

How to Prepare Music Tracks for Mixing by RealHomeRecording.com

At a big commercial studio preparing an audio mix, or mix prep for short, is usually handled by an assistant editor. It is the tedious but very necessary tasks performed to get recorded tracks ready for your mix session file. These are tasks that are often technical in nature and if you don't do them now will get in the way of your creativity. This is an intermediate level tutorial.

Most of us home studio guys don't have the luxury of an assistant mix engineer so it's our job to do mix prep. I'll get into detail with mix prep tasks in a separate videos. For now, this is just a brief overview on what you should be doing with each and every mix. Once you get used to mix prep after the first couple songs it should take about 2-3 hours per song to do these tasks.

The first thing I like to get out of the way is **comping**.

- Vocal comping, bass note alignment, drum quantization to bass and rhythm guitar notes, lead guitar solo comps, whatever. Comping or comp is shorthand for compiling the best performances from your takes. You may work differently but when I record I will have one session file for each instrument. That means that as I am consolidating my tracks for the master mix session file I will also need to drop these new tracks into my other instruments as a reference so that I know their time alignment is correct. Otherwise, you'll time align to old tracks that are obsolete.

For that reason, I like to do my vocal comping last so that I know every lyric is timed right with the instrument tracks.

- Before I make my first edit I do a save as and add the word "edit" and a number to the end of the session filename. So lead vocals edit 1, bass edit 1, drums edit 1. Instead of sequential numbers you could also use a date in year-month-day format, such as 2015-10-25 after the word edit.

On a side note if you are comping, also known as editing and you are mixing other people's music you should charge for this service. Or bump your mixing rate up and add it in because it is the work part of mixing.

- For vocal comping change the session tempo to a high number so grid cuts are more precise and moving tracks is easier. Just make sure that Timebase for items/envelopes/markers (in REAPER) is set to Time and not Beats. Alternatively, The better method, if you are a REAPER user, is to right-click the Grid lines icon and then change grid line spacing to whatever fraction you desire. Thanks to YouTube user Frank B (FB IV) for that tip.

- For other comping duties turning snap to grid off tends to work better. Your focus should be on rhythm instruments gelling together. They don't have to be exactly on the grid in relation to one another but they should work well together and have a tight groove. Being a little ahead or a little behind the grid is natural but when something sounds off you should find out why then fix it if possible. I like to give it a listen and as I hear notes that are off I press the marker key. I don't stop playback I listen all the way through to the end and keep adding markers along the way. Direct guitar tracks can be a lifesaver in these instances, not only for nudging notes into place but also visually see what needs to be fixed.
- The best place for edits is in gaps for non-continuous notes, at points where other tracks have a loud transient (like a snare drum hit, hihat hits for high frequency instruments or kick drum hits for bass instruments) or right before transients if you have a continuous playing section. For continuous crossfades keep them short...5ms to 10ms in total length.
- You may need to stretch notes. In REAPER you simply hold down your Alt key and drag an edge. REAPER has different pitch shift mode options so play with those to get your tracks sounding natural. elastique pro is a good all around mode. Soloist may sound better on vocals, bass guitar and other mono sources. If you record at high sample rates like 88.2 kHz or 96 kHz time stretching sounds better.
- I'll also do **rough volume level automation** for tracks, especially vocals. So if something is noticeable too loud or too quiet I'll adjust it. We're working with 32-bit floating point math so if something gets messed up at this point it doesn't matter.

- When you edit, **crossfade**. Back when tape was used it was cut diagonally with a razor blade instead of straight up and down. This was to prevent click/pop noises from happening. Some DAWs automatically add crossfades with cuts but some may not.

- Use headphones and **go through all your tracks one by one**. Headphones reveal nasty little things that speakers often don't. Make sure there isn't junk hidden in there. Vocal tracks are especially notorious for junk like lip smacks, headphone bleed, unnecessary humming. Acoustic drum tracks will often have a stick countdown. Take notes. Keep the vocal breaths in for now...you may want them later.

Besides technical issues you should also **look for unique parts** that you may want to feature with automation during the mix. I call this gem searching. When you find these gems note their timecode and instrument in a word processing file or on a notepad. Featuring these gems during a mix separates the big boys from the wannabes.

- **Phase check multi-miked tracks.** Typically drums, stereo miked acoustic guitar, bass cabinets with direct bass tracks, electric guitar with room mics, Anything that was recorded with more than one microphone needs a phase check. Phase align if necessary. Change polarity toggle button to hear which setting sounds fuller. A plugin called Melda Production MAutoalign can help you a lot with this task or Waves InPhase. If you don't want to buy one of those plugins reverse the polarity of one track and nudge the track until their sum cancels the most.

- If necessary **convert all your files to the same sampling rate, word length aka bit depth and to the native uncompressed file type** that your DAW supports...usually **wav or AIFF**. If not it will unnecessarily take away CPU power to resample audio in real time.

- Mix prep is also the time to **process virtual instruments**. MIDI, drum triggers, guitar amp simulators.

- **Noise reduce** tracks that need it. Vocals and electric guitar are the tracks I apply noise reduction on the most. I use a program called iZotope RX2 for noise reduction tasks. Don't overdo it though...I usually don't do anymore than 20 dB of reduction. Always keep a copy of your original, noisy tracks. Don't overwrite them!

- **De-clipping.** If by some chance you overloaded your converter and got digital clipping now is the time to fix that. Again, I use iZotope RX to take care of this recording mistake.

- Pitch correction. Auto Tune, Melodyne, ReaTune...best done manually.

- When you are finished prepping your files it is time to **consolidate those tracks**. Usually when I am tracking I have mixed session files for each instrument or vocal that I was tracking. Consolidation is massive rendering, exporting or bouncing of files...whatever you want to call it...those tracks that are currently in session files need to be changed into individual uncompressed files so that they can go inside of one master session with the least fuss and muss as possible.

The most important thing to remember about track consolidation is that the **tracks should have the exact same start times**. Even if the track starts near the end that means there will be a huge amount of silence during the track. That's OK...you need to do that to make it easier to drop the files into your master project.

- Before you render and consolidate, if you follow my **old school engineering philosophy** you may have been mixing as you go. Something that is no different from how things used to be done back in the old million dollar studio days except you're doing it in the box. To save on CPU usage, mix prep is the time to get those tracks sounding better. We're not looking to add effects like reverb or delay just yet...we are mainly focusing on clean EQ cutting, light compression with 4 to 6 decibels of gain reduction tops and console/tape saturation plugins at this stage.
- Whether you process your files or not I like to consolidate to **32-bit floating point bit depth**. There's no point in adding extra noise to your tracks.
- **Don't make the mistake of labeling the tracks with the names of the musicians** who played their part because that is confusing to the person mixing. Let's say you were sending tracks for me to mix. I may not know who Michael or Steve are. All that matters for the filename is the instrument that is played, that's it. The musician that played that instrument is irrelevant for mixing purposes.
- **Number your file names** and label them consistently. If you like vocals at the top of your mix label them "01a Ld VOX", "01b Bg VOX 1", "01c Bg VOX 2" and so on. Number for each track type, letter right after the number and then track name. Simple. That way when you drop tracks into a new session file they will appear in the correct order that you want for track layouts. And keep the number labels the same for every mix! If you must, create a table with instrument tracks and their corresponding numbers.
- If you have a **tempo track** in your instrument session files export that as well. Especially if you have a song with tempo changes. You may need it. If your DAW has the option to export MIDI there will usually be an option to export the tempo map and markers in one file as a multitrack MIDI file. In REAPER use File>Export project MIDI then put check marks next to Embedded tempo map and Write project markers as MIDI cues.
- With the exception of piano or keyboard tracks all of your tracks should be mono. Even instruments that were stereo miked like drumoverheads or acoustic guitar should be output as mono files.

- **Folder Structure for recording** should have been something along these lines: Artist or Name > Album Name is the parent folder. Then the folders within that folder are song titles then each instrument gets a folder inside of the song folders and the final mix session gets a folder as well..
- **Do not delete your raw tracks!** All along hopefully your recording sessions were well organized in their own folders. You can now create a final master session folder and a master session file which is where your consolidated tracks will be

- **Project/session file naming convention** – Song Title – MST year-month-date-letter. So the first mix on [date] would be Rock Anthem -MST. Session files are so small multiple copies aren't a problem to store. And it will prove to be important to have "old mixes" handy in case you mess up somewhere along the line. If you do this while recording it saves time!

- Once your master mix session is loaded up you can drop all of your consolidated tracks into it. **If you have tracks with large sections of silence then feel free to manually go through and cut out those sections.** This saves on CPU usage because a lot of plugins will bypass themselves automatically if they don't detect a signal. Also, your hard drive doesn't have to stream silence, which is wasted bandwidth. On newer faster computers this is less of an issue.

- After deleting silence you can **lock your tracks** so that you don't accidentally move them.

- **Mark song sections.** Intro (introduction) Verse 1 Pre-chorus 1 Chorus 1 Verse 2 Pre-chorus 2 Chorus 2 Bridge Outro are just some of the names. These labels should have been made during tracking at some point. If that was the case save as one of your sessions and delete the tracks so you don't make to waste time remarking sections. And instead of marking the sections right on the beat mark them a bar or two before.

- **Track labeling and color coding.** Label the actual tracks...by default REAPER reads the file name and labels the track name the same. Most if not all DAWs by now have an ability to change the color of tracks. This helps us to visually find groupings of tracks a lot easier, which especially makes navigation a lot easier with large sessions. Do it with color letters = instrument letters. So violet for vocals, green for guitars, drums = daffodil yellow, blue for bass, pink for pianos, etc. And **set them up in a standard fashion each and every time** so track layout becomes second nature to you. That's why you always see me using the same REAPER theme in every video...there's no reason to change what works for myself.

For a typical rock or country track I like vocals at the top then lead guitar, rhythm electric guitars then bass followed by kick drum, snare and then the rest of the drum tracks. For other genres I will place tracks where I think they are necessary.

- **Setup busses.** Usually I will make a guitar buss, drum buss, vocal buss. This makes automating volume levels a lot easier.
- **Setup mults.** More than likely some tracks will need different plugin treatments during the song. Verse effects then chorus effects back to verse effects then to a bridge effect. Vocals often have different delay and reverb settings during the course of a song. Set this stuff up now. Setting up mults is called multing.

- **Setup all the effects you typically use** on each track. If you have never mixed before skip this step. My normal track setup is Slate Virtual Mix Rack with VCC channel enabled to the Brit 4k setting with the FG-S equalizer. Then a compressor plugin. Or I may just go with the IK Multimedia British or White channel plugins which have an SSL EQ and compressor inside of one plugin.

For lead vocals I will have reverb and delay sends setup with Slate VCC as the last plugin. On the master track I have the Slate VCC mix buss plugin first, again going through the Virtual Mix Rack plugin, then it's a mix buss compressor of some sort followed by a room reverb set to around 5-10% wet. Slate VTM on the 1/2" setting is the last plugin. All of these plugins are loaded up at the start of each new session but they're all disabled.

- Load up professionally mixed music from the same genre you are about to mix. These songs will be used as a **reference** throughout mixing and mastering. You will have to lower their volume initially. A good plugin that helps with this comparison is Magic AB from Sample Magic.

- Purchase online webhosting and **upload backups** to the site. Online backup sites like Dropbox will also work just fine. Consider encrypting the files. Also, make a backup copy to an external drive or thumb drive. I use DreamHost and SanDisk or Kingston brand thumb drives.