A 6-step mixing method you can apply to any mix!

CORE MIXING

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INTRODUCTION

What will you learn in this guide?

The purpose of this guide is to provide you with an easy-to-follow, step-by-step workflow that will help you deliver professional, consistent mix results. Whether you're just starting out or looking to refine your skills, this will help you achieve your mixing goals.

It's not designed to cover every aspect of mixing, or the myriad of ways you can approach a mix, but a focused, effective, and reliable workflow!

It doesn't matter what DAW you are using to follow this guide, as every music creation DAW will have these features. Also, most analogue hardware or hybrid setups will also be able to follow along, too!

Important thoughts and tips

If I were to sum up mixing in one word, it would be '*balance*' (please don't confuse balance for 'even' or 'the same'). The guitar in your mix can be as bright or dark as you want depending on your vision for the track; however, it must be balanced this way along with the other instruments in the mix - never considered and adjusted in

solo only to hope it will work when everything else is unmuted. For example, in your track, the creative idea might be for the guitar to be crazy loud and bright during the solo, and that's totally fine! In this case, the balance becomes all about making sure it's bright and loud relative to (or in balance with) the other tracks.

This is why there isn't a 'best EQ setting for acoustic guitar', or the 'best compressor for vocals'. It is completely dependent on how it sits alongside everything else in your mix, and choosing the right settings for that individual part. What's so fascinating about this is that you can have a part that doesn't sound great in solo, but sounds amazing in the mix! ***Never make decisions in solo!*** (It's okay to do some work in solo, but only when you've heard the problem in the context of the mix.)

Therefore, mixing is about tailoring the plugins or processors to the individual part and how it works in context. Knowing your tools is essential, as once you've used a certain compressor or EQ for long enough, you'll find you are getting great results on many sources. It's all about practice and familiarity!

Finally, good mixes have good productions! Good tracks usually sound very listenable (in some cases finished) at the stage before mixing. That's important to consider before starting to mix. Do you like your recordings? Are they already sounding great as they are (think timing, tuning, and tone)? Then you're ready for mixing.

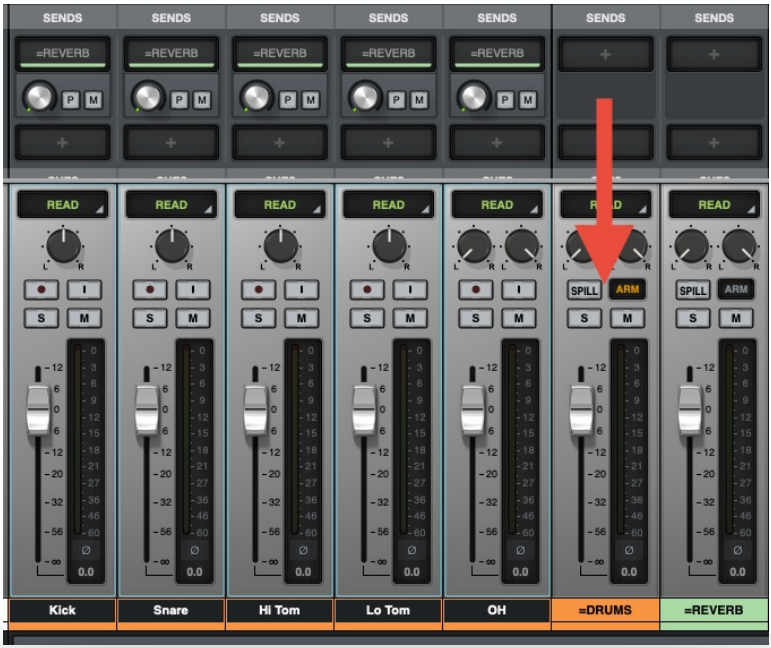
SETTING UP

Import your tracks into your DAW (or just open up your session if you've already got a recording ready for mixing).

If you've not already done so, name and colour your tracks, and add section markers (e.g., Verse, Chorus, etc.). This might seem like something you can skip, but I promise you'll prefer it when you mix with this in place.

Now, let's get our tools in place.

1. **Create your section buses.** This means routing the instrument sections to a bus/aux track. So if you have drums, bass, guitars, keys, strings, and vocals in your session, each should be grouped to its own bus/aux channel.



2. On your main bus *(the final stereo pair that all of your tracks route to - double check your group buses are being routed to that)* and add three processors in this order.

- *1.* **An EQ** *with at least three bands.*
- *2.* **A compressor** *which will be your main compressor.*
- *3.* **Another compressor** *which will be your parallel compressor. This one needs to have a mix control.*

3. **Create a Reverb bus**, and place a reverb plugin/processor there.

4. **Create a Delay bus**, and place a delay plugin/processor there.

5. **Add a channel strip plugin to every channel**. If you don't have a channel strip, then choose 1 EQ, followed by 1 compressor to assign to each channel.

STEP 1. FADER MIX

Start by raising the faders on each channel and mix the track as best as you can with *nothing but* the fader volume and pan. Listen out for how where you set the fader doesn't just change the volume, but also the impression of frequency content and EQ shape.

As you raise and lower the faders, listen out for how certain parts of the frequency spectrum begin to mask (or reveal) themselves. Suddenly, that bit of string buzz and click on the bass that sounded like trouble in solo now might blend, and in fact might help the bass to cut through the mix.

Whilst doing this, think about what parts sound dynamically uneven (compressor time) or perhaps what parts sound too dark or bright (there's a spot for EQ). Maybe even write these thoughts down as you go. After a while, this will become intuitive, but if you're new to this, it's easy to forget how you initially felt about the parts, so writing it down helps.

Remember! you can adjust your group buses as well, for quick overall group changes as you refine the fader mix.

I'd recommend moving in order of what you feel are the most important elements in your mix, so maybe pull up the vocals, followed by guitars, then bring in drums etc.

Try to set things so nothing important is buried! Don't have the guitars so loud that you lose the bass and kick drum for example.

Don't rush this part, it's very important and will create the foundation for the rest of your mix.

STEP 2. MIX BUS PROCESSING

EQ The Mix

Open up your favourite music player and listen to some tracks which you feel are good references for what you are

mixing. Make sure you play back the reference tracks through the same monitor speakers or headphones you are mixing on, and match the volume to your fader mix. (This means simply adjusting the volume of your music player so it sounds about the same volume as your DAW playback.) We'll now EQ our main mix to be broadly similar in shape to the references *(don't try to match exactly, just broadly)*.

Ask yourself:

1. Is yours too dark or bright on comparison?
2. What about the mid-range? Think about the upper and lower mid-range (~300Hz to roughly ~4kHz) .
3. And finally the bass. (Think ~200Hz and below.)

If you're new to EQ, it can be helpful to use your mix bus EQ to boost up some different frequencies, just so you can hear what they sound like in relation to the reference track. Once you're familiar with EQ and how the different frequencies sound, you'll have a pretty instinctual feel for this.

Now it's time to EQ your fader mix. Most of the time, your mix will be too dark compared to the references, so we'll use that as our example. Boost the high end (5kHz - 10kHz is a good starting point) of your mix until it feels

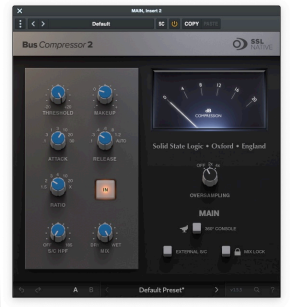
broadly in line with the reference tracks (on the EQ, it's nice to use a high shelf here, but a broad bell curve is also fine!). You will likely notice that a few sounds in your fader mix now sound too bright, but that's okay - we have a fix for that coming up!

Think about the mid-range now. Often there is a build-up somewhere around 200Hz - 500Hz, so take a close listen in that area. In the same way, alter the EQ to (again - broadly) balance with your references. Just as a reminder, use a few different reference tracks, don't just rely on one! This is a very broad shaping of our mix EQ to sit alongside other tracks in the genre that you like.

Finally the low end. Simply apply the same way of thinking.

You shouldn't need to go too far if your initial fader mix hasn't been rushed (there are always exceptions). Just trust your ears and again, no need to rush. This will all get much quicker the more tracks you mix.

Compress The Mix



If you are new to mix bus compression, then set the compressor to 2:1, with an attack time of ~10ms and a release time of ~200ms - ~400ms for a mid tempo song. Speed up the release for faster songs and slow it down for slower ones.

Then play the loudest section of your track and set the bus compressor so it's compressing by around 2dB to 3dB.

The benefit of mix bus compression is a sense of glue, but also it helps keep your drums and other rhythm tracks from sitting on top of the mix, whilst still keeping them punchy and clear! It also adds movement to the mix, which in turn helps the mix sound more exciting.

As you work more and more with mix bus compression, you'll really begin to get a handle on how it changes the mix and you can start to alter the settings and gain reduction amount by ear. This bit takes time, so don't worry if you are struggling to hear the effect right away! As you learn, take some time to try different settings. Be extreme, be gentle, and try all of the different ratio, attack and release times. You'll soon have it feeling like second nature!

Mix Bus Parallel Compression

This process is to make the mix sound thick, forward and helps gives a sense of depth and solidity but this is one to be careful with. Too much and it can make your mix sound a bit strained.

You'll need a compressor with a mix control for this. Place it as your third processor on the mix bus, set a fast attack time (around 1ms or less) and a fairly fast release time (around 100ms). Start with the ratio at 4:1.

Now, here's the fun bit. Whilst playing the loudest part of your fader mix, lower the threshold until you're getting a ton of compression! Think 10dB to 20dB of gain reduction! The mix should now be moving, pushing, pumping and sounding quite aggressive. As with every step, take some time to listen carefully here. You are looking to squash the mix and get the compressor pumping, but try to find the amount of gain reduction that feels like it 'fits' the mix.

Once you have decided, level match the compressor with your mix (so when you switch the compressor off, the level doesn't change that much) and then set the mix control 0%. Now roll up the mix control, bringing in more of the compressor sound. As a guide, I tend to find my mix control settings end up anywhere from 20% to 50%. It's not based on genre, it's just as soon as I start to hear the parallel compression adding to the mix, I'm about in the right spot.

If you are new to compression, this is another stage that will take you time to get used to so don't worry if you overdo it at first. Once you are familiar with the way it shapes the sound, it'll feel intuitive to set it up.

STEP 3. FADER MIX 2.0!

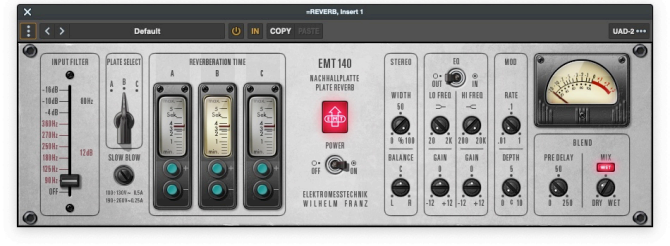
Because we've changed our EQ and added compression, the impression of where our instruments are sitting in our first fader mix will have changed. Some typical examples are hi-hats and high percussion like tambourine, where if you increased the high end, this will make them sound too bright. This is the benefit of EQ'ing the mix early.

Now that we have a clear EQ shape we can be confident that as we continue our mix (and bear in mind that we can only mix in relation to the other tracks in our mix) we won't spend ages crafting our compression and EQ to make all the tracks balanced and working together, to end up finding out that our track is just too dark (which is often the way). You might think to compensate by brightening up the track at that end stage, but that can make your parts sound unbalanced. EQ'ing the mix now makes fitting parts together easier and you'll be mixing knowing that overall, your track has the tonality you're looking for!

So! Pull all of your faders down (leaving the EQ and two compressors on your main mix bus in place and active) and rebalance the fader mix. You don't need to change your panning unless you really want to, but now using the same process as in step 1, bring up your faders and find the balance between the tracks that feels really good! You'll notice you make different decisions because (again, sticking with the brightening example) you can now hear things even more clearly, and everything will feel like it's got a bit more energy! One reason mixed tracks are often bright is that much like louder, brighter often sounds more exciting. *[Tip - revisit your compressors to make sure they're still working in a similar range to step 2]*

STEP 4. REVERB AND DELAY

Many people start with EQ and compression on individual channels, and that is perfectly fine! However, I think there can be a huge benefit in starting by creating a



'space' for your track to exist in. If you think about it for a moment, in real life the components you hear when listening to an acoustic instrument (even synths are heard in a pub, club or hall) is the instrument and the space it's in. We all know how amazing an acoustic guitar in a beautiful hall or church can sound!

When most of us record, we're recording in small, dry spaces. To have a useful 'live' studio space, it has to be pretty large and usually custom built, so it's unlikely we're capturing sounds with a nice spatial element as well.

So start by adding some space. Sending instruments to reverbs or delays will change the way they are perceived in the mix. Things that felt too bright or harsh may soften, no longer being an issue. Parts that felt like they were fighting can start to work alongside each other because of the extra auditory cues the reverb gives. (I have also personally found that listening to totally 'studio dry' sounds for long periods of time becomes very fatiguing.)

This is a wonderfully creative part of the mix! You're creating the world you track exists in!

When it comes to settings for the reverb and delay, try out some presets to get a feel for what you do or don't like.

Eventually, you'll set your reverb and delay from scratch, but presets will work wonderfully if you're new to this. (Make sure your delays and reverbs are set to 100% wet on your buses)

Start by sending the main vocal or melody instrument fully to the main reverb whilst playing your track. Now back it off until it starts to feel natural and balanced. Repeat this process on the other tracks. Notice how their relationship changes to the other parts,. There are no rules here, just make sure to apply some space to make the mix sound cohesive and full of life. As you add reverb to each track, you'll likely want to revise earlier decisions because remember, everything affects everything.

[Tip: You might have heard not to send bass or kick to the reverb. This is also untrue. I often send my kick and bass to the reverb and it sounds amazing. Just use your ears!]

Next follow the same process for sending tracks to the delay.

It's nice to use this one for just a couple of elements in the mix that you either want to sound smoother or give an

extra bit of character or width. Of course it's fine to send things to both the reverb and delay.

Again, don't rush this stage. The amount of reverb and delay you use will change the feeling and emotion of the mix, and which instruments you send to which will change the relationship with other instruments. Experiment with leaving some elements dry, too! Some mixes (especially acoustic styles, some rock, ballads, jazz and classical) can sound quite finished at this stage, so that shows how important it can be!

STEP 5. CHANNEL EQ AND COMPRESSION

Start thinking* about the most important part in your mix (e.g., vocals or lead melody) and work from there.

Whilst playing back your mix, ask yourself if the vocal sounds too bright or dark in comparison to the rest of the track.

*[*Tip: For this and every instrument in the rest of the mix don't just focus on the part you're working on. It's very easy to fix your attention so much on that part that you start to ignore the other tracks! You kind of filter them out of your awareness, even though they are playing alongside! So keep focusing on the big picture and make sure you're listening to how it's working with everything else.]*

Simply raise or lower the high end of the EQ until it feels like it has the right balance in relation to the other tracks in your mix. Balance is the keyword here. Don't just make the vocal crazy bright because you heard that on someone else's mix. It probably won't be balanced in context with your mix and will therefore sound jarring!

Now think about the midrange and the low end. Apply exactly the same way of thinking! If the vocal sounds thin, then try adding some low end around 200Hz, or if it sounds hollow, it might need more 400Hz. There are no rules here and you will get much better at identifying the frequencies that need tweaking the more you mix.

Whilst EQ'ing, also see if you need any compression. This is for controlling the dynamics of the track, but you will also get some character* from the compressor which can help make your vocal start to 'sound like a record'.

Controlling levels with compression is different than using fader automation, as fader automation is better for broad phrases or words. Compression can address the millisecond changes happening that is impractical to do with a fader!

*[*Tip: Although outside the scope of this guide, as a creative effect mix engineers can be extreme with compression. Drum room mics and vocals are a good example of this where crushing them and creating compression distortion is often done. Compressors can be used as a special effect and not just level control]*

This is somewhat easier to identify compared to EQ, as you're just listening for any area in which the part gets too loud or too quiet.

[Tip: Sometimes, no matter how much compression you seem to be doing, certain notes, words or phrases just won't seem to come out and with very heavy compression, the vocal can start to sound brittle or almost artificial. This is a sign to use either volume automation or parallel compression. There is a bonus section towards the end of this guide which gives you a parallel compression technique to try!]

If you're not sure about settings yet, start with the compressor set to 2:1, with a medium attack and release (think ~10ms attack and ~250ms release). Whilst playing back the track, lower the threshold on the compressor until

you start to see a few dB's of compression. Listen to how this is now sounding level wise. Do you need more, or have the issues gone away? Every single track will need a different amount of gain reduction and can often benefit from fine tuning the attack and release (some compressors don't have attack or release, like the Teletronix LA-2A, or only have fast/slow attack, like the SSL channel compressor). The thing to listen out for is whether anything feels like it's jumping out at you, or disappearing*. Keep lowering the threshold (and adjusting for the change in level with either makeup gain on the compressor or the track fader) until the loud parts are no longer unpleasant (ie jumping in volume in an irritating way), and you can hear the quieter parts.

*[*Tip: compression used in this way is mostly helpful for controlling the loudest parts, therefore allowing you to turn the vocal up and start to hear the quieter parts. If quiet parts are still getting lost, even though you seem to be controlling the loudest sections, then continuing to crush the vocal can cause it to become brittle, lack dynamics and therefore become lifeless. A better option here would be either automation or parallel compression.]*

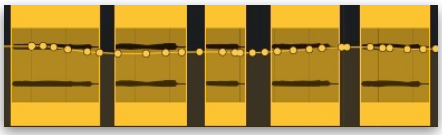
How much you squash the vocal by is a matter of taste*. Depending on the track, you may feel like you still want some of the quieter words to drop away, making the mix more intimate. On other tracks, you may want very little dynamic movement at all, for example on a heavier, more

aggressive song where the vocal needs to sound commanding and powerful throughout.

*[*Tip: Make small moves at first. Perhaps brighten the vocal a little (if it's dull compared to the other tracks so far) and do a little compression, then move on to another instrument. Because when you change one instrument, it impacts and interacts with another. Building your mix up bit by bit can stop you hitting any one thing too hard! Once you've EQ'd your other tracks a little, the parts of the vocal that were getting lost may now be clear and if you've gone too hard on the compression on the vocal, it may now sound wrong.]*

Remember! Revise mix choices regularly! You may not change anything, but everything affects everything. Sometimes you need to make a change on one channel, to realise the fix for that track actually lies in EQ'ing another channel.

STEP 6. AUTOMATION



By now, you'll have a mix which should be really working. It should sound exciting, well balanced, controlled and clear. This step is fine tuning and creative. Is there any point in the mix where the vocal could just do with coming

up for a moment? Perhaps you push the guitar up a decibel on the chorus to get them to hit harder. Maybe you automate the reverb off the vocal for a single word or line in a sparse section to create a moment of incredible intimacy. These are all great examples that automation can be useful for!

Play back your mix and consider 'riding' the lead vocal or instrument, and perhaps some other parts. That is where you put your track into touch* automation mode and move the volume fader to keep the vocal front and centre, bringing up the remaining quiet parts that compression wasn't right for, and helping create energy and excitement by making chorus vocals a little louder for example.

Many tracks can benefit from some automation. Be creative! Automation takes time to master, so don't worry if it seems hard to know what to do at first! I remember not even understanding what the goal was with automation! I knew what it did but I just didn't understand to what degree I was 'supposed' to automate. Like everything in music mixing, there isn't a single answer. It's creative, so go for it and make bad choices! Before you know it those bad choices are turning into good ones!

*[*Tip: …or latch, or write - but I'd recommend touch for now as it only records the little momentary changes and*

when you release the fader, it snaps back to where it was before you made the change]

BEYOND CORE MIXING

Following these steps will give you a solid mix foundation with which you can make pro sounding mixes, but this not nearly the only things you can do in a mix! Beyond this, there are some techniques that are outside of the scope of this guide that I wanted to highlight, so you are aware of them. These are techniques that don't make it into every mix, but are some of the more common additional processes. It is also not an exhaustive list, but just my favourite 'next step' picks.

Parallel Compression/Processing

An example of this is exactly what we did in 'Chapter 2: Mix Bus Processing' with the second compressor. We process something and then blend that process back in with the original sound. The most widely used example of this is compression, where you compress something extremely hard, and then blend it back in underneath the signal. The combination makes the quieter parts louder, but leaves the transients on top of the signal untouched. Great for solving problems where normal 'downwards' compression isn't working.

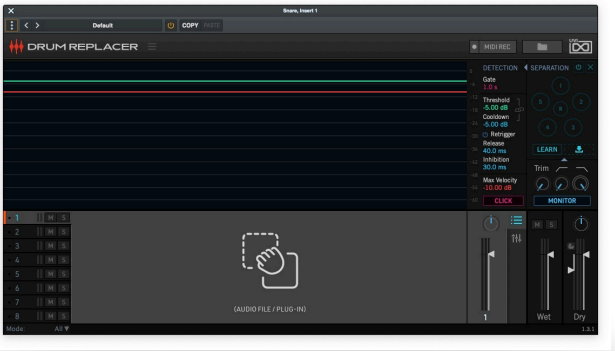
For a great starting point, grab a compressor and set the attack time very fast (sub 1ms), and a fast release

(100ms and below). Set the ratio to 20:1. Now find the quietest bit of the track and lower the threshold the needle is barely moving. Set the mix control to 50% and you'll have a natural sounding parallel compression that brings character and detail to the part.

Serial Compression

This is where you use two compressors in a row. This helps on extremely dynamic material, where there are very loud peaks followed by more steady but lower level material. The best example of setting this up is to set the first compressor with a high ratio (20:1 and above), fastest attack and very fast release (too fast a release can result in distortion, so listen out for that) and then lower the compressor threshold until you seem to be controlling those peaks in the context of the mix. Now add a second, more standard compressor setup (like in Step 5) to control the track more broadly speaking. This prevents a single compressor freaking out on the really big hits and either not recovering quickly enough, or distorting, sounding brittle or introducing other undesirable artefacts.

Drum samples



Sometimes, it can be a creative choice to add drum samples alongside real drums. A detailed description of this is a little outside the scope of this guide, but it's good to be aware that this is a technique for augmenting drum sounds creatively.

More FX

In terms of creative FX, the only limit is your imagination. Try putting vocals through a slight chorus. Widen up your background vocals with delay. None of this is 'essential' but it can elevate your mix to a new place! There are really no rules here, just try some ideas!

Notch filtering

Notch filtering is where you make a (usually deep) very narrow cut in a signal. This is not some kind of panacea to good tone, so don't go crazy notch filtering every track, but sometimes a little ring on the snare drum or a note on an acoustic guitar which resonates on every pluck can be helped by applying a notch EQ cut.

Clearing up some myths

There is no better plugin/hardware for a specific instrument vs another. This is not the way to think about it. Any tool simply adjusts the sound - you have to be clear on what it is about the sound you are trying to adjust and then reach for the correct option. There is very little that inherently sounds bad - only wrong choices. Even cheap gear with reduced frequency ranges and noise issues can be an awesome effect in the right place! This is creative art!

Some of the questions you see online are: “what’s the best microphone for acoustic guitar” or “which is the best compressor for vocals”. This is a very understandable but completely irrelevant question. It assumes the tool gets the result, but you are the one who gets the result! You are the one setting the controls, and if you keep practicing, you’ll begin to see that you can get a range of fantastic sounds out of just a handful of tools on many sources.

So once again, ***the tool has a sound, but does not give you a result! YOU get the result.*** You have to understand how the tool in question sounds before you apply it looking for that result. The very best audio tools in the world will sound terrible in amateur hands!

It’s why those questions like the above are simply coming at everything from entirely the wrong way of thinking.

The features of an audio recording matter! Is the vocal bright, dark, aggressive, gentle, dynamic, sibilant, legato, staccato? etc.

All of this will change what settings you go with on any particular plugin or outboard hardware, and whilst a particular tool may be a better choice than another in one particular instance, give it a couple of mixes and it becomes the other way around!

Lastly, there is no such thing as 'best'. There is only subjective creative choice. Many people have mixed amazing recording on just a console and many have mixed using a huge array of tools. The real difference? The person doing the mixing, their experience and their vision! ***You can absolutely do this! The gear is not the barrier!***

Final thought!

If you ever get stuck, disable the plugins and processing from a track and return to just using the fader to balance the track. Whilst you may end up switching some processing back on, you can often identify where you've 'gone too far' with a particular tool!

And… rest your ears! Take regular, decent breaks! Try to split individual song mixing sessions up across a few days and flip between mixing different tracks, rather than trying to get a single track done in one session. You will get too used to what you are hearing and can make bad choices, leading to over-processing.

I hope you have a blast making your next mix, and please feel free to get in touch if you have any questions:

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SUMMARY CHECKLIST

1. Create your fader mix. Nothing but faders and pan!

2. Use reference mixes to shape your overall EQ. Add mix compression.

3. Pull down all the faders and rebalance your fader mix. Leave the EQ and Compression settings from step 2 as they are.

4. Create the space for your track to live in. Add reverb and delay.

5. Work on channel EQ and Compression. Don't feel you have to change a part if it's already feeling good in context.

6. Add automation to enhance and add movement to the track.

Remember the word Balance!