

# 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