



# PROFESSOR MOTOR CONTROLLERS

## Low Cost Variable Sensitivity Kit Installation Instructions for "Silver Series" (PMTR2071)

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. No soldering is required to install this kit. It is not possible with this kit to make the controller less sensitive. This concept can be used on any of the "Silver Series" controllers with the red colored circuit board. The intent of this is a semi-permanent change in the sensitivity of the controller. If frequent sensitivity adjustments are desired the PMTR2070 kit can be installed to allow adjustments without the need to disassemble the controller.

To use the system, in general, you will start by shorting out the top "bands" (closest to the nose of the controller) by installing a screw & nut in the circuit board as directed below. In total over 40,000 combinations of sensitivity curve are possible using these eight "switches".

Step 1. Remove the controller circuit board assembly from the handle. 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.



Step 2. Some experimentation will be needed to insert the right number of screws to get you the sensitivity desired. We would recommend installing 2 at a time and then testing to evaluate the feel of the increased sensitivity. Insert as many of the stainless steel screws into these holes as you will need with the screw inserted from the front of the controller as illustrated in the picture above. Tighten the screws until firmly snug & then thread on the stainless steel nuts on the back of the circuit board. Using a nut driver or small socket set, tighten the nuts onto the screws from the back side good & tight. Reassemble the controller & test the results.

Caution ! : Wires that are trimmed on the circuit board can be very sharp. Be careful when the handle is removed to prevent possible cut or scratch type injuries.

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