Background Sounds

– by Rick Wade
Photos by the author

Figure 1: This downtown scene looks great but something is missing – sound! Play the video clip (on page 78) to hear the difference.

Reader Feedback (click here)

On Rick Wade's Richlawn Railroad, you can listen to the urban hum of downtown, the clamor of the railroad shops, and a gentle waterfall ...

Many of us already enjoy the benefits of sound equipped locomotives on our layouts. My non-sound equipped units have been "demoted" to occasional duty or are linked up in consists with a sound loco. Just as sound locomotives increase your model railroad enjoyment, background sound can also

enhance the realism of your layout when it is done correctly.

What do I mean by "done correctly? For background sound to be an asset it should follow a number of guidelines:

- It should be relevant; that is, it should "match" the area modeled. It doesn't make sense to have a sound track of a waterfall when there is no waterfall in sight.

- The duration and how frequently the loop is played should be appropriate. A sound loop that is 90 seconds long and repeats almost continuously will drive you and your visitors crazy!

Figure 2: I bought a cheap MP3 player like this one on eBay for $6.00. It comes with earphones and I'll use their wiring to connect to a speaker. When purchasing a MP3 player make sure that it uses battery power (AAA). Don't get the kind that is charged through a USB port on your computer.
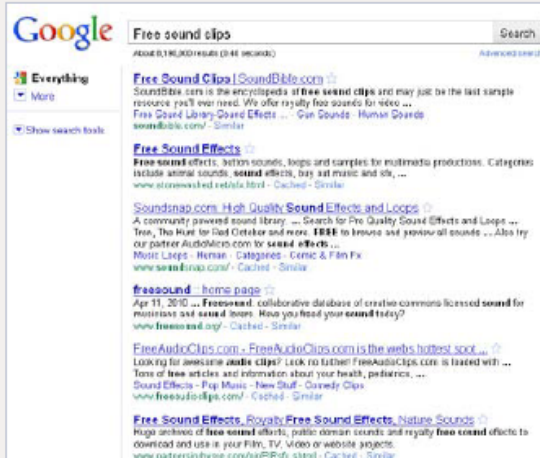

Figure 3: Many websites offer free sound files. I searched for files that fit my needs, such as "machine shop sounds" for the engine service facility.

- The volume should be at the correct level – probably lower than you expect. Background sound is just that – background. It shouldn't overpower the scene or the locomotive sounds.

So far, I have background sound in three areas: downtown, the roundhouse and shops, and the waterfall. I load free downloadable sound files on cheap MP3 players and wire them to speakers to provide the sound.

Once I've downloaded the sound files, I use an audio editor, Windows Movie Maker™, to build the files I'll install in the players. Figure 4 shows how I created the sound file for the downtown area.

Some of the files have different volume levels, so I use the audio software to normalize them to the same level. Then I adjust individual tracks to make some sounds louder than others, like big trucks which obviously would be louder than some other sounds.
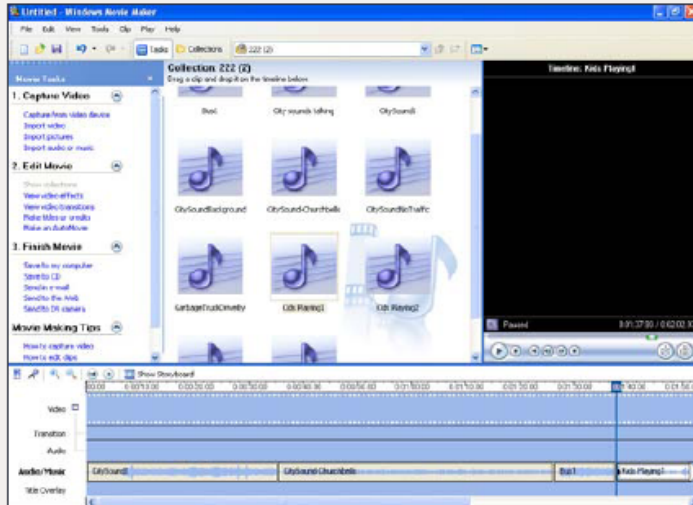
Figure 4: Once I'd downloaded sounds off the internet, I used Windows Movie Maker™ to create the sound files for loading in my MP3 players. Here I'm editing the sound clip for the downtown area.

I try to use one audio track for each type of sound. This makes it easier to adjust the volumes of multiple sounds going into a MP3 track. It also makes it easier to see the timing of the sounds relative to each other on the sound track.

Don't make all sounds the same volume. Large trucks should be louder than bird calls. Use the editor to experiment until you find a mix that sounds good to you. Don't forget periods of silence to rest your ears!

You don't need a dedicated audio editor to perform surgery on sound files. Most inexpensive home video editors will work quite nicely slicing and dicing sound effects or adding special effects like reverb.

Figure 5: I downloaded the edited sound files into my MP3 player. Since the player is stereo it can play two separate sound files at the same time – one each on the left and right channels. I only used one track for this clip, putting it on both channels.

I cut the "buds" off of the headset that came with the player and soldered the wires to a speaker from an old stereo system. The wires are very small, so take care when handling them.

I was lucky with my speaker; it matched the impedance of the MP3 player and worked fine. You may need to experiment to find one that works.

When creating a sound track, insert periods of silence for spacing between the individual sounds. This will help avoid the continuous roar effect and give your and your visitor's ears a rest.

I save my output files in MP3 format even though some of original files were WAV format. MP3 files take less storage space, so more sounds can be installed in a small player. ☑

Play video clip

Figure 6: Speaker placement is important to get good sound. I experimented with different locations and distances from the layout until it sounded right to my ears. I set the volume levels depending on the other noise in the room. If I'm railroading by myself, I keep the level very low. If I have an open house with lots of people, I'll turn it up so my background sounds can be heard over the noise.

Reader Feedback (click here)

Adding background sound to your layout doesn't have to be expensive or difficult. With low-cost MP3 players, speakers, and free sound files, you can enjoy the extra dimension of realistic sound as it helps bring your layout alive.

Rick Wade grew up in the east end of Louisville, Kentucky during the '50s and '60s. This gave him lots of opportunities to watch Louisville & Nashville trains passing only 200 feet behind his home. His first real layout was an HO scale beauty his father helped him build when he was 8. They built it on a sheet of ¾" plywood and rolled it under his bed when it wasn't in use.

In 2006, he purchased a DPM kit and assembled it. He enjoyed the experience so much he bought another, and another – he was hooked. With the finished kits mounting up, the only logical choice was to build a railroad.

His wife helps him with scenery on the layout, and encouraged him to expand it into the present layout room.

His favorite part of railroading is still structures, with scenery a close second. He still loves watching L&N trains rumbling through his '60s and '70s landscapes and taking him back to his childhood memories.