

## DESN 275 Week 5 Multitrack Editing and Mixing

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### Reading Assignment:

**Audio Engineering 101: Ch 7 Signal Processors**  
**Ch 9 Mixing**

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### Editing Assignment: Two mixes

Using the basic tracks provided, mix and master two alternate stereo CD-quality mixes with the characteristics listed below. Also include a screen snapshot of each final mix. Your two snapshots should show the key settings used to achieve the different mix versions.

(To make a screen snapshot on a Mac, press Apple + Shift + 3. Then look for a file called "screenshot" on the desktop).

### Common Characteristics for Both Versions:

- No clipping, pops or distortion added
  - Each track easy to discern, distinct when one pays attention to it.
  - Lead elements easy to hear but not louder than necessary over the background tracks.
  - No track obscuring another track
  - Overall left to right balance in the stereo mix
  - Lead elements and bass near stereo center
  - Some compression and tone manipulation on almost every track (EQ? Pass Filter? Chorus? Etc.)
  - Quiet/unnecessary track sections removed
  - Zero-point starts or quick fades and ends on clips
  - Cross-fades on clip transitions
  - Aux send/returns used for overall reverb
  - One example of automation used.
  - A pleasant balance across all frequencies
  - Turn in as MP3 or Ogg Vorbis
- **Style 1:** personal, slightly warm EQ, light reverb or delay, only light compression and plenty of space for each instrument to be heard. (Examples will be shown in class and posted.)
- **Style 2: "Radio Mix" style** useable for AM radio format or TV commercial production, more-compressed, possibly more reverb and echo, fat drums.
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### Example Quiz Questions

What are the first strategies for get started with a mix?

What are your goals when equalizing a track?

In general is it better to cut (lower) frequencies with an EQ or boost them?

Placing sounds somewhere left to right between stereo speakers is called ...?

Why does *echo* and *reverb* make a sound seem like it is in the back of a large room?

What do *Wide*, *Tall*, and *Deep* refer to mixes?

A: *Panorama – Frequency Range – Reverb/Delay*

Explain each of these *other* elements of a mix:

Balance

Dynamics

Interest/Arrangement

Why is mixing "subtractive" by nature?

What are several ways you can keep two sounds or instruments from "fighting" or masking?

What two basic tools do you have to make a mix *build in intensity*?

How many elements should be *featured* at the same time?

Why do we need center channels in theater sound?

What is meant by *rendering*?

What is meant by *bouncing*?

As you begin a layering recording session, why should you avoid adding effects like reverb too soon in the process?

When starting a mix, what are the usual starting levels for tracks?

What techniques help you make each track distinctly heard in the final mix?

## Signal Processors - Compressors

What are the practical uses of *compressors* and *limiters*?

*A: Keep transients from causing distortion.  
To even out a performance.  
To raise the apparent level of a track.*

What does a *multi-band compressor* do that a simple compressor can't?

To increase *punch* in a track, how do you set the *attack*?

## Text Chapter 7 Signal Processors

What characteristic of sound does a compressor control?

Why should you avoid squashing a sound?  
*A: Unnatural. And it brings up the noise floor.*

What are the typical uses for compression?  
*A: Even out the dynamic range of a sound, instrument, or recording.  
Bring up a quiet sound.  
Control a loud sound.  
Make a creative version of a sound.*

What does a threshold control do?

What does output "makeup" gain do?

What does attack do? Be clear.

What does the ratio do?

What is the difference between a soft and hard knee?  
*A: More subtle effect. Eases into compression.*

Which genres use the most compression?  
*A: Pop Rap Hip-Hop Metal New-Country and Modern Rock*

Which genres use less compression?

*A: Jazz Bluegrass Classical Old Country and Indie Rock*

## Chapter 9 Studio Session Procedures – Mixing

What are the basic mixing tasks?

*A: 1) Balance levels 2) Compression or Limiting  
3) Panning 4) Equalization 5) FX such as reverb  
6) Automation*

What is *automation* in a DAW?

On which types of tracks should you roll off the bass (EQ high pass) ?  
*A: Vocals guitar snare tambourine etc.*

On which types of tracks should you roll off the high (EQ low pass) ? *A: Bass Kick-Drum*

Why might you pan similar instruments to opposite sides?

Which types of pop tracks are usually compressed?  
*A: Vocals, Bass, Kick-Drum (also guitar solos)*

Why do you "always start with subtractive EQ"?

Why do vocal tracks often need to be a bit "loud"?  
*A: THAT'S what people will actually listen to.  
The lyrics need to be comprehensible.*

Should you ever go over zero in the digital world?