

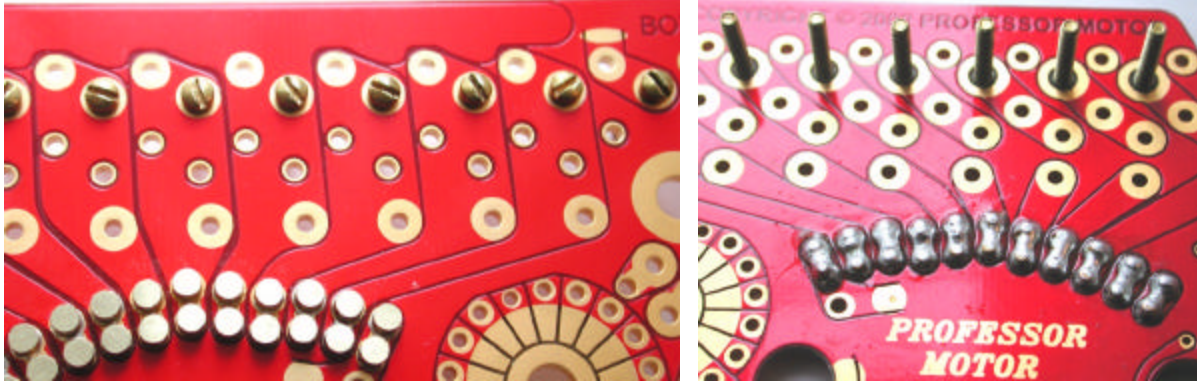


PROFESSOR MOTOR CONTROLLERS

Variable Sensitivity Kit Installation Instructions for “Silver Series” (PMTR2070)

Step 1. Tap the eight fiberglass circuit board holes between the top legs of the semiconductors on the circuit board with a #2-56 tap (not included in the kit). **DO NOT OMIT THIS STEP !** If you have a commercial track model controller (PMTR2046, 2048 or 2058) you will have shunt wires installed in the last two positions (nose of the controller), so only 6 of the holes need to be tapped and only 6 of the 8 actuators need to be installed.

Step 2. Insert the long brass screws in the front of the circuit board and thread through the holes you just tapped. Run the screws in against the front of the circuit board & tighten till just snug and flush (do not overtighten). Solder the heads of these brass screws to the gold ring that the head of the screw rests against using a rosin core solder or solid solder with a rosin flux (do not use acid core solder or acid flux!). High temperature silver bearing solder (PMTR1003) is recommended here since these connections will get hot.



Step 3. Using a Dremel, open up the top cooling slot on the back face (non-logo side) of the controller handle to a constant width. Assemble the controller, install one of the small stainless steel springs onto each of the screws and thread on the actuators (as shown below).

Caution ! : Be careful when placing the controller down on a commercial track to avoid contact with the wiring connections to the track. The silver knobs for the sensitivity system are electrically active and a short circuit could result.

Caution ! : Sensitivity knobs may get very hot if high-powered motors are used. Heat shrink tubing should be used to cover the sensitivity knobs to prevent possible injury if high-powered motors are used.

This variable sensitivity kit will allow you to short out selectively up to 8 of the normal 16 active semiconductors (or 16 of the 24 if you have a “ultra low end sensitivity” model) and will make the controller up to twice as sensitive. To use the system, in general, you will start by shorting out the top “bands” (closest to the nose of the controller) by just turning the actuator until it is snug to the circuit board. Just a slight twist (1/2 turn) is needed to loosen the actuator and disable the “shorting” feature. In total over 40,000 combinations of sensitivity curve are possible using these eight “switches”.

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