Audio Terminology

Sonic: relating to audible sound.

Audible: that which can be perceived as sound (usually applied to sound that can be perceived by human beings).

Aural: Refers to that which can be heard. The sonic version of “visual”.

Timbre: The quality and characteristic of a sound. The texture of a sound. What makes a flute sound like a flute and a fingernail on a chalkboard what it is. (Separate from pitch and volume.)

Loudspeaker: A device that reproduces sound by converting electrical signal into acoustical energy.

Subwoofer: A loudspeaker designed to reproduce bass frequencies

Microphone: A device that converts acoustic sound waves into analogous electrical signal.

Cable: Wires that are shielded with insulation. The copper wires inside transmit audio signal in the form of electrical energy.

XLR

1/4"

Neutrik, NL2
or Speakon

Cabling: The task of connecting pieces of audio gear together using the correct cables. Cabling includes neatness, tying the cable at 1 ½ ‘ intervals to pipe or gaff taping the cables to the floor. It includes labeling both ends of every cable.

Patching: Like cabling, but tends to refer to short cable runs, often in the booth. Examples include cabling from an audio interface to a mixer that is 5’ away, or from the mixer outputs to the amps.

Patchpoint: A place in the walls of the theater where you can plug in an audio cable. These points connect distant locations (like the booth and the stage) by way of cables permanently run behind the walls of the theater.

Patchbay: A panel that offers the ability to conveniently patch inputs from one location to outputs in another. Similar to a patchpoint, but is more of a central hub and tends to be in a booth.

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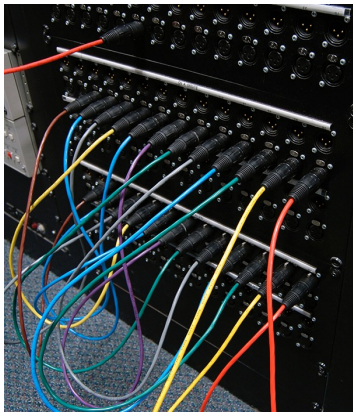
Back of a mixer where input and output cables are patched.



A patchbay with colored patch cables.

A patchpoint, just like the ones you Find around the theater.

Signal: Signal is the audio content that you are recording, mixing or reinforcing.

Noise: Noise is any unintentional sound that is added to your signal due to bad electrical grounding or nearby electromagnetic fields from power sources. Hiss and Hum are two common forms of noise.

Signal to Noise Ratio: The relationship of intended sound content (signal) to the unintentional sounds incurred somewhere in the sound system (noise - including hum and hiss).

Signal Path: Refers to the path that audio signal travels on its way from the sound's input into the system (via a microphone or a CD, for example) through to the output (the loudspeaker).

Input: An "input" refers to the point at which signal is introduced into a piece of gear (as in, where you plug a mic cable into a mixing console). It also refers to a device that produces the audio signal that is fed into a sound system. (For example, Qlab sends, a microphone onstage, and an electric guitar plugged into the sound system would all be called inputs.)

Output: An "output" refers to the point at which audio signal exits a component of the sound system (for example, the main stereo outs of a mixing console). It also refers to the final destination of the sound (for instance, "I'm sending this to an output...the House Left surround loudspeaker in the Curtain Theater).

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Mixer: An audio processing device whose primary job is to combine and route audio signals from various inputs to various outputs. It is the control surface used in mixing.

Amplifier (or Amp): An electrical circuit designed to increase the volume or power of the audio signal. They are the last stage of "processing" before audio signal is delivered to the loudspeaker and turned back into acoustic energy.

Bus: The pathway along which an electrical signal flows. For example, on a mixer there are typically two kinds of busses: Groups and Auxes.

Interface: A digital/analog interface is a device that converts digital audio signal to analog and vice versa. For example, interfaces are used to convert audio from a playback computer into analog audio signal that can be sent over cables into a mixer.

Processing: The intentional alteration of a sound signal. Processing typically involves adjusting attributes of a sound to change the character or quality of that sound. Common types of processing include EQ, Reverb, Delay, Gain.

Plug-in: A software version of a processor. For example, the EQ that you will use in Logic Pro is a plug-in.

Content: The "stuff" of your design. This term typically describes recorded sound used for playback during a show, for example recorded songs, sound effects, ambient sounds (crickets, air conditioner hum, etc.), and non-realistic recorded elements like sustained notes, rumbles, etc.
Content may include original compositions that you write or commission from another composer. They might be recorded by you or another musician, or performed lived during a play.

Delivery: How you present sonic information to the audience via loudspeaker placement and type. You design a sound system to deliver your sound content.

Localization: Our perception of where a sound is coming from; identifying the location of a sound source.
The term is also applied to the act of placing loudspeakers and delivering content in a way that causes the content to seem placed in a specific area of the stage.

Coverage: The size of the area (in horizontal and vertical planes) that is covered by sound delivered by a loudspeaker. “Good coverage” means that you have clear, direct sound delivered to all audience members. Looking at the dispersion patterns of your loudspeakers will help you determine whether you have enough coverage, and how to place your loudspeakers to achieve full coverage.

Dispersion: The pattern of sound emanating from a loudspeaker. Dispersion is expressed in degrees. For example, our QSC AD-S82 loudspeakers have a dispersion pattern of 90^{o} in the horizontal plane and 60^{o} in the vertical plane. This is similar to the degree angles of lights; you can measure how that angle covers your audience by using a protractor and groundplan, as we will see.