

The Mix

(A pop music viewpoint)

- Pros have done 1000s of hours!
- Compare *compare* **compare** your mix to other mixes!
- Put your mix *in a playlist* with similar music.
- Listen to it on as many *different speaker* systems as possible.

You Will Adjust

- Timing of individual notes (Edits)
- Balance (Levels)
- Frequency Range (EQ or high/low/pass)
- Panning (Stereo R-L or 5.1 placement)
- Dimension (*ambience: reverb, delay*)
- Dynamics (*compression, limiting, gating*)
- Interest -*The arrangement. Something changes, interest builds, the second half is not a repeat of the first.*

Mix Strategies

- Have an idea of what you want, an example
- Don't let the controls "lead you."
- How **Wide**? How **Tall**? How **Deep**?
 - **Wide** in stereo panning (left-right)
 - **Tall** full frequency is represented (20-20K)
 - Avoid sources with similar frequency ranges "stacked"
 - Some midrange usually is reduced though
 - **Deep** with reverbs,
 - Also use delay, flanging, chorus
 - **Dry** = close-up front **Wet** = in the back

Balancing Competing Tracks

- Example: two voices, or guitar and keyboard
- Example: Or street noises with a dialog
- 1. Levels are the obvious first choice.
- 2. Change the frequency range of individual tracks (EQ or high/low/pass)
 - Make frequency room for each other.
 - For instance, boost one at 500Hz and cut at 800Hz. Cut the other at 500Hz and boost at 800Hz.
 - Whatever is most important for communication may have to get the biggest chunk of frequency range.

Balancing Competing Tracks

- 3. Cutting out parts of each track so they alternate.
- 4. Rearrange and re-record the instrument.
- 5. Pan the clashing tracks apart.

Building a Mix: Adding Tracks

- Options for Dance/Pop Music:
 - Start with bass?
 - Start with kick drum?
 - Start with snare drum (2,4 back beat)
 - Start with bass and drums?
- Film -start with most important element:
 - Dialog, key object sounds, vocalist track
 - And fill in other sounds around it.

Building a Mix: Starting

- Listen to each track and note problems.
 - Get rid of rumbles, clashes, and tracks that really are redundant, like two guitars chording.
- Then start with everything at -6 dB
- Or build up track by track from the heart of the arrangement? Drums and bass?
- Popular alternative: Start with loops

Building a Mix: Options

- In a section (horn, string), work from highest to lowest pitched.

Helpful Actions

- Switch off effects when recording.
 - Less effects means less CPU load
 - For some effects, wait until mastering?
 - Install a master effect and “suspend” it.
- Use solo often to isolate sounds.
- Any effect setting you like?
 - Save the setting preset using a file name that is specific.

Reverb

- Reverb effects easily add to the overall volume level.
- Can be a heavy CPU user.
- Many automatically reduce the dry part of the mix. A good reverb will have a way to turn down the dry *and* wet parts of the reverb “mix.”
- Avoid this by giving reverb a separate FX track. Then set to 100% wet.

Levels

- Start with each track at -6 dB
- Together they will be -3 dB or higher
- The more tracks the higher the total
- Watch out for clipping, especially peaks

Compression?

- Expected but often overdone in pop and commercials
- Use whenever you want a sound to stay apparent
- The *sugar* of mixed music
 - Bass is almost always compressed a lot
 - Vocals not quite as much
 - Rhythm related tracks often compressed
 - Snare, electric guitar, lead guitar

Buss Compression

- A final, overall compression
 - Almost always done in pop music
 - Required in commercials
- Compress the final stereo mix
 - Often with a multi-band compressor
 - Sometimes compress twice with 2-3 dB each
 - Common to add a *limiter* with high threshold *first*, to control little transient peaks. Then the compressor follows.
- New York Style
 - Highly compressed – layers of compression - punchy and aggressive
 - EQ boost high and low - “Recreate the event!”
- LA Style
 - More natural although still compressed
 - “Capture the event”
- London Style
 - Compressed like NY
 - Many effects layers – Complex arrangements
- Nashville Style
 - Started as simple, warm EQ, few layers
 - Aural space between instruments