
14: Routing

Pro Tools 2

APP 3

Dec 8, 2015

Overview

In this chapter we will discuss various routing options in Pro Tools that will prepare you for more advanced mixing techniques.

Bussing

In order to understand bussing in Pro Tools we have to remember that it is entirely based upon analog style bussing. The system was designed so that engineers who have been working in an analog system for years could transition into a digital system seamlessly.

That being said it is important to note that there are some clear differences between bussing on a console and bussing in Pro Tools.

Before we even think about the endless possibilities of bussing in Pro Tools let's take a look at the bussing on standard analog consoles to give us a better background in what kinds of bussing existed beforehand.

NEVE Routing

Neve consoles are the classic sound of rock and roll and even more specifically grunge. They are what you would call the... "Nirvana" of recording consoles. Here's a picture of the one I get to play with!



This is a 96 input Neve 8026.

Now let's look at the bussing options on this console.

Remember before computers bussing would have been the only way to move audio around in a mix situation.

This console has 8 mono busses. (That's right only 8!!) and because this desk was not originally designed to have a mix bus. Busses 1 and 2 have been modified to be used as a mix bus. That means you have a stereo mix bus, then 3 additional stereo busses, or 6 mono busses.

These busses can only be sent post fader and since they are set up as stereo pairs if you engage the panning then you are stuck with stereo pairs on that entire channel strip.

In addition to the bussing you have 4 mono cue sends that can also be used as stereo pairs. They can be sent pre or post fader and have an additional rotary fader control.

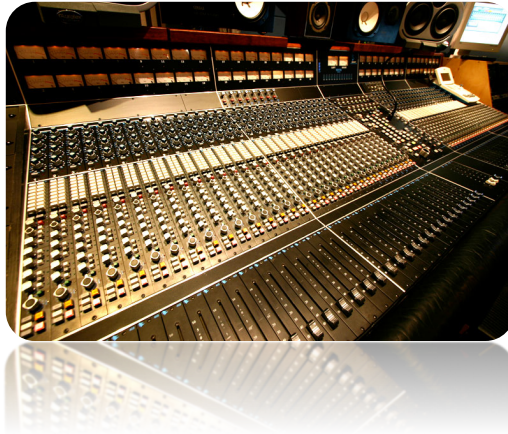
Finally you have 4 mono reverb sends that function almost identical to the cue sends.

So that gives you a total of 16 routing options, 8 busses, and 8 controllable sends.

What kind of options does this leave you with? How can we relate that to mixing in Pro Tools?

API Routing

API consoles aren't known for their routing options but rather for their clean sounding preamps and equalizers. Therefore even this modern API console has relatively simple routing options.



This console has 16 busses.

6 Aux sends that can be used as either cue or effects sends.

The notable difference with this console is that it includes 2 MIX busses. MIX A and MIX B.

Now with 2 dedicated stereo mix busses we can consider multiple layers of bus compression, or blending different elements. Establishing an instrumental mix on one mix bus then a vocal mix on another and blending the two on the grand master. The options are starting to expand greatly now that we're not limited to returning busses on faders or summing in the master section.

SSL Routing

Finally we get to the SSL. Which is known for 3 things:

- 1: Overloaded channel strips, EQ, Compressor, Gate/Expander on EVERY channel strip.
- 2: Classic sounding bus compressor.
- 3: More routing options than any other console ever!



These consoles let you buss anything anywhere twice and then some.

Looking at the basic specs of their latest workhorse the SSL Duality you have 24 Busses. 3 Mix Busses. 4 aux sends. 1 stereo cue sends.

This is FAR more than you'll ever need on ANY MIX EVER!

Pro Tools VS Console Routing

The reason I wanted to discuss the routing options on consoles is because when you look at a pro tools system. Even one as simple as Pro Tools 10 running on a laptop from 2009 you can get 256 busses!

Versus what we consider to be the standards; a modern SSL where you have a total of 36 busses, or an API with 26 busses, or a Vintage Neve with 16 busses.

What you will find is that Pro Tools gives you too many routing options. Therefore you have to create a map, or a plan in your head of how you want to route your mix before you start bussing things.

Using vintage consoles as a map is a great way to get started designing routing architectures in Pro Tools because what they don't tell you is that every time you build a mix in Pro Tools you are essentially designing a console to your own routing needs on that particular project.

Bussing in Pro Tools

Pro Tools does not clearly define any busses as mix busses, effects sends or cues. This allows you the freedom to design them as you see fit.

Out of habit and convenience I always use Bus 1-2 as my MIX A bus. Here I'm mentally stealing from the SSL architecture of having a MIX A, MIX B and MIX C.

A lot of what I do when mixing in Pro Tools is limit myself to the tradition of a console relative to the style.

For example when mixing rock drums I will consider a Neve console. All of the busses are sent post fader with no individual control. So when bussing drums for parallel compression I will take that into consideration and set all of the send faders at unity and control the volume at the return fader.

Another traditional technique I hold true for MOST (not all) mixes is to forget that I have infinite plugin options and limit myself to 1 reverb unit and "patch" it accordingly. In this case I would envision FX send 1 on the SSL returning on a stereo FX return in the master section. The return would be assigned to be summed into the appropriate mix bus, solo safe and the fader would be set. In this case you would control how much you send to the reverb on each channel strip.

VCA vs GROUPING vs BUSSING