SOUNDS FOR TRACTION MODELERS

As described and demonstrated at the EPTC 2007 Meet by Fred Miller, MMR

The new Digitrax® DCC Sound Decoders offer a great opportunity for enhancing your trolley modeling experience.

Bells, gongs, whistles, air compressors, controller clank, track squeal and motor whine sounds are all possible in rolling stock with SFX DCC decoders. Sounds are controlled by throttle function keys, throttle speed settings or automatically timed.

Currently Digitrax® markets two forms of SoundFX decoders. One series is designed

SDH104K1A SFX Sound Decoder Plug-in

as a "drop-in" for Kato HO diesel locos, although it can be used in other equipment. Another "sound only" decoder is available to add sounds to a locomotive or car that

SFX064D SFX Sound ONLY Decoder

already has a motor controlling DCC decoder.

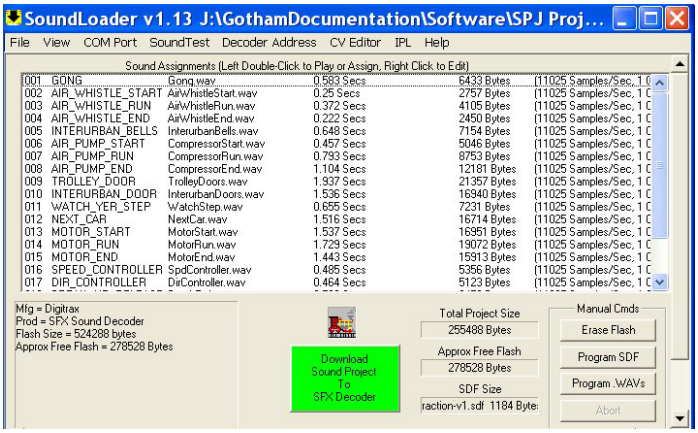
Both of these sound decoders are sold with a small speaker. The products offer great flexibility in sound modifications from the simple to more complex:

- **Download an existing "Sound Project" to a SFX decoder (Digitrax® defines the collection of sounds and logic as a "Sound Project").**
- **Replace sounds in existing projects with custom sound clips**
- **Select from multiple "schemes" in a "sound project"**
- **Write sound processing logic to create new "sound project"**

Digitrax® provides several "sound projects" for various diesel and steam locomotives. Other "sound projects" have been made available from the user community including the demonstrated TRACTION-V1 from the author at no cost for any non-commercial use.

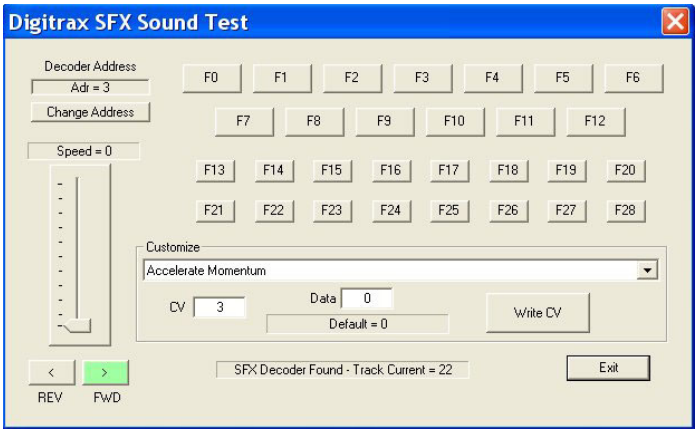
Some of the Nitty Details:

Sound Projects are developed on your PC. In order to "download" these from your PC, or even replace sounds in an existing "sound project" a Digitrax® PR-2 Programmer is needed along with the provided free software program "SoundLoader." This software also enables testing and DCC CV



SoundLoader Software to load Sound Projects

modification to the SFX decoders. Sound volumes and other optional settings can be modified and tested.



SoundLoader Software to test sounds on decoder

Developing new Sound Projects is a bit more complex and requires some familiarity with computer programming. The "logic" which

relates the sounds to throttle or timed activities is expressed in what Digitrax® calls a Sound Definition Language (SDL). In the author's opinion, the power of this language is what puts the Digitrax® offering way ahead of other products which can only select or replace sound clips. Only the Digitrax® SDL offers the complete programming of the sound logic.

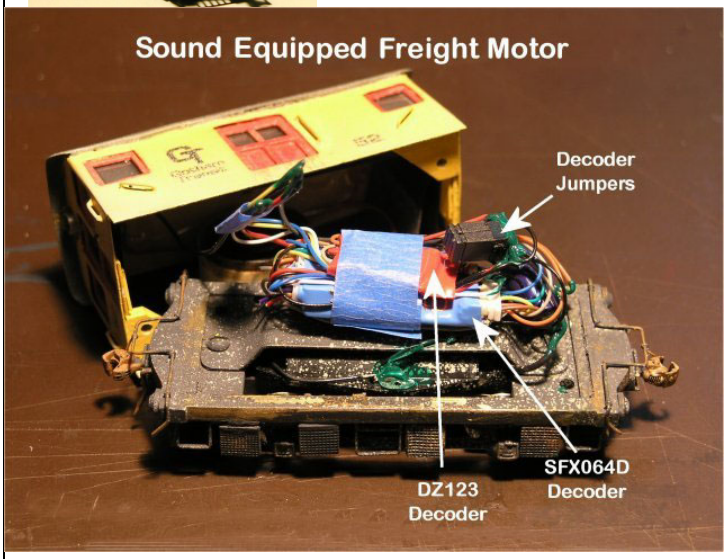
The development of the Sound Definition Language is done using a Macro Assembler (such as provided free by MicroChip, the manufacturer of most of the computer chips in decoders.) Some additional software files, available from Digitrax®, are also necessary to complete the creation of new Sound Projects.

The sound clips used in the Sound Projects are also edited using available PC software

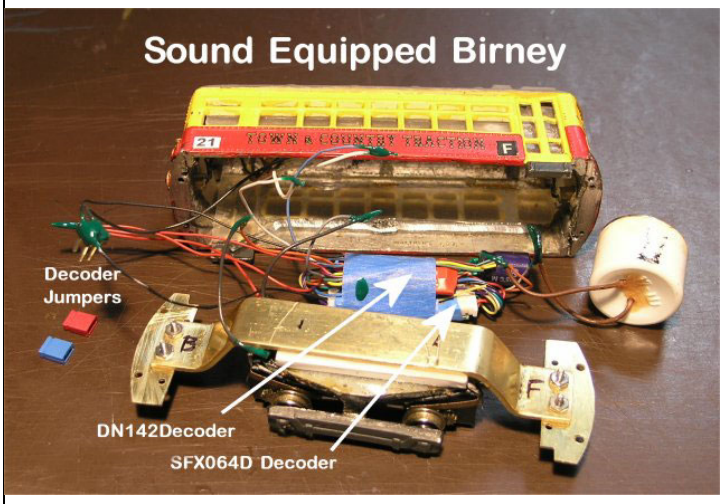
Sound Clips are edited with commercially available software

As indicated earlier, either the combined motor and sound DCC decoder (eg SDH104K1A) or the sounds only DCC decoder (SFX064D) can be mounted in the traction equipment. The former might use less space but requires modifications to LED lamp and motor connections. The sound only decoder is installed in parallel to an existing motor decoder. The latter installation would of course have the DCC address set the same. For convenience in later programming of sounds or Configuration Variables (CVs), the author puts a set of jumpers to enable connection to one or both of the decoders.

The H&F Freight Motor demonstrated has two decoders, a DZ123 for motor and headlight control, and the SFX064D.



The Birney Street car also has two decoders, a DN142 for motor and headlight control, and the SFX064D.



The author would be glad to work with interested modelers in developing new Sound Projects, changing sounds or simply loading his TRACTION-V1 project into your decoder.

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