Introducing the #1 Most Helpful Troubleshooting Tool in SymNet

No audio on an output. Echo in a conference room. A page message playing in the wrong zone.

These three issues are but a handful of situations that can occur during the commissioning phase of a SymNet audio system, and of which some troubleshooting steps will need to be taken in order to resolve the problem. Troubleshooting a complex signal path can be time consuming; however, with the right tool troubleshooting a DSP signal path can be done easily, intuitively, and within a very short amount of time.

SymNet Composer offers the “Trace Signal Path Forward” tool, which will show the complete path of any input signal with SymNet Composer.

To use this feature, simply right click any wire in the SymNet Composer signal path and choose “Trace Signal Path Forward”. This will cause the entire signal path for that source or mix to highlight red.

Here are three examples of using Trace Signal Path Forward to troubleshoot the examples problems mentioned in the first paragraph.

1) No audio on a particular output:

In this example, there are 12 mics used for an automix system. Mic input #5 can be heard in a single zone, output #4, when it should be routed to all 8 outputs of a Radius. When Trace Signal Path Forward is used, it becomes obvious that mic #5 is routed to only 1 zone via the Submix Matrix output.

Hint: follow the red wire
Since mic #5 is only present on the Submix Matrix output #4, open the user interface of the Submix Matrix. Notice that mic #5 is only routed to output 4. Click the connect button for mic#5 for all other outputs within the matrix to solve the problem of missing mic#5 audio on the other 7 Radius outputs.

2) Echo in a conference room:
In this conference room example, the far end caller is complaining of hearing echo. Typically echo in a conference room is caused by having an incorrect mix being feed to the REF input for a mic or all mics. The REF input should only ever consist of the far end caller and any local media sources. Echo is when the far end caller hears themselves talking, when their audio plays in the conference and then enters the mic and is sent back to the fall end caller. So, if they are hearing themselves echo back, first check to make sure the far end caller audio is routed to all mic REF inputs.

When Trace Signal Path Forward is it is easy to see that the far end caller is not routed to REF 8, so the problem in routed is quickly located. Using this feature is 100 times faster than muting all mics except one, then checking for echo, and repeating this procedure until the mic that causes echo is located.
Here is a close up of the problem.

Notice how REF #8 is not receiving the far end audio. When the wires are followed back upstream it is easy to see a wire is missing on the 8th channel, between the compressor and summer, where the far end audio stops passing to the REF #8. Once this wire is placed, then REF #8 will get the far end audio and the echo problem should be solved.

3) A page message playing in the wrong zone:

In this example, the customer has complained that when a certain preset is triggered and a page is made, the page is being routed to a wrong zone. The page is only supposed to go to zones 1,2,4,5,8, however it is also sounding in zone 7. When onsite, first trigger the preset that is causing the issue for the customer, then use Trace Signal Path Forward and follow the page input.

Notice the highlighted red line indicates that the page does indeed get routed to output zone 7, as well as the correct zones.
Following the page signal path from the input to the output it becomes clear that the mono distributor is incorrectly routing the page to zone 7 when this preset is triggered.

To fix this routing problem, uncheck button 7 in the mono distributor, then right-click the module or button 7 and save it in the off state to the respective preset. Use the preset manager to recall the presets to insure the page will only be routed to the correct zones when this preset is triggered.

Conclusion:

There are a variety of ways in which an incorrect signal path can create a lengthy and difficult troubleshooting session during the commissioning stage; however, with the Trace Signal Path Forward tool that SymNet Composer provides, finding and fixing signal path routing errors is easier than ever.