Introduction to Music Production

Week4: Compress a drum groove in a variety of ways and describe what you are doing and the audible result.

Introduction

Hi, I'm Takahiro Kubo from Chiba in Japan. I'll teach the dynamic processors by using drum sound.

Lesson

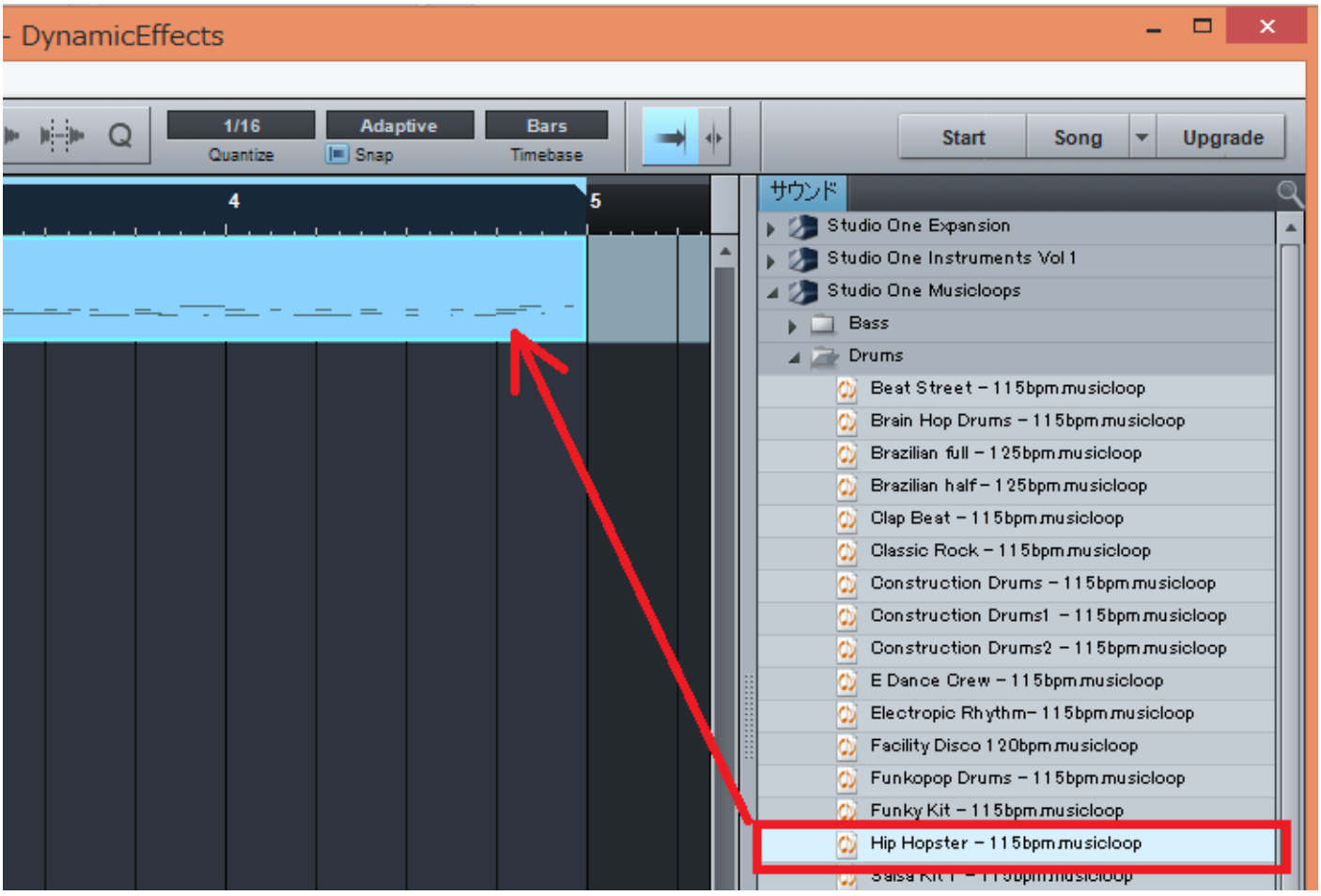
First of all, let's confirm the kinds of dynamic processors.

- Compressors
  - reduce dynamic range
- Expanders
  - emphasize dynamic range

Today, I will show the effect of these processors by using drum sound. I'll introduce the way to do it in Studio One.

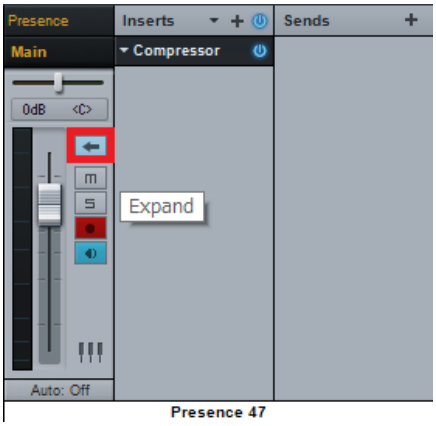
1.Prepare the drum sound

You can choose the drum sound from sounds in browser. I chose Hip Hopster, and I made the loop section over it by Shift + P.



2.Compressors

Then, open the Console View by F3 button, and check the Compressor by the expand button.



Presence 47

If you click the Compressor, you can see the control panel like below.

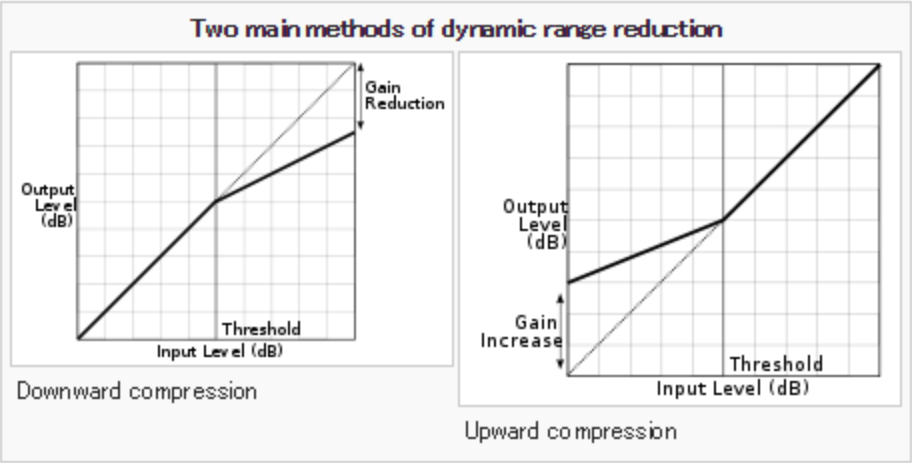
Then, let's play the sound. If you are opening the Compressor panel, you can analyze it.
The drum sound, Hip Hopster drum, is lilke below.

- average of minimum db is around -28.
- average of maximum dB is around -19

So we can say the original dynamic range is -28 ~ -19, about 9dB (the red line below).

To compress this dynamic range, there are two ways.

- downward compression: loud to quiet
- upward compression: quiet to loud



(from wikipedia)

Now, let's try the above theory.

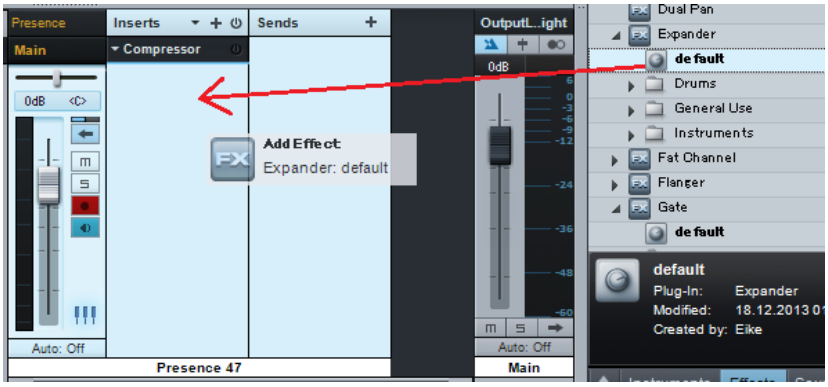
In the Studio One, to use the upward compression seems to need the professional licence... So I show the downward compression only.

I set the threshold to -24, the middle loudness of this sound, and set ratio to 20:1.
Then, the dynamic range became -33dB ~ -27.5dB, about 5.5dB. The dynamic range is narrowed.

(You have to check the Filter button to change the slope over the threshold).

3.Expanders

Next, let's try the expanders.

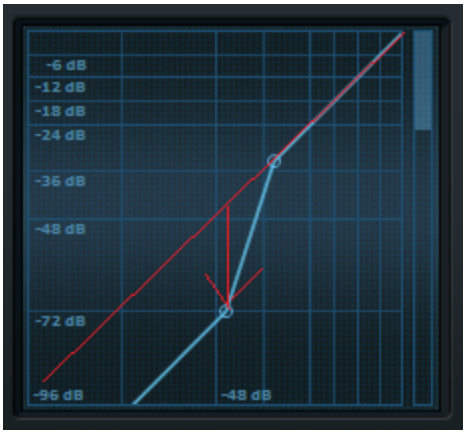


If you add the expander, you can see the contol panel of expander.

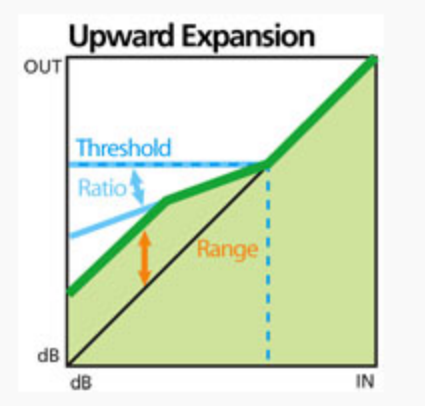
The effect of expander is expanding the dynamic range. There are also two ways to expand the dynamic range.

- downward expander: quiet to more quiet
- upward expander: loud to more loud

Downward expander works like gate. The quiet sound becomes more quiet.

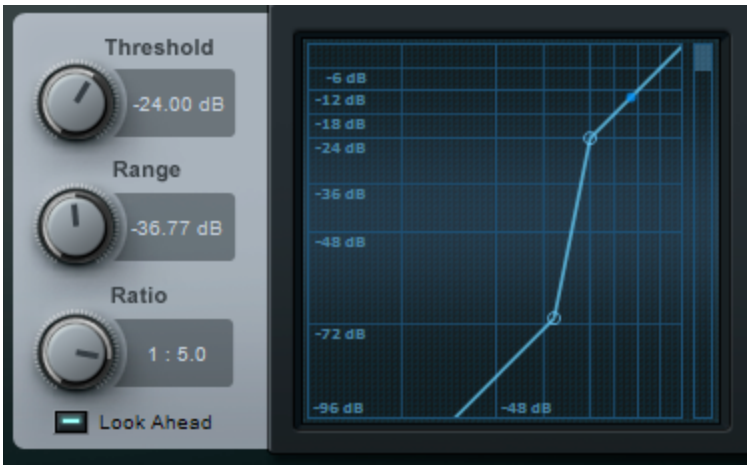


Upward expander works oppositely.



(from [ML4000 Part2 ML4 Multi-band Dynamics Processor])

I set the threshold to -24, the middle loudness of this sound, and set ratio to 1: 5.
Then, the dynamic range became -36dB ~ -19dB, about 17dB. The dynamic range is expanded.



Below is the result of each processor's effect.

- original drum sound
- compressed
- expanded

Reflection
It was a little difficult to use the processors in DAW. But to do it was very effective to understand.
And I could use processors, but to get the good musical effect was difficult..

Thank you for reading, and if there are anything I missed, please notify me.