Editing, Equalization, and Compression Tips

Editing for Timing Issues

- List to each separate take for each track. Pick the best one and use it going forward.
- Determine exact time (mm:ss) where timing issues occur. Compare to original scratch, click, or percussion tracks. Note1 – Timing doesn't need to be perfect versus click, but each track needs to generally line up versus the other performance tracks. Note2 – People are very sensitive to audible timing issues. The finished product will not sound "professional" if these are not addressed.
- Cut and paste either phrases or quiet passages to adjust timing. Do not delete anything from tracks. Save track as a new file name before editing. If no useable tracks are available, consider looping an acceptable section of a track, and then using that throughout the song.

Editing for Performance Issues

- Determine exact time (mm:ss) where other performance issues, such as pitch, wrong notes, extra noises, etc, occur.
- Find a better instance of the same phrase in the same track, or from a different take.
- Determine the exact length of the phrase. Make sure timeline snapping (fine) is turned on. Note – Bars and Beats time format usually works the best, but mm:ss can also work.
- Highlight the good phrase (exact length), hit Copy, then highlight the same length over the bad phrase and hit Paste.

Equalization

- Think of each track as having its own real estate in the frequency range, with a sweet spot that it owns. Emphasize that frequency on the track, and deemphasize that frequency range on the other tracks.
- Kick drum and Bass exclusively own the region from 100 Hz down. Put a High Pass filter on all other tracks with a frequency somewhere between 100 and 200 Hz. Move the frequency up until the track starts sounding thin, and then back off a little.
- Put a low pass filter on Kick Drum and Bass with a frequency between 3kHz and 10kHz.
- Find problem and sweet frequencies by sweeping a filter with a narrow Q and a large amount of boost or cut.
- Avoid boosting and limit to 2-3dB when boosting. Boost with a wide Q, generally cut with a narrow Q (surgical cuts).
- Use a compressor or dedicated deesser to address sibilance instead of EQ. Consider using tape saturation, tube distortion, or an exciter to add presence/air instead of EQ.
- Use available frequency analysis tools to help with this process.
- Do not make any major EQ decisions with track solo'd. All major mixing decisions need to be made in the context of the full song. Note – Making each track sound great solo'd will result in a poor sounding song.
- Treat instrument solos like vocals.
- Check phase on drum tracks by reversing phase on each track to see which has best bass response.
- Use "Track Starting Points" chart for guidance on initial EQ settings.

The Music Room

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40hz – kick fundamental
80hz - rumble of the bass
100hz - thump of the kick
200hz - bottom of the guitar
250hz - warmth of the vocal
350hz - bang of the snare
400hz - body of the bass
500hz - clang of the high hat
600hz - clang of the cymbals
800hz - ping of ride cymbal
1000hz - meat of the guitar
1200hz - body of the snare
1400hz - meat of the vocal
1600hz - snap of the kick/ attack on guitar
2500hz - wires and snap of snare
3000hz - presence of the vocal
4000hz - ring of ride cymbal/top end of bass guitar
6000hz - sizzle of the high hat
7000hz - sizzle of the cymbals
8000hz - top end of the kick
9000hz - brightness on snare and cymbals
10000hz - brightness on vocal
12000hz - air on vocal
14000hz - air on cymbals

Track Compression

- Use a basic compressor on most tracks to tighten dynamics. Aim for 4-10dB of compression with 2-4dB of makeup gain. Start with attack and release settings of 10/100ms and 2/1 reduction. Use higher settings on tracks with a lot of low end (bass / kick, etc). Avoid any “Pumping” sound.
- Note – Compression of 10dB will cut the dynamic range approximately in half. Adjust makeup gain so that the overall track volume does not change with the compressor on or off. Note – We usually perceive louder as better, so use this approach when A/B’ing all effects and mix adjustments.
- Do not use compression on highly compressed instruments, such as distorted electric guitars.
- Bass can often benefit by using a multiband compressor.
- Vocals will sometimes need multiple levels of compression.
- Simulations of many analog devices, such as tape saturation, tubes, transformers, etc will also provide some compression.
- Post track compression will often be found on a group buss, main buss, and during the Mastering process. Leave dynamics in place to allow for this compression later on.
- Use “Track Starting Points” chart for guidance on initial Compression settings.