Challenge #2 – Pan, Volume, and EQ

Recording, Engineering, and Mixing

There is a new song posted on the CvStuShare drive – IMP16. Copy this folder onto your thumbdrive (if you don't have access to the CvStuShare drive, borrow someone else's computer to copy the folder to your thumbdrive).

Note that for this project or any subsequent projects, you can use a song that you have recorded or put together yourself. The only requirements are that a) whatever song you use, the complexity must be similar to the song posted on the shared drive and b) when you turn in your work, you need to include all the media files that accompany your song.

Next, create a mix of this song by using the following techniques:

1. Adjust the left / right placement of each track in your headphones.
2. Adjust the volumes of each track until all the parts sound balanced (use the "Solo" button to compare groups of parts). But make sure that you never "go into the red" on any of the tracks, effects, or the master tracks. This means that the volume is too loud for your computer and the audio is distorting. (You might not be able to hear it in Reaper, but you would on a CD or an mp3.)
3. Add EQ to the tracks
    a. For instruments such as guitars, organs, and higher-pitched drums, you can pull some of the lower frequencies out – maybe all the way to 150 Hz or so.
    b. It can be helpful to clarify tracks by using small amounts of cutting or boosting at different frequencies. For example, you can create some sonic distance between the rhythm and lead guitar parts by cutting the rhythm parts slightly at around 300 Hz, but boosting the lead parts at 800 Hz. This will help the rhythm guitar sink back into the mix a little bit and cause the lead parts to stand out more. You can do this with different sets of instruments as well – particularly if they seem to blur into each other in your headphones.
    c. Vocals can often benefit from some additional high frequencies – 2000 Hz and up.
4. Add special effects to the guitars and organs – try flangers, choruses, phasers, and vibrato. Don't overdo it – if it sounds great to really crank up the effect on a certain instrument, go for it – but it can also sound good to use the effects in a more subtle way. Play around with different settings until you find ones that you think sound good on the instrument AND fit in well with the overall mix. Use the "Solo" button to isolate the track when necessary, but don't do all of your work soloed, so you get a sense of how your changes are affecting the overall song.

When you've got a mix you think sounds good, compare your work with another student's work. After your comparison, make some changes to your mix to see if it can be improved even more. When you're all done, you can use the "Render" command from the file menu to save an mp3 version of the file. You can copy this to an mp3 player or a CD to see what it sounds like on a different sound system (preferably one with speakers, like a home or car stereo).