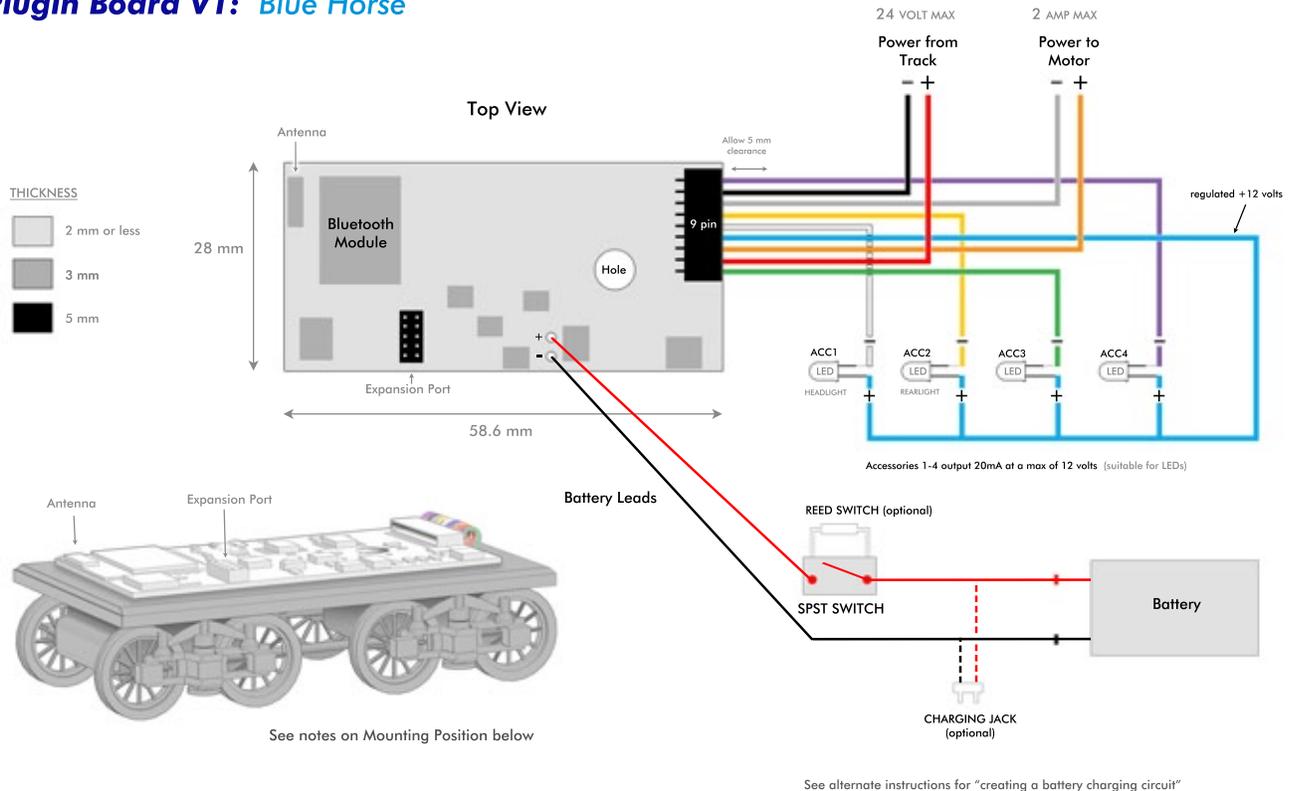


Plugin Board V1: Blue Horse



Installation considerations:

Space: Use the dimensions of the board (28 mm x 55.8 mm x 5 mm) to make sure it will fit. Allow an extra 5 mm to the length of the board (55.8 mm + 5 mm) to allow for the wiring harness. The board should be mounted horizontally (for maximum range). If possible, allow for 5 mm vertical clearance above the expansion port for future connectivity.

Power: It is very important to test the stall current of your locomotive and that it does not exceed 2 amps. Attempting to draw more than 2 amps from the board can damage the board. See instructions on "testing motor stall current". Do not use AC voltage to power the board. The board will operate on DC voltage between 9-24 volts. Do not use the board with O gauge Universal motors. Do not use old "Pulse Power" transformers to power this board.

Electrical: If your locomotive is not DCC-ready (and you are modifying a standard locomotive) it is important to isolate the motor and lights from the frame. Failure to do so can damage the board. See instructions on "isolating motor and lights from the frame". Always handle the board carefully in a static-free environment. Make sure the board is electrically isolated from all metal surfaces or circuitry in your locomotive.

Mounting Position: To achieve maximum range, orient the board with the circuitry facing upward and the antenna as far from metal chassis areas as is reasonably possible. Mounting the board vertically is ok, but may result in slightly less range on the bottom (no circuitry) side of the board.

8-pin Connections: If you are using an 8-pin connector to your locomotive, make sure to plug it in with the proper orientation on your loco. (Failure to do so will result in your loco running backwards). See instructions on "using 8-pin connectors". 8 pin connectors do not take advantage of ACC3 and ACC4 from the board. If you choose to utilize the green (ACC3) and violet (ACC4) wires, refer to the wiring diagram.

Battery Use: The board contains two connection points to which wires may be attached as battery leads. If you are not experienced with soldering small connections, please consider purchasing a board with the wires already soldered in place. Improper soldering can result in damage to the board.

The board will operate on track power or battery power. You may use both at the same time (for improved performance on dirty track). When using battery, make sure the battery polarity is correct. For smoothest transitions (from powered to non-powered sections of track) your battery voltage and track voltage should approximately match. The