



Installing Your New Creature From The Black Lagoon – Tail Light DMD Panel MOD

A few things before we start:

The wooden speaker panel provided in this MOD was manufactured using a Precision CNC machine and is meant to be a replacement for your original wooden speaker panel. Included in this MOD is the new wooden speaker panel (pre-wired w/ LED's installed), a PCB LED sequencer for the Starlight sign, nylon stand-offs, screws, plastic washers, and other hardware dedicated to the MOD. All the hardware from your original wooden speaker panel will need to be transferred to the new wooden speaker panel. This includes the speakers, DMD display, speaker panel mounting hooks, etc... Information to aid in the transfer of these items is detailed below.

Tools you will need:

Phillips Head Screw Driver

Small Flat Head Screw Driver

5/16" Nutdriver or Socket

Pliers (small set is fine)

Drill Bit 6mm

Hair Dryer (with LOW setting, NOT a Heat Gun)

Goo Gone Adhesive Remover (use other brands at own risk)

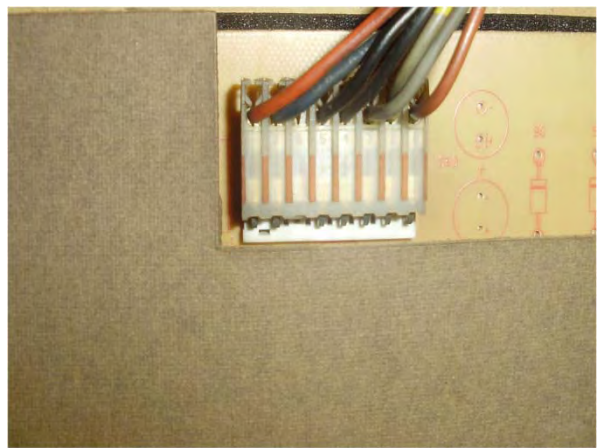
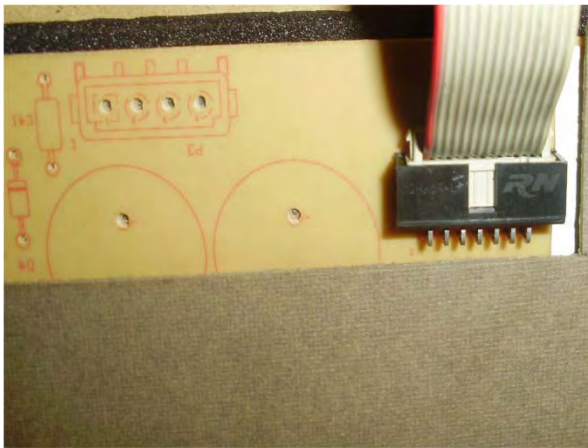
Old Cloth (Used To Remove Adhesive)

Installation Procedures

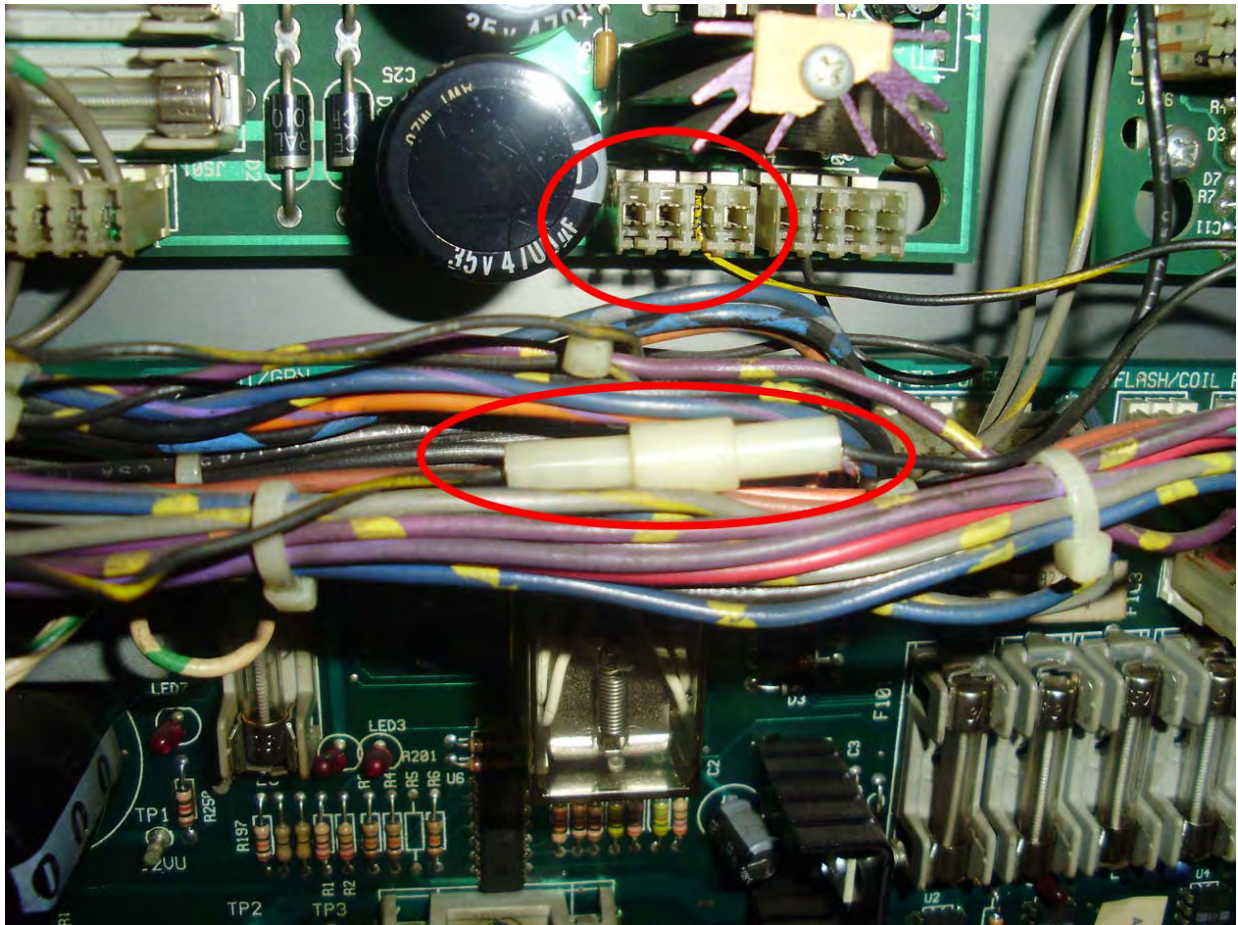
Removing the original speaker panel from your machine:

The first thing we want to do is remove the entire speaker panel from your game. To do this you'll need to remove all the wires from the back of the speaker panel and disconnect a couple from the Sound Board.

- 1) Remove the ribbon cable from the DMD Display on the back of the speaker panel.
- 2) Remove the power cable from the DMD Display on the back of the speaker panel.



- 3) Disconnect J505 from the Sound Board, see picture below.
- 4) Disconnect the in-line connection you see circled below. You might have to dig around that bundle of wires a bit to locate it.



- 5) Once you have the above wires disconnected you'll want to remove them from the bundle of wires in the back box. The other ends of these wires are connected to the speakers on the speaker panel. In order to remove the panel from the game, so you can work with it easier, these wires will have to be removed from the wire bundles.

NOTE: Now that we have the speaker panel removed from the game we can sit down at a table and work on it.

Removing the hardware from the back of the panel:

- 1) Lay the speaker panel face down on the table so you can remove the speakers and DMD Display from the panel.
- 2) The speakers can be easily removed from the panel using a Phillips Screw Driver. Each speaker has 4 screws. When you take them out simply put them on the magnet on the back of the speaker they belong to so you don't lose them.
- 3) The DMD display is held on with 4 small nuts. They can be removed using the 5/16" nutdriver or socket. I suggest after removing the DMD display that you lay it on a soft cloth glass down, and put it aside so it doesn't get scratched or broken. Don't lose the 4 plastic stand offs that hold up the DMD display.
- 4) Remove the black plastic channel from the top of the panel, again using your Phillips Screw Driver. It is held on with 4 screws. Be sure and put the screws aside with it so you won't lose them, or mix them up with others.
- 5) Now remove the two metal brackets that hold the panel in place when it's in the machine. These are located on either side of the panel near the top edge just under the black channel. Use your Phillips Screw Driver for this as well, removing 2 screws per bracket.

You have now removed all the hardware from the back of the speaker panel. It's now time to move on to the front.

Removing the art plastic from the front of the panel:

This task is one to be gentle with. This plastic isn't easily broken, but you don't want to take chances by forcing anything. The plastic is held on with a thick black adhesive tape that covers most of the back of the plastic. On some machines the plastic comes off very easily and on others it may take a little more work for it to come lose.

Simple get a hold of one of the corners of the plastic by pulling up on it with your fingers. If you can't get it lift using your fingers you can use your flat head screw driver, very gently, to get under it and get it started so you can use your hands to lift it. Be careful if you use the screw driver not to crack the plastic or gouge it. Once you have a corner lifted up, gently continue to lift from that corner as the adhesive continues to let go of the wood panel. Once you get started it generally lifts off pretty easily. Just take your time and don't overly force it. That's

why I like using my hands for this and not tools. It's much easier to feel what the plastic and adhesive are doing and you can adjust your pressure.

Removing the black adhesive from the art plastic:

Patience. That is what you need for this part. You must go into this task with patience and it'll go a whole lot smoother for you. Do not spray Goo Gone or any other adhesive remover on the black adhesive. It won't help you get it off, it'll only make a mess. The Goo Gone is used to clean up and that is it. Do NOT use razor blades on this task either. Metal ones will scratch/cut your plastic and the paint under the adhesive. Plastic ones just aren't strong enough to deal with this adhesive, so they are a waste.

What I found worked best was again my hands. I had better control, it made a lot less mess, and decreased my chances of damaging the plastic. You should start by using your finger nail to "scratch up" an edge of the black adhesive tape. I started in the center of the plastic in the clear window opening. It's easiest there. Trying to start on an outside edge of the plastic just didn't work for me.

Once you have some "scratched up" or lifted from the plastic simply start peeling it back. What I found was that if I pulled too fast or too hard the piece I started would just rip loose and I was back to scratching at it again trying to get a new piece lifted up. Patience and steady pressure pulling it up and back so it would peel off worked best. I was able to get large chunks of the adhesive off before ripping it loose with this method. All in all it took me about 10 minutes to get all of the black adhesive off.

If you find that you just keep ripping off small pieces and you're not really getting anywhere, then it's time to use the hair dryer. Depending on your weather some will have an easier or harder time with this. The heat in the air makes the adhesive more pliable and therefore it doesn't come off in small pieces but rather you can take off larger sections at a time. So if you keep pulling off small pieces, use the hair dryer on its LOWEST SETTING to heat up the adhesive in the spot where you are working. Don't over heat the plastic or it will warp and melt. It doesn't take a ton of heat to get the adhesive to become more pliable. DO NOT USE A HEAT GUN! You will melt the plastic for sure. It's too much heat. Use a hair dryer and put it on the lowest setting.

Once you have all the black adhesive off use the Goo Gone to clean up any residue left behind. Goo Gone can eat the paint off of the plastic if left in place too long. Spray small sections at a time. Spray it on, wait 5 second and start scrubbing the residue and Goo Gone off using an old cloth. Once you are satisfied with that area use another old cloth (dampened with water) and

wash the area. This helps deactivate the Goo Gone and remove it so it doesn't continue to eat away at the paint on the back of the plastic. Continue this until you have removed all the adhesive residue.

Removing the metal speaker panel grilles from the panel:

Removing these is pretty simple. You will either find they have been stapled on or nailed on with small tack nails. Either way the easiest way to remove it is to take your small flat head screw driver and gently push it between the metal mesh and the wood panel near the locations of the staple or nail. Gently pry it up being careful not to bend the metal mesh. Once you get the staple or nail to lift out just a little take a pair of pliers and get a hold of the top of it and pull it out. Do this for each of the 4 staples or nails used on each grille.

Drilling LED Holes in metal mesh grilles:

The next thing we want to do is drill the holes in the metal mesh so that the LED light will not be obstructed. You don't want to skip this step. When the LED's light up the metal mesh will show through your plastic if you do not drill out holes. If you happen to have a drill press, use it. Most of us don't and have to use a hand drill.

The best way to go about this is to lay the metal mesh grille over the new CFTBL MOD Panel on the side you will be installing it on. Start at the top and mark the location of the first LED on the mesh grille. Remove the metal grille laying it on a piece of scrap wood and drill it out in the location you marked going all the way through the grille and into the wood. The wood just allows you to drill through the mesh easier and get all the way through it.

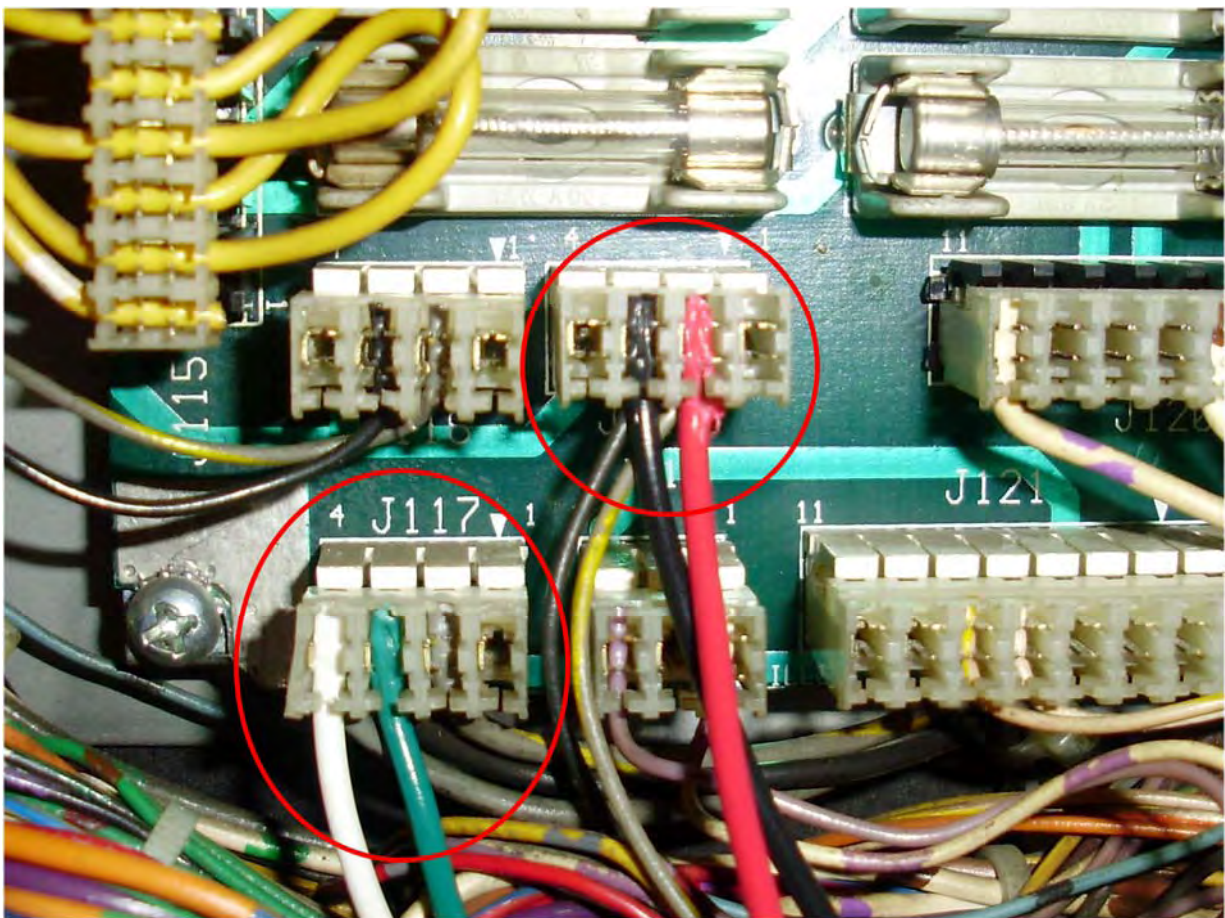
Do this for each LED. Each time realign the mesh grille on the new CFTBL MOD Panel and mark a new LED location. Don't try to mark a bunch at once. Take your time and do them one at a time.

When you have completed each hole, go back and make sure there are no burrs or metal sticking up that might scratch your plastic once you put it back in place. You may need to sand the burrs off. For me I just used a small hammer to gently flatten any metal that was sticking up at the hole locations after drilling them.

Assembling the new Panel (MOD Panel)

You're now ready to start putting together the new panel. To do this you'll simply do everything in the reverse order that we took apart the old panel. Here I will just give a quick list of the order you should put it together. I'll make notes on anything that will be different or out of order.

- 1) Attach Metal Mesh Grilles (using an industrial staple gun, or small tack nails)
- 2) Install the two metal brackets that hold the panel in place on the back of the panel
- 3) Install the black plastic channel on the top of the panel
- 4) Install the DMD display. Make sure and use the plastic stand-offs you removed from the old panel.
- 5) Install the speakers. The larger speaker must be installed on top of the 4 plastic washers provided in your kit. This lifts the speaker up over the wiring and LED's that are positioned under it. There are also 4 longer screws provided to screw the large speaker down. The original screws will be too short with the plastic washers in place.
- 6) Connecting the Wiring. First, plug in the green and white wiring harness to the small PCB on the back of the CFTBL Panel MOD. The connector is keyed with a lock. However double check that the WHITE Wire is on the +5v side.
- 7) Now it's time to connect the 4 wires to the pinball machines Power Driver Board. The two connectors we will be connecting to are J117 and J118. Both are located on the bottom left corner of the pinball machines Power Driver Board (largest board in the backbox) **see picture on next page...**



Make sure your pinball machine is turned off and unplugged before doing the below steps.

To insert the provided wiring into the original wiring harnesses pictured above you need to use your small flat head screw driver to push them in. Again take your time. Don't push too hard but you will have to give it some force to get them in there and make a good connection. Do this with the connector still connected to the power driver board. Below is a break down of the color of wire and to what pin and connector that wire goes to. Keep in mind the pins are labeled from right to left on the power driver board.

Red Wire – J118, Pin 2

Black Wire – J118, Pin 3

Green Wire – J117, Pin 3

White Wire – J117, Pin 4

8) The art plastic should be installed only after completing all previous steps and just before putting the panel into your machine. Since there is no adhesive on the back of the plastic anymore it will simply sit or float over the panel. You can of course use a double sided tape to re-adhere the plastic to the panel but it's not necessary if you choose not to. In some cases however you may find that to align the LEDs with the plastic properly securing it with double sided tape may work best. Each art plastic can be and probably is a little different. Knowing the manufacturing standards at Williams/Bally it's a good bet you might have to do some adjusting up and down etc. The plastic should slide up under the black channel at the top of the CFTBL DMD Panel.

You're Done. Now all that is left is to plug your pinball machine back in and turn it on. If for some reason the LED's do not come on you will want to turn off the pinball machine and check the connection of the wires you just pushed into the connectors at J117 and J118. J117 controls the STARLIGHT sign and arrow. J118 controls everything else. If you have questions or problems installing your panel please feel free to contact me via email or contact me by phone. My cell number is published in the contact me section of the website.

Thanks again for purchasing this MOD and your continued support of pinball.