

Quick Start Guide

For the Bachmann®
DCC Sound-Equipped
K4 4-6-2 Locomotive



Featuring WOWSound®
DCC Sound Technology
by TCS

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For More Information Visit:

www.TCSDCC.com

For WOWSound Video Tutorials Visit:

www.youtube.com/TCSDCC

Overview

Congratulations on the purchase of your Bachmann locomotive with digital sound installed. This state-of-the-art Digital Sound Decoder incorporates WOWSound® Digital Sound Technology and will provide true CD-Quality audio, realistic operational performance, and the benefits of DCC (Digital Command Control) technology.

This Quick Start Guide assumes that you have some understanding of, or experience with, other “prototype” trains and TCS’ 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 WOWSound® you should start by visiting the TCS website at www.tcsdcc.com/documentation to find programming guides as well as video tutorials provided by TCS.

For most DCC operations of the locomotive (selecting new sounds, adjusting volumes, remapping or changing lighting effects, etc.), it’s easiest to use Audio Assist® (accessed by pressing function button 8 four times in quick succession while you are operating your locomotive in DCC mode). From there the decoder will take over, talk to you, and explain how to perform the various configuration actions available.

Features

With WOWSound® decoders, you know you are getting the real sounds of locomotives carefully recorded, preserved, and played back without distortion or manipulation. WOWSound®’s signature CD-Quality audio provides modelers with the closest experience to standing trackside.

In addition to excellent audio performance, WOWSound® decoders also feature Keep-Alive® UPS (Uninterruptable Power Supply) for uninterrupted operation, even over dirty track, and the exclusive Audio Assist® for easy configuration without programming CVs.

WOWSound® Decoder Features:

Operational Features:

- Button actuated braking
- Extended momentum for realistic acceleration and deceleration
- Back EMF for slow speed operation
- Automatic sounds when operating on DC track
- Supports 14/28/128 speed step modes
- Both simple and advanced consisting for MU (Multiple Unit) operation
- Supports user-loadable speed tables for completely custom speed curves

Light Features:

- Full Rule 17 Dimming features
- Fully remappable light functions (on buttons F0-F12)
- 20 different lighting effects
- 6+ light functions for realistic lighting
- Light Mode/Sound Mode function mapping that allows each button to perform two actions independently

Sound Features:

- 2 Watt amplifier for powerful sound in a small package
- Load-based motive power sounds that adjust automatically to the load, speed, and track conditions on your layout
- Variable length horn/whistle sound for custom signalling
- True CD-Quality Audio - WOWSound® is the ONLY decoder with 16bit 44,100Hz audio files for unparalleled fidelity
- A large number of sound variations to make MUs more enjoyable
- Page mapping that allows you to control all functions with just buttons 0-9

Programming Your Locomotive:

Address Programming:

The default address of all DCC decoders is 3, so you can start by placing the locomotive on the rails and selecting address 3 on your command station.

To change the address to another number less than 126 (99 for some Command Stations), place the locomotive on the programming track and following your command station instructions for programming CV 1 to your chosen address below 126.

For addresses higher than 126, use your command station's instructions for "long address" programming.

Bachmann E-Z Command®:

For Bachmann's E-Z Command® system, simply follow your command station instructions for programming the address (**programming track not required**).

Configuring with Audio Assist®:

With your locomotive addressed and responding on the DCC mainline, press function button 8 four times rapidly to enter Audio Assist. Audio Assist will then guide you through configuring a wide array of features.

Resetting Your Locomotive:

To reset your locomotive to factory default settings, you can program CV8=8 or (while operating on DCC) through Audio Assist.

From the Audio Assist Main Menu, the button presses, in order, for a full factory reset are:

Button 4 → Button 3 → Button 2

Running Your New Train:

Your new locomotive is pre-configured with all of the settings best suited to replicate the prototype. This means you can place your engine on the track and immediately start running with either a DCC command station or a 12v DC power pack.

DCC Operation:

With your locomotive address selected, you can begin moving the locomotive with the throttle control and controlling the light and sound functions with the function buttons.

Button mappings for triggering light, sound, and motor responses will operate a little differently depending on whether the locomotive prototype is Diesel, Steam, or Electric.

DC Operation:

Using a standard DC power pack supporting up to 24v, your WOWSound-equipped locomotive will come to life as soon as you place it on the track and ramp up the power to 7.5v and above. In DC operation, the sound and light operations will automatically operate based on the direction of travel and the amount of power applied at the throttle.

Notes on DC Power Supply:

This locomotive can operate with both regulated and unregulated DC power supplies. Your locomotive is factory-set for regulated supply mode (***standard for most newer power supplies***). Older power supplies may require switching to unregulated power mode for best operation of your locomotive. If you wish to switch the operation mode from regulated to unregulated power, follow these steps:

1. Power the locomotive but DO NOT move it (sounds/lights are activated only).
2. Cycle the direction switch on your analog (DC) controller twice; the locomotive will announce it is now in unregulated supply mode.
3. To return to regulated power supply mode, cycle the direction switch twice again and the locomotive will announce it is now in operation under the regulated mode.

WOWSound K4 4-6-2 Paginated Function Mappings for <i>E-Z Command</i>® System		
Press function button 8 twice rapidly to switch from page 1 Sound Mode to page 1 Light Mode. Every double press of function button 8 after will rotate to the next function mapping page. [†]		
Function Page 1:		
	Sound Mode	Light Mode
F0	Generator	Directional Headlights On/Off (F10)
F1	Bell	
F2	Whistle – Long Toot	
F3	Whistle – Short Toot	
F4	Blow Down	
F5	Cylinder Cocks	
F6	Water Fill	
F7	Dims Headlight (Rule 17)	
F8	1x Press to mute/unmute 2x Press to rotate light/sound mode or page 4x Press to enter Audio Assist®	

† The function pagination feature found on this decoder is designed to allow users with *E-Z Command*® systems to access more than just 9 functions. Each “page” of functions will correspond to a group of up to ten functions: 0 through 9, 10 through 19, and 20 through 28. For systems that support all function buttons, it is not necessary to use the pagination system. On these systems, you may use the standard function button control method.

**for E-Z Command® System
(continued)**

Function Page 2:

F0	Blower
F1	Injector
F2	Coupler Close
F3	Coupler Release
F4	Brake Release
F5	Apply Brakes
F6	Momentum
F7	Safety
F8	1x Press to mute/unmute 2x Press to rotate light/sound mode or page 4x Press to enter Audio Assist®

Function Page 3:

F0	Grade Crossing Quill
F1	Forward Quill
F2	Reverse Quill
F3	Stop Whistle
F4	Rotate Whistle/Bell
F5	Ash Pan Cleaning
F6	Station Announcements – Departing
F7	Station Announcements – Arriving
F8	1x Press to mute/unmute 2x Press to rotate light/sound mode or page 4x Press to enter Audio Assist®

K-4 Locomotive Function Mappings for 28-Function Systems

Function pagination will still operate on any DCC system, but is not necessary for use on systems that support all 28 functions. Press function button 8 twice rapidly to switch from Sound Mode to Light Mode.

Sound Mode Functions

F0	Generator Directional Headlights On/Off
F1	Bell
F2	Whistle – Long
F3	Whistle – Short Blast
F4	Blow Down
F5	Cylinder Cocks
F6	Water Fill
F7	Dims Headlight (Rule 17)
F8	1x Press to mute/unmute 2x Press to rotate light/sound mode or page 4x Press to enter Audio Assist®
F9	Unused
F10	Blower
F11	Injector
F12	Coupler Close
F13	Coupler Release
F14	Brake Release
F15	Apply Brakes
F16	Momentum

28-Function Systems (continued)

F17	Safety
F18	1x Press to Mute/Unmute
F19	Unused
F20	Grade Crossing Quill
F21	Forward Quill
F22	Reverse Quill
F23	Stop Whistle
F24	Rotate Whistle/Bell
F25	Ash Pan Cleaning
F26	Station Announcements – Departing
F27	Station Announcements – Arriving
F28	1x Press to Mute/Unmute

Light Mode Functions:

F0	Directional Headlights On/Off
F1	Unused
F2	Unused
F3	Unused
F4	Unused
F5	Unused
F6	Unused
F7	Dims Headlight (Rule 17)
F8	Unused
F9	Unused

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COMPATIBLE
WITH THE NMRA
STANDARDS AND
RECOMMENDED
PRACTICES

In the event you have a defective or damaged product, do not return the locomotive to the store where it was purchased. After checking all procedures listed in this guide and the warranty included, contact us at:

Bachmann Industries, Inc.
1400 East Erie Avenue
Philadelphia, PA 19124 USA
service.bachmanntrains.com

Should you need service or repairs, 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 TCS for resolution.



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