# TRACKSIDE TURNOUT DCC DECODER INSTRUCTIONS

Thank you for your purchase of the DCC Trackside Turnout Decoder.
This product is designed for you to easily upgrade your analog (switchbox operated) turnouts to DCC operation.
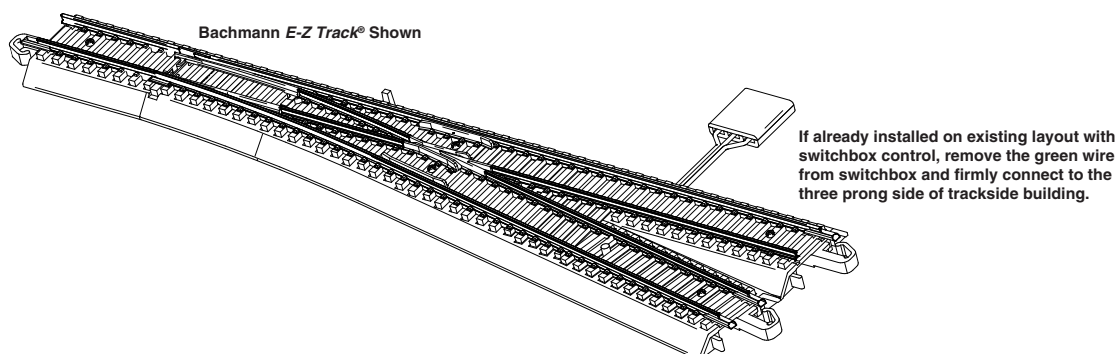
Included in package:
• 1 trackside structure with DCC decoder
• 1 *E-Z Track*® red power wire
• 1 piece of double-stick tape
• 1 instruction sheet

## SETUP WITH BACHMANN'S *E-Z TRACK*® SYSTEM

To begin, first turn off power to your layout and DCC system to prevent any short-circuits during installation. Then, connections to the trackside structure can be made. If using the Bachmann *E-Z Track*® system, installation is plug-and-play (alternatively, solder connections can be made if desired). To connect the trackside structure to your layout with *E-Z Track*® connectors, use a pair of pliers to remove the break-off tabs on both sides of the structure, as shown in the diagram below. After breaking off the tabs, any excess plastic can be trimmed with a standard hobby knife.

Remove break-off tabs (both sides) for *E-Z Track*® installation

Shown with break-off tabs removed
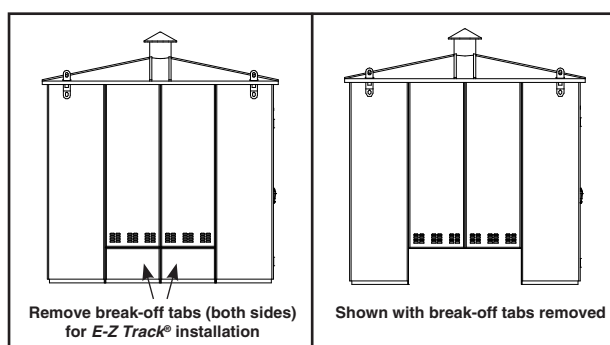
If your turnout is currently connected to a switchbox controller on your layout, remove the plug with the green wire from the switchbox, then, on the underside of the structure, connect the green wire's plug to the board's three-prong connection.

Bachmann *E-Z Track*® Shown

If already installed on existing layout with switchbox control, remove the green wire from switchbox and firmly connect to the three prong side of trackside building.

The new red wire (supplied) connects to the two-prong side of the structure, and the opposite end connects to any open connection on a power terminal rerailer track that is powered by a DCC system. **Make sure all plug connections are secure by firmly pressing the plugs over the prongs**. Once wired, the double-stick tape (supplied) can be used to affix the structure to your layout.
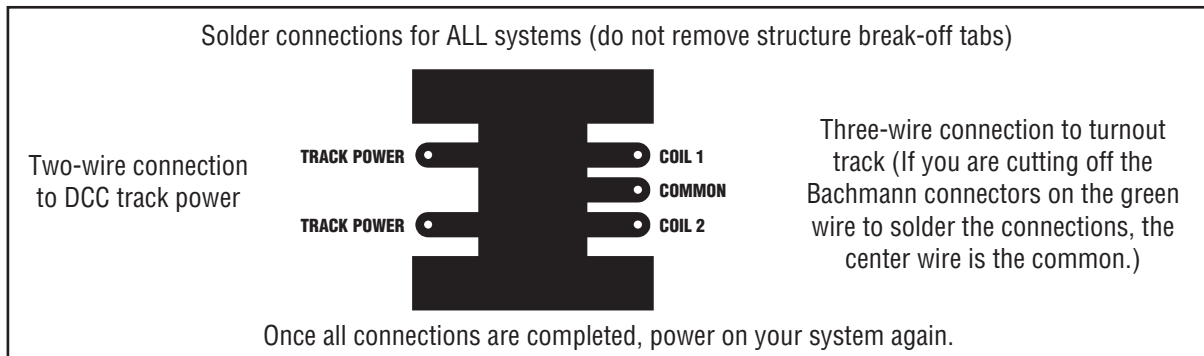

Green three-wire plug connection from *E-Z Track*® turnout

Red two-wire plug connection to *E-Z Track*® power terminal rerailer
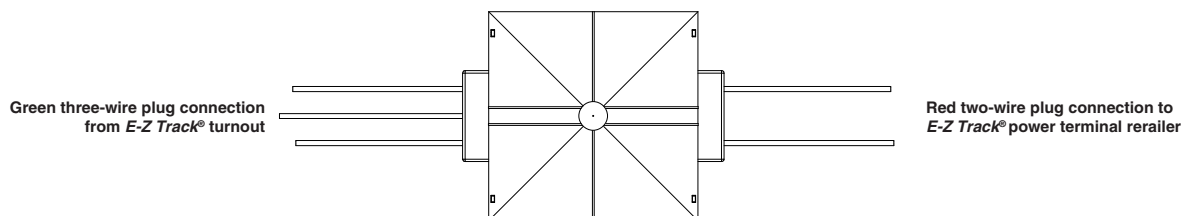
If you wish to hide the connection wires under your layout, feed the wires through a hole in your layout drilled under or near the structure.

SETUP FOR ALL TRACK SYSTEMS

If you do not have Bachmann's *E-Z Track®* system or want to more easily hide the wire connections, make solder connections as shown to your HO DCC track power source and track turnout section.

Solder connections for ALL systems (do not remove structure break-off tabs)

Two-wire connection to DCC track power

TRACK POWER   COIL 1
   COMMON
TRACK POWER   COIL 2

Three-wire connection to turnout track (If you are cutting off the Bachmann connectors on the green wire to solder the connections, the center wire is the common.)

Once all connections are completed, power on your system again.

CLEAR LOCOMOTIVES FROM ADDRESS 9 IF USING BACHMANN'S *E-Z COMMAND®* DCC SYSTEM

To avoid conflicts with any DCC locomotive you are operating with Bachmann's *E-Z Command®* system, it is best to reserve address 9 for access to DCC turnout control and programming. Before controlling or programming your DCC turnouts, reassign any locomotive with DCC address 9 to another address. Address 9 should ONLY be used for access to DCC turnout control.

PROGRAMMING THE TRACKSIDE DECODER WITH BACHMANN'S *E-Z COMMAND®* DCC SYSTEM

Note: to avoid derailments, stop all locomotives on the track before beginning the programming process.

The factory preset address for the trackside decoder is address 3. If programming the DCC turnout to another address is preferred, the procedure is as follows:

1. Press address 9, then press the yellow function key to enter DCC turnout control/programming mode.
2. The programming button is connected to the roof vent on the structure as shown. **PRESS AND HOLD** the roof vent button for 2 seconds; the turnout will toggle twice to indicate that it has entered programming mode.
3. Next, choose an address (from keys 1 through 8) that you want to assign to a turnout and press the corresponding key **FOUR TIMES**. The turnout will toggle four times to indicate that programming is complete. You can now use the newly assigned address to control the corresponding DCC turnout.
4. Press the function button to exit DCC turnout programming mode.

Roof vent button
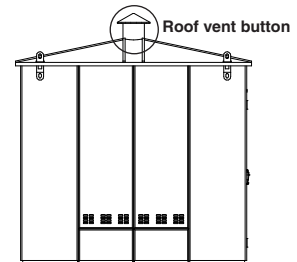
To cancel the turnout programming process for any reason while using the *E-Z Command®* controller, press the red stop button; the DCC turnout will retain its original address. If you have entered the programming mode and cannot continue the programming process within one minute, the turnout will toggle twice to indicate the programming process has been cancelled. The DCC turnout will retain its original address.

OPERATION WITH BACHMANN'S *E-Z COMMAND®* DCC SYSTEM

Up to eight individual turnout track sections (or turnout groups) can be controlled with the *E-Z Command®* controller. Turnouts (or turnout groups) can be assigned addresses 1 through 8; for each press of the address button, the DCC turnout(s) will toggle once. To enter DCC turnout control mode, press address 9, then press the yellow function key (address 9 will blink). You now have access to DCC turnout control. Press address buttons 1 through 8 as previously programmed to toggle the turnouts. **ADDRESS 9 MUST BE IN FUNCTION MODE (BLINKING) IN ORDER TO OPERATE THE TURNOUT CONTROL ADDRESSES 1 THROUGH 8.** Press the function button to exit DCC turnout control mode.

MANUAL OPERATION

If you need to change the direction of a turnout manually, press the vent button on top of the structure.

FACTORY RESET

In order to reset the decoder to factory defaults, power on the system, then **PRESS AND HOLD** the vent button. After two seconds, the turnout will toggle twice to indicate that it has entered programming mode. **CONTINUE TO HOLD THE BUTTON** for eight additional seconds and the turnout will toggle four times to indicate that reset is complete.

OPERATION WITH OTHER NMRA-COMPLIANT DCC SYSTEMS

When using an NMRA-compliant DCC controller other than *E-Z Command®* with the trackside decoder, the decoder will operate according to the manufacturer's instruction manual. If you wish to change from layout operation with another manufacturer's NMRA-compliant DCC system to *E-Z Command®* DCC operation, all turnout addresses must be reprogrammed with the *E-Z Command®* controller. The DCC turnouts will not operate until this step is taken. Follow the *E-Z Command®* programming instructions as listed. In the unlikely event you encounter any difficulties, it may be necessary to complete the above factory reset before following the programming instructions.

NOTE: IT IS RECOMMENDED THAT YOU USE ONLY NMRA-COMPLIANT DCC SYSTEMS TO OPERATE THESE TRACKSIDE TURN-OUT DECODERS.