

Y-Cable Basics – To “Y” or not to “Y”

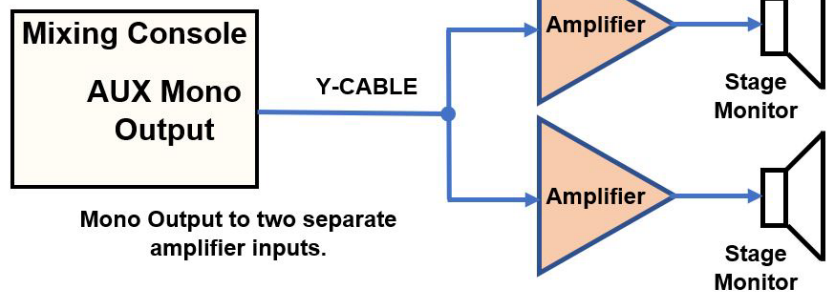
Y-Cables (in audio applications) can be considered any cable that has “one” connector at one end, and “two” connectors at the other end used to connect audio equipment. There is a right way and a wrong way to use Y-Cables. These types of cables can help solve an audio distribution problem when used correctly, but can also cause larger issues when used improperly. The correct way to use a Y-Cable is to “split” an output signal into two separate lines (inputs), and utilize the cable as a splitter. Using a Y-Cable the opposite way (as two outputs going into one input) is not being utilized properly, and this is referred to as using the Y-Cable as a “mixer.” When two output signals are combined together (using a Y-cable) and fed into one input – cancellation issues and possible damage to equipment can occur. Keep in mind that even if the Y-Cable appears to be working properly – the audio signal could still result in lower quality sound and / or intermittent issues.



Examples of Y-Cables

Example A – Using a Y-Cable as a “Splitter” Ok

Y-Cable Connection Example A



Some Rules regarding Y-Cable Use:

- The level of the audio signal being split or combined also needs to be taken into consideration as well.
- Output and Input Impedances also need to be considered when using Y-Cables. Since Inputs are High impedances and Outputs are Low Impedances, you need to always “Match” Outputs to Inputs. Never Inputs to Inputs or Outputs to Outputs (If this happens to occur there will be signal loss and / or damage to the equipment).
- It is highly recommended not to use any type of Y-Cables unless you are in a situation where you “temporarily” need to get a system up and running quickly. Never use a Y-Cable in a permanent installation.

Example B – Using a Y-Cable as a “Mixer” Not Ok

Y-Cable Connection Example B

