MUS 109 Mixing Project

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For the mixing project, the stems for the song "Bitter" by FytaKyte were mixed using various techniques within Pro Tools. Bitter is an uptempo alternative-rock record with a distinct groove in the bass guitar. The rough mix consisted of gain staging. At this point, the master fader was peaking at about -10 dB in order to have enough headroom for plugins and mastering (see Figure 1).
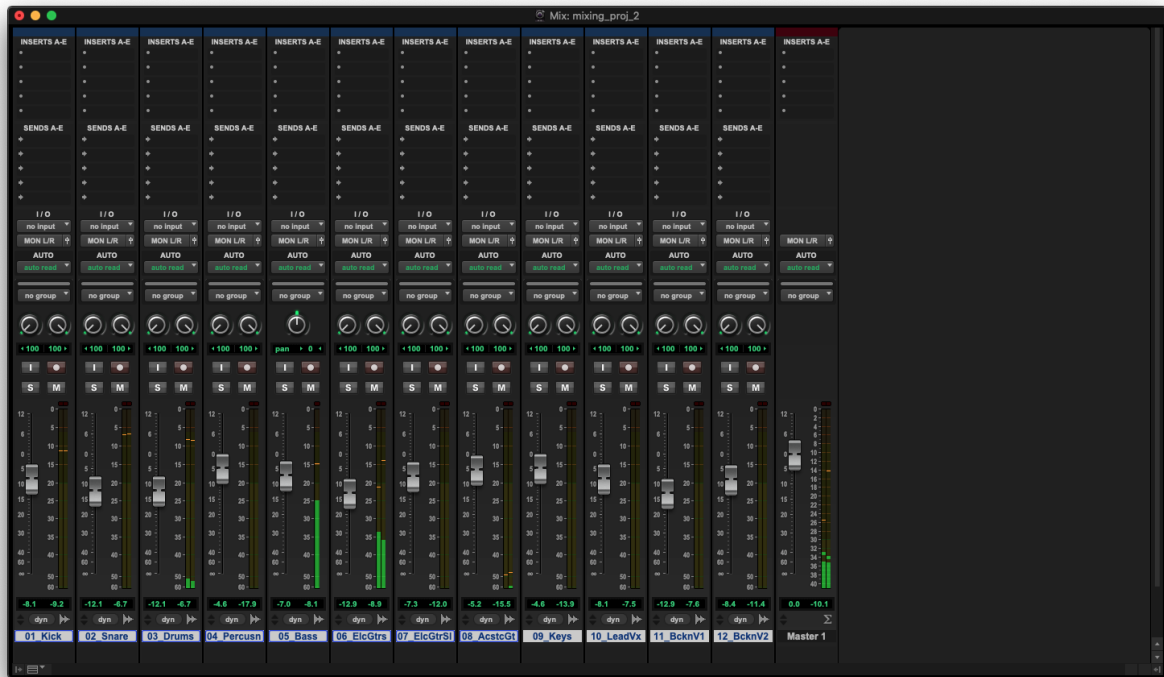

Figure 1 - Rough Mix

Looking at the drums, the kick appeared to be recorded separately from the other drum tracks. This was beneficial, as there was no bleed, thus no need for gating. In order to give the kick more definition amongst the bass guitar, some light EQ and a transient shaper were added (See Figure 2).

Figure 2 - Transient Shaper & EQ

Moving to the snare, I felt that it could have a greater presence in context with the rest of the mix. There was also some bleed from the kick drum in the recording, so the Virtual Mix Rack was applied to handle both gating and EQ. The virtual mix rack becomes a staple throughout the rest of this mix, as it provides EQ, compressors, tube amplifiers, and various other dynamic plugins within its suite. In order to beef up the snare, EQ bands added a bell curve around 1kHz, adding about 3 dB, and another bell curve around 820Hz added about 4.8dB. The being used is designed specifically for drums, allowing for greater control over DeBleed and transient definition (See Figure 3).

Figure 3 - Gating and EQ using Slate's Virtual Mix Rack

The overheads proved to be a challenge which needed an interesting solution. There was bleed from both the kick and the snare present in the recording, but gating and sidechaining a compressor took too much of the hi-hats and cymbals out of the recording. To avoid phasing issues, the CS-EQ was used to cut the low and low-mid frequencies, while boosting around 7kHz and 12kHz respectively. London was applied to add saturation simulated from an analog tube. There are two other tubes in the virtual tube collection which are used in this mix, London worked best for securing the crash cymbal in the mix (See Figure 4).

Figure 4, Overhead EQ Control, Tube Saturation for Definition

Not pictured is the extra percussion, which were occasional maracas/shakers sprinkled throughout the track. A light touch of reverb was added for a sense of space. As mentioned above, the bass in this record is very distinct, and needed to be solidly defined within the mix. To achieve this, the bass essentially needed to fit in a place of its own, where it would not clash with the other tracks. This chain features the FG-A EQ removing highs to allow for more high-end space, removing lows to control the muddiness of the mix, and boosting 1.5kHz. The New York tube is being applied for saturation, adding a warm definition to the bass. While the saturation level is maxed out, the dry/wet mix is 3.98%, making this a more subtle change. Pro Q3 is removing

approximately 4 dB around 1.9kHz. Black Box is the main tube for this track. Operating

at about a 18% dry/wet, this is where the bass' true definition is found (See Figure 5).

Figure 5 - Bass EFX Chain

The electric guitars felt very good from just gain staging, all that was added was

some lightly mixed delay, about 14% dry/wet in both the left and right channels, along

with a high frequency cut using Pro-Q3 (See Figure 6).

Figure 6 - Electric Guitar EFX, Repeater Delay and EQ

The acoustic guitar and keys were two elements that were mixed to be compliments of each other. Both these elements felt thin in comparison to the rest of the mix. To help define the acoustic guitar and keys, they were panned slightly hard right and left respectively. The acoustic guitar saw a bell adding about 2 dB at approximately 3kHz, with a high roll-off beginning around 6kHz. The Hollywood tube was added as it complimented the high frequencies of the acoustic guitar very well, and helped define its position in the mix (See Figure 7).

Figure 7 - Acoustic Gtr EFX, EQ and Tube Saturation

The keys fit very nicely once they were panned and given their own little section. RC-20 was added to give a little wobble (pitch drift), some iron-simulated distortion with a low dry/wet mix, and some space (reverb), in order to achieve a unique sonic profile (See Figure 8).

Figure 8 - RC-20 for Keys

The lead vocal was an element that felt rough and incomplete in the dry recording. To start, the FG-S was used mainly for additive EQ at around 2.3 and 4.5kHz, while cutting all frequencies below approximately 50Hz. The FG-N was used for subtractive EQ around 6.8kHz, and a subtractive high-band. Hollywood was added to give a little edge to the vocals, again maxed saturation at about a 9.5% mix. The FG-Stress is a compressor which is being used to glue the vocal. While it is operating at a 10:1 ratio which seems very high, the dry/wet mix is just over 50%, essentially mimicking a parallel EQ. Finally, a deEsser was added in order to control the sibilance,

as the annunciation of certain words in the hook were very sharp, and pierced through

the mix (See Figure 9).

Figure 9 - Lead VOX EFX Chain

The backing vocals were both given the same virtual mix rack chain as the lead

vocals, but were given a little extra reverb. The one takeaway from the vocal tracks was

that the natural reverb in the recording fit the record very well, however I felt like that

backing vocals needed their own flair. Before mastering, a flanger and PanMan (an

autopanner) were added to the electric guitar solo that occurs during the bridge before

the final pass of the hook (See Figure 10).

Figure 10 - Gtr Solo EFX

Finally, Black Box HG-2, and Shadow Hills Mastering Compressor were added to the master fader in order to maximize the sound, and to give some final flair and definition. The Black Box HG-2 was used to focus the drums and bass, and give a slight uniformity amongst the rhythm elements of the record - at about a 25% dry/wet mix (See Figure 11).

Figure 11 - Master Fader

Finally, the drum tracks were routed to their own bus where light parallel compression was added. Figure 12 below shows the finished overview of the faders. Bear in mind most of these were changed as effects processing occurred.
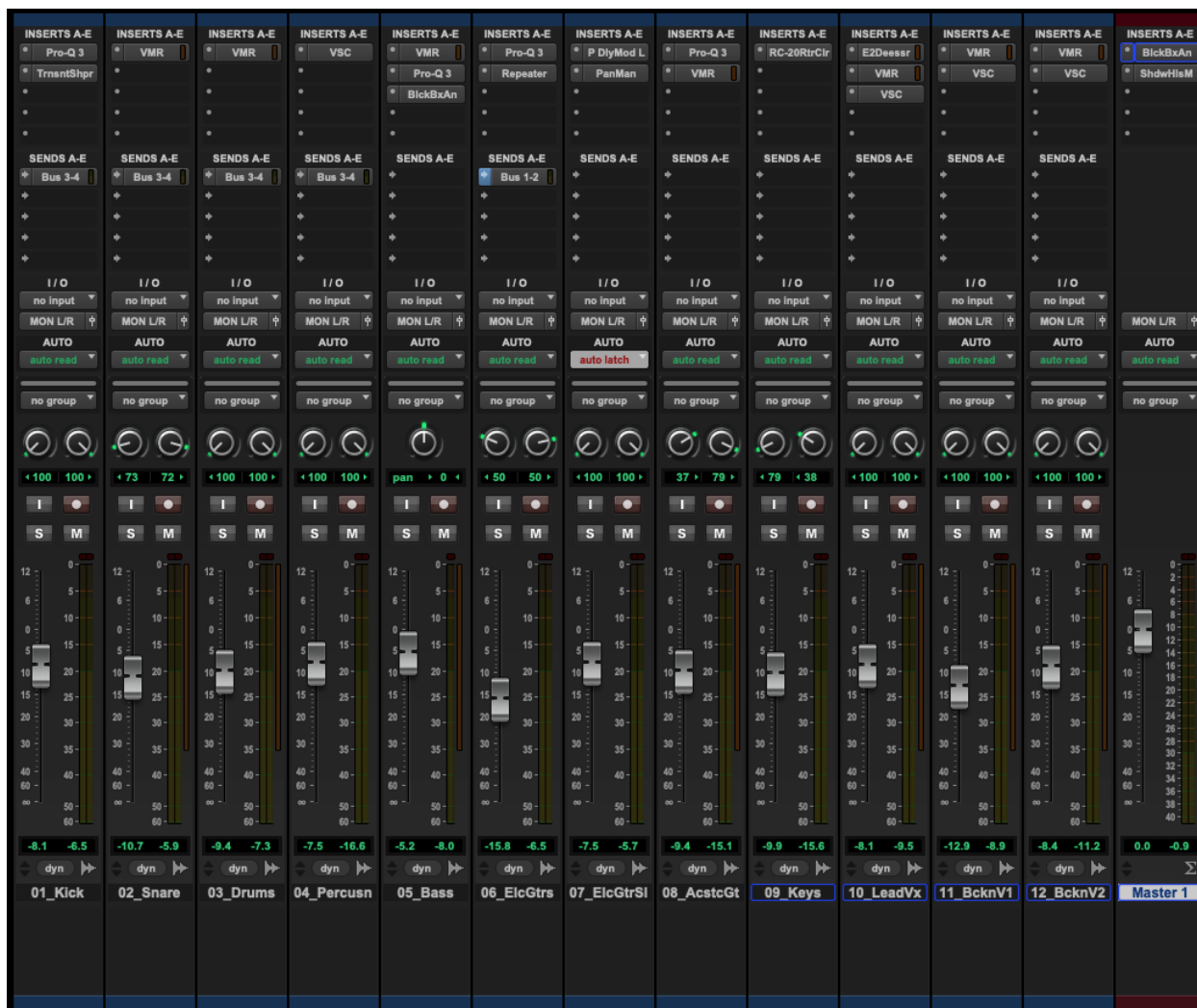

Figure 12 - Final Faders