

UPGRADED MC-2100 MOTOR CONTROLLER INSTALLATION INSTRUCTIONS

- **This Board May Look Different Than Your Original Board!**
- **T.M.D Upgraded MC-2100**

FEATURES

1. Components that typically fail have been replaced with more robust components
2. The T.M.D Upgrade MC-2100 has been tested at amp levels sustained beyond what a typical household outlet can supply for more than 24 hours. An original board failed within seconds.
3. We are so confident in the T.M.D. Upgraded MC-2100, we offer a 1-Year guarantee! The original factory board only has a 30-Day warranty.

WARRANTY

The warranty on your Upgrade MC-2100 is 1-year from the invoice date. This warranty does not cover damage arising from improper installation, electrical shorts or surges in other parts or house wiring, a worn-out belt and/or deck, or acts of God.

INSTALLATION

Remove the screws holding the old board to the frame and leave the writing intact. The mount for the Upgrade MC-2100 is the same as the old mount. So, simply put the board in place of the old one and then screw the replacement board to the frame before connecting wiring.

Change the wiring from the old board to the new board one wire at a time. Each wire should be changed over as follows. From the box on the old MC-2100 labeled motor, remove the red motor wire from the A+ terminal and put it on the Upgrade MC-2100 on the terminal labeled A+. Next, remove the black motor wire from the A- terminal and then put it on the terminal labeled A-.

Next, remove the blue AC wire from the CB1 input on the old board and put it on the AC input terminal labeled CB1. Do the same thing for the other blue wire to the CB1A terminal. Then, remove the white wire from the AC NEUT input and put it on the new board on the terminal labeled AC NEUT. Then you will need to do the same thing for the AC HOT wire.

Next, you will need to swap the three wire connections on the opposite side of the board from the old MC-2100 controller to the new MC-2100. This harness cannot be interchanged. There should be 8-wire harness, a 3-wire harness, and a two-wire harness all in line with each other.

Finally, you will need to remove the incline motor harness from the old MC-2100 controller to the new MC-2100 controller making sure that you do not pull off the black connector of the old board. On some of the old MC-2100 controllers, the polarity between the red and black wires are reversed. If your incline motor runs backward (up is down and down is up) then you will need to follow the red and black wires from the harness to the terminal they plug on to at the incline motor and swap the wires. (Attach the red wire to the black terminal and the black wire to the red terminal).

If your old MC-2100 Controller has a Transformer that is mounted to the treadmill frame, then you will need to unhook the two harnesses from the old controller and tie the wires out of the way because they will not be used on the new MC-2100.

The final step is to follow the calibration instructions that are listed below. If you have any questions or have any problems, email us at doc@treadmilldoctor.com.

CALIBRATION

- 1.) Press the Stop and the Speed Up keys down while inserting the safety key. If this doesn't work, email us at doc@treadmilldoctor.com for key sequence instructions to enter calibration.

Press the Stop key one time. The Time window should read EP:2P. This means that it passes the EPROM test. Some models use the terminology FP or a similar designation. The important part is the second digit and it should say P. If the second digit says F, it has failed the EPROM test and please contact us.

Note: Some newer model treadmills may show UER or VER in the time window instead of EP:2P.

- 2.) Press either incline key and the incline will calibrate automatically.
- 3.) BE CAREFUL, THE TREADMILL WILL RUN AT FULL SPEED IN THIS NEXT MODE! DO NOT STAND ON THE WALKING BELT. Press the Speed key and hold it down until 85 is shown on screen.
- 4.) If the top speed of the treadmill does not match the displayed speed on the computer console, adjust the speed potentiometer on the motor control board.
- 5.) The max speed potentiometer is a small silver square with an orange center and is located near the outside edge of the board and is labeled tach. Using a small insulated screwdriver, adjust this potentiometer clockwise to speed up and counter-clockwise to slow down the max speed of the treadmill. A tiny turn of this potentiometer will make a big difference in speed so be careful when adjusting.
- 6.) It is not important to get the speed set exactly at the max speed of the treadmill but do make sure to get the speed within .2 MPH of the max speed of the treadmill. For instance, if the max speed of the treadmill is 10 MPH, make sure to have the speed set between 9.8 MPH and 10.2 MPH. Some models have a 12 MPH top speed, so please ask us if you aren't sure.
- 7.) **THIS IS A VERY IMPORTANT STEP BECAUSE YOU WILL GET AN ERROR MESSAGE IF THIS STEP IS SKIPPED.** After completing calibration of the speed, press the Speed Down key. The treadmill will automatically return to 0 MPH. Please allow the unit to stop completely before continuing.
- 8.) **THIS IS A VERY IMPORTANT STEP BECAUSE YOU WILL GET AN ERROR MESSAGE IF THIS STEP IS SKIPPED.** Press the Stop key once and remove the safety key.

If you have any questions about these instructions or if you need further assistance, please contact us at doc@treadmilldoctor.com.