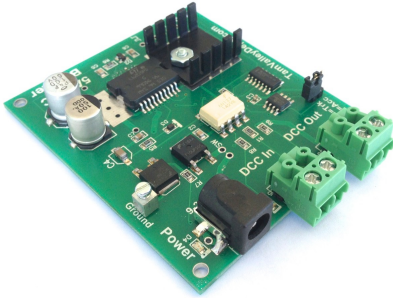


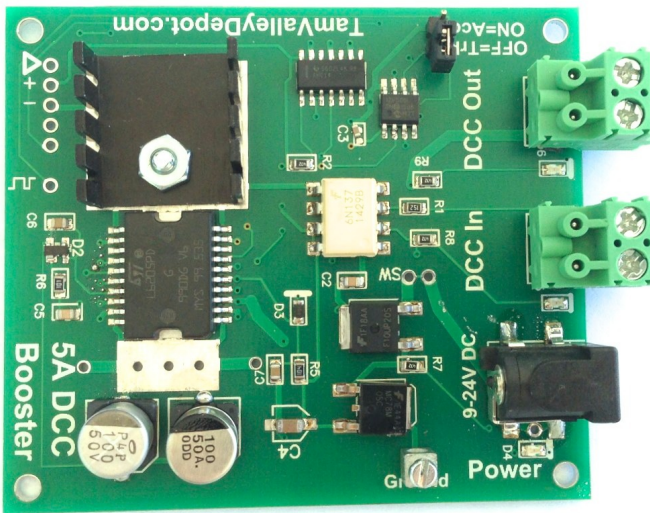
Accessory or Track DCC Booster Manual



This DCC Booster was designed to solve two issues that putting a lot of DCC accessory decoders on your layout brings up. 1) They are a drain on your precious loco amps and 2) When a loco causes a short all the accessories lose power. To solve this problem we have made this DCC booster that can be used for accessories on any brand of DCC system. It can deliver up to 5A with a suitable power supply. During a short on the rest of the layout that shuts down the command station, the booster can continue to deliver power to accessories if the jumper is on.

Installation

- Mount the unit on a wooden board or other non-conducting surface near your DCC unit with supplied screws and spacers
- Connect the Power connector to the jack labeled **Power** and plug it in to the wall. Power must be **DC** and should be from 12- 18 volts and 3 to 5 Amps. **AC should not be used. Output is 1V less than power voltage.**
- Connect two wires from the track DCC bus to the **DCC In** connector.
- Connect the DCC Out connector to a 2-wire bus to feed your Accessories or a track power district. The DCC connectors are wired so that the polarity is preserved.
- Set the jumper (JP1) if for accessories (see below).



Jumper for Track vs. Accessory Use

If using the unit to power accessories put the jumper (near DCC Out) ON (jumper across both pins). If using the unit for powering track then put the jumper in the OFF position (jumper on only one pin). In the ON, accessory position the unit will provide power to the accessory bus for 5 minutes in the absence of an input DCC signal, allowing accessories to stay powered in the event of a short that shuts down the main booster.

Track Use Considerations. You may need a ground - see the Ground section on the next page. Also make sure the polarity is correct between sections. An easy way is to measure the AC voltage across the gaps between sections (or use a 12V lightbulb) - it should be 0 volts if polarity is correct and properly grounded.

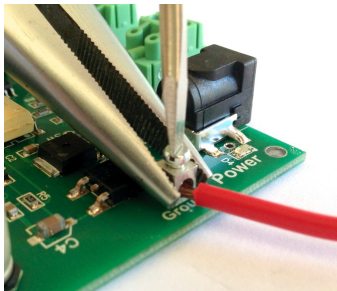
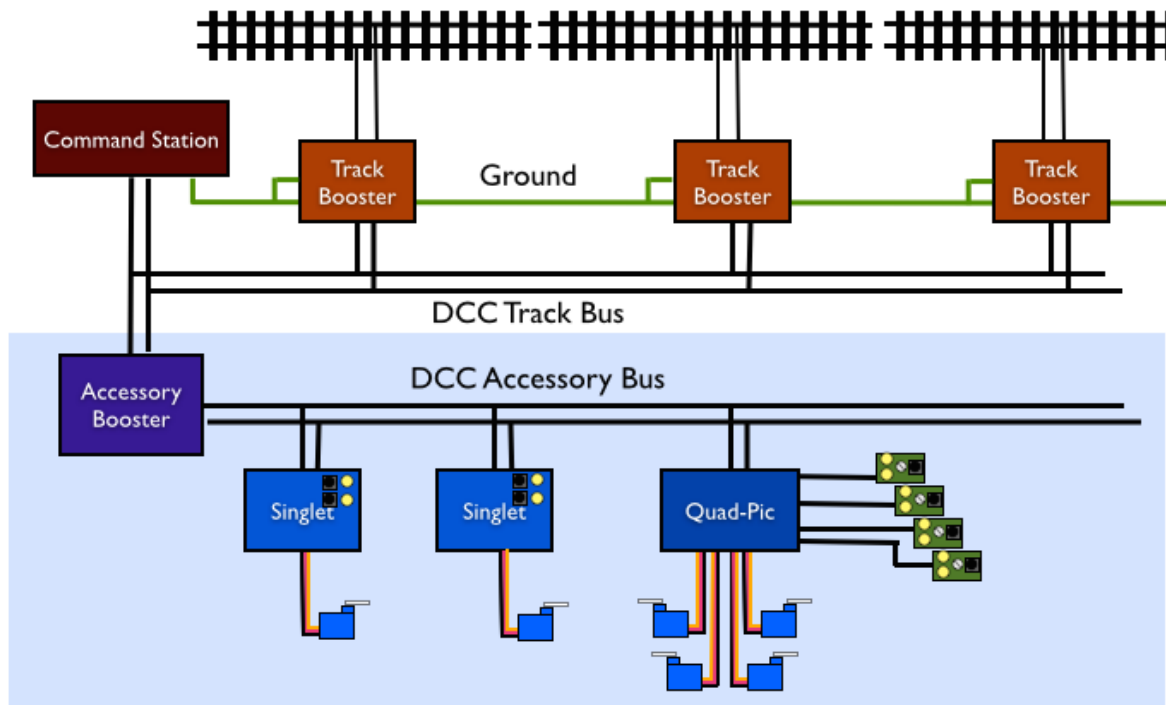
LEDs

There are three LEDs that indicate status. **Power** indicates that there is power being fed to the booster. The **DCC In** LED indicates that there is a voltage on the DCC input lines. The LED by **DCC Out** indicates that there is power on the output and the unit is on. When the unit shuts off this LED turns off. During shorts, this LED dims.

Protections

The booster has protection against shorts and overheating. It is not necessary to provide an additional circuit breaker. However, do not let uninsulated powered wires touch the components on the board or the resulting short might damage a component inadvertently. The board may get very hot in use. This is normal and not a concern for board lifetime.

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Hold pin with pliers while tightening to prevent twisting off connector.

Ground (Optional)

If you are using the DCC booster for accessories then no ground connection is needed. If using as a track booster, then in certain cases it may be helpful to ground the booster to the command station. If you are using a common power supply then the ground connection is through the power supply so do not connect another ground. If using separate power supplies, connect a ground wire (18-14 Ga) to the Ground connection near the power plug. (You can also use the screw on the heat sink for the ground connection.) See the instructions for your command station for connecting the other end of the grounding wire. **Do not connect the ground to "earth" or to the ground on your household AC!**

Specifications

- Max power input voltage: 40V.
- Power Connector: 5.5 mm (outer) / 2.1mm (inner) barrel plug, center positive
- DCC input: optically isolated, 5-30V. Current load about 5 milliamps.
- Peak-to-peak output voltage: Power Supply voltage minus 0.8-1.4 volts (decreasing with load and independent of voltage on the DCC input).
- DCC Connectors: Screw blocks
- Max output: 5 Amps
- Board Size: 3" x 2.5" (76mm x 64 mm)
- Short Circuit Protection: Trips at 5.6A, off time 1 microsecond, reset time 200 microseconds.
- Thermal Protection: Unit will shut itself off when very hot. Use caution when touching board after hard use.

More Help - www.tamvalleydepot.com/Contact Us
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