Ducker Module: SymNet Designer vs. SymNet Composer.

This Tech Tip features the new Ducker Module in SymNet Composer. It also covers the differences between how it was used in SymNet Designer vs. Composer.
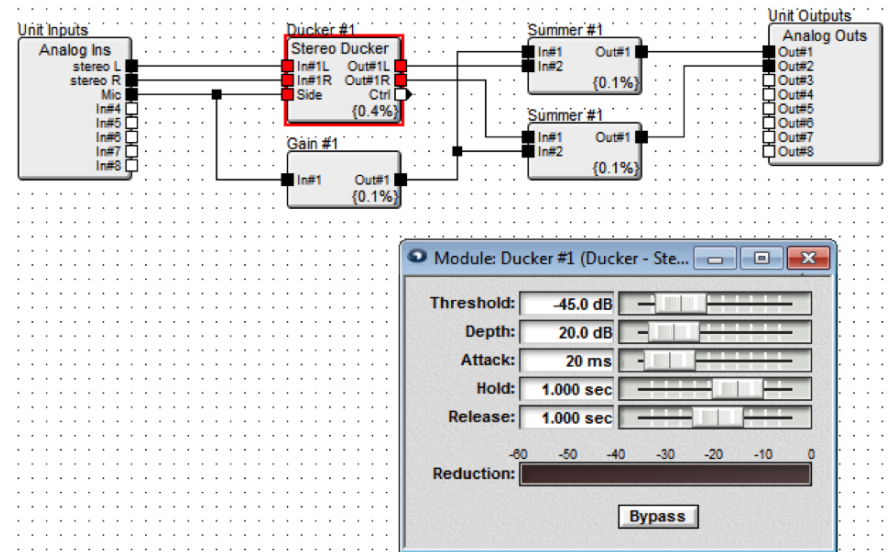
A ducker is used in a scenario where one source (the side-chain) needs to "duck", or lower, the volume of second source (program audio). Most often a ducker is used in paging applications to lower background music when a paging mic is used; however, a ducker can be used anytime sources need to be prioritized.

When the "side-chain" input senses audio, the Ducker will lower the program audio by a user defined amount, known as the "depth" (20 dB in this example). After the side-chain input no longer senses audio above the threshold, the program audio will come back up to its previous level after a specified amount of time (Hold & Release settings).
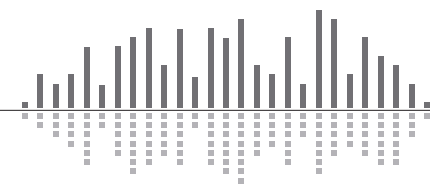
The ducker depth can be set to lower the program audio partially or completely, depending on the application.

Occasionally, in SymNet Designer, there was confusion due to the fact that the side-chain input only triggered ducking of the program audio, but did not mix the side-chain back into the program audio. In other words, a page would cause the BGM to lower, but the page was not heard over the top of the BGM. In order to hear the page over the top of the BGM, the page/side-chain input needed to be mixed or summed to the output of the Ducker. Additionally, to control the level of the page/side-chain relative to the BGM/program audio, a gain stage needed to be added to the side-chain signal path.

Here is a programming example of a Ducker being used in SymNet Designer.
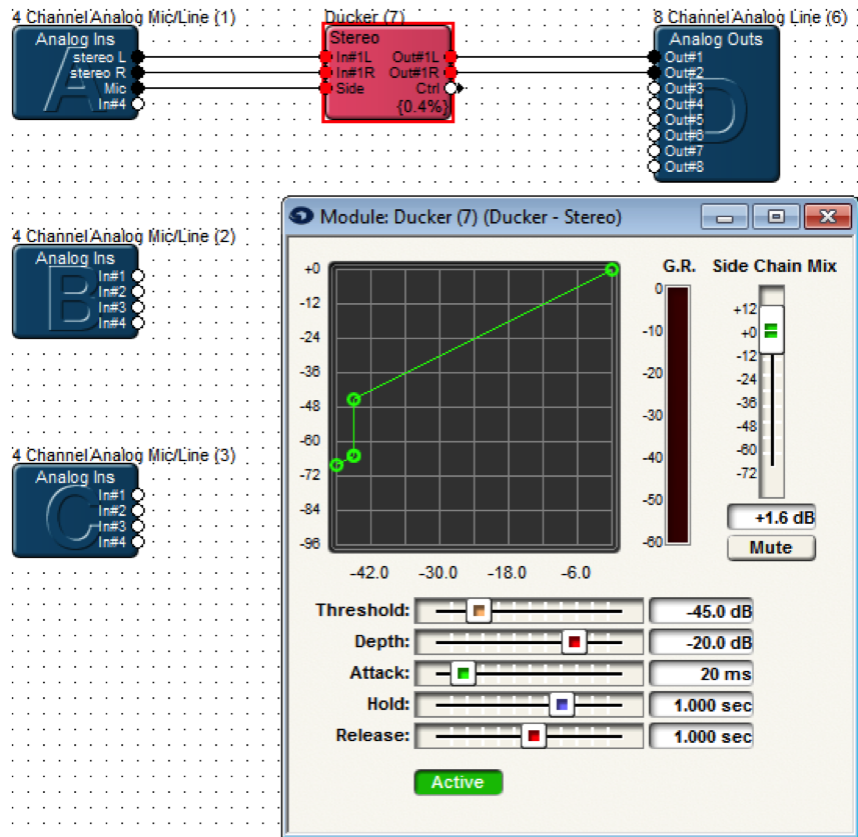

In SymNet Composer, using a ducker has been greatly simplified. The Ducker module has built in side-chain mix controls. By default, the side-chain input is muted. To mix the side-chain signal back into the program audio, simply turn off the mute and adjust the level for which the side-chain should be mixed into the program audio.

Here is a programming example of a Ducker being used in SymNet Composer.

Notice the "Side Chain Mix" control which includes a volume fader and mute button. Additionally, the Ducker GUI now has a graphical representation of the parameters, useful for setup.

From the two examples, you can see how simple and intuitive it is to utilize the Ducker Module in SymNet Composer.