

Hobbytrain Plasser Ballast Tamper

Translation of Manufacturer's Instructions and Revised Decoder Installation Instructions

by Blaine Bachman – Revised 14 Apr 2009



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Dear Customer,

Congratulations on the purchase of your new HOBBYTRAIN model. Please follow these instructions to care for and operate your model. Each model was inspected at the factory for proper function and completeness.

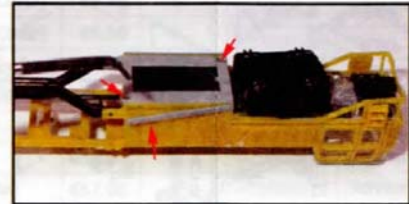
1. **Attaching the Detail Parts:** Several fragile parts are left for the purchaser to install. They are located on the spare parts sprue and should be removed and handled with extreme care. Please refer to the exploded view for proper part placement and only use plastic model cement to attach the parts; DON'T USE CA ("super glue").
2. **Handling and maintenance:** Note! The model is composed of many small and fragile parts; please handle with extreme caution to avoid breakage. Before using the model on your layout, we recommend that you run the model on a loop of track for approximately 1-1/2 hours at approximately 75% of full throttle, changing directions periodically. The drive train was lubricated at the factory; however you should check this before and after the break-in period. It is not necessary to disassemble the model to lubricate it. Use only oil or grease especially formulated for plastics and use it sparingly!
3. **Disassembly of the model (for optional installation of a digital decoder):** Since there is no room inside the model for a decoder plug, you will have to hard wire a decoder to the pick-ups and to the motor. If you have any reservations about your ability to do this work, seek the assistance of an expert; perhaps the dealer who sold you the model can do the work or recommend someone who can. When working on the model, place it on a soft, flat surface to minimize the chance of damage. You will need a hobby knife, jeweler's screwdrivers, and a pair of fine tweezers. The decoder should be installed in the smaller of the two cabs.

Translator's note: Having now installed a decoder in the tamper, I have concluded that the manufacturer's decoder installation instructions are seriously inadequate and contain unnecessary disassembly steps that have a high likelihood of damaging the unit. What follows are my suggestions for decoder installation; study the manufacturer's isometric drawing and read these instructions through twice before beginning!

- a. Remove the buffers, the scale coupling hook, the model coupler, and the coupler swing mechanism from the small cab end.
- b. Separate the drive shaft coupling by sliding the rubber tube toward the motor.

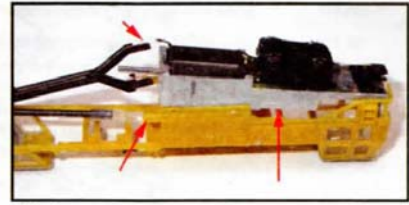


- c. Remove the tanks from both sides of the motor area.
- d. With the tamper upside down, remove the two screws from the motor mounting plate; remove the plate by lifting it straight up.



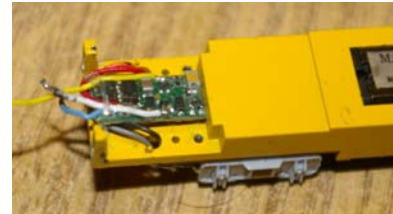
Note that the tank tabs and the buffers go through the body and into the chassis or motor mounting plate; do not glue these parts to the body when reassembling or you will have difficulty disassembling the model in the future!

- e. Unsolder the black wire that runs through the motor compartment from the shorter of the two brass wires that run to the other end (leave the wire attached at the truck end).
- f. Press the metal chassis half from the plastic housing (*Note that it is not necessary to remove – as seen in the photo - the Y-shaped piece that hold the brass wires*).

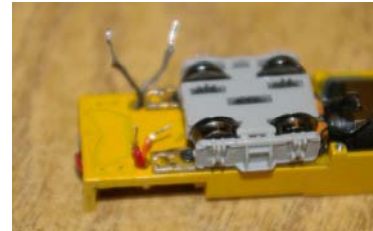


- 4. Decoder Installation. I used a TCS Z2 decoder (<http://www.tcsdcc.com/decoder/Z-Scale/Z2.php>), trimming the clear insulating wrap just a bit at the wire end so that the wires could exit without wrapping around the end of the printed circuit board thereby providing the clearance needed to mount the decoder longitudinally. **At this point, the manufacturer's instructions call for removing the truck. This is unnecessary and can result in the separation of the delicate wheel wiper pickups from the truck body. I recommend you leave the motor, truck, and printed circuit board assembled – just be careful and quick when soldering to the printed circuit board so as to not transfer much heat to the pickup wipers!**

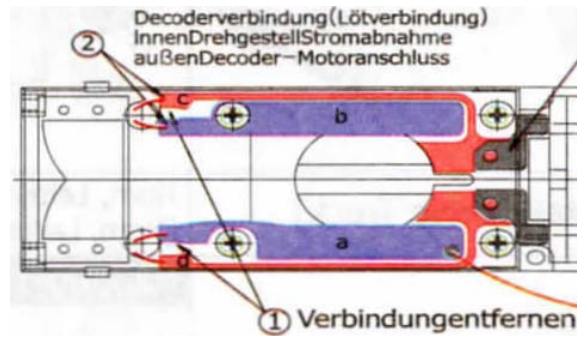
- a. Position the decoder in the cab area and attach it with double-stick tape; run the decoder leads through the large holes in the chassis.



- b. Trim the decoder wires to a convenient length: strip, twist, and tin the ends.



- c. Isolate the traces on the printed circuit board by scratching off a portion of each trace (at points 1 on the drawing) using a hobby knife.
- d. Solder the wires to the board as indicated on the drawing (points 2, both sides).
trace **a** = Red Wire
trace **b** = Black Wire
trace **c** = Grey Wire
trace **d** = Orange Wire
Make sure that the truck contact points are unobstructed.



5. Optional Lighting (with decoder installation). The manufacturer has included shallow light boxes atop the metal castings that form the floor of the two cabs, however the headlamps are molded on the body shell with no hole through the plastic casting. The light boxes are too small to hold anything but one of those tiny axial-lead bulbs (like Circuitron's 'Mighty-Lites' sub-micro bulb) but the boxes can be drilled to hold a micro-miniature bulb. An emergency beacon is molded onto the center top of the smaller cab.
- a. To program the decoder to include headlights and a rooftop strobe, set the white wire to be constantly on (both directions of travel) and the yellow wire as a strobe or rotary beacon. The DCC-standard settings are:
 - CV 49 = 32
 - CV 50 = 35 (flashing light), 36 (single strobe), 37 (double strobe), or 38 (rotary beacon).
 - b. Drill through the molded headlight lenses (I only opened the lower of the two lenses on the left side of the cab). *PHOTO COMING!*
 - c. To install conventional micro-miniature bulbs, with the metal chassis in place continue to drill partly through the light box using the hole in the body as a guide. Remove the body and complete the hole. Use progressively larger drills until the hole is big enough to hold the bulb. *Omit this step if you plan to use the tiny Circuitron axial bulbs.* *PHOTO COMING!*
 - d. Paint the inside of the shell black around the headlight openings to control stray light. *PHOTO COMING!*
 - e. Make a lens and 'light pipe' for each lamp using fiber optic. Attach to the shell with white glue.
 - f. After the glue dries, trim the fiber optic flush with the inside of the shell. *PHOTO COMING!*
 - g. Mount the bulbs for the headlights.
 - If using the axial bulbs, you may pass the leads out of the light box using the hole provided at the base of the box; insulate the leads with a coat of durable paint or varnish.
 - If using conventional bulbs, glue the bulbs in place, not allowing the end of the bulb to protrude beyond the front surface of the light box. Cover the back of the bulb with paint to eliminate light shining into the cab.
 - h. Mount the rooftop beacon to or through the cab roof. *PHOTO COMING!*
 - i. Wire the two light circuits to the decoder using appropriately sized resistors (in my case both the LED strobe and the incandescent headlights worked acceptably with a 470Ω resistor wired in series). *PHOTO COMING!*
6. Reassembly:
- a. Insert the metal half chassis into the body.
 - b. Resolder the black wire to the shorter of the two brass wires.
 - c. Reinstall the engine mounting plate, trapping the longer of the two brass wires against the bare area of the metal chassis; ensure that the wire remains inside and along the edge of the motor chamber.
 - d. Connect the drive shaft.
 - e. Reinstall the lateral tanks, the buffers, the hook, and the coupler.

Troubleshooting: If power pickup is poor or non existent, check the truck to printed circuit board contact and then the contacts to the Y-shaped framework.

WARNINGS!

- Do not allow the model to operate unattended.
- This model is intended for use by persons of age 14 and older; not suitable for smaller children due to small parts that could become dislodged and swallowed.
- This model has pointed edges that could cause injury if used inappropriately.
- The model should not be used with defective or questionable power supplies; there is a risk of electrical shock.
- Use in dry areas only.
- Any claims for damages resulting from improper use, failure to follow these instructions, connection to other electrical devices, random radio interference, impact, overheating, humidity, etc., are not covered under our warranty.
- Retain this manual and the packaging for later use!
- The manufacturer reserves the right to change or revise the model or this documentation.
- We hope you enjoy your new HOBBYTRAIN model.