

# Access Grid Node Cabling Basics

Or, a guide through the forest of cables and connectors.

	<p><b>XLR Female</b> Genelec speakers Gentner microphone connections</p>
	<p><b>XLR Male</b> Microphone plugs Gentner speaker connections</p>
	<p><b>Phoenix connector</b> Connects to the back of the Gentner. Pinout is, looking at the back of the connector, + – Ground.</p>
	<p><b>RCA plug</b> Standard connector on consumer electronics gear, convenient “standard plug” for connector conversion.</p>
	<p><b>1/8” stereo plug</b> Connector used on PC audio cards.</p>

## **Interconnections**

or, cables you'll build with screwdriver and pliers.

### **Gentner to Audio PC Line In**

This cable connects to the Gentner Output A. Since it is an unbalanced audio connection, the Gentner – and ground connections are tied to the 1/8" shield. The Tip connection of the 1/8" will connect to the Gentner +.

### **Gentner to Audio PC Line Out**

This cable connects to the Gentner Input A. Since it is an unbalanced audio connection, the Gentner – and ground connections are tied to the 1/8" shield. The Tip connection of the 1/8" will connect to the Gentner +. Note that we're currently using monophonic audio from the PC, so we just pick one channel (and make it the same as the line in connection, so the two cables can be swapped).

I've been building these lately by clipping a 1/8" to dual RCA cable (these are easy to find) in half, and turning one half into a PC/Gentner cable and the other into a Gentner/RCA cable.

### **Gentner to Microphone**

This is a conversion cable that connects an XLR female to the Gentner. The XLR connector is wired as a balanced audio connector. Pin1 of the XLR (X, or shield) connects to the Gentner ground. Pin 2 of the XLR (L, or line) connects to +, and pin 3 (R, or return) connects to –.

### **Gentner to Speakers**

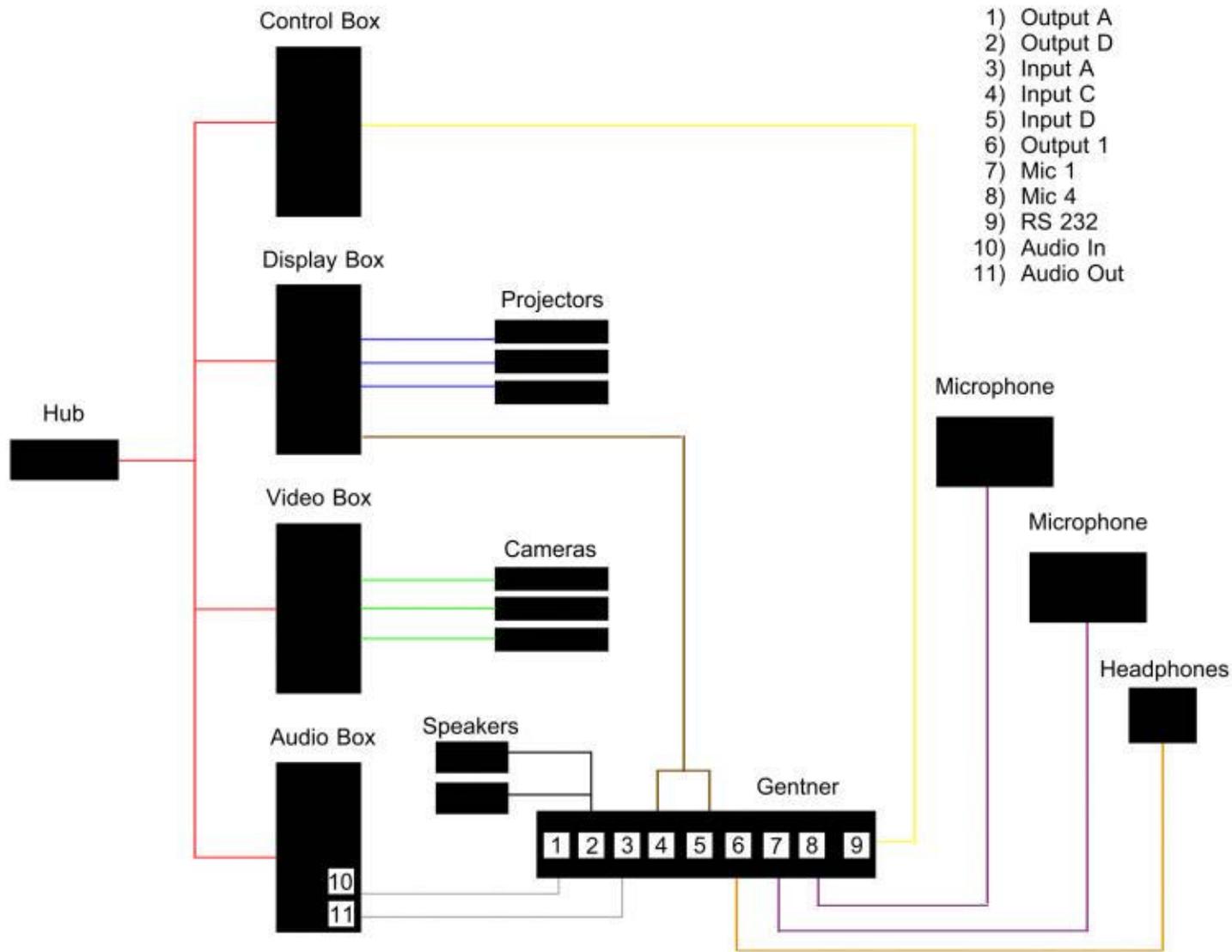
This is the same as the microphone cable, but has an XLR male instead of XLR female. I typically wire two XLR connectors to a single Phoenix, so that both channels are driven by one Gentner output. I do this because it is unclear if the echo cancellation works properly with two Gentner outputs driving the speakers (one can only designate a single output as the Gentner echo cancellation reference).

### **Gentner to Headphone**

This is a cable useful for debugging local audio problems. I generally build these by using the Gentner/RCA cable made with the remnants of a Gentner/PC cable, a 1/8" female to RCA male Y cable, and a RCA female/female barrel.

## Cables you'll find in the FL Library for the hands-on part of the tutorial

	<p>Category 5 Ethernet</p>	
	<p>HD15 monitor cable</p>	
	<p>SVideo cable, connects cameras to capture card.</p>	
	<p>Gentner to XLR female cable, for microphones</p>	
	<p>Display PC to Gentner cable (lots of pieces, example of cobbling what you need).</p>	
	<p>Gentner to headphone cable. Another cobbling example.</p>	
	<p>RS232 cable, with RJ45 cable converters.</p>	
	<p>Gentner to XLR male cable, for speakers.</p>	
	<p>Gentner to PC audio cable.</p>	



- 1) Output A
- 2) Output D
- 3) Input A
- 4) Input C
- 5) Input D
- 6) Output 1
- 7) Mic 1
- 8) Mic 4
- 9) RS 232
- 10) Audio In
- 11) Audio Out