# ProAudioBlog

Pro Audio Updates from **STUDIOSPARES**

# PROCESSING AND EFFECTS

I touched a little bit on gating in my last article so I won't repeat myself here but here are a few things to think about when it comes to EQ, compression, reverb and delay; as we use processing and effects to gel our mix together.

**Processing**

– EQ

I mentioned in my previous article about using filtering to carve out spaces for instruments to sit in the mix. Aside from this we should be aiming to fix any tonal problems in physical ways before we attempt to EQ- adjusting the mic placement for example. It's fair to say that on a well tuned system we should be able to use very little EQ on the channels themselves- yes it is possible! When we *do* use EQ when mixing live it should mainly be subtractive EQ to improve our gain before feedback.

– Compression

As with most processing, compression is best used in such a way that it can't be heard much less noticed by a punter in the crowd. Bearing this in mind, we can make a choice to only use compression where it is necessary- and this will be on signals which will be too dynamic. It's worth making sure that the input and output gains are at 0dB on each compressor before anything else- so that there are no nasty surprises later down the line. It's usually a good idea to check that all the compressors are patched in and active (especially on a digital desks) and that the ratio is gentle and the threshold high to start of with. This will mean that if we want to add a bit of compression very quickly all we have to do is pull down the threshold.

**Effects**

-Reverb

The main goal with reverb is to create a sense of space and depth in the mix. If the band have recorded their album for release, reverb should pull the mix together in such a way that it sounds like the recorded CD (or digital download). Most reverb units and plugins usually come with presets but they should usually always be adjusted. The reverb signal will need to complement the size of the room the band are playing in. I usually like to shape the tone of the reverb, either in the plugin itself or by inserting an EQ on the return channel. This way I can filter out any frequency content from the reverb signal that I don't want to add to the original signal. The benefit of this is a potentially better intelligibility and less low (or high) frequencies getting in the way of other elements in the mix.

-Delay

Usually the more creative of the duo of effects, delay can get away being a bit more obvious. Making sure that the delay is in time with the tempo of the song is key to making it sit rhythmically. It's also worth bearing in mind that the nuances of more complex stereo delays won't be as noticeable in a wide room where the Left and Right hangs/ stacks of speakers are further apart- better to keep it in mono for situations like this if we want a consistent musical experience for everyone in the audience. I think that delay usually sounds best on the ears when it peaks it head up at key moments during the song; like the chorus, single key lines that the vocalist sings- or even just single words.

Aston Fearon is an experienced sound engineer- specialising in mixing Front of House and System Teching - and has worked with a number of venues, PA hire and event production companies in the UK.

www.astonfearon.co.uk