

technique

mix
automation

automation stations

INTRODUCTION TO MIXER AUTOMATION: PART 2

Paul White concludes his short series on mixer automation with a step-by-step guide to setting up and running an automated mix.

Last month's workshop on automated mixing introduced the concepts of VCA and moving-fader automation on analogue consoles, and their equivalents on digital mixers. It's one thing to understand the theory, however, and another thing to actually put together an automated mix in practice.

When it comes to doing this, it's sometimes difficult to know where to start, especially with digital consoles that allow you to automate everything except the mains switch! Those working with virtual studios inside their computers face a similar dilemma, as there too it's possible to automate a huge number of mix parameters for both audio and MIDI tracks, so if you work mainly with a desktop system, this article should still be useful. Of course, virtual studios often have the advantage that mixes can be controlled in graphical form by creating and dragging graphic envelopes to control levels, pans and so on, and when I'm doing work for myself, that's often the way I automate my mixes. However, the basic process of setting up a mix is the same regardless of what system you use, the main difference being that with a computer, you can't drag more than one virtual fader at a time.

Whichever system you have, I maintain that the most important element of an automated mix happens before you even switch the automation on. With the mixer in manual mode, you should try to find a balance that sounds as close to right as possible, set your pan positions, make any EQ changes that are necessary and bring in your main effects, such as reverb. You should also set up any effects that will be brought in during the course of the mix, such as tempo-related delays. If you have a console with onboard dynamics, you can also set up such compression as is necessary for the main parts. If you need to create fader groups, this is the time to do it, and if you're using a Yamaha digital mixer, save this basic mix as a scene or snapshot as you'll need to use it as the starting point for any automation.

So far you've done no more than you would do if you were mixing manually, but spending time at this stage will save a lot of unnecessary messing around with the automation later. By now you should have a static mix in which the overall balance sounds good, but perhaps some notes or phrases are a little too loud or too quiet. There may also be parts playing throughout the mix that you'll want to take out in some places -- such as dropping out that heavy guitar part in the first verse. You may also have several takes of the main vocal and instrumental solos on different tracks, with a view to 'comping' a best take using sections of each.



On Automatic

Probably the best place to start using automation is with the mutes. Go through each track and ensure that it is muted when nothing is playing. You can also use mutes to compile parts from sections of takes recorded across several tracks by muting all the parts other than the one you want to hear at any given time. Take your time getting this right and you'll be rewarded by a cleaner mix.

Once all the mutes have been written, close your eyes and listen to the mix with the automation running things. This way you'll be able to concentrate completely on the musical performance to see if you missed anything. If you can, also make mental notes of any places where the levels might need fine-tuning. Often you'll find odd vocal phrases sinking back into the mix or standing out too much, even though you've used compression to get the mix sounding as even as possible: it's fixes like these that automation does best. You may also find that you'd like to make small level changes for artistic reasons -- for example, dropping an instrumental part by a dB or so during the vocal, or pumping up a support part slightly during a solo.



Writing the fader moves is where you translate all these mental notes into reality, and in most cases, it's best to work on one fader at a time until the balance is as you want it all the way through the song. The first pass of fader moves is done in Absolute mode, but if you need to go back and refine your moves further, Trim mode is often best as it doesn't overwrite your existing mix data, it simply allows you to add or subtract level from what you've already done.

Save your mix at regular intervals, just in case you have a crash or other disaster, and always save your mix in the least bit experimental.

Advanced Techniques

Most digital consoles allow you to copy and paste automation data in much the same way as sequencers copy and paste MIDI data. This can be useful if you want to copy the same automation data to all the choruses in a song. Even if you make subtle changes later, the copied data is generally a good starting point. It's also often possible to edit individual automation moves in an edit list, but to be honest, it's often easier to redo the automation moves than to edit. Even so, the facility to move mute information backwards or forwards in time by precise increments can be very handy when you're doing your cleaning up.

Mixing in a computer-based virtual studio is fairly similar to using a hardware digital

The Next Step

Listen to your mix with the automation running the mutes and faders to see what else may be needed. For example, do you want to bring up an echo send level at certain points in the song to add repeat echo, or would you like to change some aspect of the EQ for part of the song? You can automate anything you like, but put the song first and only do what the song demands. Using automation on everything just because it is there is the first step on the road to madness! There are so many possibilities that you could spend your whole life messing around with automation without getting a single song finished. Most of the time, it's likely you won't have to automate all the channels -- not even all the levels. I find that once I've set up a static mix and sorted out the mutes, I don't usually need to automate more than around a third of the tracks that are playing, though a lot depends on the style of music you're working with.

When you think you've finished, listen carefully to the mix running under automation, and if possible, run off a DAT, cassette or CD-R copy to play on other systems before going any further. It's also worth double-checking the mix over

mixer, except of course you can only change one parameter at a time unless you have a hardware fader controller. Rather than mute unwanted noises, I generally use the scissor tool to cut up the audio files in such a way that blank sections can be removed from the arrange page. Short gaps or pauses within the remaining sections can be cleaned up using the Silence function, though bear in mind that this is a destructive operation. Simply highlight the offending noisy section, then use the Silence function to replace it with digital silence.

headphones, as this can often reveal problems that aren't obvious over loudspeakers -- especially things like unwanted background noises or distorted signal peaks. You've saved the mix, so you can always come back to it, but if you have an analogue mixer, keep in mind that there are lots of mix controls that probably aren't automated (pan, EQ, aux sends and so on), not to mention settings on external effects units and signal processors you might have patched in. Big George gave me a really useful tip which he called "Total recall for a quid". Essentially, George suggests using a pocket mini-cassette recorder so you can go down each mixer channel and read the control settings into the recorder. Then, you go to the patchbay, make notes on any connections you have there, and finally, you record what outboard gear is being used, what patches are being used, and in the case of manual equipment, what the control settings are. Next time you come to recreate the mix, you play back the appropriate mini-cassette and set up the controls as it talks to you.

Summary

Some people still labour under the misapprehension that automated mixers are there to make life easier, or to help you get the job done more quickly. Nothing could be further from the truth! Once you start using automation, you'll be unable to let the little errors go by that you used to ignore when everything was manual, and you'll start to think up things that you can do simply because the technology makes it possible. Fine-tuning a mix so that every little detail is taken care of is time-consuming and requires a lot of concentration, and you'll probably find that the job takes you an order of magnitude longer than it did when you just ran the mix by hand. Even so, it's usually worth it as the quality of result you can achieve in a project studio takes another step up.

If your studio is ever used by anyone other than yourself, then automation becomes even more important because it allows you to load up a mix you were working on months ago, then just carry on working in the confidence that the mixer settings are where you left them. If you have a digital console and you're using only the inbuilt effects, you can recall the entire project and know that *everything* is where you left it. Similarly, you can store your clients' projects so that when they return after a few weeks to do the inevitable remix, you don't have to waste time trying to recreate the original mix -- which they'll always claim sounded different anyway! At this point, it's worth stressing the importance of backing up client mix data: even though you may have done a MIDI dump to your sequencer, back up the MIDI file on a floppy and put it somewhere safe -- ideally with the client's tapes or track sheets.

Automation won't necessarily make you a better mix engineer, but it will allow you to be as good as you can be. At the very least, it allows you to concentrate on what your mix sounds like without being distracted by having to move the faders manually, and even for very simple static mixes, snapshot or scene information is fantastic in that it can save or recall your whole mix at the press of a button or two. Digital automated mixers now cost little more than manually operated analogue mixers used to cost just a few years back, and it's probably fair to say that in a few more years' time, it'll be difficult to find a mixer that doesn't offer some form of automation. The technology is out there now, it's affordable, so let's use it! **sos**

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