The Logic Pro 9 Compressor

Introduction to Music Production, Week 4

Joe Muscara - May 14, 2015

Introduction

My name is Joe Muscara and I live in Houston, Texas where the Big Bopper's classic hit "Chantilly Lace" was recorded at what is now arguably the oldest continuously operating studio in the U.S., SugarHill Studios. This lesson is for week four of Introduction to Music Production at coursera.org. I will show how to use the Compressor that comes with Logic Pro 9.

Before We Begin

Logic Pro is a very deep and powerful program. There is usually more than one way to do something, whether it be a menu item, a keyboard shortcut, or a cursor tool. If you're familiar with Logic Pro, you may have a completely different method to do some of the steps I describe below. What's important is that you use what's best for your workflow. Also, while I am showing Logic Pro **9**, these techniques are the same or similar in Logic Pro 8 and X. Consult your documentation for specifics.

The examples below assume that you already have tracks or channels set up in a Logic Pro session and that you know some of Logic Pro's terminology. If you want to try these techniques and you do not have a recording to work with, you can make a test recording with your built-in microphone, or you can use some audio (blue) Apple Loops.

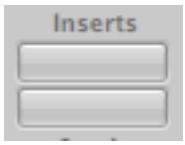
What is a Compressor?

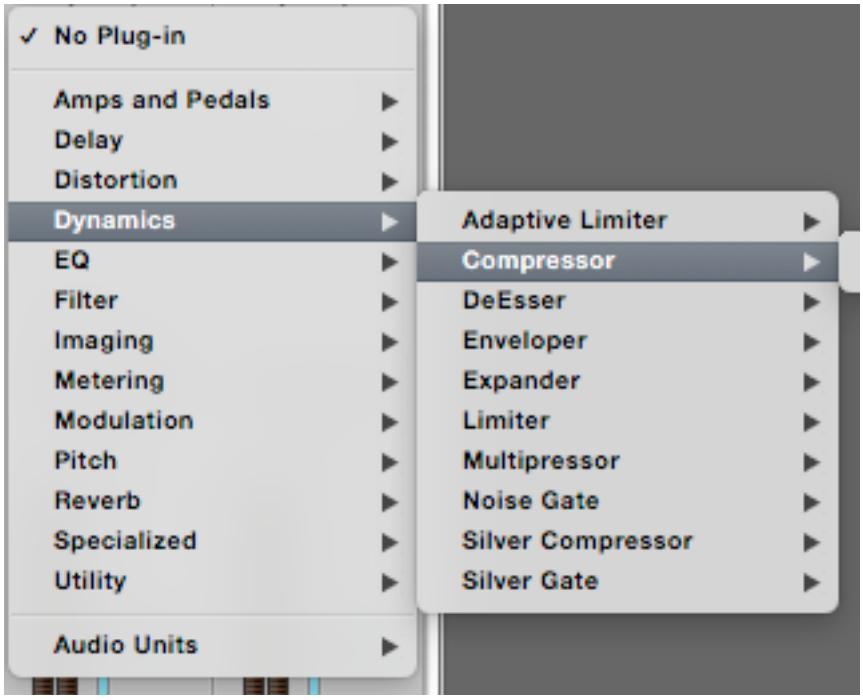
A compressor is primarily used to reduce the dynamic range of a recording, whether it be of an individual track, a submix of tracks, or the overall mix. It can be used to make a track or tracks sit better in a mix by keeping the volume levels of the track(s) more even. When used on a submix of tracks such as drums, it can "glue" the tracks together making them sound more like they belong together. A compressor can also be used to radically change the sound in creative and interesting ways. You can find many suggestions online and in books and magazines for both the corrective and creative uses of compressors and what settings will achieve those. As always, experiment and use your ears.

Instantiating Compressor

In Logic Pro 9 you add Compressor to a channel the same way you add any Insert effect.

1. Select the channel.
2. Under Inserts (either in the Inspector or in the Mixer), click and hold an insert slot of the selected channel strip. (This slot will usually be blank by default.) Select Dynamics - Compressor from the pop-up menu.





Compressor will appear with its default settings.

Compressor

Starting near the top left, here are some of the parameters of Compressor.

Bypass: This completely bypasses Compressor, as if Compressor was not on the channel at all. Use this to compare what you are doing with the raw sound.

Compare: This toggles Compressor between the current setting and the previous setting. If you make adjustments or change the selected preset and close Compressor, that becomes the "previous" setting the next time you open it. Any further adjustments after you reopen it would be compared to the saved "previous" setting. This does not compare your Compressor settings to having no compression at all. That is what Bypass is for.

Circuit Type: This lets you choose the circuit that Compressor emulates. Compressor emulates several analog hardware compressors, descriptions of which can be found online.

Gain Reduction display: This shows the amount of compression being applied. It works the opposite to a level meter, where the amount of compression is shown extending from the right.

Attack: This knob and field sets the attack time, which is the amount of time it takes for the compressor to react when the signal passes the compressor threshold (the integrated Limiter and Limiter Threshold are not discussed here). Faster attacks (lower values) will do

more to keep the level of the audio smoother, but may reduce or eliminate important transients such as the initial hit of instruments like drums.

Release: This knob and field sets the release time, which is the amount of time it takes for the compressor to stop reducing the signal when the signal drops below the threshold. A slow (longer) release time might be good for more sustained sounds, but may bring up background noise when used with sounds that have a faster decay.

Compression curve display (transfer function): This shows the compression curve created by Ratio and Threshold parameters. Input is the X-axis and output is the Y-axis. A perfect 45° line intersecting the same values on input as output would be no compression, created by a 1.0:1 Ratio. Above the Threshold, the flatter the curve, the more the compression. This is controlled by the Ratio.

Ratio: This sets the compression ratio, which is the ratio that the signal is reduced when it is above the threshold. It is expressed in values of input:output. For example, if the Ratio is set to 2.0:1, then for every 10 dB increase of input, the output increases 5 dB. Ratios of 10:1 and higher are generally considered to make the compressor act as a limiter.

Compression Threshold: This sets the level above which the compressor reduces the signal.

Reflection

This lesson only scratches the surface of Compressor. My research for the lesson led me to learn a lot about this plug-in. I also found out that Compressor in Logic Pro X 10.1 has some really intriguing improvements if you're using that version. Whatever version of Compressor you're using, you can find much more information about it in the Logic documentation as well as online.

Thanks for reading. I hope you found this useful, and I'm looking forward to your feedback.