

A Sound System to Inspire Audio Adrenaline

BY JERRY HEESEN

In the early days of surround sound, promoters of the technology inspired buyers of home systems with the line, “Get theater-quality sound at home!” Today, we can do a lot better than that. Home systems can be basic or elaborate, but they all succeed in giving listeners a surrounded, sensual sound experience, whether it’s used to enhance a home-theater experience or for music — or both.

Thanks chiefly to new, affordable technology and popular demand that sparked many new options and price points, home surround-sound systems deliver a quality of sound far superior to what you’ll find in most movie theaters. These systems add an entirely new dimension to your listening experience — actually meeting the intent and potential of the recording or soundtrack. Most recordings today are programmed to deliver an experience like this, but the old two-speaker systems simply aren’t up to the task.

A good surround-sound setup — especially when it serves as an integral part of a home theater system — will provide hours of enjoyment for you and your family. It will immerse you in sights and sounds once found exclusively in the realm of the finest first-run movie houses.

If you’re considering a surround-sound system, here are some of the things you’ll want to know. I’ll begin with just a few technical basics, then move on to the more playful stuff. Don’t get me wrong. Surround sound is serious business for an army of skilled engineers and technical pros, and movie and music aficionados. Hundreds of books and maga-

zine articles cover this stuff. But we won’t go there in this article. I’ll simply say that much of this complex technology is based on Dolby Surround.

Dolby technology became the foundation for a majority of the sophisticated movie soundtrack work during the past 30 years. Many retailers base their systems on Dolby Digital 5.1, a simple reference to programming for five speakers and 1 subwoofer. The “5.1” refers to five discrete full channels — left, center, right, left surround and right surround — plus a sixth channel for the powerful, low-frequency effects that are felt and heard. But there are also more advanced 6.1 and 7.1 systems that require additional speakers.

When I see customers experience home theaters for the first time, it’s always amazing to me to see the transformation that takes place. It’s an experience that just washes over them. Though



This photo shows a typical 5.1 home-theater surround-sound setup. There are five speakers surrounding the listener/viewer, plus one subwoofer — often on the floor beside the TV or even under the couch.

a large-format TV greatly enhances the visual experience, it’s the sound system that truly evokes a sense of excitement. Generally speaking, a big picture with basic sound is nowhere near as involving as a smaller screen with dynamic sound. Of course, a big picture with great sound delivers the ultimate experience.

For surround sound to work, the environment must be wired to accom-

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Speaker placement is vital and depends on the theater system and your home's layout. Some systems suggest the speakers form an equilateral triangle with the listener.

dimension to sound in a way that can't be reproduced otherwise. A surround-sound system enhances your sense of being in the midst of a musical or movie environment. Multichannel music and soundtracks, if presented well, create a

large, encompassing sound field, adding new realism to the reproduction of the original recording.

The goal here is to envelop you in sound without drawing your attention away from the music you're listening to or the movie you're watching. The surround system adds size and dimension to the soundstage and ensures a seamless transition when sounds and effects "move" from the front and center speakers to the side and rear speakers.

Unfortunately, conventional two-channel stereo systems simply can't reproduce this sound experience in your home. The way to hear the surround sound is to have a reverberant sound field with front, side and rear speakers used to create an embracing sense of sound, and for the subwoofer to stir those deep, bellowing notes in a way that the body can feel.

Placement of the TV and speakers is critical. Ideally, the TV is centered on a wall, not in the corner of a room. For the



plish the task, the equipment designed for surround-sound reproduction, and the speakers positioned optimally.

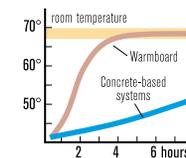
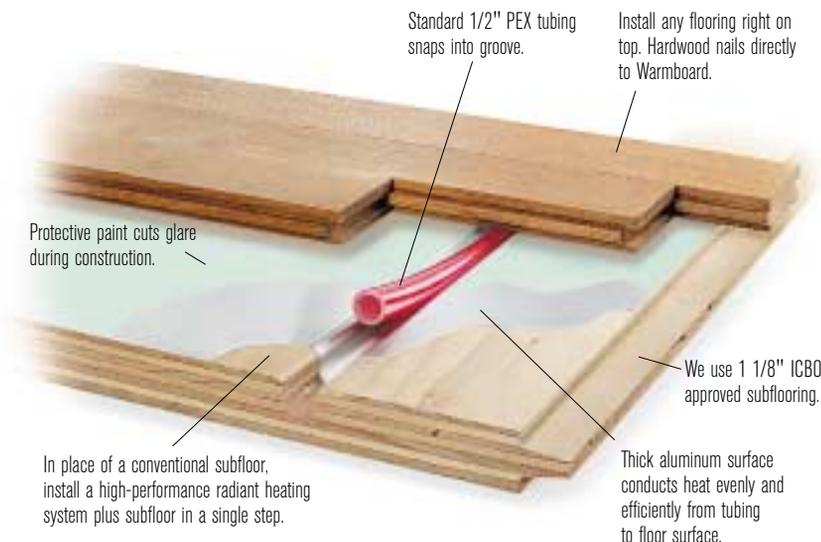
The whole concept of surround sound is to create a sumptuous sound stage that brings realism, depth and

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best results from speaker placement, the front left and right speakers should frame the TV, a few feet from each side. The center speaker should be on or above it. The rear surround speakers should be separated behind the seating area. And the subwoofer should be somewhere along the front wall or along the side near the front. (See the illustration on page 32.)

Basic, two-conductor speaker wire connects the speakers to the processor or receiver. Thicker-gauge speaker wire generally provides better sound performance, and I usually recommend anything from 16- to 12-gauge wire (12 being thicker). Speaker wire is often useful for the subwoofer wiring as well, though some subwoofers require special, low-level audio cable.

Want a shopping list? Let's start with what you'll want in addition to the TV — the hardware that generates the sound.

Surround Processor and Amplifier

The surround processor decodes the soundtrack and sends it to the appropriate amplifier channels to create the desired sound field. These components can be purchased separately or together as a receiver, which combines the surround processor, amplifier and AM/FM tuner, all as one component.

The all-in-one-receiver approach generally does the job OK, and that's why they're popular. But if you're looking for an enhanced experience, the "full separates" approach is the way to go. This means choosing a surround processor/preamplifier, a power amplifier and — if you want one — a tuner instead of a single-package receiver. Individual components provide better performance, especially in power amplification, and they also permit you to tailor a system to meet your needs precisely.

Prices for separates can range from \$2,000 to \$20,000, as opposed to a \$150 to \$2,000 range for receivers.

At the high end, you have suppliers like Lexicon and Anthem. For the diehard, these components will deliver unsurpassed performance. However, the much more reasonably priced receivers (in, say, a \$300 to \$2,000 range), from companies such as Rotel,

NAD and Denon, will give some of the high-end contenders a serious run for their money.

Source Components

This equipment includes:

- VCR — ranging in price from about \$50 to \$300
- DVD player — (capable of using enhanced digital soundtracks) \$60 to \$500, with a few high-end units between \$1,000 and \$5,000 or more
- Cable/satellite equipment

Next, the Speakers

Your dealer can show you any number of options, from large floor-standing speakers to smaller table or shelf-mounted models to low-visibility, in-wall or ceiling "stealth" speakers. Although the larger freestanding speakers have some advantage in sound reproduction when compared with smaller or in-wall designs, they may be more intrusive aesthetically.

And since speakers are the voice of surround sound, you want to choose a set that's designed to work together and at the upper end of what you can spend on them. It's money well spent.

Among the best speakers, I feel, are Paradigm, B&W and Speakercraft. These suppliers offer you a spectacular range of speaker systems designed for sensational sound reproduction.

Want to Get Started?

Your independent audio/video specialist is a valuable resource. They'll offer you sound advice (no pun intended) based on an explanation of what you want to accomplish and how. They may ask for blueprints of the room where you're installing the sound system, or they may prefer to make a house call to prescribe the most suitable components and their location. You may want to visit one or both of these websites for a directory of specialists in your area: www.cedia.net or www.paralink.org. ■

Jerry Heesen owns GNT Audio Video Systems in Lancaster, Pa. They specialize in the design and installation of home theaters and whole-house music systems, sophisticated high-speed structured wiring, home automation and lighting controls. Jerry can be reached at 717-393-4471 or at www.gntstereo.com.

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