


Speaker Types

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If you've ever found yourself wondering about the different types of speakers and what their purposes are, you are not alone. This is a topic we frequently answer questions about, so we've laid out some key terminology for anyone that's looking to learn more about their functions.

Tweeter:

A tweeter is generally the smallest speaker in a stereo system. Tweeters can range in size from 1/4-inch all the way up to a few inches in diameter. The name "tweeter" originated from a bird's ability to "tweet" in high frequencies. The higher the frequency is, the faster a speaker must move per second.

A tweeter's small size and light weight allows it to move quickly to accurately reproduce high frequencies. A tweeter's range will vary based on its construction, materials and size, but tweeters typically play frequencies from about 2,000 Hz up to 20,000 Hz. We always recommend checking with the manufacturer for specifics on the frequency range for a particular tweeter.



Midrange (Midrange Woofer):

A midrange speaker or midrange woofer tends to be slightly larger than a tweeter and slightly smaller than a standard woofer in a stereo system. Midrange speakers can make a stereo system work more efficiently by playing frequencies from the tweeter range all the way down to the highest frequencies played by the standard woofer. This takes some of the low frequency burden off of the tweeter and high frequency burden off of the woofer, thus allowing all three speakers to sound their best. This efficiency improves clarity as well as dynamic capability. A midrange speaker's typical range is from 5,000-6,000 Hz down to 300-500 Hz.

Woofer:

A woofer tends to be larger in size than a tweeter, ranging from 2-3 inches up to 8-10 inches. These speakers are used primarily for playing frequencies below the range that a tweeter would play and just above the frequencies that subwoofers are capable of reproducing. Woofers are larger and have more excursion capability, or movement, which allows them to reproduce lower frequencies. The name "woofer" comes from the idea that dogs bark or "woof" in low frequencies. The woofer will typically play from the tweeter's lowest cutoff point all the way down to much lower frequencies that the subwoofer is responsible for. A woofer's typical range is from 2,000-5,000 Hz down to 50-100 Hz.



Subwoofer:

A subwoofer is typically the largest speaker in a stereo system. Subwoofers can range in size from 5 inches all the way up to 12 inches or more. Subwoofers are used for playing the lowest frequencies in music. Their large size comes along with excursion capability that is greater than all other types of speakers. Their ability to make greater movements allows the subwoofer to be more effective at playing the lowest frequencies, especially at higher volume levels. Typical range for a subwoofer is from 100 Hz down to 20 Hz.