Logic Guide: How to mix

Mixing is the art of balancing the lovely track you just created (or got given to mix). Done properly, it can really bring the track alive, but it's often a confusing process. This handout is designed to give you a brief overview to get some basic mixing done on your tracks.

Step 1: Listen

Before you do anything with your tracks, it's good to have a good listen. If the track is one you created and produced yourself, you probably know it really well, but it would be a good idea to take a listen to some other tracks by similar artists. Try to get an idea of how their tracks are balanced and mixed. How do their drums sound? How many instruments are there and how are they balanced across the stereo field (basically are they all in the centre, or is some stuff mixed left and right)? Are there any specific production techniques used that aren't part of the original recording?

If you've been given a track to mix, just listen to it and get a feel of what you're working with. What type of track is it? What's the playing like? Is this going to be an easy track to mix, or are you going to have to work to get this track sounding good? What's the quality of the raw recordings?

Step 2: Go through each instrument one by one

There are many ways to go about mixing, but one way I would suggest is to go through each instrument individually. Try to get each instrument sounding good on its own and then your job of balancing them all together later is going to be a lot easier.

- 1. First of all, check to see if there's anything you need to do to get the channel ready. If it's a DI'd bass guitar, you might want to run it through a bass amp modeller. If there's a load of hiss, you might want to set up a noise gate. If there's a bunch of background studio noise, like people talking before or after takes, or the sound of someone putting a guitar down for example, then crop it out in the main arrange page.
- 2. Do the track strips need labelling? Sometimes people can be super lazy when recording, so it's always a good idea to see if the channel strip name matches the recording.

Step 3: EQ

There's a great deal of debate about whether to compress your instruments before you EQ, or the other way around. It's completely up to you, but I often EQ first. But remember: *only use EQ on a channel if you think it needs it.* You don't need to automatically reach for the EQ every time. There's been loads of projects where I've been really happy with the way the instrument was recorded, so I've not even loaded up the EQ on that channel. Use your ears and see what you think.

If you think an instrument does need work and you're worried about what frequencies you need to cut or boost, the following chart can definitely help. It shows the frequency range for each instrument and then what frequencies you'd need to cut or boost to achieve a desired sound. If you're ever somewhere and don't have this handout to hand, if you type in "instrument frequency chart" into google, there are tons more versions out there too.



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Step 4: Compression

Compression is all about levelling the dynamics on each instrument to get them ready to mix. A good rule of thumb if you're relatively new to mixing is that every track needs to have compression on it. Compression works by setting a threshold and any part of an audio track that goes above that threshold has its volume reduced. It effectively ends up making the loudest parts of an audio file quieter, and you end up with less volume difference between the loudest parts and the quietest parts of a take.

This is great because it gives you an easier signal to balance in your mix. If you don't compress your audio, you might end up with a vocal track that sits nicely in the verses but absolutely blows your ears off when they hit certain notes in the chorus.

If you know what you're doing with compression, great. If you don't, then a good place is to start with the presets. You can access them by clicking here on the compressor:



The compressor needle should be moving from the audio triggering it here. If the needle isn't moving, turn the threshold dial to the left until it does. If the needle is going towards, or even over, -10 then turn the threshold dial up until its not compressing it quite so much and the needle is nearer -5. Use your ears and, when you're happy using presets, try and learn how the setting work on a compressor so you can set your own settings in future.

Step 5: Panning

Panning is the act of putting something in either the left or right speaker, instead of straight out of the middle. It's not really going to be used on a lot of your mix, but you can use it to separate out different parts occasionally. A good rule is to only use it on your overhead mics (usually panned halfway left and right) and mid-frequency instruments like keys and guitars. If two guitar tracks are getting in the way of each other in the mix, try panning one left and one right. Similarly, if there's too many mid-frequency instruments all on top of one another in your mix, try panning the keys either side, or maybe even your guitars too. Don't go crazy with your panning, but be aware that it's a good technique to help you fix a particular problem if you need it. Don't ever pan things like your lead vocals, bass or most of the rest of your kit (especially the kick).

Step 6: Reverb

Reverb is the natural sounding echo you get when you play an instrument in a specific room or space. When you record a track, all of the instruments are going to sound quite dry, so adding reverb is a great way to get them sounding more natural and as if they're playing in a specific place. To set it up is to click on the box on your channel strip labelled 'sends' and then this box turns up.

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Choose a spare bus (one that doesn't have any words next to, like 'bus 11' in the example above). And then a little box appears on your channel strip.

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Next, go to the channel strip that has 'B11' at the top and click on the audio effects space. Choose a reverb from the menu options (I like to use either Space Designer or Chroma Verb). Choose a setting from the preset menu that suits your track:



Finally, go back to that box on your channel strip and turn up the dial. The more you turn it up, the more reverb you'll get on that channel.



When you want to add reverb to a new instrument, just click on the blank 'sends' box on that new channel and then choose the *same bus* that you set your reverb up on. That way you can add different amounts of reverb to different instruments, but still have them sound as if they were in the same space.

Pretty much most channels in your mix will need reverb, so add it to everything. You want just enough to soften up the audio and make it sound natural, but not too much, or your track will start to sound really echo-y and muddy.

Don't add any reverb to low down instruments, like the kick drum or bass. Even a little reverb can make those instruments sound super muddy and dense in your mix.

Step 7: Balance

When each channel is sounding good on its own, you're ready for trying to blend them all together. There are many ways to do this but personally I'm a big fan of starting with your drums and getting them sounding good. Then blend in your bass until those both sit together nicely. Then add your guitars and other chord playing instruments. Lastly, when all of that sounds great, add in your melody or vocals. Make sure your mix sounds balanced before adding in the next instrument and you can always tweak any of the EQ, compression or reverb settings later on when the tracks are getting blended together.

That's it! It's hard to do at first, but the more you practise, the better you'll get.

Top Tips:

Here are a few random top tips for you when mixing:

- Always aim for balance in your mix. Don't blast the bass, for example, because whilst it might sound pretty good now, if someone puts it on in their car and cranks the bass (like many people do), then it's going to blow their heads off! Try to get your track where you can hear everything if you concentrate, but nothing should be overpowering in your mix.
- Having said that, the only two parts that you can get sounding a little louder are your snare and your main vocals. Still aim for that balanced sound overall though.
- The more reverb you add, the further back in your mix it will put an instrument. If you want your vocals, say, to stand out a little more, instead of reaching for the fader to turn it up, try taking a bit of reverb off that channel and see if it comes through a little stronger in your mix now.
- When mixing with your drums, always start off with loads of the overhead mics and blend in enough of the spot mics to bring out the rest of the kit. Don't do it the other way round, with loads of spot mic volume and only a bit of the overheads.
- Mixing at a lower volume will result in a better sounding track. Blasting out most tracks from a speaker system will make them sound pretty good, but getting a track sounding better at a lower volume is harder and will produce a mix that will work on all systems.
- Listen to your mix with and without headphones. This only works if you have some good speakers, but it's good to try and get your track mixed so that it sounds good on both headphones and out loud.
- Make sure you don't let anything clip in your mix. It's important to keep your levels from going into the orange or red in the mixer so, if anything does, turn it down. If you want to turn everything down, just draw a box around every fader and drag them all down at the same time. That way it keeps your levels balanced like they were before.
- If you're really struggling to work out how loud different instruments should be in your mix, take a listen to some tracks in the same genre. See how other producers have balanced their mixes and try to get yours sounding the same
- When you're finished mixing, don't neglect the mastering stage. There's a separate handout that can help you through that but it's the last, vital stage to getting your mixes sounding polished and ready for use.