Pinshakers CFTBL Hologram Mod Kit Installation

Vers 1.xx Installation – Updated 04/06/2023

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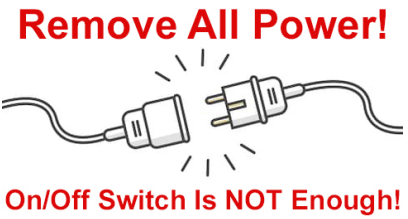
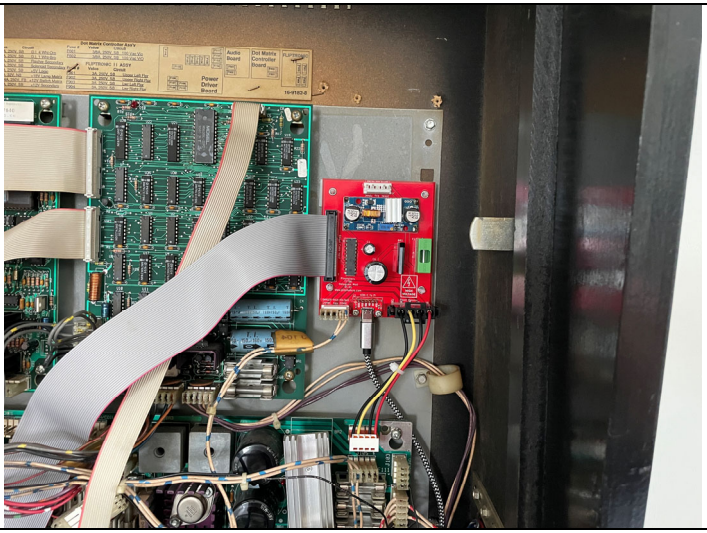
EXPECTATIONS OF USE

You agree to use our products in the manner described in the documentation provided. Any deviation from the provided documentation will likely cause damage to persons or property. You agree to only install our products in fully working and operating pinball machines. Pinshakers will in no way be held responsible or liable for any damage that results in the use of this kit; either to any person, your pinball machine, or structure in which the pinball machine is operated.

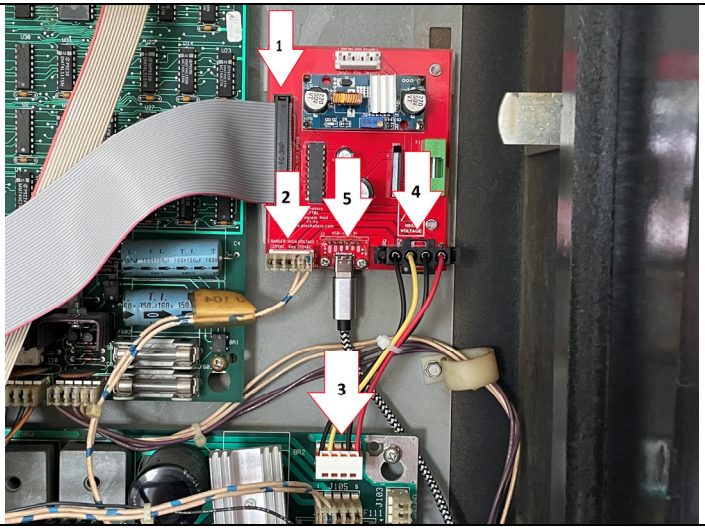


Parts Required (included):

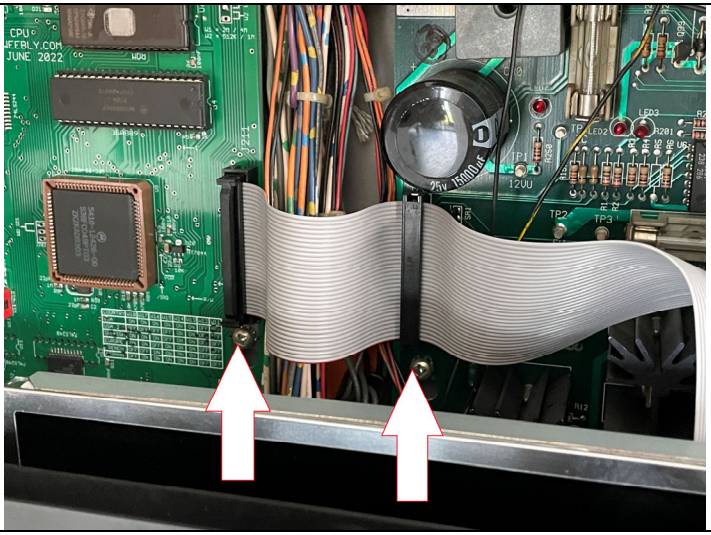
- ☐ Installation Manual
- ☐ I/O Power Board
- ☐ Raspberry Pi Daughterboard
- ☐ 10.1” LCD Screen
- ☐ Raspberry Pi 2B, 3B, or 4B
- ☐ Ribbon Cable
- ☐ USB-C Cable
- ☐ Power Harness
- ☐ Black Elastic Light Shield Band
- ☐ Mounting Strap and Hardware



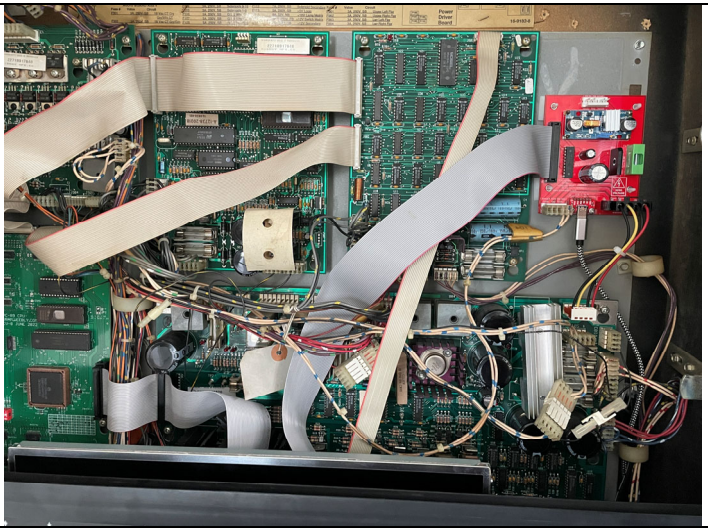
Step 1: I/O Power Board Install
Find an open spot in the upper right side of the backbox to secure the included I/O power board using the installed 4 adhesive standoffs. Be sure to clean off the surface area of any dirt/grime and then peel off the backing to the 4 standoffs and secure board in place like the photo above. Leave plenty of room for the wire connections and ribbon cable to connect to the board but don't place the board too high otherwise the power harness won't reach the power driver board.



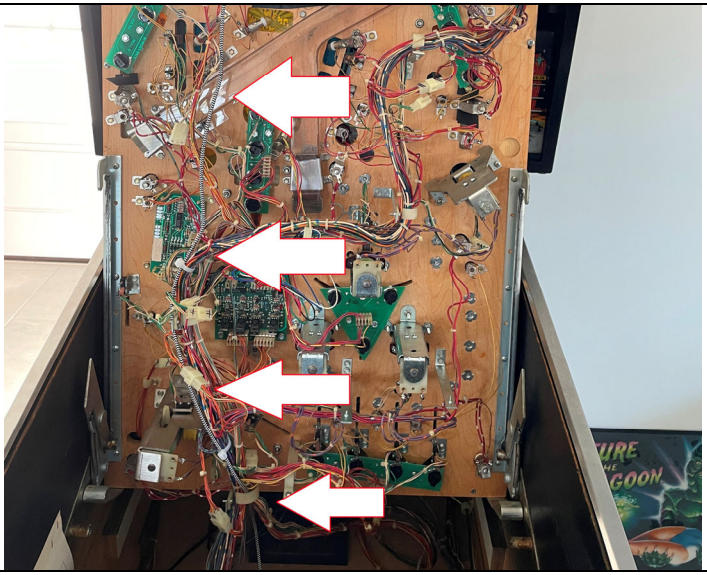
Step 2: I/O Power Board Install cont.
Install the end of the ribbon cable (1) with the red stripe facing down as shown above. Remove the connector from J104 off of the power driver board and connect it to the I/O board (2) as shown above. Install the included power harness into the J104 connection you just freed up (3) and connect the other side onto the I/O board (4) as shown above. Finally connect once side of the USB-C cable into the I/O power board (5) as shown above.



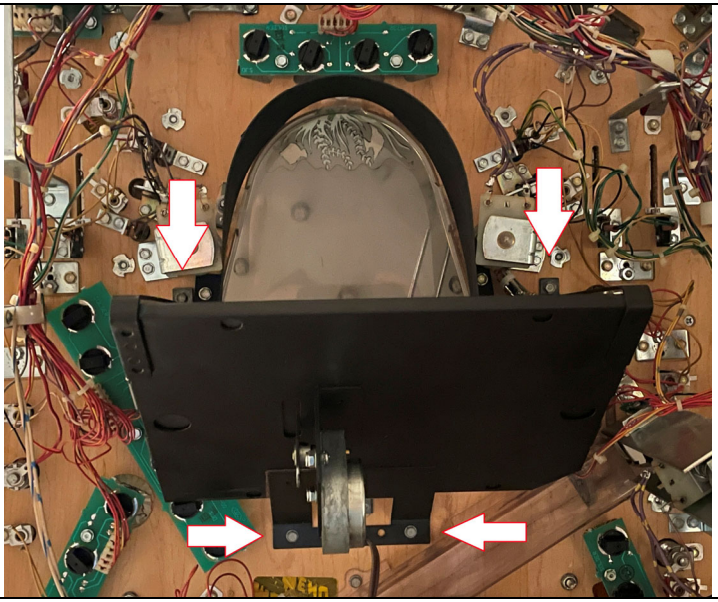
Step 3: I/O Power Board Install cont.
Install the other end of the ribbon cable as shown above. Carefully remove the original ribbon cable and install the included custom ribbon cable with the red stripe facing down. **Do not install this cable with the red stripe facing up otherwise damage will occur to the I/O power drive board, your MPU, and your power driver board.** Be careful and take your time to make sure all of the little pins are aligned properly.



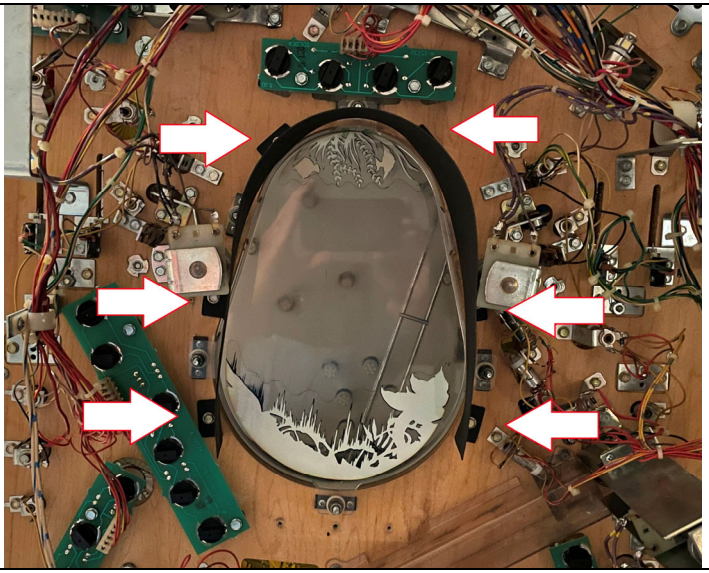
Step 4: I/O Power Board Install cont.
Remove the playfield glass and pull the playfield forward into the locked position. Run the USB-C cable down the right side and into the bottom cabinet.



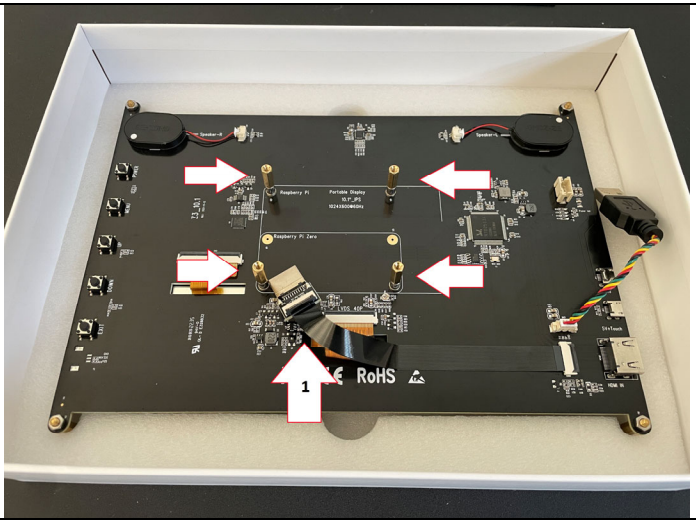
Step 5: USB-C Cable Routing
Place the playfield in the upright position and run the USB-C cable up towards the hologram unit as shown in the above photo. Leave plenty of slack at the top and wait until the screen is installed to secure it with the zip-ties.



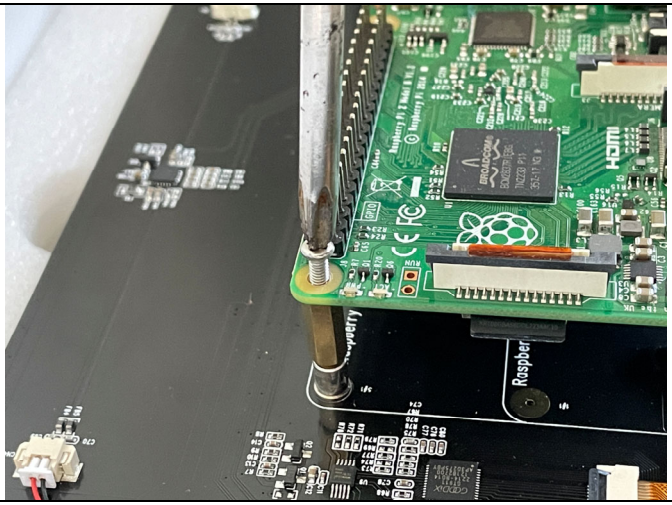
Step 6: Hologram Removal
Disconnect the wire connection going to the hologram motor. Remove the 5 wood screws that secure the hologram to the playfield. Make sure you are holding the hologram unit while you are removing the mounting screws so that it doesn't fall into the cabinet. Set the hologram unit aside in a dry dark place so that it preserves the hologram for the future.



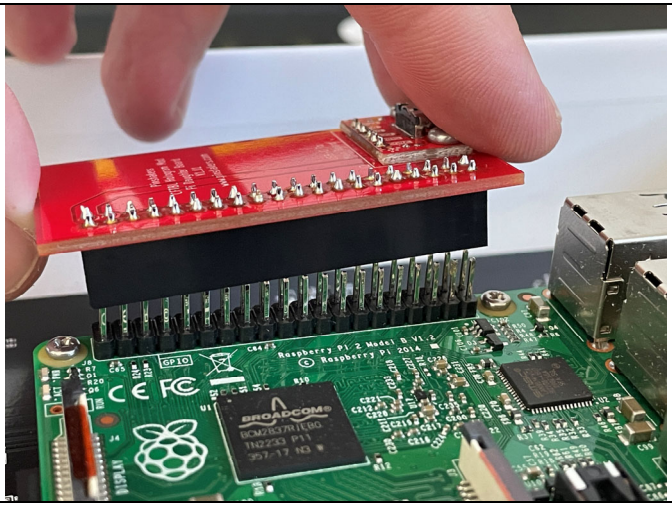
Step 7: Hologram Removal cont.
Remove the 6 wood screws that are securing the black hologram shield to the playfield. Be careful with this shield as it is just flimsy cardstock. Set the shield aside in a safe place to keep it from getting bent or torn.



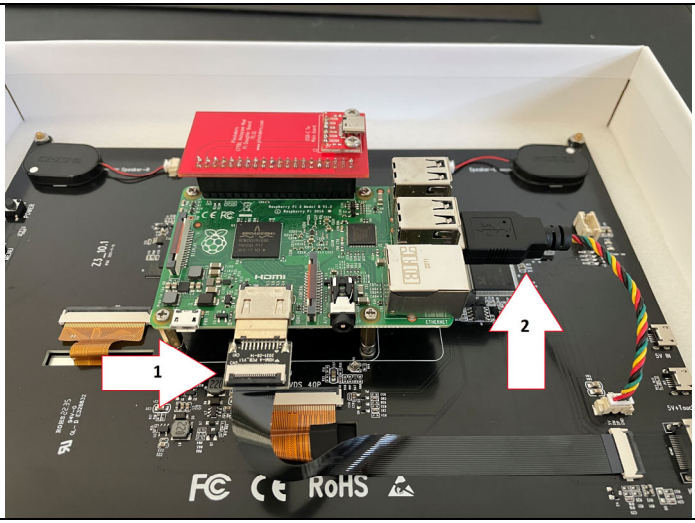
Step 8: Raspberry Pi Install
Steps 8-11 only apply if you are installing your own Raspberry Pi to the kit. If your kit came with one already installed you may skip to step 12.
Install the included microSD card into your Raspberry Pi and then place it onto the 4 brass standoffs as shown in the above photo and align them with the 4 mounting holes on your Pi. Orient it so that the USB connections are facing to the right towards the pre-installed USB cable. Be very careful with the HDMI cable that is connected to the thin ribbon cable (1) as it is fragile and can easily be torn by accident.



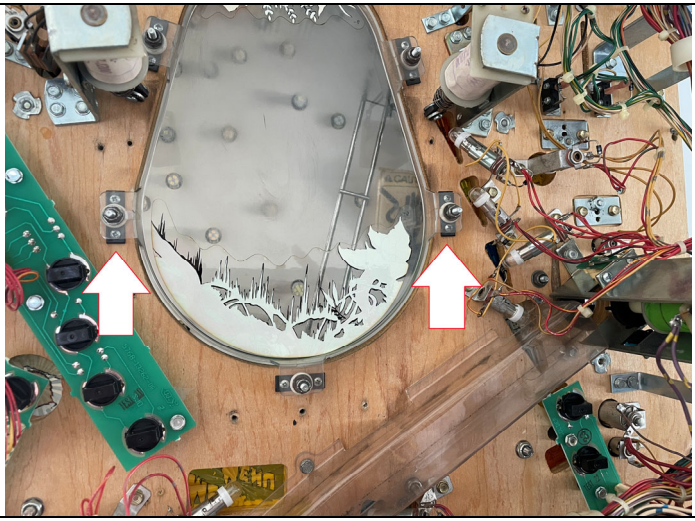
Step 9: Raspberry Pi Install cont.
Secure the Pi onto the 4 standoffs with a screwdriver and the included mounting screws.



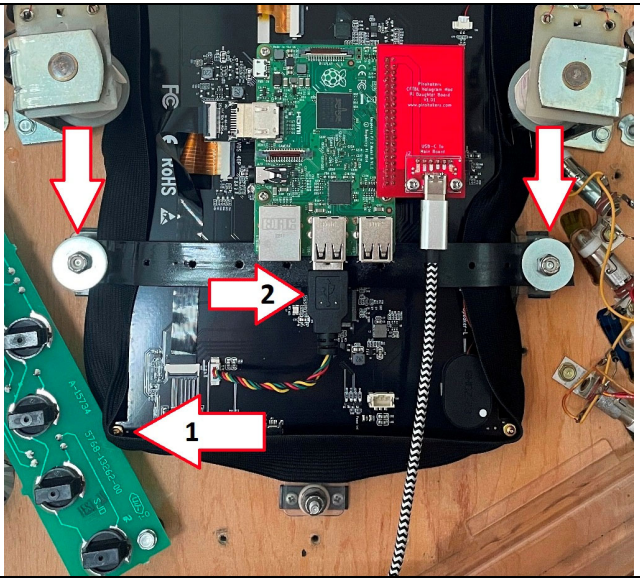
Step 10: Raspberry Pi Install cont.
Carefully install the included daughterboard onto the Raspberry Pi as show above. Make sure the pins are all aligned properly and do not orient it the opposite way from the photo above.



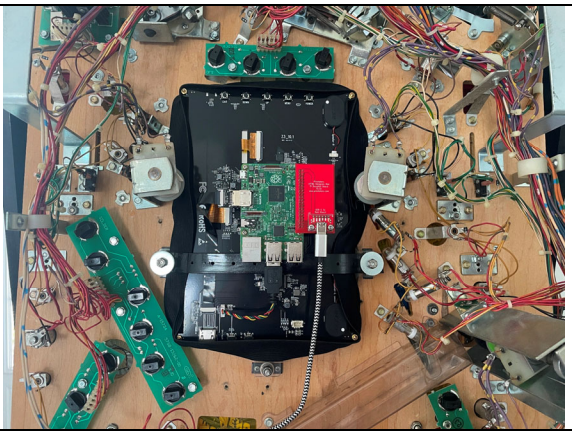
Step 11: Raspberry Pi Install cont.
Carefully install the HDMI cable (1) and the USB cable (2) into the Pi as shown above. It does not matter which USB slot you choose, as long as it is not putting too much of a strain on the cable. When everything is installed properly it should look like the above photo.



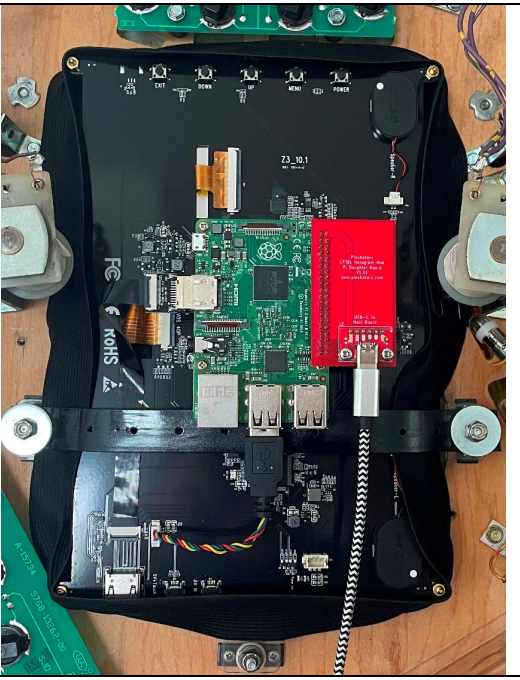
Step 12: Screen Install
In the following steps we will be installing the LCD screen with the Raspberry Pi attached. With the playfield still in the upright position locate the two window mounting screws as shown above. We will be using these two screws to secure the screen to the playfield with the included mounting strap and the two locknuts that are included with your kit. Do not remove the existing locknuts from the window assembly.



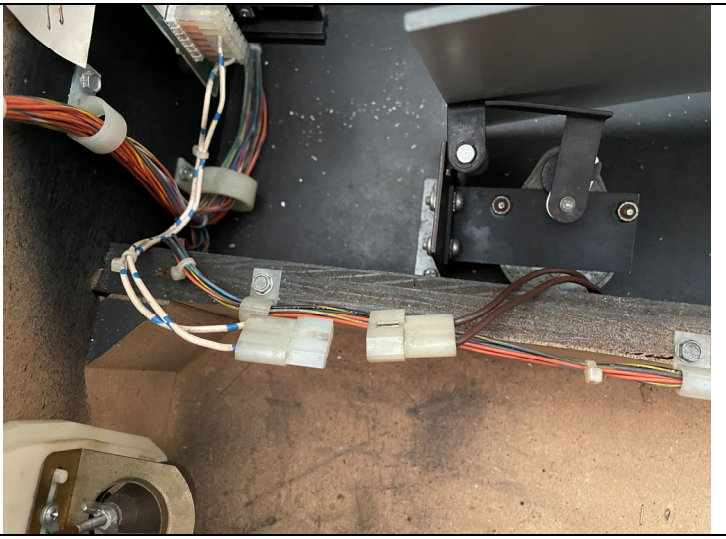
Step 13: Screen Install cont.
Place the screen onto the playfield as shown above with the black elastic light screen wrapped around the outer edges of the screen. All 4 of the pre-installed brass standoffs should be resting against the playfield. Position the screen so that the bottom left standoff (1) is just above the lamp board and the screen is centered as best you can on the window.
Place the mounting strap across the back of the screen as shown above and secure it with one of the included locknuts and washers. Route the strap under the bottom portion of the Raspberry Pi. Be very careful of the HDMI ribbon cable. It may help to temporarily disconnect the USB cable (2) for this step. Secure the other side of the mounting strap. Do not tighten down the strap too much as it may bend the LCD screen. You will get a good feel for how tight it needs to be as the LCD screen will not move at all once it is secured. Reconnect the USB cable.



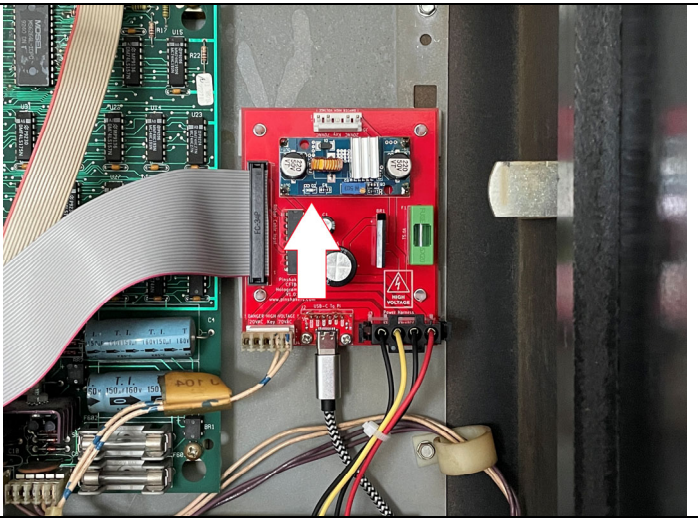
Step 14: Screen Install cont.
The above photo is how the screen should look once it is installed properly.



Step 15: Screen Install cont.
Make final adjustments to the black elastic band around the edges to shield as much of the light as you can from reflecting onto the LCD screen.
Connect the USB-C cable to the Raspberry Pi daughterboard. Use the included zip ties to secure the USB-C cable neatly down the playfield.



Step 16: Screen Install cont.
While it is not necessary for proper operation, we recommend you disconnect the cable going to the mirror motor as well as the hologram lamp that is on the back side of the cabinet.

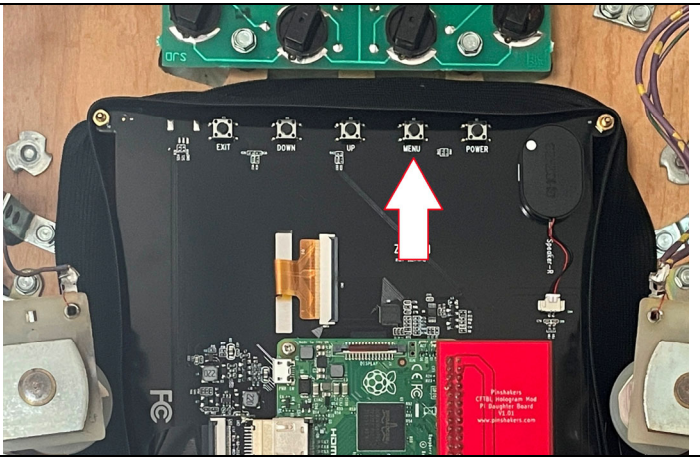


Step 17: Finishing Up

Put the playfield back into the normal position and re-install the 3 pinballs. Turn the machine on and look for the LED to come on the I/O Power Board in the backbox. Watch as the LCD screen boots up, there will be a momentary splash image that comes on as it boots then it will go blank.

Start a game and get to the creature multi-ball mode. Once you find the creature, the video clips should start on the LCD screen. When you drain one of the balls, the clips should stop.

Do not attempt to adjust the little screw on the blue daughterboard as that will cause damage to your kit and the Raspberry Pi.



Step 18: Adjusting The Brightness

You can adjust the brightness of the screen by using the menu buttons on the back of it. Keep in mind though that if you set the brightness too high it may result in an under-voltage warning which would be indicated by a yellow lightning bolt on the screen.

Congratulations, you have successfully installed your new Pinshakers CFTBL Hologram Video Mod! If you have any questions or problems please do not hesitate to reach out to us for help.

For product support email us directly at pinshakers@gmail.com.