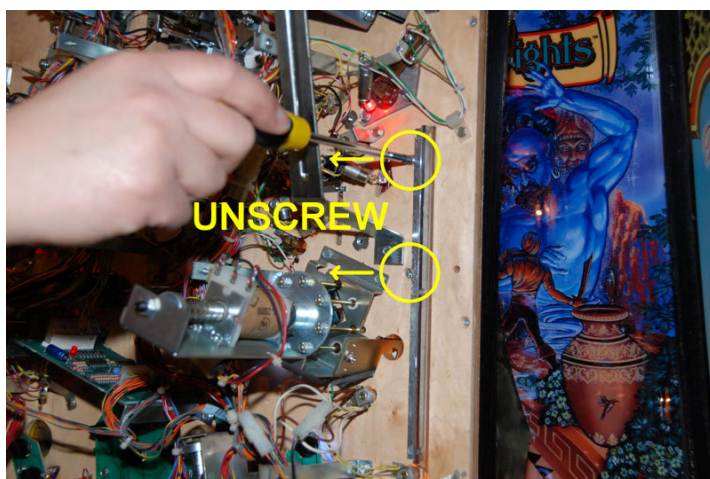


Package contents:

- Shooter sword LED mod PCB
- Opto sensor assembly
- 2 pcs #6-32 1 1/2" hex head sheet metal screws
- 2 pcs plastic spacers
- pass-through power cable

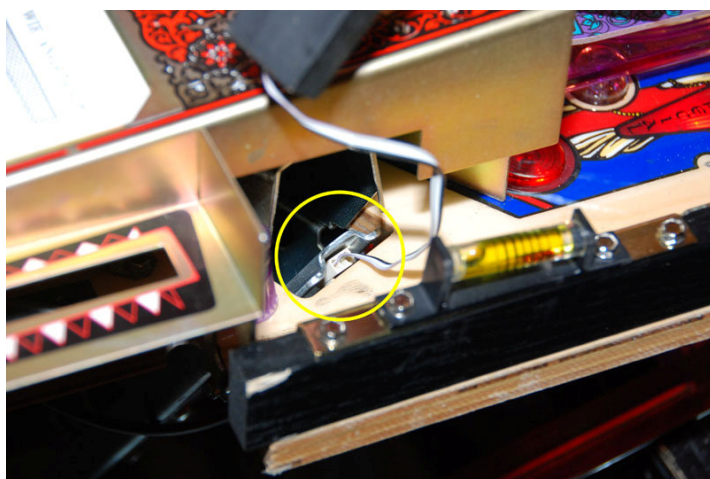
INSTALLATION:

1. Open the coin door
2. Remove the lockdown bar
3. Remove the playfield glass
4. Raise the playfield to vertical position
5. Unscrew the two screws holding the black wooden guide left to the shooter lane.



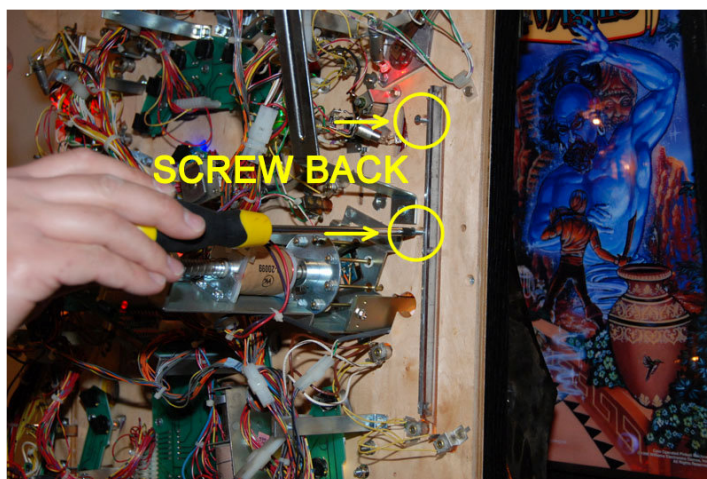
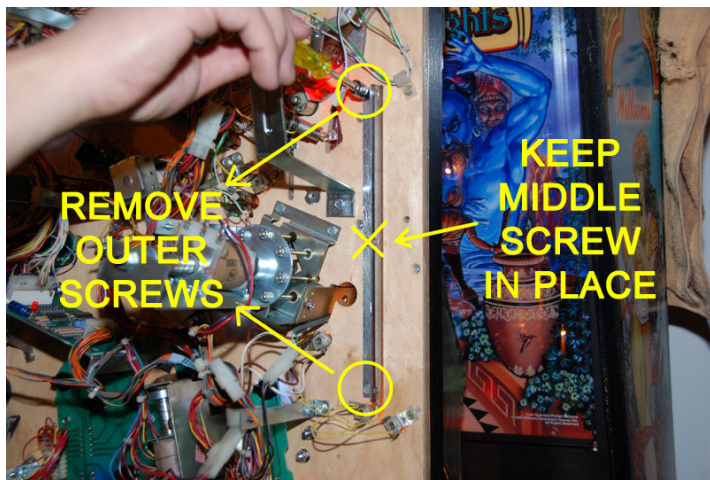
6. Remove the wooden guide completely (you will not need it)

7. Put the connector and the cable of the new opto assembly under the ball through assembly



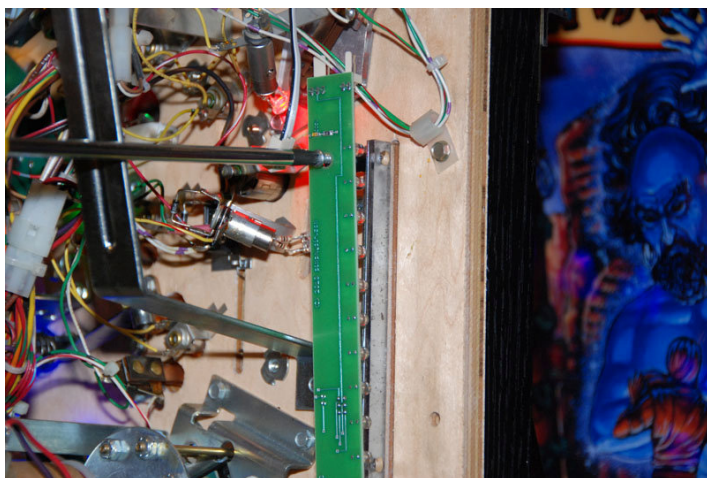
8. Insert the new opto assembly into the place of the old guide

9. Screw the new assembly tight



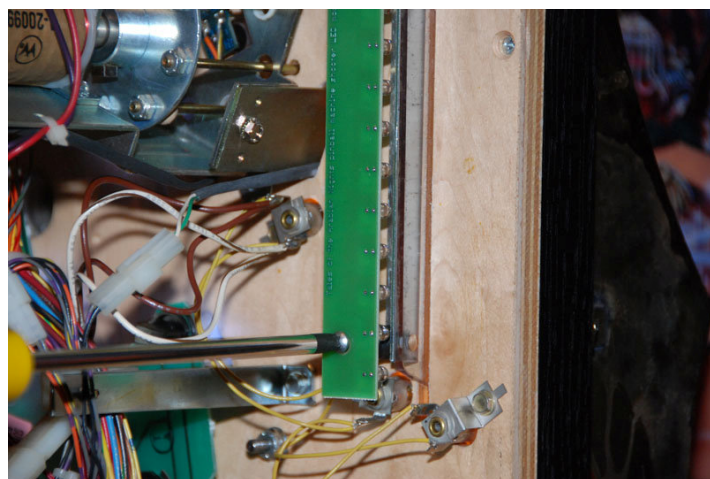
10. Remove the two outer screws holding the “sword” plastic, don’t remove the middle one, keep it tight.  
*You won’t need the removed screws.*

11. Put the new 1 ½” hex head sheet metal screws through each hole of the board as seen on the picture. Put the spacers on the screws.

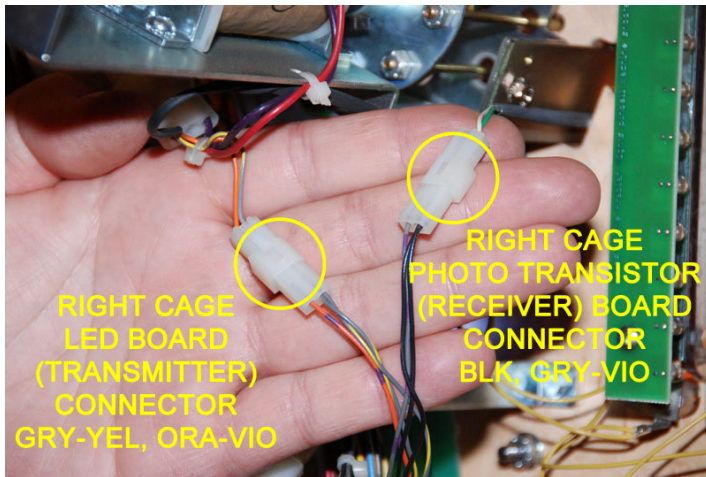
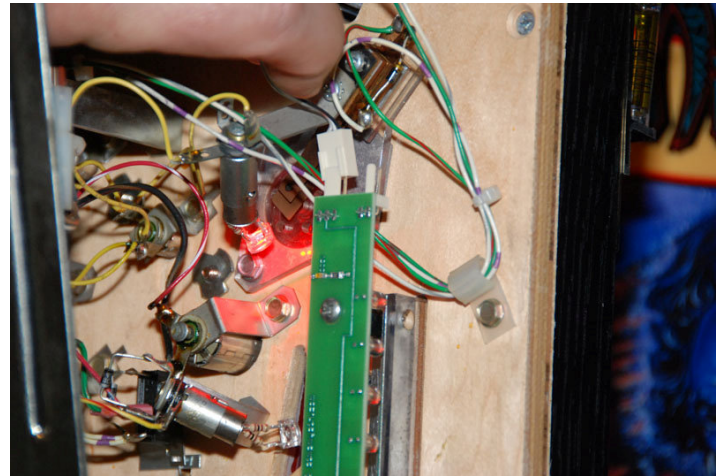


12. With a ¼” hex head screwdriver, tighten the board to its place. The LED-s should be under the edge of the sword plastic, the board’s connectors should look upwards.

**DON'T APPLY TOO MUCH FORCE WHEN TIGHTENING THE BOARD, NOT TO DAMAGE THE PLAYFIELD WOOD!**



13. Connect the opto assembly to the 3-pin connector of the mod board.



14. Find the connectors of the Right Cage opto assembly.

Transmitter connector:

*gray-yellow (+12V) and orange-violet*

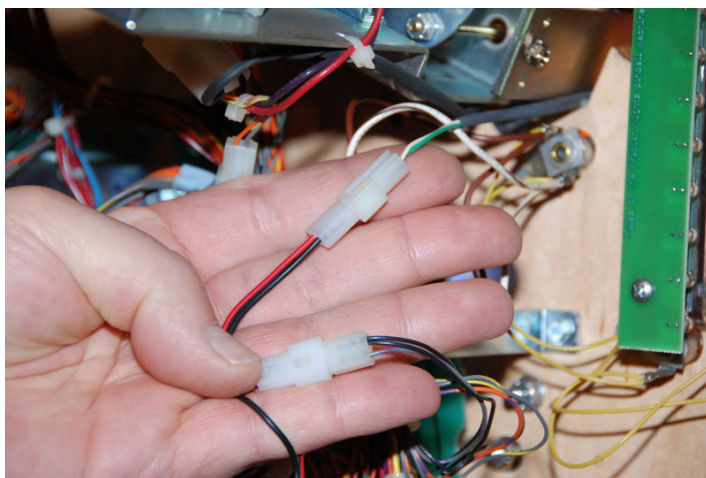
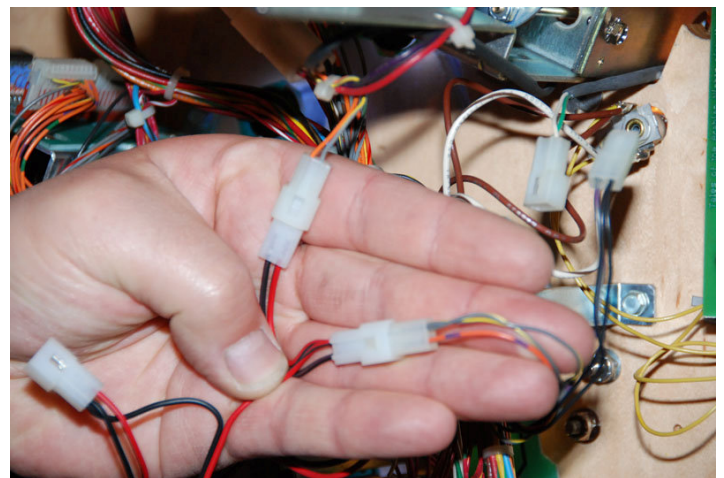
Receiver connector:

*black (GND) and gray-violet*

We need +12V and GND only.

15. Unplug these connectors.

16. Put the pass-through cable with the RED power lead between the transmitter connectors (*gray-yellow and orange-violet*).

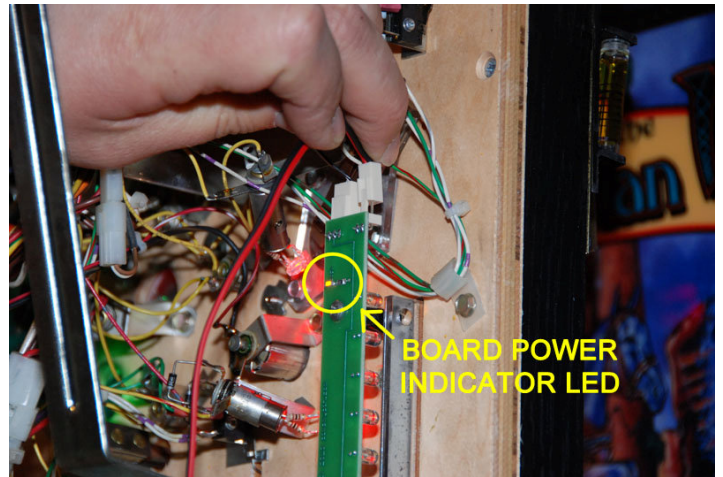


17. Put the pass-through cable with the BLACK lead

between the receiver connectors (black and gray-violet at the lower connector, white and green on the upper one).

18. Plug the power cable to the 2-pin connector of the mod board.
19. Turn the machine on, check the yellow led on the bottom of the PCB, which turns on when the power cable is properly installed.
20. Lower the playfield into its place, reinstall balls, playfield glass and lock down bar

Installation is finished; your machine is ready to play!



**TIPS:**

1. There is a jumper next to the central logic IC on the PCB. This gives the mod two modes of operation:
  - a.) When the jumper is removed, there is only one lighting cycle, a single scanner light, repeating each time you shoot the ball.
  - b.) With the jumper on (default), there are a few different cycles of lights, changing randomly on each shot.
2. The lighting effect is more dramatic if you remove the two GI bulbs which light the shooter lane.

**Important!** The PCB has a variable resistor with which the sensitivity of the opto can be adjusted. These are preset for general environmental conditions. It is NOT advised to adjust these unless a light source with intensive infrared radiation (e.g. halogen lamps close to the machine) interferes with the board starting the LEDs spontaneously.

If your metal sword assembly is well polished, it may reflect too much light from the opto assembly, which may result in constant running. Under these circumstances you have to adjust the sensitivity. For more information, please contact us at [pimpmypin@gmail.com](mailto:pimpmypin@gmail.com)

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