

7 – Expansion Exercise

Expansion

An expander increases the dynamic range of a source by increasing the level of loud parts of a signal (i.e. upward expansion) or decreasing the level of quiet parts of a signal (i.e. downward expansion). In practice, expanders generally provide the audio engineer with a tool for manipulating ambience, attack, and sustain. Downward expanders are the most common form of processor used by engineers for expansion. It may seem counterintuitive that turning a signal down actually increases dynamic range, but this is the case with downward expanders. By turning down quiet parts of a signal even quieter, the difference between the quietest and loudest parts of the signal are increased.

Overview

Use the provided multitrack recording to practice your skills using expanders to process your tracks. While the purpose of the exercise is to focus on using expanders specifically, you may also use any other processing you deem necessary to achieve a quality result (such as equalizers or other processors). However, the majority of the time you spend on this exercise should be working with expanders.

The included drum tracks were recorded at MTSU's Studio B in a large and reverberant room. Minimal dampening was used on the drums, and the drums were tuned to have a fair amount of resonance and sustain (in particular the snare drum). The result of these recording techniques is a large, open, and resonant drum sound with a good deal of ambience in the recorded tracks. It is your job as mix engineer to transform this drum recording and create a drum mix that is tight and punchy. This can be achieved by increasing the attack and reducing the ambience and sustain of the provided tracks using expanders.

Please note that a full complement of drum tracks has been provided from kick in and kick out mics to stereo room mics. It is typical in a professional setting to provide a wide variety of drum tracks to the mix engineer so they have options when creating their drum sound. *You do not need to use all of the included tracks to achieve your drum sound.* In fact, it might be beneficial to mute overly ambient tracks as you deem necessary. However, your overall drum mix should sound natural with a good balance between all the instruments of the drum kit (i.e. kick, snare, toms, high-hat, and cymbals).

Guidelines

1. Before starting to mix, come up with a plan for your approach to this exercise by using what you have learned about expansion from your readings and class instruction. Listen to all the tracks provided and take notes of: 1) any problems you hear, 2) your best guess as to how to fix these problems, and 3) what you would like your final mix to sound like. *Be prepared to discuss your mix approach in class after handing in your assignment.*
2. Focus on using expanders. The primary purpose of this exercise is to improve your skill with expanders.

3. Use only stock plugins within your DAW. The reason for this is twofold. Firstly, it does not take expensive or unique plugins to achieve a good mix. Simple tools used by a skilled mix engineer will outperform fancy plugins used by an unskilled novice. Secondly, this enables a fair comparison between student mixes.
4. Apply any processing as necessary to achieve a polished and professional product (e.g. EQ, compression, etc.). You may use processors other than expanders. Don't forget that using the foundational tools of level and panning will be essential for crafting a punchy and tight drum mix in addition to using expanders.

Initial Deliverables

Please deliver the following in one parent folder entitled “**LastName_Expansion v1.**” Upload this folder and share it with your instructor.

1. Pro Tools session of your mix. Label the session name with your last name and “v1”.
2. Make sure the “Audio Files” folder in the Pro Tools session includes only newly created audio files. The original files included in the exercise should be deleted for delivery to the instructor. Please note that you will want to keep a copy of the session with the original audio files for your own records and for future revisions.
3. 48kHz sample rate and 24 bit interleaved stereo .WAV file bounce of your final mix.

First Mix Attempt - Rubric

<i>Criteria</i>	Overall quality of mix	All materials submitted as requested	Followed exercise guidelines	Focused on the assigned mixing technique
<i>Points Allotted</i>	2 points	1 point	1 point	1 point
<i>Guidelines for full points</i>	Drum mix is tight, punchy, and well-balanced with minimal ambience remaining in the recording. There are no distracting artifacts from expansion present in the final mix like significant distortion.	All materials are properly labelled, all original audio files are deleted in Pro Tools session, and final mix delivered at proper specifications.	Used only stock plugins. Product delivered is well-organized and professional in presentation.	It is clear that a significant amount of effort was put into using expansion in the exercise.

Revision Process

To simulate a real-world mixing process better, and to help you to continue improving your skills using expansion, this mixing exercise will go through one round of revisions between the instructor and student. In the professional realm, it is very common for clients to listen to the initial mix and provide the mixing engineer with notes for revisions.

After you have submitted your initial mix to the instructor, they will provide you with notes regarding their thoughts on your mix, including what you did well and areas for improvement. Come up with a plan to address the instructor's concerns before starting your revisions. This could be a simple checklist of the revisions you need to complete or a general brainstorm of what techniques you might use during your revisions. Coming up with a plan will help you stay focused and address the instructor's concerns.

Once you are finished revising the exercise, closely listen to the results of your work and write a brief paragraph about your experience. In your written reflection, outline any difficulties you encountered while mixing. Compare your initial impressions and goals for your mix with the actual process of mixing and the final result. Did you fully or partially achieve your goal for what you wanted your final mix to sound like? Were you able to address all of the instructor's revision notes? Were there any particular revision notes that you struggled with and why?

Revision Deliverables

Please deliver the following in one parent folder entitled “**LastName_Expansion v2.**” Upload this folder and share it with your instructor.

1. Pro Tools session of your revised mix addressing the instructor's concerns. Label the session name with your last name and “v2”.
2. Make sure the “Audio Files” folder in the Pro Tools session includes only newly created audio files. Please note that you may want to keep a copy of the session with the original audio files for your own records.
3. One Word Doc or PDF of your written reflection notes for your revised exercise. This document should include a brief paragraph and be no longer than one page maximum (shorter is fine).
4. 48kHz sample rate and 24 bit interleaved stereo .WAV file bounce of your revised mix.

Second Mix Attempt - Rubric

<i>Criteria</i>	Addressed revisions	All materials submitted as requested	Followed exercise guidelines	Focused on the assigned mixing technique
<i>Points Allotted</i>	2 points	1 point	1 point	1 point
<i>Guidelines for full points</i>	Your mix addressed all or almost all of the instructor's concerns regarding revisions.	All materials are properly labelled, all original audio files are deleted in Pro Tools session, and final mix delivered at proper specifications.	Word Doc or PDF included with written reflection. Used only stock plugins. Product delivered is well-organized and professional in presentation.	It is clear that a significant amount of effort was put into using expansion in the exercise.