

Chaining digital audio outputs from multiple GigaStudio systems

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Chaining digital audio outputs from multiple GigaStudio systems together can be accomplished in one of two ways with the WaveCenter and Dakota cards, either as a stereo "Sum" using the Input Monitor panel of each Giga set-up, or as parallel channels of an ADAT optical stream using the Patchbay panel.

The Summing method commonly uses the S/PDIF outputs but can be done on a pair of optical channels as well. Connect the digital output of the first system to the like digital input of the second and so on. Keep in mind that all connected systems have to be referencing the same clock source. If your master clock is coming from the last device in the chain, such as a digital mixer, its clock output needs to be looped back to the input of the first PC in the chain so that it can be fed to all of the PC's. Configure the first PC in the chain as you normally would, sending its output to the desired stereo output pair. The second PC will be set up the same way except that you will also enable Input Monitoring from the WaveCenter/Dakota control panel. Enable the input coming from the previous machine as an input monitor source, by pressing the appropriate button on the Input Monitoring window. Then set the "destination" device to the output you wish to send to the next computer in the chain. (Be sure to click the "Enable" box as well.) Finally, you should set GigaStudio to use the same output as you set for the "destination" -- now the second PC...(etc) Now the second PC will be combining the output of the first PC with its own. Repeat this procedure with any additional PC's you have.

While there are no means of actual level metering between PC's, you do have level controls from one to the next. Using the level controls in the Input Monitor panel you can set the input gain of the previous PC/s as well as the output gain of the summed signal to the next. If you have level meters at the final stage (on your console) you could run audio out of each PC one at a time and adjust the levels from first to last to match. Begin by setting the 2nd - 4th computers for input monitoring at their normal default levels. With the first and second computers set to normal (full) volume adjust the Monitor Output level of the 2nd so that it does not clip on the input of the third. Now adjust the output gain of Gigastudio on the 3rd computer so that it matches computers 1 and 2 when they are each played separately and then set the Monitor Output level of the 3rd so that it doesn't clip at the input of the 4th, etc. Lastly, adjust the output gain of GigaStudio on the last computer so that it matches all previous computers when each are played separately and set the Monitor Output for optimal level to your console. This should result in a summed signal where each instrument is balanced regardless of which computer it comes from and the total summed signal does not clip.

The parallel method is a bit easier to set up and is useful if you are using ADAT optical as a format. Begin by connecting the optical inputs and outputs as you would above. Then simply assign the outputs of the first computer in the chain to

optical outputs such as A1:2 (this could really be more than 2 channels if needed). On the second computer use the Patchbay in the WaveCenter/Dakota control panel to pass inputs A1:2 directly to outputs A1:2. Now assign the outputs of the second computer to other channels such as A3:4. You will now have audio from the first computer in A1:2 and audio from the 2nd on A3:4. Repeat this procedure, patching inputs to outputs in the Patchbay and adding additional channels as needed. The result will be an 8 channel ADAT optical signal with outputs from two or more computers on separate channels.