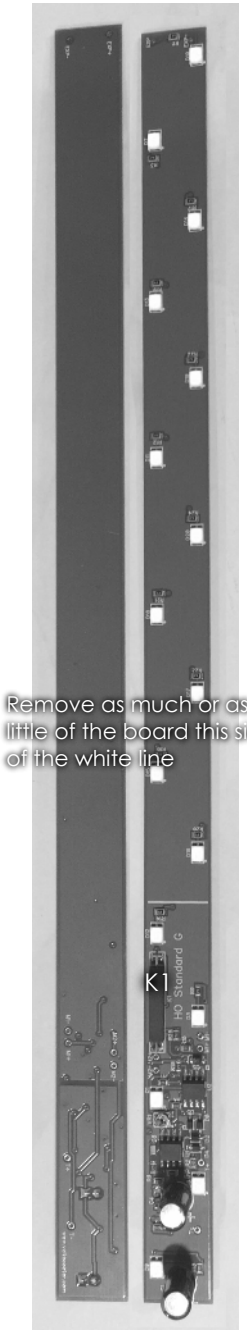


Condensed instructions are included. More instructions are available at **www.voltscooter.com**.

www.voltscooter.com

Voltscooter Electronics
56 Nonotuck Street
Holyoke, MA 01040-2666 USA

Warranty

If for any reason this product does not meet your needs you may return it for a full refund. The warranty will be honored even if the product has been modified by installation. This offer is valid for a minimum of one year from the date of purchase.

Voltscooter Electronics

Quality Lighting Kit for HO-Scale Passenger Cars

Constant, adjustable, regulated passenger car lighting board:

- Super-capacitors and regulators for consistent lighting.
- Magnetic wand turns lights on or off. A magnet at track side can be set up to do the same turning on or off lights as the cars pass.
- 16 LEDs to insure uniform lighting.
- Instructions provided for installation in any cars, with or without electrical pickups.
- Adjustable from dim to very Bright.
- When adjusted for normal light levels the car will remain lit at constant brightness for 30 Seconds or more after power is removed.
- Size: Length 10.6"(270 mm) x Width 0.59"(15 mm) x Height 0.06"(1.5 mm) Height at the capacitors 0.43"(11 mm). Can be shortened to 3.22"(82 mm).

Installation

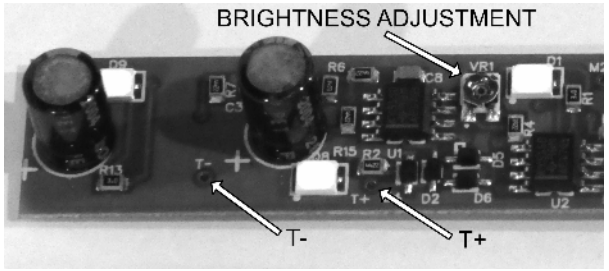
The top of the light board has connection points labeled.

+T and -T should be connected to the car's track pickups.

+M and -M are for connecting optional LED marker lights (not supplied). The marker light connection is at 3 Volts and is current limited by a series 750 Ohm resistor. Connect the anode of the LED to +M(1 or 2) and the cathode of the LED to -M(1 or 2).

EXP provides direct connection to 3 Volts and can be used to add more white LEDs with user-installed three ohm dropping resistors.

Brightness is adjusted with a jewelers screwdriver at the point shown above.



Installing Your Pickups

Recommended tools:

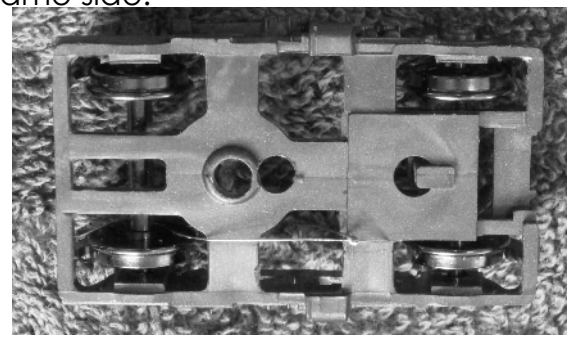
- A small soldering iron that lets you get close to the solder point
- Good lighting and magnification
- Jewelers tweezers
- Small needle nose pliers and wire cutters

Recommended parts:

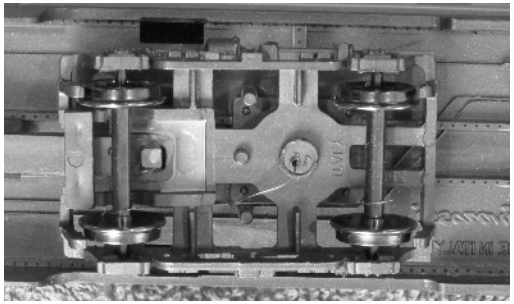
- Metal wheel sets
- Plastic to make supports for the lighting board
- Fine magnet wire (supplied)
- 0.008" phosphor bronze wire (supplied)

Reboxx (http://www.reboxx.com) wheel sets are available in axle lengths to match your truck. Brass wheels are not recommended as they tend to corrode causing poor electrical pickup.

With the trucks installed, drill a hole completely through the kingpin or through the bottom of the car near the kingpin. This hole will be used for passing the wire from the truck to the inside of the car. Be sure that the insulated side of the wheels are on the same side.



Insert the phosphor bronze wire as shown above. Two kinds of wires are supplied. The phosphor bronze wire is not coiled and is like a spring. Bend a hook in the wire as shown to secure the wire.



The phosphor bronze wire should be next to the non-insulated side of the wheels. Bend and cut off excess wire from the other end. Insert the magnet wire into the drilled out kingpin hole. Solder the magnet wire to the phosphor bronze wire. Be sure to pre-tin the magnet wire. Sustained heat is needed to burn off the insulation on the magnet wire.

Repeat for the other truck. The insulated wheels of the second truck are on the opposite side of the car.

Solder the magnet wires to the +T and -T points on the light board. Install the light board into your car. Place the car on powered track and adjust the light with a flat blade jewelers screwdriver.

Turn the lights on by swiping the magnetic wand across the length of K1 and turn the lights off by swiping the other direction. A track side magnet can do the same thing as the are passes if it is near the roof and the side of the car where K1 is located.