

Quick Start Guide

For Bachmann®
DCC Sound-Equipped
Locomotives



Featuring DCC
Sound Technology
by SoundTraxx®

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Overview

Congratulations on the purchase of your Bachmann locomotive with digital sound installed. This state-of-the-art Digital Sound Decoder™ incorporates SoundTraxx Digital Sound Technology and will provide all the pleasures of high quality, digital onboard sound and the benefits of today's DCC (Digital Command Control) technology.

This **Quick Start Guide** assumes that you have some understanding of, or experience with other SoundTraxx Digital Sound Decoders. It covers the differences you may need to know between these decoders and any you may have previously used.

If you are new to SoundTraxx Digital Sound Decoders, you should start with the **User's Guide** which will walk you through the various aspects of programming your sound decoder, as well as some tips on troubleshooting. For the power user, the **Technical Reference** will provide a list of all the CVs available for use with your sound decoder and their exact function and make-up for those who wish to have a complete reference for advanced programming techniques. These documents are available in PDF format on both the SoundTraxx (www.soundtraxx.com) and Bachmann (www.bachmanntrains.com) websites. Please note that you need to have Adobe® Acrobat Reader installed on your computer to open and print these files. This is available as a free download from www.adobe.com.

Features

SoundTraxx Digital Sound Decoders have a great number of features designed to enhance your operating experience. The custom decoder installed in your locomotive has been pre-programmed for a great ready-to-run experience. However, there are many features available that you may wish to experiment with or adjust to suit your personal preferences.

Sound Features

For users of other SoundTraxx decoder models, you will be pleased to find the same high fidelity sound that you are accustomed to. You will, however, find some differences in the sound features and you will find them outlined in this Quick Start Guide.

For those operating your trains in DC mode, the automatic signal feature, which will activate Stop, Forward and Reverse whistle and horn signals automatically in response to train motion is a standard feature.

Throttle Features

The Digital Sound Decoder that comes with your Bachmann model has many advanced throttle features as part of SoundTraxx's Hyperdrive™ system, including Back-EMF (also known as "Cruise Control"). With the addition of these features, you will be able to better control your locomotive speed under varying conditions.

Decoder Specifications

- Supports extended address mode for assigning any locomotive number up to 9,999.
- Supports advanced consist addressing.
- Supports Operation Mode Programming, allowing CVs to be changed on the mainline without using a programming track.

Throttle Specifications

- Supports 14, 28 and 128 speed step modes.
- Programmable acceleration, deceleration and starting voltage for prototypical starting and stopping.
- Use of standard and alternate speed tables.

Lighting Specifications

- Supports Rule 17 operation or automatic direction control.

General Sound Specifications

- Adjustable Volume Controls
- 1-Watt Audio Amplifier

Steam Effects

- Steam Exhaust Chuff
- Three (3) Selectable Whistles or Airhorns (varies with model)
- Short Whistle
- Bell
- Airpump
- Steam Release (hiss)
- Blower

Diesel Effects

- Engine Exhaust (8 notches)
- Three (3) Selectable Airhorns (varies with model)
- Short Horn
- Bell

Quick Start

Let's Get Started!

Your Digital Sound Decoder has been installed with all CVs pre-programmed so you can begin using your locomotive immediately without having to worry about what adjustments to make. Items such as the exhaust chuff rate have already been calculated and optimized for the locomotive. The decoder is set to operate immediately using either a 12 volt DC power pack or NMRA-compatible DCC command station.

Operating with DCC

Your locomotive will respond to address 3 as it would if you had just installed any DCC decoder. Since these decoders have two rather than four lighting outputs, we have made some changes to the standard function assignments so that those using command stations with limited function keys can access some additional sound functions. The table below shows the function assignments of the decoder.

For now, simply set your controller to Locomotive Address 3, place the locomotive on the mainline and away you go! The default function assignments for your decoder are listed below. To activate a function, simply press the appropriate key on your controller.

Sound Decoder Function Assignments		
Function Key	Steam Default Effect	Diesel Default Effect
F0	Headlight (Dims in Reverse)	Headlight (Dims in Reverse)
F1	Bell	Bell
F2	Whistle	Airhorn
F3	Short Whistle	Short Airhorn
F4	Steam Release (Hiss)	**Dynamic Brake
F5	NA	**Flashing Light
F6	Smoke (if locomotive is smoke equipped)	**Lighted Number Boards
F7	Dimmer	Dimmer
F8	Mute	Mute

****Only applicable to DD40AX locomotive**

Operating in Analog Mode Using a DC Power Pack

While the sound system installed in your Bachmann model is first and foremost a DCC decoder, it may be used on a DC powered layout. You may control your locomotive using an ordinary power pack though operation will be a bit different than when running non-decoder equipped locomotives.

With the power pack's throttle set to zero, the decoder will be silent as it has no power. The throttle must be turned up to around 5 volts or so to provide sufficient voltage to power up the internal circuitry of the decoder. At this point, you will begin to hear the background sounds such as the blower and airpump start; the diesel exhaust will turn on.

Increasing the throttle further to around 7.5 volts or so will set the locomotive in motion, increasing speed as the throttle is increased. Note that the direction can only be changed when the locomotive is stopped.

When operating in analog mode, be careful not to exceed the decoder's input voltage rating of 27 volts. **When your track voltage exceeds 21 volts, the decoder will automatically shut off the sound and motor and flash the front and rear lights: back down on the throttle immediately.**

Important: Your sound decoder will work best in analog mode when using a high quality, electronically regulated power pack, preferably one that supplies smooth, filtered DC power. Older rheostat style power packs and pulse power packs will result in erratic and unreliable operation and should not be used with this sound decoder. If your power pack provides a Pulse power switch, leave it in the 'Off' position.

Depending on the quality of the power pack's track voltage, some automatic sound functions may require a higher sensitivity setting than needed for DCC operation to avoid continual triggering of the sound effect.

Automatic Sound Configuration Register
CV 197 selects which automatic sound functions are enabled when the decoder is operating in analog or DC mode. This has been preset to have the Automatic Whistle or Airhorn Signals activated so that whenever the locomotive is stopped or started, the sound decoder will produce the correct signal appropriate for the direction of travel:

One Short Toot = Stop
Two Medium Toots = Forward
Three Short Toots = Reverse

The decoder has also been pre-programmed so that the bell will automatically come on at a predetermined track voltage and as

the voltage is increased, will turn off. This is designed to replicate the proper use of the bell when an engine is passing through a yard or approaching a station platform.

You can also program the decoder to enable Automatic Grade Crossing Signals using a DCC system:

Automatic Grade Crossing Signal - When enabled, the decoder will play a grade crossing signal (two long blasts followed by a short and another long) triggered by a sudden upward spike in the throttle.

Additional information about automatic sound functions can be found in the **User's Guide** available on both the SoundTraxx (www.soundtraxx.com) and the Bachmann (www.bachmanntrains.com) websites.

Programming Notes

Use this space to record any special programming notes about your sound-equipped locomotive.

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COMPATIBLE WITH
THE NMRA DCC
STANDARDS AND
RECOMMENDED
PRACTICES

For service/repair, contact the Bachmann Service Department at 1-800-356-3910 or via e-mail at service@bachmanntrains.com. Bachmann's Service Department is available Monday thru Friday, 8:00 am to 4:00 pm ET.

Please be aware you may need to leave a message on our voice mail system. Your call will be returned as soon as a service technician is available. We thank you in advance for your patience.

You can also send your locomotive to:

Bachmann Trains
Service Department
1400 East Erie Avenue
Philadelphia, PA 19124

Please include a detailed description of your concern and complete contact information. For some service issues regarding DCC sound decoders, the Bachmann Service Department may forward your locomotive to SoundTraxx for resolution.



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