

# Multiroom Music

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## Multiroom Music Overview

Of all the electronic amenities available to a new home, none are quite as enjoyable as a whole-house music system. Distributing tunes from one stereo system to speakers in far corners of a house is nothing new. Handy homeowners have been stringing wire from their stereo receivers to new speakers for years. But there is a limit to how many speakers a standard stereo amplifier can support. Plus, you may have to hoof it back to the stereo system to adjust the volume or switch from a CD player to a DSS receiver. As long as your home is unfinished, invest in a whole-house music system that's convenient to use and safely transports songs without blowing up an amp.

There are basically two types of whole-house music systems from which to choose: a system that distributes the same song to every speaker, or a more intelligent system that lets each family member listen to a different music source (such as a CD player and tuner) simultaneously from different rooms.

## Planning Issues

### What You Need to Consider

#### - Prewiring

It's hard to say where you might listen to music, especially if your home has yet to be built. Certainly, the family room, dining room, kitchen and living room make sense. By all means make sure your audio installer runs speaker and control wiring to those rooms. In other rooms, such as the master bedroom, the guest rooms and the unfinished basement, you may feel less certain about installing speakers. The good news is, you don't have to. But do make sure that the installer still routes wiring to those rooms, and documents their locations. Should you convert the bonus room into a den, for example, you can easily add a pair of speakers and a volume control-if there's enough wire waiting for you behind the walls.

#### - Zoning Out

Initially, you may be wowed by a whole-house music system's ability to serve each room independently, but to preserve music quality and keep your budget in line, it's probably better that adjacent rooms (like a kitchen and a breakfast nook, or a bedroom and a bath) receive the same song. Grouping rooms together is called "zoning." This is much like having "zones" for your heating and cooling system.

#### - Speakers

Speakers come in a wide variety of styles and shapes. As long as your home is unfinished, use speakers that can be mounted into the walls and ceilings. Improvements in the designs of in-wall and in-ceiling models make them an eye-pleasing alternative to box speakers, with no sacrifice in sound.

#### - Room to Grow

You wouldn't buy a PC with insufficient memory to support new programs. The same thinking goes behind selecting a whole-house music system. It must be expandable, i.e., able to handle new music sources (a second CD player or a hard disk recorder, for example) with no difficulty. Some whole-house music processors can be upgraded via software.

## Add-Ons

#### - Infrared Remote Control

There are times when you might not want to go to a keypad to change the music. Here's where a handheld remote control can come in handy. Some whole-house music systems come with their own handheld remote controls, others come with keypads that can be taught to understand the commands of your existing remote control.

#### - Audio/Video Switcher

In some rooms, such as the home theater/media room, you will probably want the same speakers that spill music into the room to also take care of the movie soundtrack. To smoothly switch from music to movies requires an inexpensive audio/video switcher.

#### - Audio Hard Drive

This device enables you to store thousands of your favorite songs on a hard drive.

#### Installation Issues

Your Builder, Your A/V Specialist, Your Electrician

Ask your builder to construct a closet that can conveniently house all of the necessary gear of a whole-house music system. This closet should measure about 84 inches high by 24 inches wide by 26 inches deep, at a minimum.

Here, the components can remain out of sight, but that doesn't mean they should be tough to reach. You'll need to visit the CD player to change a disc, for example. Therefore, your builder should locate the closet in a central area of the home.

The A/V specialist will need your help in deciding where to plant the keypads, among other items.

Electrical wiring and low-voltage wiring do not peacefully coexist. If you have any say in the matter, ask your electrician to run his wiring before the A/V specialist, to preclude any possible interference.

#### Speakers

The right kind and the right placement are key

It's easier than ever to have music in every room. If you are building a new home or planning to remodel your existing home—it's a no-brainer. These days there are speakers designed for every situation and listening preference. Your audio installer can help you choose the right speakers and ensure that your home is properly wired for optimum performance.

There is both an art and a science that go into the placement and installation of speakers for a whole-house music system. For foreground music applications, it is usually best to place the speakers in the room in such a way as to provide stereo left and right imaging when you are facing the main feature of the room. This feature could be a large picture window or fireplace in a family room, an entertainment center or armoire in a living room, or a centralized cooking area in a kitchen. In a bedroom, the speakers are best placed over the foot of the bed. Always face the speakers toward the main sitting location of the room.

For background music, speakers installed in the ceiling usually provide the best dispersion in any space.

Try to keep speakers at least two feet from any room boundary, including the ceiling. The exceptions are soffit locations, where there might be a protrusion of a drywall space into the room. Because soffits represent extruded room boundaries, they can sometimes be used to your installer's advantage. Soffits also can include an archway, such as the ones sometimes found between a living room and a dining room, around a built-in fireplace or even under a stairwell. Often these built-in cavities can optimize the sound of an in-wall speaker.

Balance is the key to a quality sound system. Large rooms, such as living rooms, typically have acoustic challenges. These rooms have soft, sound-absorbing furniture and carpets that effectively muffle music volume, or conversely, leather furniture or a lot of glass can reflect the sound.

When installing speakers, keep in mind that spaces that are considerably larger than other spaces in the house may require additional speakers to offer smooth coverage and balanced sound levels. Sometimes smaller spaces actually require more speakers as well. Because of their relatively short distance from the listener, speakers installed into a low ceiling may not have enough space to properly disperse and attain even coverage.

In any room, bear in mind that sound propagation is very similar to that of light (angle of incidence equals angle of reflection). A qualified audio system designer can use this information to make a room "sound" larger or more intimate, much the same way as a lighting designer uses lighting to define a room's ambiance and establish comfort.

## Volume Controls and Wiring

### Get rooms ready for music

Devices to control the volume in each room are what make the system accessible and usable. Every room should have a means of adjusting the volume independently of the other rooms in the home. Because each volume control requires its own wiring, this is an important item to review during the wiring phase of installation.

If you are working with an audio installer, don't worry about the details, but try to keep your future needs in mind. It's not a bad idea to route wire to more locations than you are going to use immediately, keeping your options open for the future. If you do this, make sure that your installer leaves you with a clear wiring diagram so he or you will know where to drill holes in the future.

## Outdoor Music

### Tips for spreading songs outside

- Determine your system's sonic architecture. If you want to create a "background sound" type of environment, it's okay to install multiple pairs of speakers throughout the yard or under eaves. Too many overlapping left-right combinations, though, can be sonically problematic. A safe solution is to send a mono signal to every speaker so the sound is more diffuse.

- The best time to design an outdoor audio system is while the landscaping is being planned. Having the ground open simplifies the process of running speaker cabling. Not only does an unfinished yard allow the wires to be covered up with new sod, plants, or stonework, it also means the wires can be buried deeper.

- Consider the dispersion and coverage characteristics of the speakers. Some speakers are optimized for wide dispersion of sound; others for deeper coverage. While traditional speakers assume the listener can be positioned between a stereo pair, this is usually not practical in outdoor applications. Using a greater number of speakers and running them at lower levels will provide more even sound coverage with less chance of bothering the neighbors.

- All outdoor speakers are not created equal. While most outdoor speakers need to be placed under eaves, better models can be placed anywhere, fully exposed to the elements. This allows for greater flexibility in system design and speaker placement.

- When proximity to neighbors is an issue, consider installing speakers along the perimeter of the yard. Put them at ground level facing the house, as opposed to hanging them under the eaves. This makes for a stealth installation that directs sound towards your home rather than at the neighbors. Speakers placed on the ground also deliver greater bass output.

- Be skeptical about promotionally priced outdoor speakers that claim to be weatherproof. All else being equal, a weatherproof outdoor speaker should cost more than an indoor speaker. Rock-type speakers are built with housing materials that can last for a decade or more.

- Compromises are not to be feared. Be creative in your installation. Consider alternative installation techniques like mounting speakers low to the ground and aiming them up to the sky. Mount speakers high and aim them down to where shrubbery and other elements of the landscape will absorb the sound. For stronger bass, place the speakers in corners, at the bases of walls or underneath eaves. Simply mounting the speakers on a wall or on the ground rather than on a post can help enhance bass performance.

5 Things to Consider-Multiroom Music Make beautiful music everywhere!

- Which rooms to wire
- Wall-mounted keypad controllers
- Single vs. Multizone systems
- Mutisource systems
- In-wall and in-ceiling speakers

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Home Control FAQs

Everyone in the house has different musical tastes. Who gets control?

- Everyone! With multizone/multisource audio systems, it's possible to have multiple music selections going at the same time. If you have a hard disc music server, you can also store all of that music in one place, while distributing different selections to different rooms in the house.

- What's the difference between in-wall and in-ceiling speakers?

Basically, one is installed in the wall and one is installed in the ceiling. The layout of your room will probably dictate which one is right for you. If you're not sure which to install, talk to your retailer, dealer or installer. If you think you may want both or may change your mind at some point, there are plenty of companies out there that manufacture speakers that can be installed in either spot.

- Can I add zones onto my existing system?

A zone can be as small as a single room or even an entire section, like the back deck or the downstairs. Some audio distribution systems are built to be expanded. These are called "subzones." If you have a room that's big enough for multiple sounds, think about adding a subzone. The equipment that you have will dictate how much you can expand. If you've maxed out your distribution options (good for you!), then see if you can daisychain another unit.