Adding Music to Your Decks

by Darren J. Grebe

Sound wiring is a great, hands-off upsell for deck builders

Whole-house sound systems have recently exploded in popularity. With some forethought and not a lot of extra effort, you can add music to the decks you build. It's the sort of add-on that can easily be marked up 10 percent to 20 percent.

As an audio installer, I work with all types of contractors, deck builders included. But while you might think you can simply add speakers, there are some design features and considerations that will make the resulting recreation space more enjoyable for the customer.

Outdoor Speakers

Speakers are obviously a chief consideration. All outdoor-rated speakers have a few things in common — first of all, of course, they are waterproof. Most outdoor speakers today have rubber grommets for the wire to enter and sealed compartments to connect the external wires to the speaker (**Figure 1**). Some use standard "binding posts" that are gold plated for added protection from corrosion. Look for brands with longer warranties (some offer limited lifetime warranties) to help your customer avoid future hassles (see sidebar, "Outdoor-Audio Suppliers," page 4).

Speaker grilles are usually made of plastic or epoxy-covered metal to withstand the elements, and the speakers themselves are usually

Figure 1. Outdoor speakers are distinguished by their weather-resistant construction. Look for plastic or metal materials and a seal to keep moisture from entering where the wires penetrate.

high-impact plastic. The individual speaker drivers (like the woofers and the tweeters) are made from polypropylene, aluminum, titanium, or some other material that holds up well outdoors.

The range of outdoor speaker styles has expanded recently. Besides the standard box speakers that mount on a yoke affixed to a post or a wall, you can get speakers disguised as rocks, tree stumps, planters, and even hanging coconuts. I'll concentrate here on box speakers and planter speakers.

Wire or Not?

Even though you don't need to select the wire, it's good to make sure your sound guy is using the right type. Very simply, direct burial (DB) speaker wire is the only type to use outdoors. Standard in-wall wire or zip-cord will break down in the sunlight and weather. DB wire is both UV resistant and moisture resistant. In most cases, the minimum wire gauge is 16. It's almost never necessary to go larger than 12 gauge.

You can skip wire entirely and use wireless speakers. They range from inexpensive — about $80 each — to around $600 each. Cheap wireless speakers are attractive because they generally use batteries to power the wireless receiver and the small amp built into it. The downsides are they chew up batteries at a rapid pace, and the sound quality is pretty low; they may also produce occasional dead air. I recommend them only if you have no alternative. TIC Corp. carries self-contained systems.

The better — and more expensive — systems require line voltage (120 volts) at the speakers. You'll need to get an electrician to run some conduit for a weatherproof outlet. A good transmitter-receiver combo (actually two receivers, one for the left speaker and one for the right) will run about $600. KEF Audio makes a good-quality system for that price.

Figure 2. Placing speakers on the house provides sound to the deck, to the yard, and perhaps to the neighbor's yard. Speakers facing inward from the deck's perimeter take a little more wire, but the sound stays on the deck.

Placing the Sound

You are creating a deck to augment the lifestyle of your customers, so you interview them and find out how the deck will be used and design it accordingly. An audio installer does the same thing — and depending on what the customer tells him, there may be some additional deck design issues for you to consider.

First, the location of the speakers dictates everything else. The two major variations of box-type speaker placement are on-house and on-post. A third variation is planter speakers.

On-house placement (**Figure 2**) works well if you want to project the music onto the deck and into the surrounding area (large backyard, beach, pool, and the like). The speaker can be pointed downward to try to contain the music on the deck, but then neighbors behind the deck will hear it at a louder volume. On-house speakers don't require you to make any special changes to the deck, so your job doesn't change.

On-post placement, in contrast, restricts the sound overflow by directing the music toward the house. If the sound guy specs on-post speakers, you'll need to coordinate with him so he can run wire.

Planter speakers radiate sound in a

Figure 3. The author usually pulls the speaker wire through a hole drilled in the ledger before the deck is framed and leaves a long length coiled and ready to be run to the speaker locations.

Figure 4. When the deck is above a waterproofed room below, it's important to schedule the audio installer in before the roofer to ensure the wire penetrations are waterproof.

circular pattern (called "omnidirectional"). They can be placed almost anywhere on a deck and yield good sound. Like on-post speakers, they need wires run to them, so again, you'll need to coordinate with your sound guy.

Wire Runs

Wire can be run from the house to the speaker location with no help from you; however, a little preparation will make the job easier, cleaner, and more reliable.

Speaker wire usually exits a house through the ledger board. The installer should be able to drill the holes before framing, as long as you have your joists marked out. He should drill so the wire can run along the inside of one of the outer joists.

Usually, I'll pull the wire through the ledger and leave a long length looped and waiting to be run to the end of the deck (**Figure 3**). It's best when the installer can run the wire before the decking is put down, through conduit (or some form of chase) that's attached to the joist.

If the installer can't get to the job site between framing and decking, you may need to add the chase yourself, probably in the form of a small beveled piece of wood nailed to the length of the joists. Drill some weep holes to drain water.

When a deck floor is already in and it's close to the ground, the installer will have trouble grabbing the wire to run it to the end. In this case, before you start decking, uncoil the wire and

Working With an Audio Installer

- The audio installer should make certain that the wire exits, the wires, and the speakers are all waterproof. How the installer does his work is ultimately your responsibility.
- Work with the installer to make sure the speakers don't compete with other elements of the design.
- The installer should offer a "winterizing" package that includes bringing the speakers inside in the late fall and reinstalling them in the spring. The ends of the wires should be weatherproofed when the speakers are not attached.
- If you are subcontracting the installer, you should be able to make 10 percent to 20 percent on his project. Different installation companies work in different ways, but if you're the contractor for the job, you need to make something for your oversight.

Figure 5. Walled-in decks provide the best opportunity for hiding speaker wires. Otherwise, the wires generally run inside newel post sleeves.

CEDIA Certification

To find a qualified audio installer, I recommend looking for CEDIA (Custom Electronics Design & Installation Association) certification. CEDIA is very active in training and certification of installers and designers. To be a CEDIA member, a company needs at least one CEDIA-certified person on the team. Retaining membership and certification requires continued education. Find a certified installation company at www.cedia.net.

lay it in the chase (I know it's not your job, but doing this will create great contractor relations and you might get a discount for the sound installation). Most of the time, though, you and the installer should be coordinating tasks; this step is just in case.

A job I was on some years back illustrates the importance of communicating with your sound guy. Before the deck was started, I brought the audio wires out of the house where the ledger board was supposed to go. I planned to wait until the deck was done, then crawl underneath and run the wires along the joists out to the speakers. This would have been simple, as the original plan had the deck about 4 feet off the footings.

The as-built design, however, was closer to 6 inches off the footings, and I couldn't get to my wires after the decking was down. What should have taken minutes took about three hours. That sort of situation can turn into a back charge no one is happy about.

For decks above rooms, which require complete waterproofing, the wires for on-post speakers will have to penetrate the rubber waterproofing membrane. Make sure the breach is waterproofed (**Figure 4, page 3**).

On-post placement will require some coordination with the owner, the designer, and the audio guy. Usually, all that is needed is a channel cut into the post to accommodate the wire — just like for low-voltage lighting wire. It's best when the posts receive some sort of wrap, because the wires are concealed and protected from damage.

The location of the speakers will dictate where along the post the wire should exit. In my experience, the center of the post height is most common, as the speaker is usually placed in the middle of the post. Walled-in decks make it easier for everyone, as the wire can run up the wall and exit wherever it's needed (**Figure 5**). ❖

Darren J. Grebe owns Soundwaves of New England in Yarmouthport, Mass.

Outdoor-Audio Suppliers

Not all audio components are created equal. Some of the companies I deal with follow:

Bose 800/999-2673, bose.com
Boston Acoustic (Voyager series) 978/538-5000, bostonacoustics.com
KEF Audio 732/683-2356, kef.com
Niles Audio Corp. 305/238-4373, nilesaudio.com
Rockustics 800/875-1765, rockusticsinc.com
Sonance (Mariner series) 800/582-7777, sonance.com
SpeakerCraft 800/448-0976, speakercraft.com
StereoStone Corp. 800/350-7866, stereostone.com
TIC Corp. 800/779-6664, ticcorp.com