

Audio Services Terminology

Hardwired Microphone

The dynamic (close-range) microphone is used for a solo vocalist or instrumentalist or for a speech. A standard mic cable and boom stand is usually provided with each microphone.



Boom Stand



Close-Range Microphone



Microphone Cable

Gooseneck Microphone

This condenser (mid-range) microphone is used on a podium, lectern, pulpit, or ambo. It is optimized for speech reproduction. There are two adjustable portions of it so users can raise or lower the microphone element if necessary.



Gooseneck/Mid-range Microphone

Hanging Microphone

This microphone is utilized for picking up large groups from overhead. Typical applications are for a choir, ambient mic for a church congregation, and over the stage in an auditorium.



Hanging Microphone

Boundary Microphone

This is a unique microphone that works well for special applications. It sits on a flat surface and has a wide pick-up pattern. It works well on an altar, as a piano microphone, or as a microphone for a small choir.



Boundary Microphone

Wireless Microphone

This is a wireless microphone system. The receiver plugs into the mixer portion of the main sound system. The transmitter is either a handheld or beltpack and is carried around by the person speaking.

The beltpack can have either a lapel (as shown) or headworn microphone attached to it



Wireless Microphone



Receiver



Beltpack Transmitter



Handheld Transmitter

Audio Services Terminology

Mixer

This is a small rack-mount mixer, which takes all the inputs of the system (microphones, CD player, etc) and 'mixes' them down to one signal path to go to the amplifier. This mixer can also be used as a sub-mixer, where it takes the inputs from a certain area and mixes them down to one output to send to the main system mixer or processor.



Mixer

Mixing Board

This is a larger-scale mixer, often used in school theaters or with a church praise band where there are a large number of inputs and there is a sound system operator who needs to control all of the inputs. The inputs will often come into the mixer through a mixer snake or stage box. This mixer can also have multiple outputs to feed the main speakers and monitor speakers, as well as possibly a personal or in-ear monitor system.



Mixing Board

Mixer/Processor

This is a combination mixer/digital processor along with an integrated control processor. These units come with a variety of inputs and outputs for a range of applications. This box handles the signal routing from input(s) to output(s) as well as all the equalization, delay, compression, and feedback suppression for the system. Touchpanels offer the greatest flexibility and future-proofing for system control. Projectors, screens and other peripherals can be controlled by this same platform.



Mixer/Processor



5.7", 8" and 11" touchpanels

Equalizer

This is a standard equalizer. For systems where the end-user requires a lot of control over the system, such as a live band or theater system, this is a perfect fit. Usually seen in the 31-band model, this allows the user to adjust an individual frequency in the system by either giving it more gain or less gain as needed for the room or the input.



Equalizer

Amplifier

This unit supplies power to the speaker or speakers. These come in a wide range of options, from small single-channel amps for powering a couple of hallway speakers to big multi-channel amps that can power a large multi-speaker sports arena system.



Amplifier

Audio Services Terminology

Paging-quality Ceiling Speaker

This is the type of speaker often seen in school intercom systems. It is very inexpensive and gives a reasonable sound with acceptable clarity of speech, but has no low frequency reproduction so is not recommended for music.



Paging-quality Ceiling Speaker

High-quality Ceiling Speaker

This speaker is often seen in boardrooms, banquet facilities, or low-ceiling areas in churches. This speaker produces a much more accurate sound and wider frequency range than the paging speaker, so music sounds fairly good through them. Speech clarity is also good through this speaker. Aesthetically, the speaker blends in with the ceiling tile (they are often paintable as well) and looks much less industrial than the paging speaker.



High-quality Ceiling Speaker

Line Array Speakers

This speaker is ideal for settings with long reverb times where the sound hangs in the air for three or more seconds. It has a very narrow profile, so is unobtrusive when aesthetics are a big concern. This speaker has excellent speech intelligibility and is designed to put the sound on the audience area, not on the sidewalls or ceiling.



Line Array Speakers

Suspended Speakers

This is an example of the "typical" speaker that is found in auditoriums or church sanctuaries. Usually it is a two-way box, which means the high frequencies are produced by a small tweeter and the lower frequencies are produced by a large (usually 8" or 12") driver. It is considered a full-range speaker, so will adequately reproduce sound for most speech and music applications. When a lot of instruments will be used or music tracks will be played, we recommend adding a subwoofer for extended low-frequency response.



Suspended Speakers

Subwoofer

This speaker is designed to reproduce low frequencies, generally under 150Hz. There are a range of options: setup as a single or dual driver and, the size of the driver. The picture at left shows a single 15" driver. The larger the driver, the lower the frequencies it can produce. A dual-driver setup can reproduce lower tones than a single driver, as well as having a higher overall volume level. Subwoofers are interesting in that they can go in a corner or back of a room and still fill the room with low frequencies; they do not have to be in front of the audience.



Subwoofer