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Installation Instructions for Reverse board Item 00249

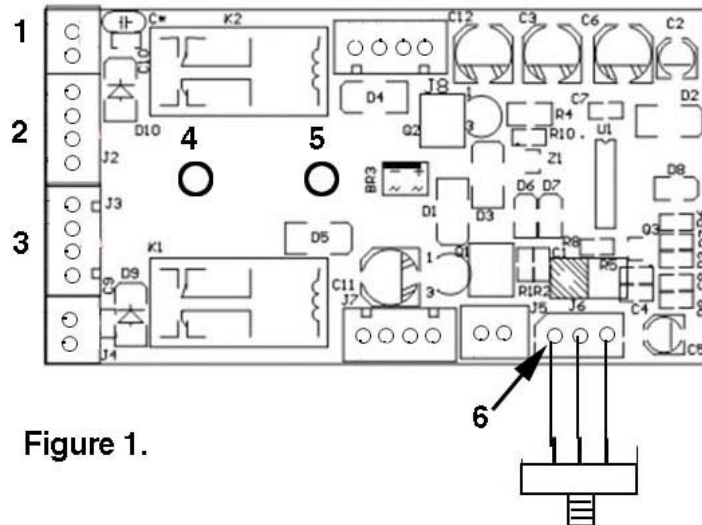


Figure 1.

The enclosed reverse board is designed for AC current operation. This board is designed for the use with DC motors (the board will convert the AC track power to DC current).

Parts included: (One) Circuit Board, (One) Switch with Wire Harness, (Two) Small screws for mounting switch, (Two) Four-Wire Harnesses, (One) Two-wire Harness, (One) Long Bolt, (One) Short Bolt, (One) Plastic Washer, and (Two) Nuts.

Step 1: Determine if you are going to mount the board vertically (with bracket) or horizontally (without bracket).

Step 2: If necessary, drill a hole in the metal frame of locomotive.

Step 3: If not using bracket go to next step. Place plastic washer onto long bolt. Insert bolt into hole 4 or 5 (Figure 1) on the component side of the circuit board. Place bracket on backside of circuit and secure with nut. Insert short bolt into hole on locomotive from the bottom of the frame. Place bracket onto bolt on the top side of the frame and secure with nut. Go to Step 5.

Step 4: If not using bracket, insert long bolt into hole on locomotive from the bottom of the frame. With the component side facing up, place the circuit board over the bolt through hole 4 or 5 (Figure 1). Place plastic washer on bolt and secure with nut.

Step 5: Plug the switch with wire harness into the socket #6 shown on Figure 1. Determine mounting location of the switch. Use a 1/8" bit to drill a hole in center the switch mounting location. Insert the slide portion switch into the hole to mark the two smaller mounting holes. Using a metal object with a sharp point such as a nail or scribing tool, mark the position of the two mounting holes for the switch. Use a 3/32" bit to drill the holes. Position the switch on the top of frame with wires facing up. Insert through the large hole. Insert the small screws through the bottom of the frame into switch mounting holes and tighten.

Step 6: For single motored locomotives, plug one 4-wire harness into the reverse board socket #2(Figure 1). For dual motored locomotive plug the second 4-wire harnesses into the reverse board socket #3 (Figure 1).

Step 7: Connect the red wire to the roller pickups, black wire to ground or the metal frame. Connect the blue and yellow wires to each DC motor. You may want to test the locomotive with test leads before making permanent connections. Test for the correct start-up direction and make sure both motors are running in the same direction. If your locomotive starts in the wrong direction, reverse the blue and yellow wires on **BOTH** motors. If one motor is running in the wrong direction, reverse the blue and yellow wires on that motor only.

Step 8: If you need power for a sound board, plug the 2-wire harness into socket #1(Figure 1). Please note: the red wire is connected to the roller pickups and the black is ground or outside rail.

Step 9: Make sure all connections are complete and insulate any bare wires with shrink tubing or electrical tape

Step 10: Test locomotive. Replace the body shell and test again.