
# TRON LE Moving Recognizer Installation Guide

Rev. B

Lundy Electronics

Table of Contents

The **TRON LE Moving Recognizer** controller designed by Lundy Electronics is the best way to interface the PinVision Moving Recognizer kit to your TRON LE. The mod operates with 100% accuracy, and the TRON LE service mode Moving Recognizer test doesn't even know the difference.

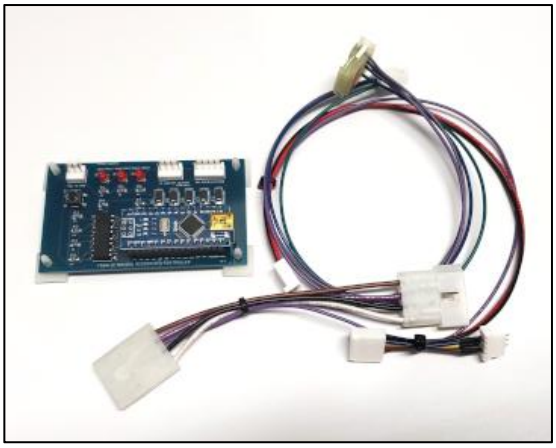
# Product overview

The PinVision for TRON designed by 86Pixels offers a Moving Recognizer kit that is designed to connect to their PinVision driver board. This product was designed with the TRON Pro model in mind because the TRON back playfield panel is removed and replaced by the PinVision display back panel. This design is a problem for TRON LE owners because they lose the factory Moving Recognizer motor assembly and switch matrix connections. LE owners are now forced to have their PinVision Moving Recognizer kit function the same way as for Pro owners which is inferior to the factory LE moving recognizer code and control.

Because of this disadvantage for LE owners, I have created a way to once again use the original LE connections and code to control the PinVision Moving Recognizer. The Lundy Electronics **TRON LE Moving Recognizer** controller is a custom PCB with wiring harnesses that connect to the factory switch and motor harness connections like the original factory recognizer configuration. The mod is completely plug and play with no tools, soldering, or modifications required.

# What's included

- Instruction sheet
- Controller PCB
- Power and control wiring harness
- Switch matrix wiring harnesses



# Installation instructions

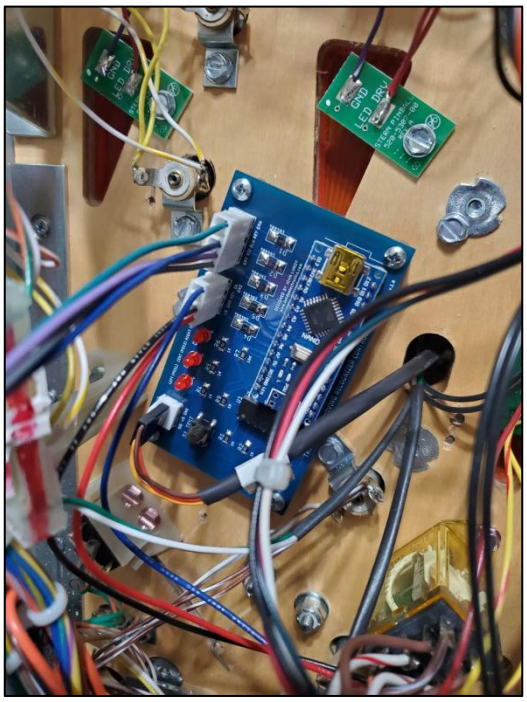


Figure 1

**Step One:** With the machine powered off, balls removed, and playfield raised to a full upright position, mount the Lundy Electronics **TRON LE Moving Recognizer** control PCB with the supplied double-sided sticky PCB mounts. See Figure 1 (prototype with screws shown) for correct placement and orientation.

**Step Two:** Install the supplied switch matrix harness by connecting the smaller 5-pin connector end to the J3 “SWITCHES” connector of the control PCB and the larger 5-pin connector end to the original Stern 5-pin “Z” connector strip where the original switch harness was attached from the original LE back panel. See Figure 2.

**Step Three:** Install the power and control harness by connecting the smaller 4-pin connector end to the J2 “POWER” connector of the control PCB. The smaller 5-pin power tap connector gets inserted between the original J2 connector PCB of the long LED board to the left of the moving 3-bank target assembly. See Figure 3a. The larger 4-pin motor control tap gets inserted between the original motor control relay connector and harness connection. The motor control relay is located below the spinning disk assembly. Follow the wires from the relay until you find the connector required. See Figure 3b.

Figure 2

*Note: The moving Recognizer relay location can vary and may not be as pictured above. All three wired relay assemblies have the same connector, and it’s the control side that is important to note when making this connection. The moving Recognizer control side will have a violet wire with black stripe opposite the mating relay connection.*

Remove the PinVision Moving Recognizer servo cable from the PinVision control board mounted in the backbox and relocate it to the J1 “SERVO” connection of the control PCB. This connection is the only one not keyed. Use care for proper orientation or damage could occur to the PinVision Moving Recognizer servo and/or control PCB. Proper orientation is orange(SIG)-red(VCC)-brown(GND) from left to right. See Figure 1. Installation is now complete.

# Operational tests

**Caution: You will apply power at this point. Follow all precautions going forward.**

The Lundy Electronics **TRON LE Moving Recognizer** controller has three LED indicators that indicate when the appropriate switch closure is made during movement of the Recognizer based on when the motor signal is active.

With the playfield still in the upright position and the coin door open with the door switch pulled out, power on the machine. Enter the service mode and select GAME test followed by REC test to enter the Moving Recognizer tests *Note: If you previously disabled the Moving Recognizer in settings, make sure you re-enable it before performing this step.* You can now test the Moving Recognizer exactly the same way as the original. Perform this test and verify the proper movement of the Recognizer and the corresponding LED is illuminated on the control PCB. If everything is functioning correctly, testing is now complete. You're ready to close up the machine and play.

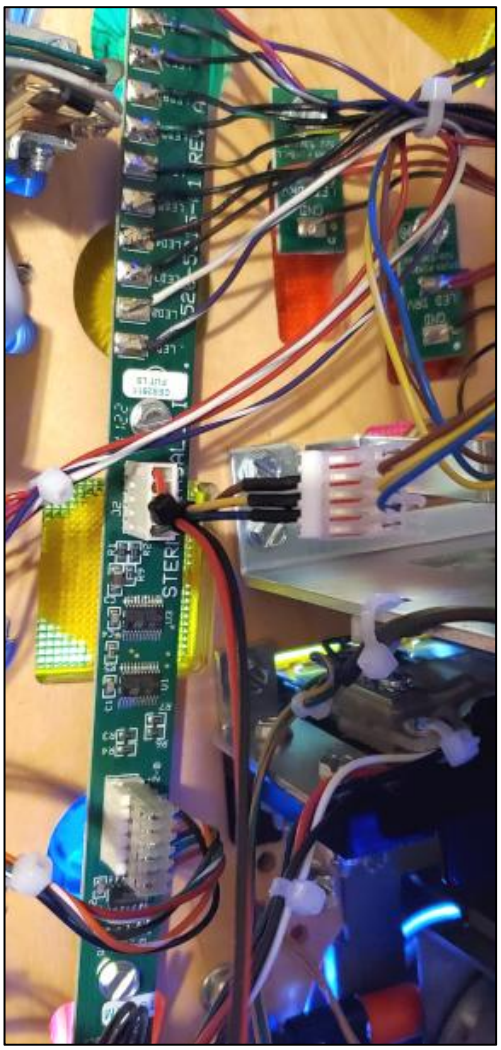


Figure 3a

For curious tech types, the TEST button on the control PCB is used mainly for development and can also show the current revision of code in the control PCB. Pushing the button after the board is powered on will show the current version using the LEDs. Holding the button down while powering on the control PCB will allow testing of the Moving Recognizer range outside of the pinball machine control. The reset button must be pushed to leave this manual control mode when finished.

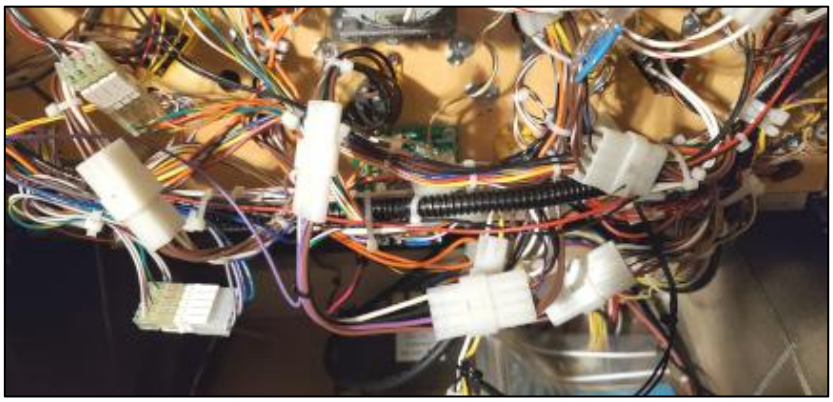


Figure 3b

If you find yourself needing installation help or have questions about this mod, please contact "Tekman" on Pinside (https://pinside.com) or send an email to john@lundyelectronics.com.

**Enjoy your TRON LE Moving Recognizer mod!**