1.

Let’s customize the LCD display so that you can see the detailed MIDI input activity monitor.

5 To the right of the LCD display, click the small arrow, and choose Custom.

Before you start recording, you need to locate the keys that trigger the kick, snare, and hi-hat on your MIDI controller. You will use: ▸ C1: kick

▸ D1: snare

- F#1: closed hi-hat
- A#1: open hi-hat

6 Play the lowest C key on your MIDI keyboard while watching the MIDI activity in the LCD display.

If the display doesn't show a C1, you can use the Octave –/+ buttons on your keyboard to offset the pitch range. Once you've found C1, locate D1 (the next white key to the right), F#1, and A#1 (respectively the first and the last keys of the next group of three black keys to the right).

7 In the upper half of the ruler, click the cycle area to turn on Cycle mode.

Since you don't have a region in the workspace, the Region inspector displays the MIDI Thru settings.

8 In the Region inspector, set Quantize to 1/16 Note.

You will now record the drums one at a time. Let's open the Piano Roll to see the notes appear on the grid as you record them.

9 In the control bar, click the Editors button (or press P) to open the Piano Roll.

10 Start recording. You hear a four-beat count-in before the playhead reaches the beginning of the cycle area.

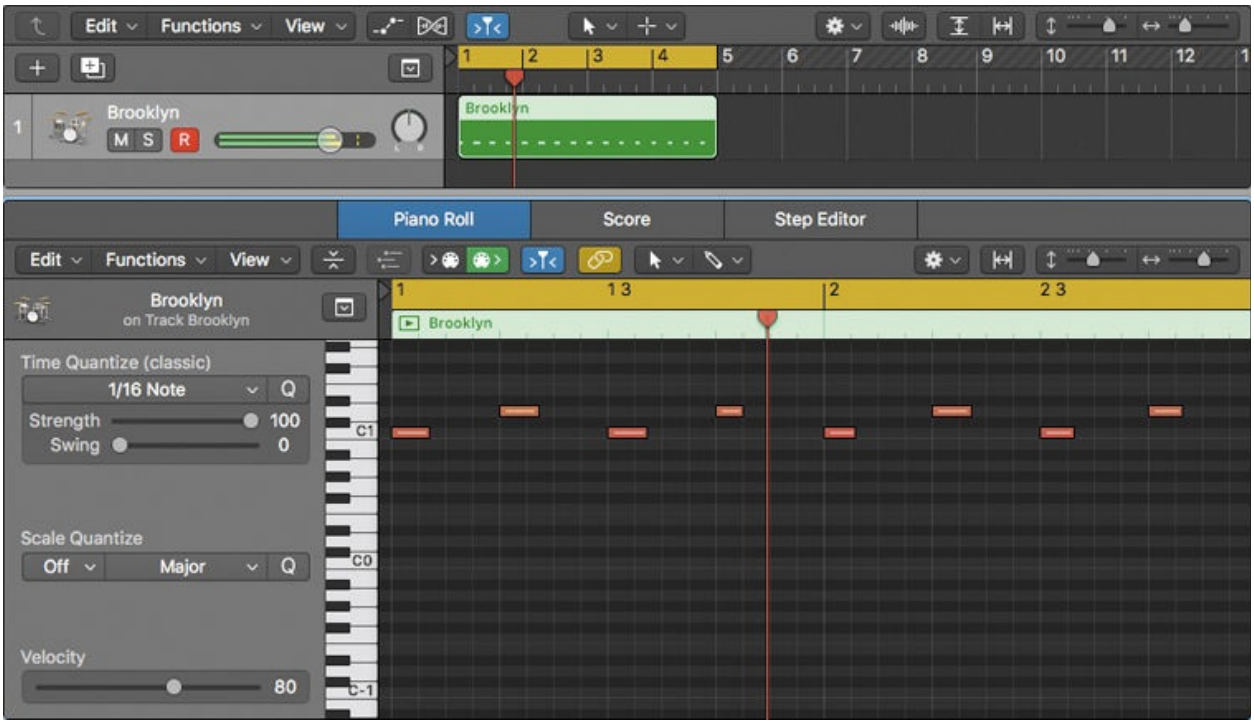
11 Play C1 notes on the first and third beat of every bar.

When the playhead reaches the end of the cycle, it jumps back and starts a new pass. You can hear the kick drum notes that you just recorded. Notice that the notes snap to the nearest sixteenth note because you chose that value as your MIDI Thru Quantize setting.

You have all the time in the world before you continue to record. As long as you don't play anything, Logic continues cycling over the existing region, playing back your kick drums. And if you forgot to play one or two kick drum notes, you can record them during one of the subsequent cycle passes.

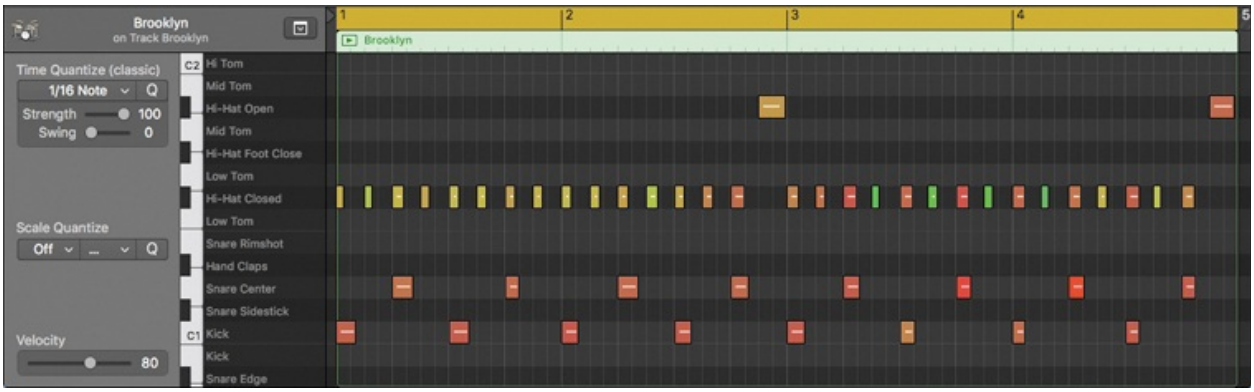
12 Play D1 notes on the second and fourth beat of every bar. The kick and

the snare should alternate on every beat.



13 Play hi-hats on every eighth note using the F#1 (close hi-hat) and A#1 (open hi-hat) keys, playing the open hi-hat only as the last eighth note of some of the bars.

14 Stop recording, click the background of the Piano Roll to deselect the notes, and press Z.



If the Piano Roll vertical zoom level allows, the drum names are displayed in front of the keyboard to the left of the grid. You can see your drum pattern. Now that the notes are not selected, you can see their colors, which vary depending on the note's velocity.

Joining MIDI recordings as you did in the two previous exercises provides a lot of flexibility and allows you to take your time, recording a single part of a performance at a time. These techniques will help in many situations. For

example, consider first recording the notes of a cello melody, and then later recording the movements of the pitch bend wheel to add cello-like vibrato toward the end of sustained notes.

Recording MIDI Takes

When you want to nail a performance or experiment with several musical ideas, you can record multiple takes and later choose the best one. The techniques for recording MIDI takes are similar to the techniques you used to record audio takes in Lesson 2. You can record new takes over an existing region or take folder, or you can record multiple takes in Cycle mode.

Cycle mode should still be turned on from the previous exercise. Let's record takes in Cycle mode and experiment with using different melodies for a bass line.

1. Choose Record > Overlapping MIDI Recordings > Cycle > Create Take Folder.
2. Choose Track > New Software Instrument Track (or press Command-Option-S).
3. Open the Library, and choose Bass > Stinger Bass.
4. Start playback and play a few notes on your MIDI keyboard.

   You can hear your bass, and you can practice until you find an idea for a simple bass line that will work with the drums you recorded on track 1.

About Live Mode

Selecting a software instrument track automatically record-enables it, but the instrument is not always in Live mode (for example, when selecting a software instrument track during playback). An instrument in Live mode requires more CPU resources. When an instrument is not in Live mode, the first note you play will take about 100 ms (milliseconds) to trigger the instrument, which is then placed in Live mode.

You can put an instrument in Live mode by sending any MIDI event to it (playing a dummy note, moving the modulation wheel, and so on), by clicking the R button in the track header to make it solid red, or by starting playback.

5 While playback continues, click the Record button (or press R). Logic continues repeating the cycle area, so you don’t lose your groove.

6 When the playhead starts a new pass of the cycle, play a bass melody on the MIDI keyboard.

When you’re done recording the four-bar bass melody, the playhead jumps back to the beginning of the cycle. You can continue recording new takes while staying in Cycle mode, or stop recording and start recording again to record new takes.

7 Record two more takes of the bass.

8 Start playback. You can hear the last take of the bass.

9 In the workspace, from the take folder pop-up menu, choose take 2.

You can hear take 2.

Note

Note that there’s no Quick Swipe Comping button next to the take folder pop-up menu. Unlike with audio take folders, you cannot comp sections of takes in a MIDI take folder.

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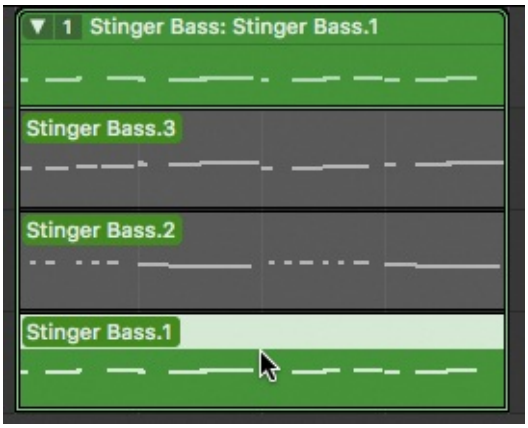
10 Double-click the take folder to open it. Click the first take, at the bottom of the list, to play it.

11 Choose your favorite take, and from the take folder pop-up menu, choose Flatten.



The take folder is flattened, and only the selected bass take remains in a MIDI region.

12 Stop playback.

Tip

If you want to keep a performance you played while Logic was in playback mode, click Stop and press Shift-R (Capture as Recording). A MIDI region containing your last performance is created on the track.

Lesson Review

1. How do you merge a new recording in an existing MIDI region?
2. How can you time-correct a MIDI region?
3. How do you choose default region parameters for new MIDI recording?
4. What type of Track Stack should you create to have MIDI regions on the main track trigger instruments on the subtracks?
5. In the Smart Controls pane, how do you map a screen control to a plug-in

parameter?

6. In the Smart Controls pane, how do you assign a screen control to a knob on your MIDI controller?
7. How do you automatically arpeggiate chords?
8. How can you put a track into Live mode?

Answers

1. Choose Record > Overlapping MIDI Recordings > No Cycle > Merge; or if Cycle mode is on when you record, choose Record > Overlapping MIDI Recordings > Cycle > Merge.
2. In the Region inspector, set the Quantize parameter to the desired note length.
3. Deselect all regions in the workspace to access the MIDI Thru settings in the Region inspector.
4. A summing stack.
5. In the Parameter Mapping area, click Learn. Click a screen control to select it, and click a plug-in parameter to map it to the selected screen control.
6. In the External Assignment area, click Learn. Click a screen control to select it, and turn a knob on your MIDI controller until the screen control moves along.
7. In the MIDI FX slot of the software instrument channel strip, insert the Arpeggiator MIDI effect plug-in.
8. Click its Record-enable button, or, for the selected track, send any MIDI event from your MIDI controller, or start playback.

Keyboard Shortcuts

Project	
Command-Shift-N	Creates a new empty project
Command-Option-W	Closes the current project
Windows and Panes	
Command-K	Opens or closes the Musical Typing window
P	Opens the Piano Roll
B	Opens the Smart Controls
V	Hides or shows all the plug-in windows
Tracks Area	
Command-Option-S	Creates a new software instrument track
Command-Shift-D	Creates a Track Stack for the selected tracks