

What should I look for in speaker stands and brackets?

This article was kindly donated by B&W

We supply stands and brackets specifically designed for some of our speaker models and it will come as no surprise that we recommend these where available. However, sometimes you will have to choose a model made by another manufacturer.

Any speaker support should ideally do the following:

1. Raise the speaker to the correct height
2. Support the speaker firmly
- 3.
4. Prevent any vibrations in the speaker being transmitted to the floor or wall
5. Be as stable as possible against being knocked over

What is the correct height for the speaker?

You have to consider two factors here - the directivity of each driver and how the drivers blend together through crossover.

As you move off axis of a driver, its top end response begins to fall off. The degree to which this happens depends on the diameter of the radiating area compared to the wavelength of sound at that frequency. Apart from the tweeter, drivers usually cross over to a smaller unit before the wavelength gets too small (note that with semi-rigid diaphragms like Kevlar® cones, the radiating area at higher frequencies is not necessarily the full diaphragm area). One is therefore led to believe that the tweeter should point at the listeners' ears.

To a first approximation this is true, but through crossover, where two units are working together, you get lobing of the sound in the plane that goes through both unit centres (usually, but not always the vertical plane). You have to make sure this lobe is also directed at the listeners.

You can tilt the lobe by adjustment of the crossover and / or moving one driver back with respect to the other to alter the relative time delay. We sometimes do this with floor standing systems of low height, but the danger of doing this too much is that the optimum listening height changes with distance. So in general for stand-mount models we make the lobes point straight out and you get a good response with the speaker raised so that your ears are between midrange and tweeter centres, with a favour towards the tweeter.

Supporting the speaker firmly

To produce good tight bass, with plenty of dynamics and slam, you need to provide a firm foundation for the bass units to work against. This requirement can conflict with the need to prevent vibrations going to the floor or wall and sometimes you have to make a compromise, but, all other things being equal, it's best to hold the speaker firmly in place. Where you have carpets, use spike feet and make sure the speaker cannot wobble on the stand.

Damping the stand or support

Most of the better stands are either constructed from an acoustically dead material or can be damped by pouring a suitable substance in a hollow structure (for example sand in a metal stand). If you still have a problem of coloration from the stand, it is often cured by the use of Bostik Blu-Tack®: or similar malleable re-usable adhesive between the speaker and stand. This isolates well without being too floppy and ruining the bass dynamics. You can use fairly stiff decoupling here because stand resonances are usually at higher frequencies.

Preventing vibrations getting into the floor or wall

If you have a solid concrete floor, you probably won't have too much of a problem, but suspended floors can act like sounding boards and add coloration to the sound. Here you may have to make a compromise with the bass dynamics and use a flexible barrier for isolation, especially if you need to reduce the sound being

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transmitted to another apartment. Often you will have to use more flexible decoupling to prevent bass energy being transmitted and there are proprietary isolating feet available from several sources.

Wall brackets are more difficult to deal with. For safety, you need to have a firm fixing to the wall, so here you may have to make more of a compromise.

Be safe!

Always have regard to the overall stability of the speaker on its stand. There are tip-over standards for furniture, although these vary from one country to another. A good general guide is that the speaker on its stand should return to an upright position if tilted over up to 10 degrees in any direction. Remember, a knocked over stand will probably have exposed spike feet. Have extra regard for small children or animals.