Using Compression in REAPER

Recording, Engineering, and Mixing

Compression is one of the most critical tools a mixing engineer uses. In most modern music, compression is used on EVERY track.

Compression is used to accomplish three main goals:

1. To limit the maximum volume of a track
2. To raise the overall (average) volume of a track
3. As a special effect

Using the imp16 project, we will focus on the first two uses of compression.

To use a compressor on a REAPER track, first adjust the volume of the track so that it is hitting between 6 - 12 on the meter at the most. Then, click on the "fx" button for that track. Chose "VST: ReaComp" from the list. Then, you need to make three adjustments WHILE THE TRACK IS PLAYING:

1. Slide the "Ratio" slider (about halfway down the ReaComp window) over. You will learn more later about how to choose an appropriate ratio – for now, pick a number somewhere between 2 and 4.
2. Slide the "Threshold" slider (all the way on the left of the ReaComp window) until the moving green bars on the left are just coming over the top of the slider much of the time (see image 1) and the red bars on the right are going down to around 3-5 at the most (see image 2). You won't see either the green bars on the left OR the red bars on the right if the track isn't playing, so it's critical for this step that the track be playing at this time.

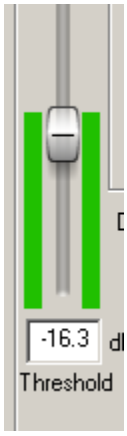

Image 1

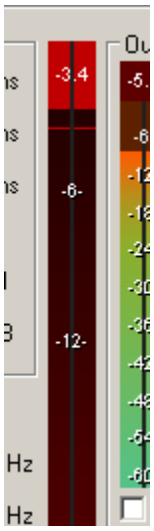

Image 2

3. Slide the "Wet" slider (on the right side of the ReaComp window) up so that the colored bars hit somewhere between 6 – 12 at the MAXIMUM (see image 3)

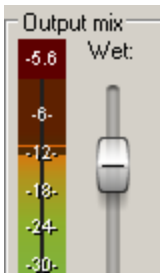

Image 3

Adjusting the compression in this way will make the loudest parts of each track a little bit quieter and make the quietest parts of each track a little bit louder. This makes it much easier to get good volume levels as you mix the entire song.

Often, it is difficult to hear the difference between the compressed and uncompressed sound of one track. In order to really take advantage of compression, you need to apply compression to all of the tracks in a song. Then, when they are mixed together, it is much easier to get a good sound and overall volume levels. So don't be concerned if you don't hear much of a difference – compression is critical, but subtle. It takes a while to train your ears to recognize compression. (That's why we're starting now – the sooner you get started using compression, the sooner you'll be able to hear how it improves the sound of your mixes.)

A great website that explains compression is located at this address: http://www.humanbeatbox.com/recording/p2_articleid/32. This article has lots of audio clips to listen to – it's worth your while to listen to these to get in your head what the difference is between a compressed and uncompressed sound.

Another great article is: http://www.whereismyhead.com/lit/compression_faq/. Unfortunately, as of 9/28/09, this site is block by our filter – I've submitted a request to have it unblocked, so it's worth seeing if it works! Much of this article is highly technical. However, towards the bottom, there are some images that show visually what happens to an audio track when it is compressed in the same way you will compress the imp16 tracks. In the pictures, you should notice that after compression has been applied, the loudest parts of the track are quieter. Then, after gain compensation has been applied (this is the "Wet" slider in ReaComp), the loudest parts of the track are back to their original level – but the quiet parts of the track are now a bit louder.