

>> Choosing AV loudspeakers

MORE CHOICES THAN YOU THINK!

A typical home theatre loudspeaker system consists of three front loudspeakers (left front, centre, right front), left and right surround speakers, and a subwoofer. This would be commonly described as a 5.1 system, and is still the most popular implementation of a home theatre system.

However, the current de facto standard for Dolby TrueHD and DTS-HD Master Audio soundtracks is 7.1, which would add one or two back surround speakers to the equation. Most mid-priced, current-generation AV receivers are 7.1 channel-capable.

Some brands, such as Yamaha, offer even more extensive speaker configurations, based on optional front and rear presence loudspeakers in a 9.1 or 11.1 configuration. Provision for a second subwoofer will result in a 7.2 or 9.2 speaker system.

Finally, the advent of object-based surround sound, including Dolby Atmos and DTS:X, has required ceiling-mounted speakers for the overhead channels, or speakers that are able to project the sound upwards to reflect from the ceiling.

Sometimes, the shape or size of a room makes the use of a conventional multi-speaker arrangement difficult. In such instances, opting for just two front speakers and a subwoofer is one solution, although at least some of the surround sound ambience and steering will be lost.

An increasingly popular option is the soundbar, which is offered in both active and passive forms, and uses a multiple driver array in a single slim, horizontal enclosure that fits neatly under a flat screen television, either on a shelf/stand, or wall-mounted.

Some of the more sophisticated soundbars use digital signal processing to simulate surround sound by adjusting phasing and time delay. If set up correctly, the result can be startlingly realistic, but much depends on how the soundbar interacts

with the room's shape and acoustics.

Almost all soundbars come with a matching subwoofer which will take care of bass and sub-bass frequencies. Some of these are linked to the soundbar wirelessly, making locating the sub much more convenient.

In fact, wireless speaker technology that allows full-frequency signal transmission is becoming a lot more accessible, which will at least sort out the problems of running multiple cables unobtrusively.

Another option is to use ceiling-mount loudspeakers for the surround and surround back speakers, leaving only the front and centre speakers to be conventionally located. This also allows the wiring to run in the ceiling. Even the front speakers can be in-wall mounted for a seamless look, but

entails chasing into walls, or creating 'false' dry walls, which can be expensive and disruptive.

Back to the 5.1 and 7.1 speaker arrays. Common practice is to select a complete speaker package from the same manufacturer and same range, so that the voicing of the speakers is consistent. This ensures a uniform tonal approach between the loudspeakers, which assists in creating a seamless, 360-degree soundstage.

As for size, opting for larger, floorstanding speakers will ensure a fuller, sound, but they

will need the acoustic space of a larger room to deliver their best. The smaller the loudspeakers, the more of the lower frequency spectrum will be the responsibility of the subwoofer, making the integration with the sub more critical.

However, smaller speakers are more easily positioned, and can even be placed in bookshelves, or wall-mounted. Utilising dipole or bipole speakers for the surrounds is another way of ensuring a wider, more uniform soundfield delivery.

Subwoofers should be active and chosen relative to the size of the room. Surprisingly, the biggest isn't necessary the best: small and powerful subwoofers with high-excursion drivers can sound authoritative and controlled.

Opting for two smaller subs rather than one, and locating them in diagonally opposite corners is one way of boosting bass impact without sacrificing accuracy.

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