



## **Bachmann Heisler**



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## Overview

The Bachmann Heisler is a relatively easy installation. Bachmann has done the difficult work for you. Our recommendations here represent what we feel is the best trade off between work put in and the sound out. Many alternate installation possibilities exist.

You will need to remove the rear truck in order to get at the speaker enclosure. Our speaker will fit the enclosure with minimal modification. We do recommend adding some baffling and drilling additional holes in the enclosure to let the sound out more freely.

On our sample only one of the cylinders had working contacts. There was a piece missing in the second one that made it nonfunctional. As a result we have decided that for most customers the best overall sound is achieved using voltage mode. If you decide to use the contacts you will need to re-configure the software. The chuff will be synchronized with the motion, but since there is only one chuff per drive shaft revolution, there may be quite a bit of motion before we chuff. The chuff will be somewhat irregular at low speed due to the long time between chuff contact closures.

Connection to track power couldn't be much easier- from our screw terminals to Bachmann's.

## Speaker installation

Set the locomotive upside down in the top section of the packing box.

1. Remove 2 screws that secure the truck bolster to the frame. FIGURE 3
2. As you remove the truck, unhook the drive shaft and the brake rod.
3. Remove three screws that hold the ash pan in place.
4. Drill two rows of holes (3/16"); one along the bottom and one just to the inside on each ash pan round bottom tray. FIGURE 1
5. Screw the speaker to the enclosure using a piece of 1/4" packing foam cut to take up the extra space. Note that the design of this speaker is such that the speaker cone will rub on the grill if the speaker is bolted directly to the grill. FIGURE 2
6. Thread the speaker wires through the channel and into the rear compartment.
7. Reattach the ash pan to the frame. Connect the drive shaft and brake rod. Reinstall the bolster and attach with two screws.

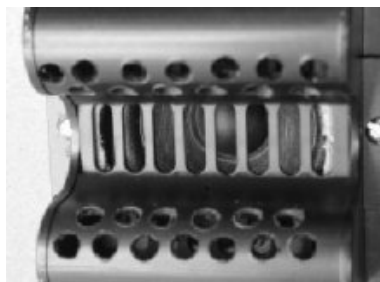


Figure 1



Figure 2

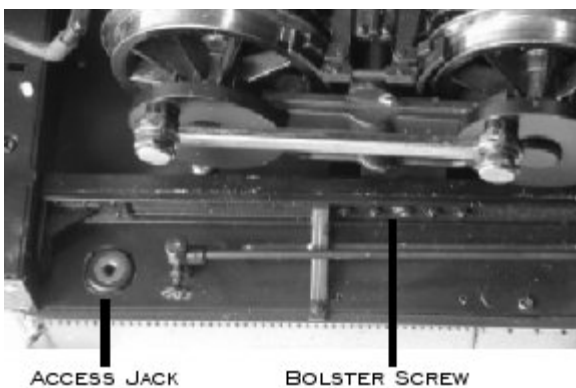


Figure 3

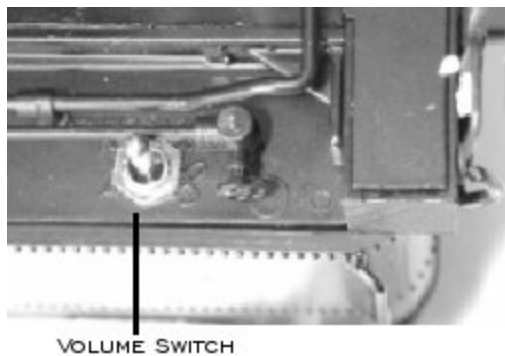


Figure 4

## Volume Switch & Access Jack

While the locomotive is upside down and resting securely in the cover packaging, you can drill holes for the volume switch and the access jack.

### Volume switch

drill a ¼” hole in the back right rear corner of the floor under the water tank - engineer’s side. FIGURE 4

### Access Jack

Drill a 9/64” hole in the left rear corner of the floor under the water tank - fireman’s side. FIGURE 3

TURN THE LOCOMOTIVE BACK ON IT’S FEET AND SET ON THE WORKBENCH.

## Opening the Bunker

There is a single screw under the hatch in the coal load that will allow you to remove the coal load. With the coal load out of the way you will be able to make all the connections needed to complete the installation

Install the volume control and the access jack through the holes in the bottom of the locomotive and wire them to the sound board. Connect the speaker wires to the sound board. Run a wire from Bachmann Terminal # 7 to Phoenix Terminal #1 and run a wire from Bachmann Terminal # 8 to Phoenix Terminal # 2. Plug in the battery. If the toots are incorrect, swap the wires going into terminals 1 and 2 but make sure that the direction switch is set to match your other engines. The sound board can be “wire tied” to the nest of wires that is in the bunker.

*Figure 5*



## Testing

Put the Heisler on a track. Set the motor polarity switch to the center position (motor off). Apply power to the track. The sound system should come on when you get to about quarter throttle. When the battery is fully charged the sound system will come on almost immediately. Run the track voltage up and down and you should hear a lot of different sounds.

At this point you may want to let the Heisler sit and charge the battery so you can hear the idle sounds. You can turn the volume up or down as you prefer, it will not effect battery charging. Charging will start at about 6 track volts, and is optimum at 8 volts. Full throttle will actually take longer to charge the battery.

If you decide to run the Heisler without charging the battery set the motor switch back to your preferred direction (probably “Large Scale” which is toward the fireman’s - left- side of the locomotive.) It will take a few laps before the battery will give you sound when your track voltage falls below 5V.