



Instructions to install the 19" LCD monitor in an upright video game cabinet!

Start by checking to be sure the game is unplugged from the wall!

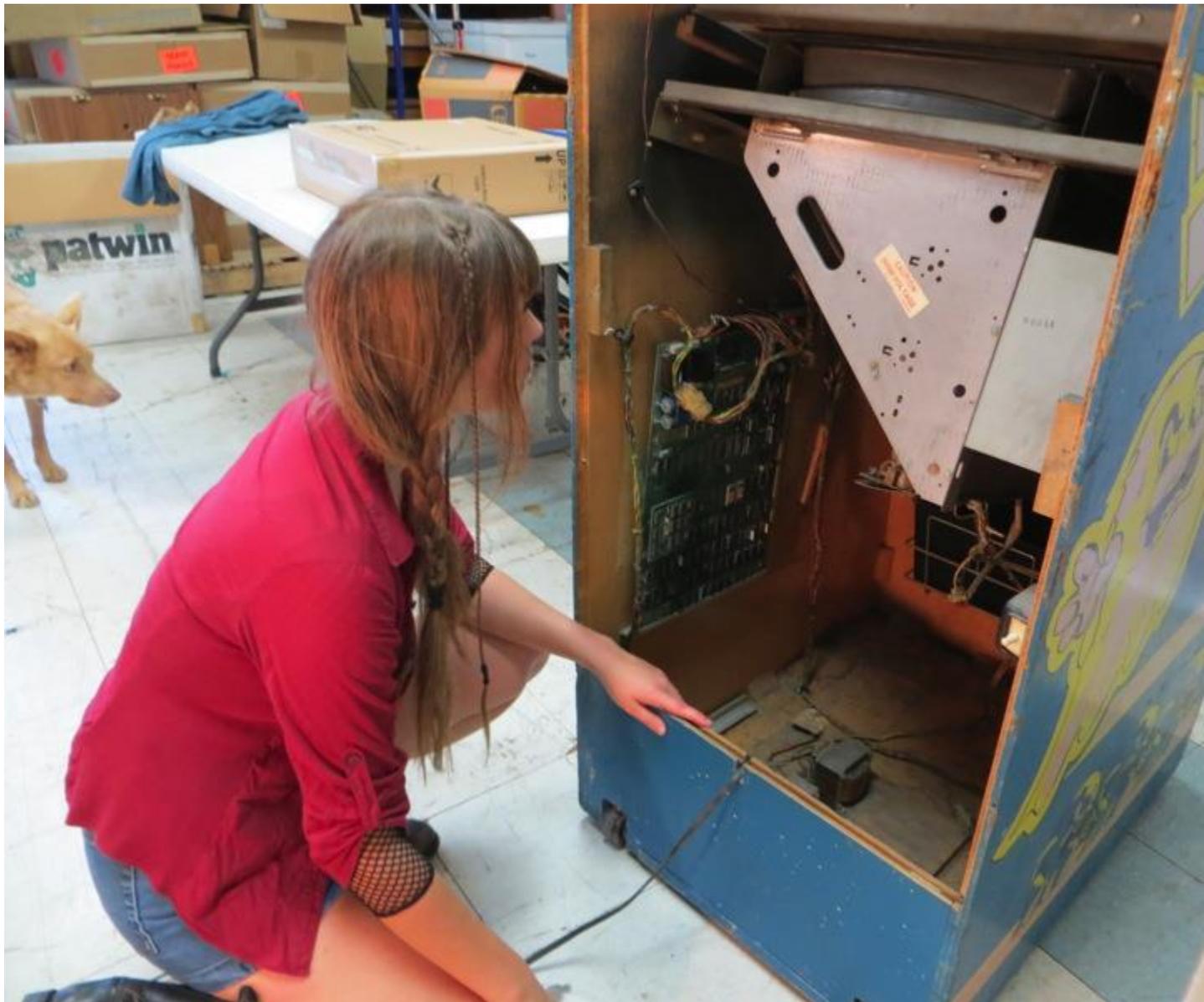
And just so we're on the same page, whenever we refer to the old monitor we mean the COMPLETE monitor; the glass picture tube, the metal chassis it is attached to, and the circuit board that's mounted to the chassis. It should look something like this:



OLD STYLE GLASS PICTURE TUBE MONITOR



This is our technician, Mary with a typical Ms. Pac-man upright cabinet.



In the next steps we will be removing the old CRT, (glass picture tube type) display from your cabinet. We're working with a Ms. Pac-man, but all upright cabinets will be quite similar.



Start by removing the metal bracket retaining the tempered glass bezel which covers the old monitor.



Set the bracket and screws aside as we'll be reinstalling them.



Reach up inside the coin door and release the latches which hold the control panel in place.



Lift the control panel slowly and unplug the wiring harness.

If it's not easy to disconnect, you can probably just stand it up the way Mary is doing.



Now you can remove the tempered glass bezel.
Be extremely careful not to scratch the paint on the inside of the bezel!



Success!



Set the tempered glass bezel aside, FACE DOWN in a safe place.

Don't scratch it!

A new one will cost you \$189.00 at PAC-MAN.COM



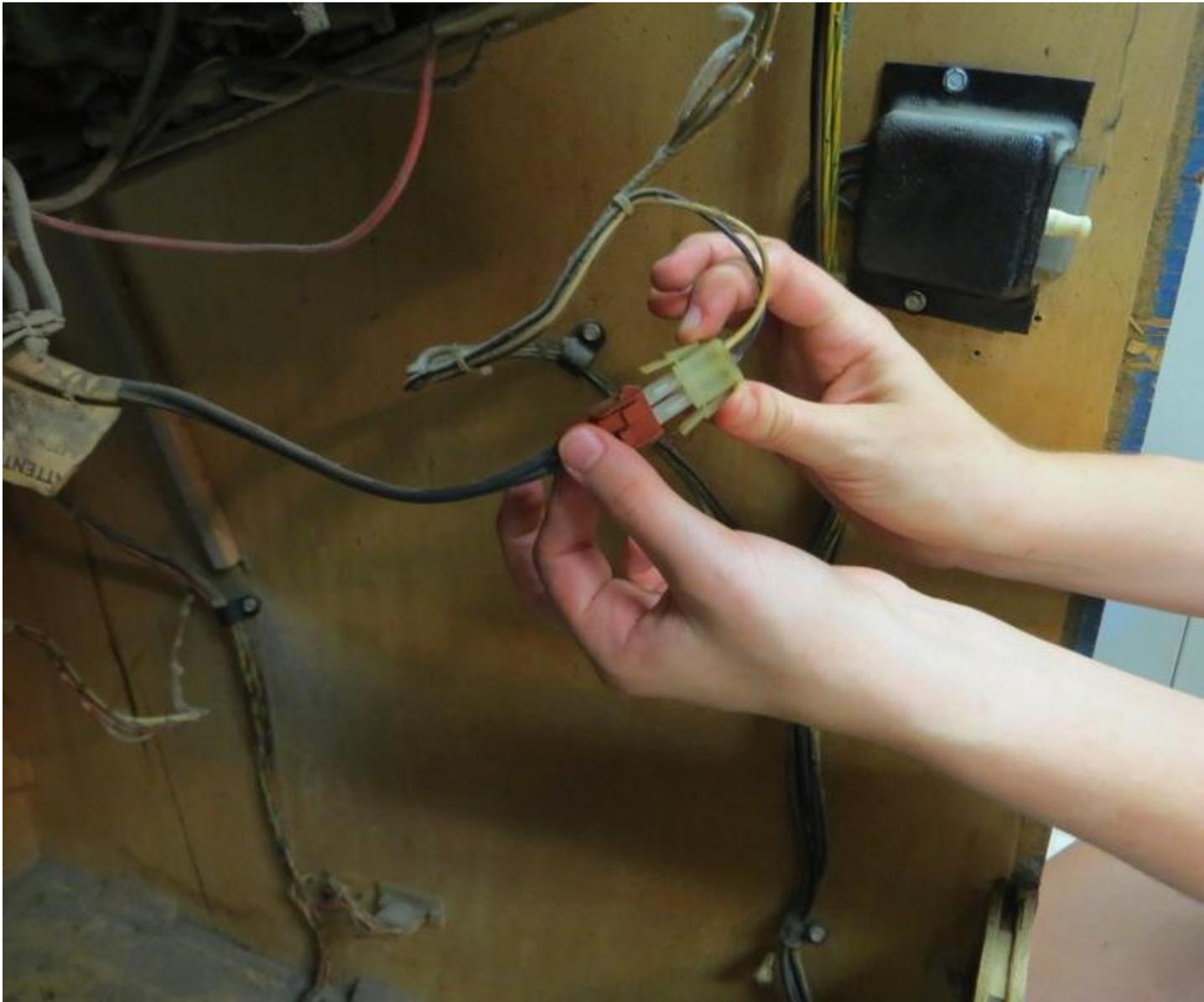
If your game still has the tinted plexiglas 'sunlight shield'
remove it
and set it aside. We won't be reinstalling it.



If the black plastic monitor shroud is held in with screws, remove them.



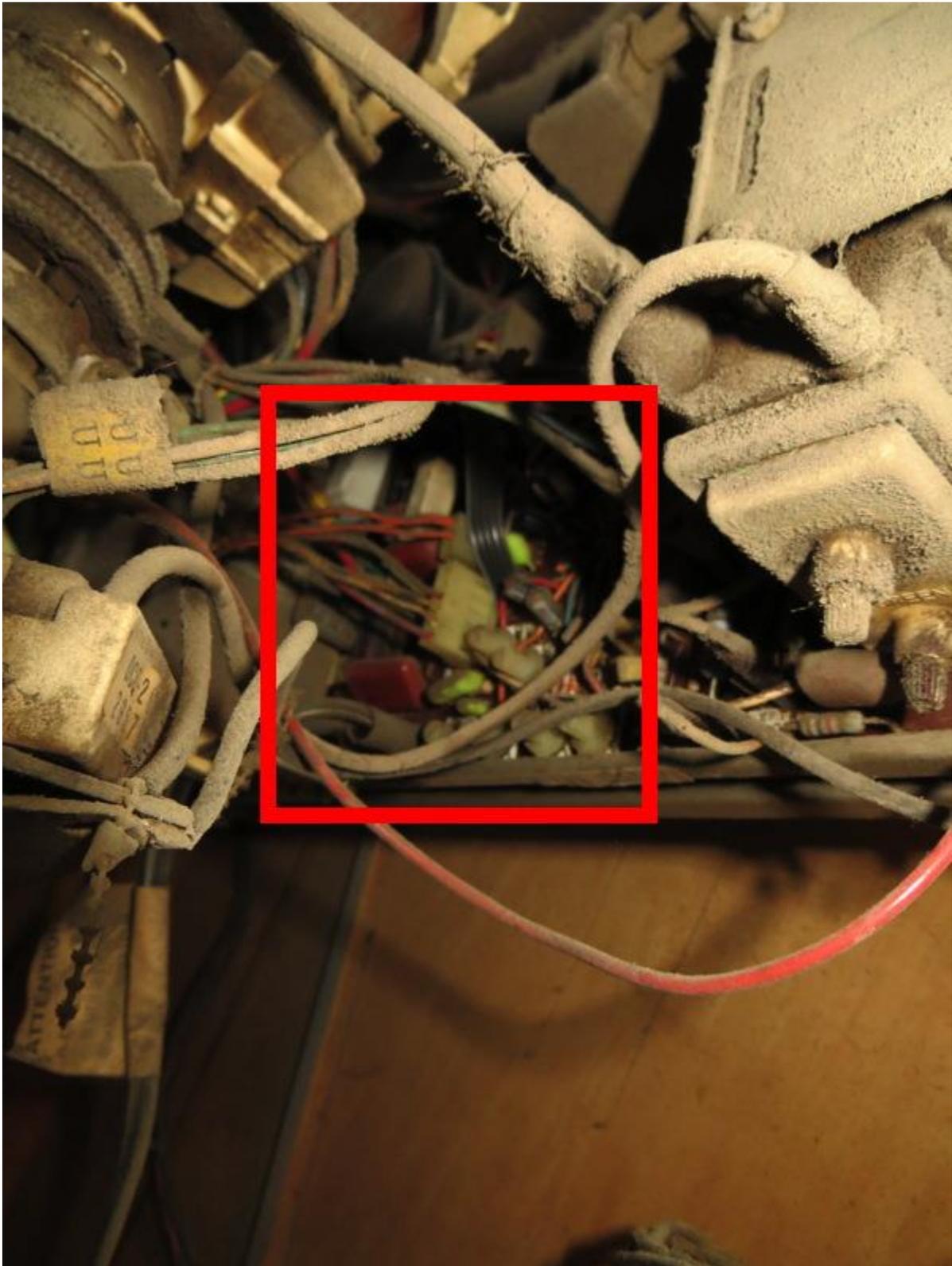
Remove the shroud and set it aside. We won't be reinstalling it either.



Locate the two pin power connector coming from the old monitor.

Pinch the two wings to release, and pull to separate the two halves.

Pull by the plastic connectors, not by the wires.



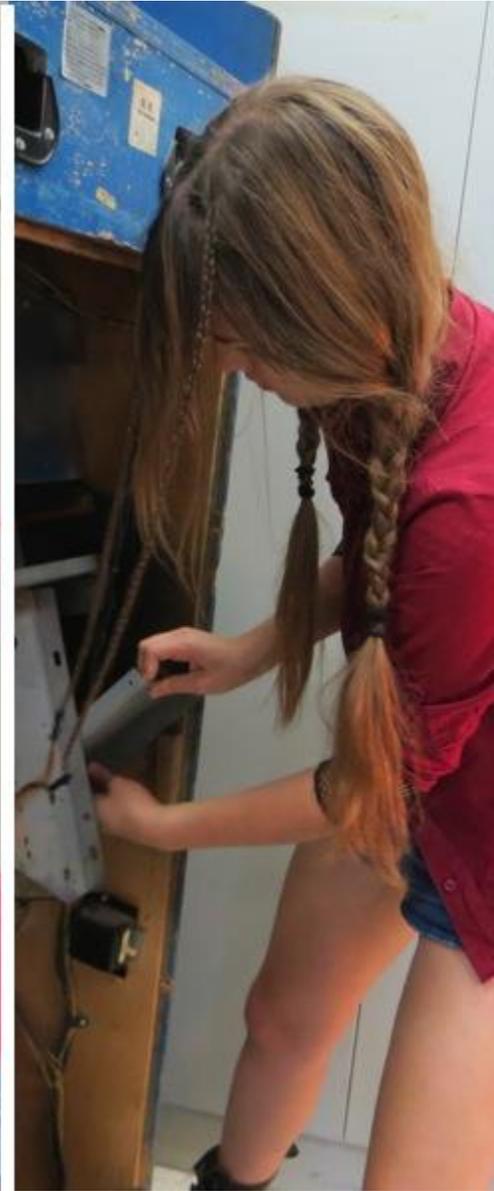
Locate the signal connectors on the old monitor board.

Those shown here are typical; a 6 pin and a 3 pin. Unplug both connectors.

If your old monitor only has the six pin, don't worry. All will be revealed [HERE](#)



Here Mary is showing us the 6 pin and the 3 pin signal connectors.



If your cabinet has a bracket securing the bottom of the old monitor to the wall, unscrew it and remove it. More scrap metal.



Don't allow yourself to be distracted!



Grab your nut driver or socket set and remove the four corner bolts which are holding the monitor brackets to the cabinet.



The two bolts in the rear are easy to get two,

the two in the front you'll have to reach for.
Take a look around and make sure there's nothing else
connected from
the cabinet to the monitor that will keep you from removing it.



The old monitor with the brackets attached can weigh as much
as 50 LBS.

DON'T TRY TO REMOVE IT BY YOURSELF!

Get someone to help you as you slide the old monitor out.

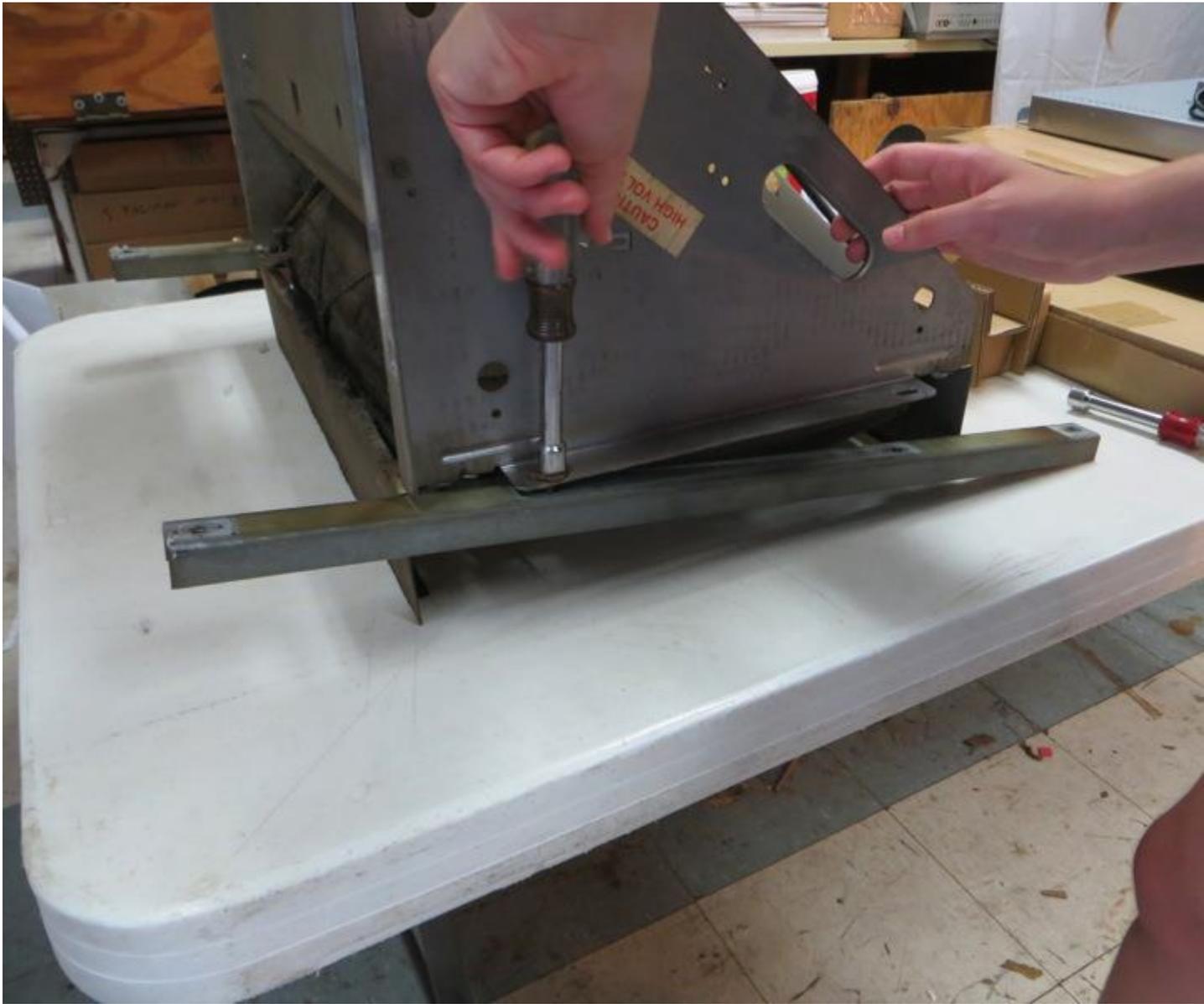
Be careful of the narrow end of the picture tube. It's extremely fragile.



Slide it out slowly and carefully. Don't rush this.



Set the old monitor face down on your work table and remove the four screws which are holding the two long mounting brackets to the monitor. We're going to re-use these.



Keep these two brackets.
Dispose of the remains of the old monitor properly as you
would any dead television set or computer monitor.



Carefully open the box containing your new LCD display.



Remove the new mounting brackets and set them aside.
The cardboard spacer under the brackets contains the new power
supply and cord.
Set them aside as well.



Carefully lift the new display out of the box and set it **FACE DOWN**.



The shipping box makes a good work surface to install the mounting brackets, as you will see shortly. You should now have:

- The 19" display screen
- The two mounting brackets

- The power supply module (the small black brick) and
 - The power cord for power supply
-



Now we're ready to install the new LCD monitor.
Start by placing one of the mounting brackets in place in the cabinet.

We're going to use this to measure the placement height of the new LCD.

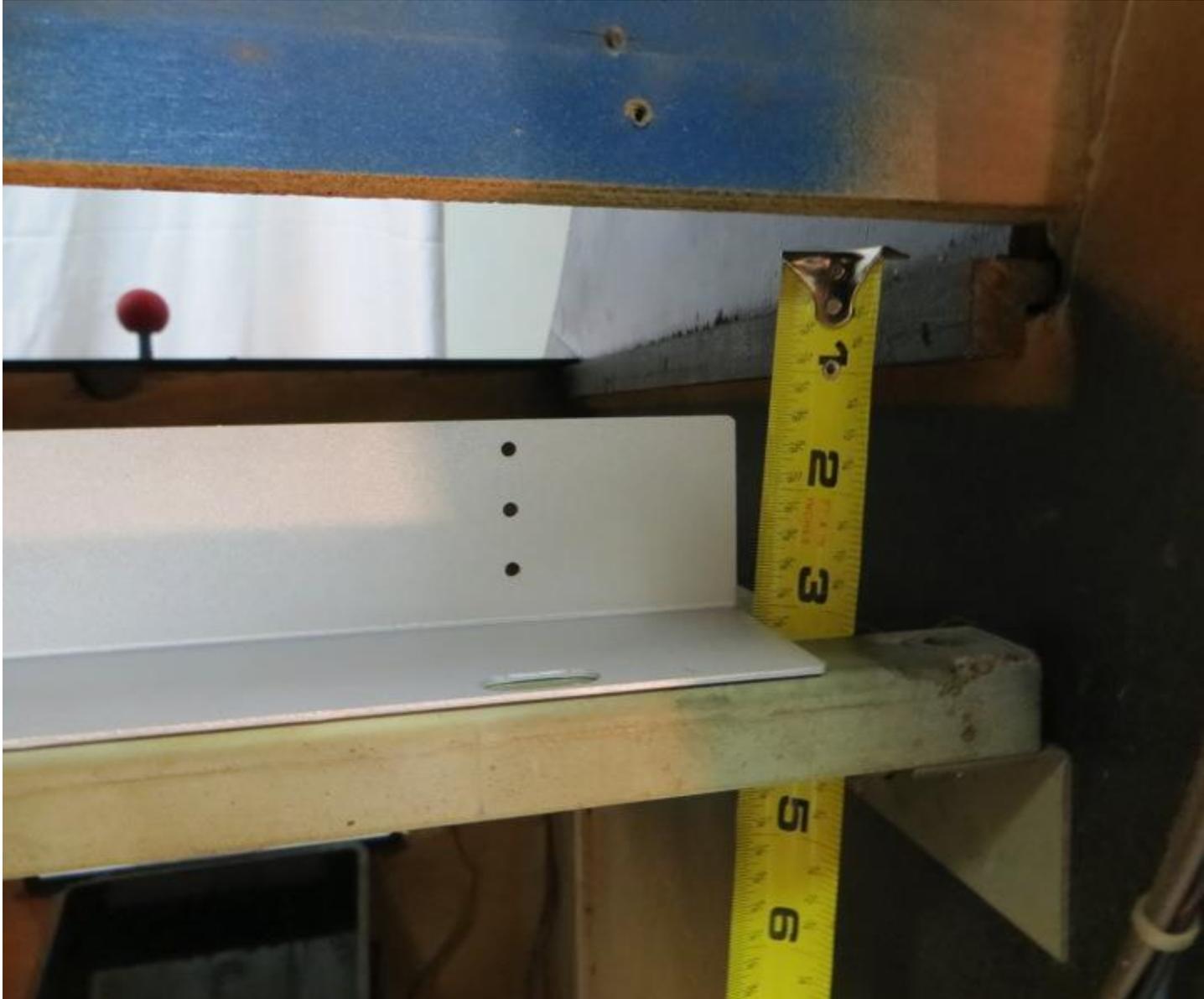


Place one of the new brackets on the old bracket and hold it in place.

NOTE: EVERY CABINET IS DIFFERENT.

At this point the height of the monitor is adjustable using the three rows of holes provided in the new brackets. You can also turn the new brackets over so they lower the monitor instead of raising it. The idea here is to mount the new LCD as close as

possible to the underside of the tempered glass monitor bezel,
eliminating the need for the black plastic shroud.



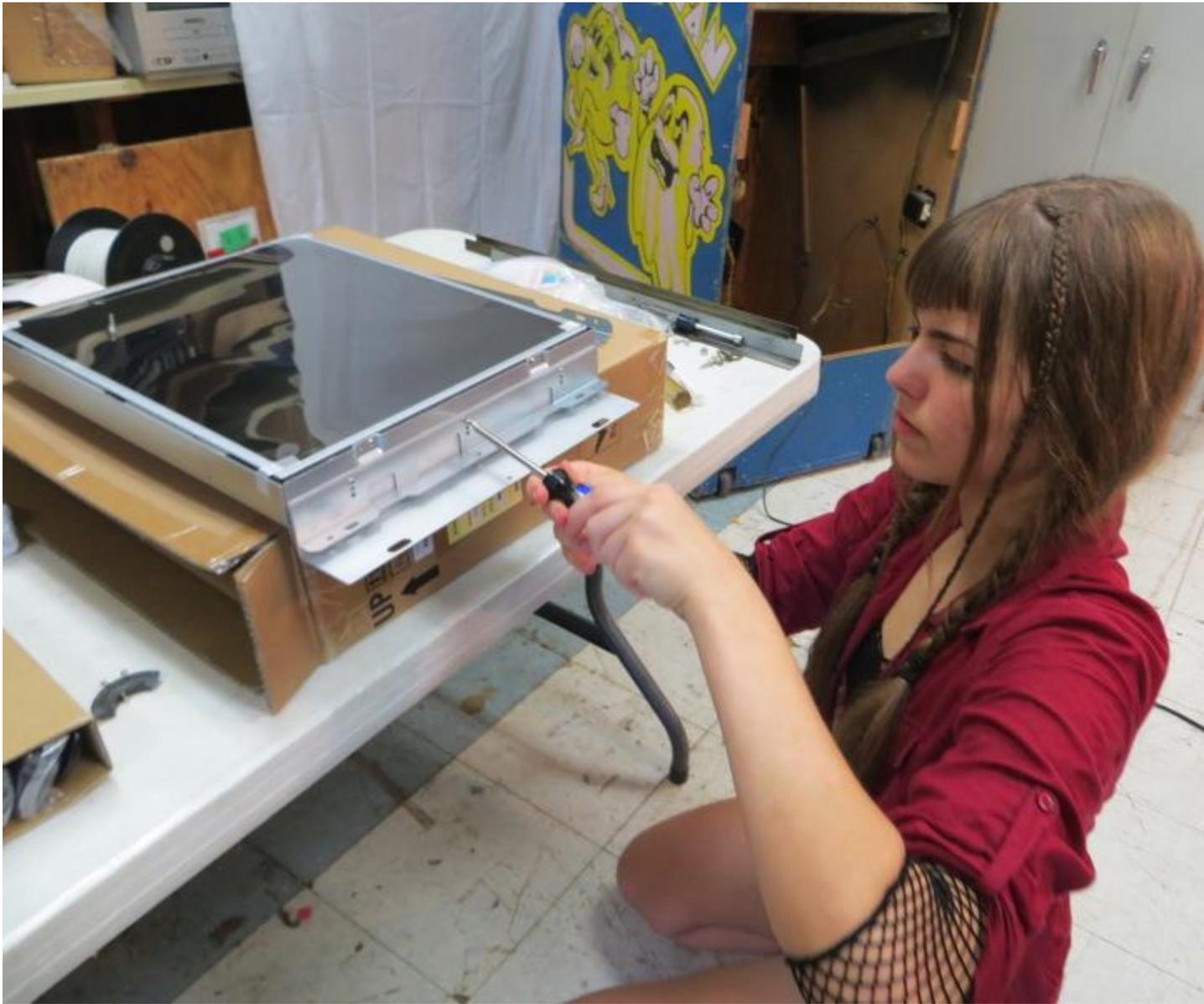
Take a tape measure or ruler and measure the distance from the
base
of the new bracket to the underside of the tempered glass
monitor bezel.
In our case it looks like 3 inches.



Turn the new LCD face up.
With a small phillips head screwdriver, remove the three screws
holding
the small bracket to the monitor. Don't lose the screws!
Place the small bracket on the large bracket and determine the
best row of
holes to use to get the proper height for your cabinet.



When we attach the brackets to the monitor, we get our 3 inches of lift!



Put the middle screw in first but don't tighten it.

MEASURE TWICE, SCREW ONCE!

Once you have confirmed that the height of your brackets is correct for your cabinet, attach all three mounting screws and tighten. Do the same on the other side.



Now turn the LCD display face down.



Remove AND SAVE the ty-wrap from the wire going to the adjustment board.



Unwind the wire to the adjustment board but don't yank on it.



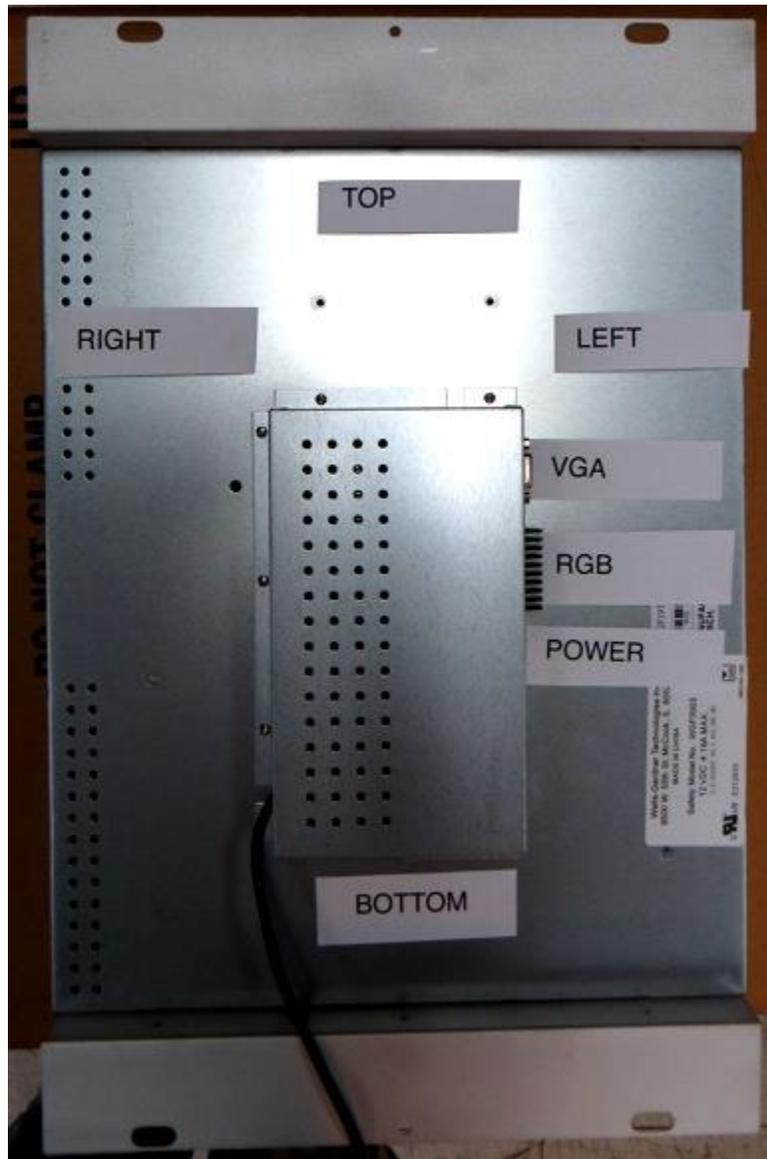
Now it's time to mount the original monitor brackets back into the cabinet.

NOTE: You may have to provide slightly longer bolts depending upon your cabinet.

As before, the two in the back are easy to get to.

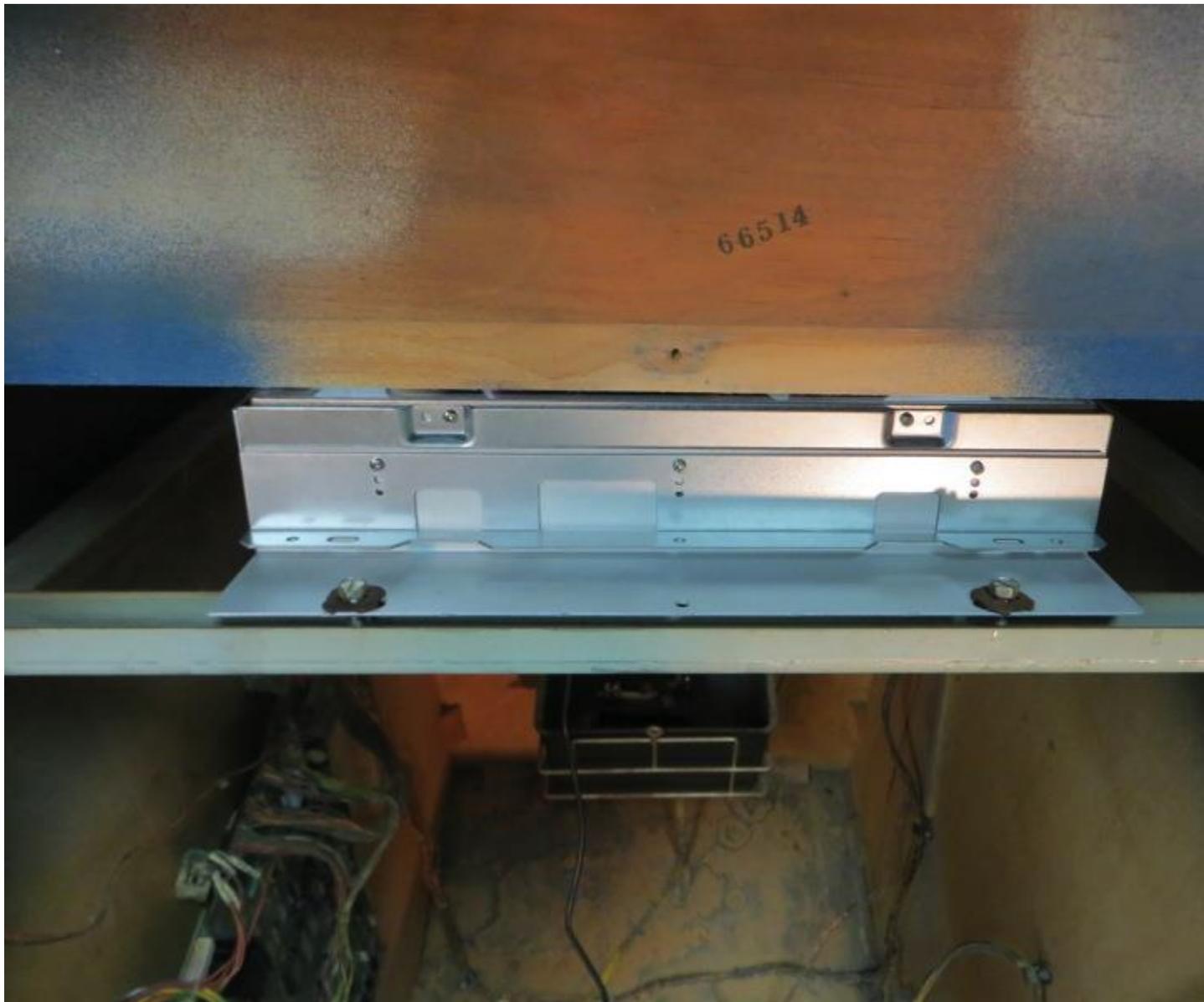


But now the two in the front are easy, too!



NOTE: The LEFT side of the display has the power and video plugs.

If you screw up, the picture will be upside down, but it only takes a minute to turn it around.



Put the new display in place and start the four mounting screws
finger tight.

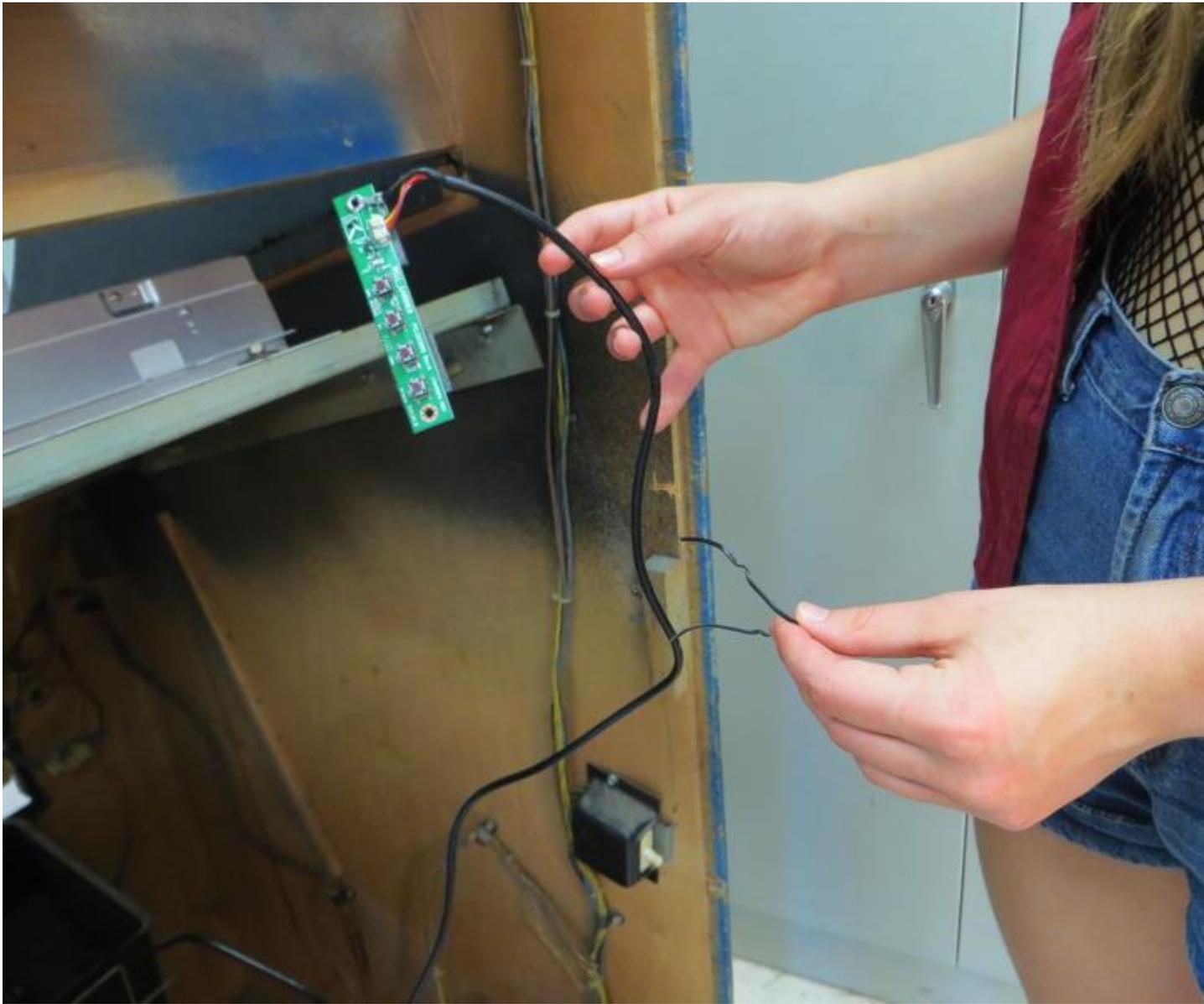
The brackets have slotted holes to allow for some sideways
adjustment.

Inspect the height of the monitor face in relation to where the
tempered glass bezel will sit
Be sure it's not sitting too high.

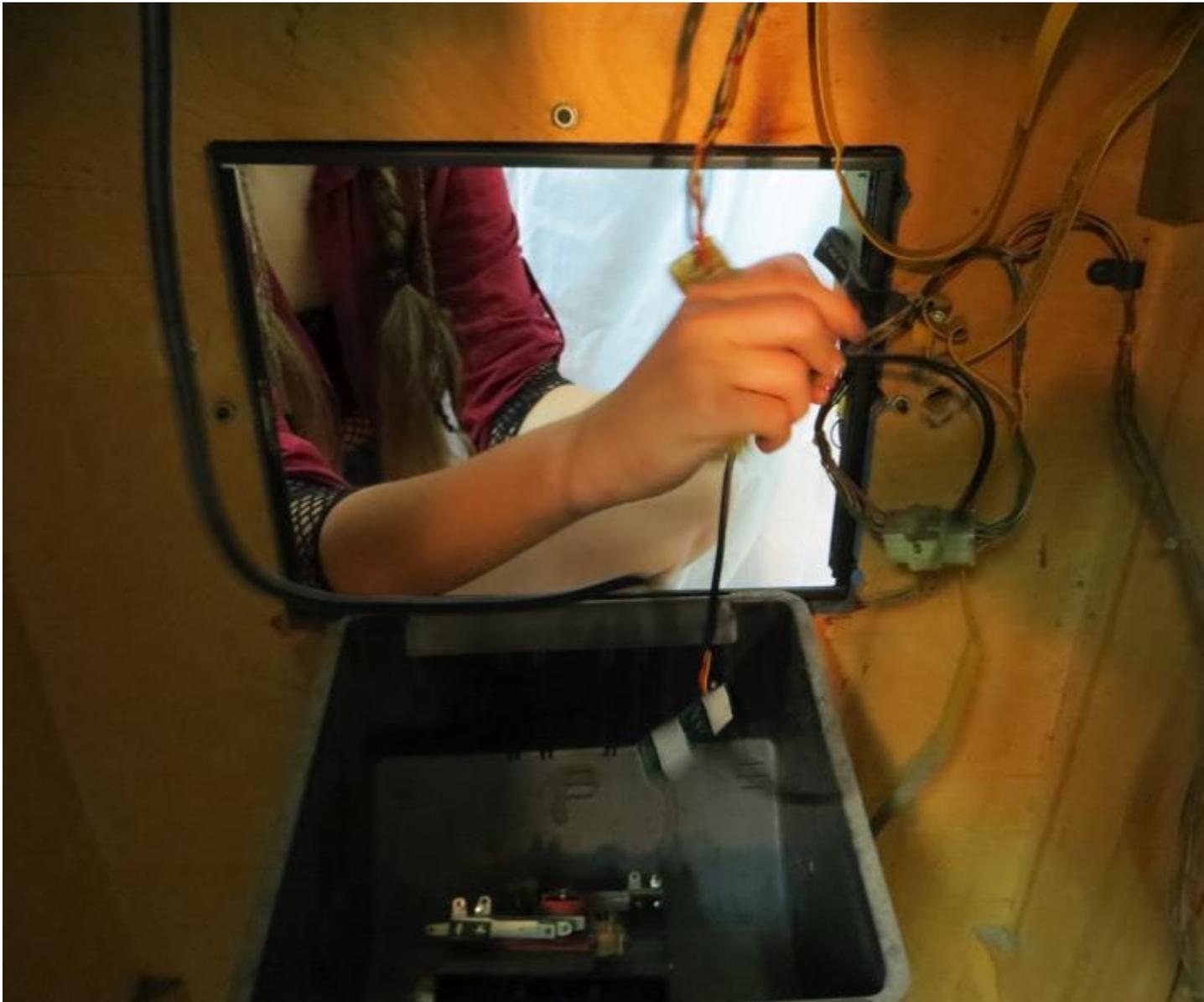
We wouldn't want to scratch the bezel when we're reinstalling it, right?



Inspect the monitor from the front to see that it is centered, square to the cabinet, and at the proper height. If it looks good, tighten the mounting screws.



Grab the ty-wrap and the adjustment board which is hanging down by the wire.



Pass the adjustment board forward and use the ty-wrap to attach it so that you will be able to access it through the coin door.



Grab the black power supply brick and unwind the long wire attached to it.



Plug the round barrel connector into the power input jack on the new LCD display.



Mary is concerned because the signal wires aren't long enough to reach the new monitor.

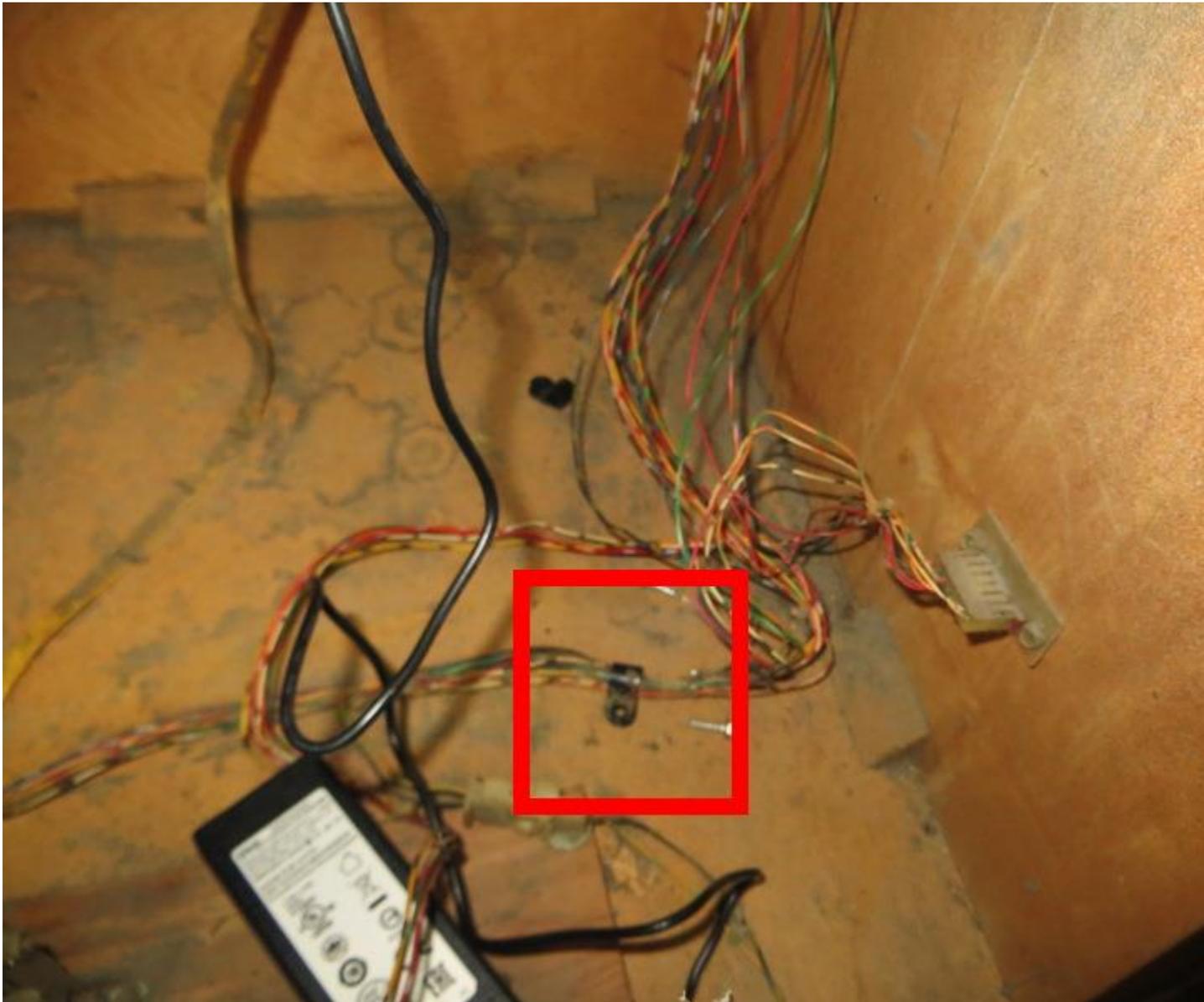
This is a common problem because the new LCD display is so much smaller than the old glass CRT display.



If you need to, gain some slack in the wires by undoing the wire bundle retainers from the cabinet.



Then you can **CAREFULLY** snip the wire ties holding the harness together.



The wire bundle will separate allowing you to gain some slack so the signal connectors will reach the monitor. If needed, undo an additional bundle retainer.

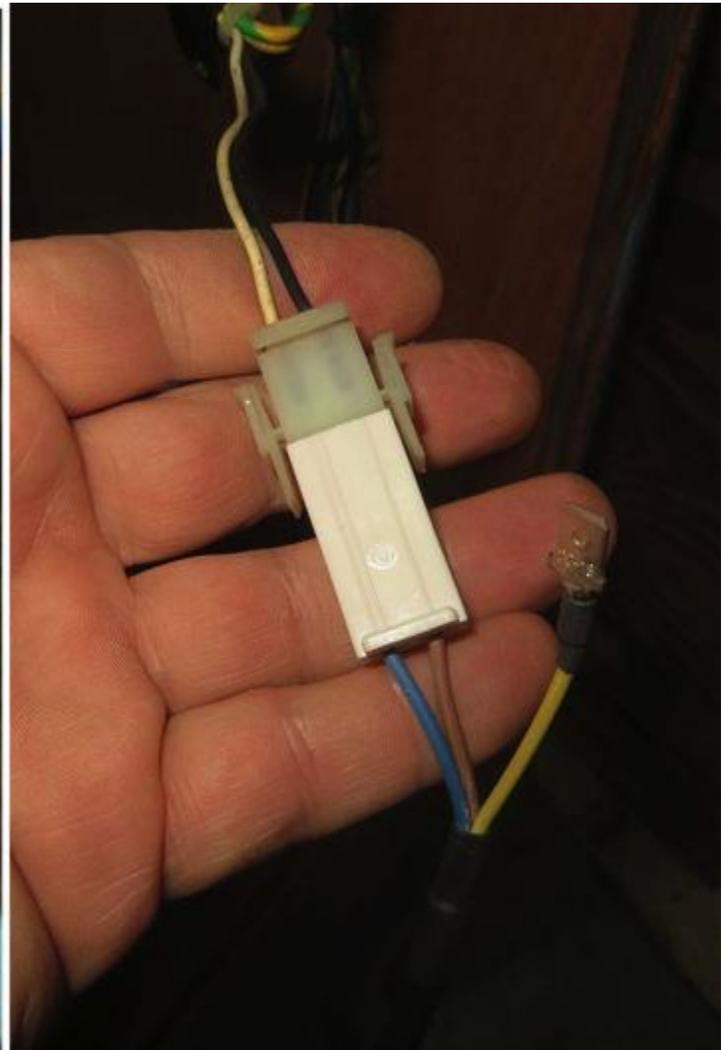
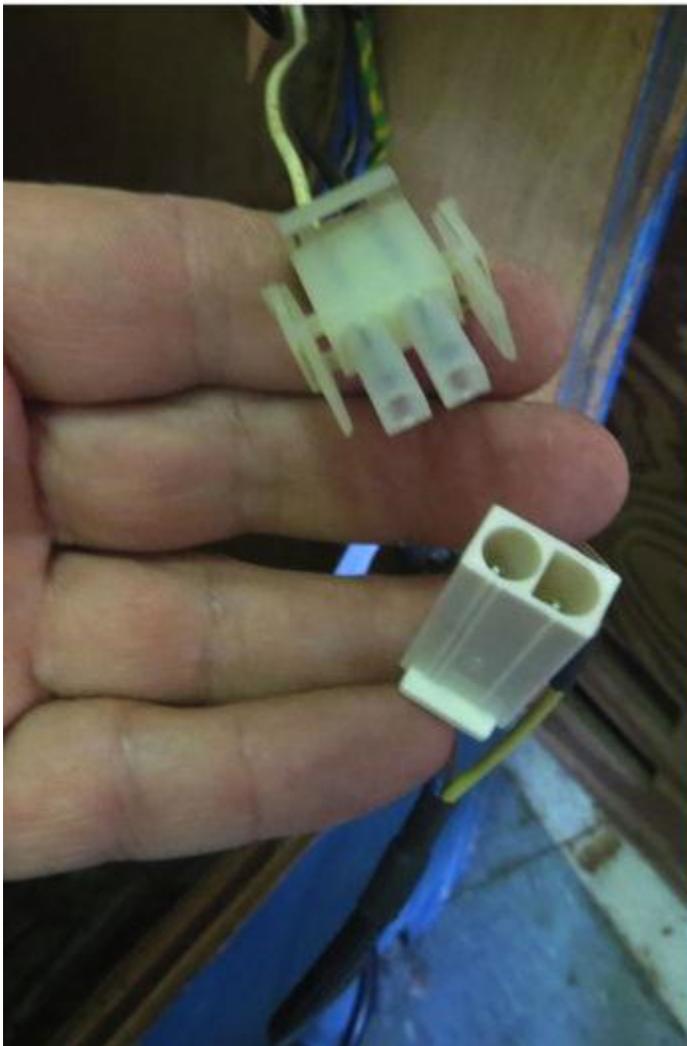


Now they reach!



Here is a close up of the 6 and 3 pin signal connectors plugged into the new LCD display.

NOTE: There is a gap between the two connectors. They should NOT be touching each other.



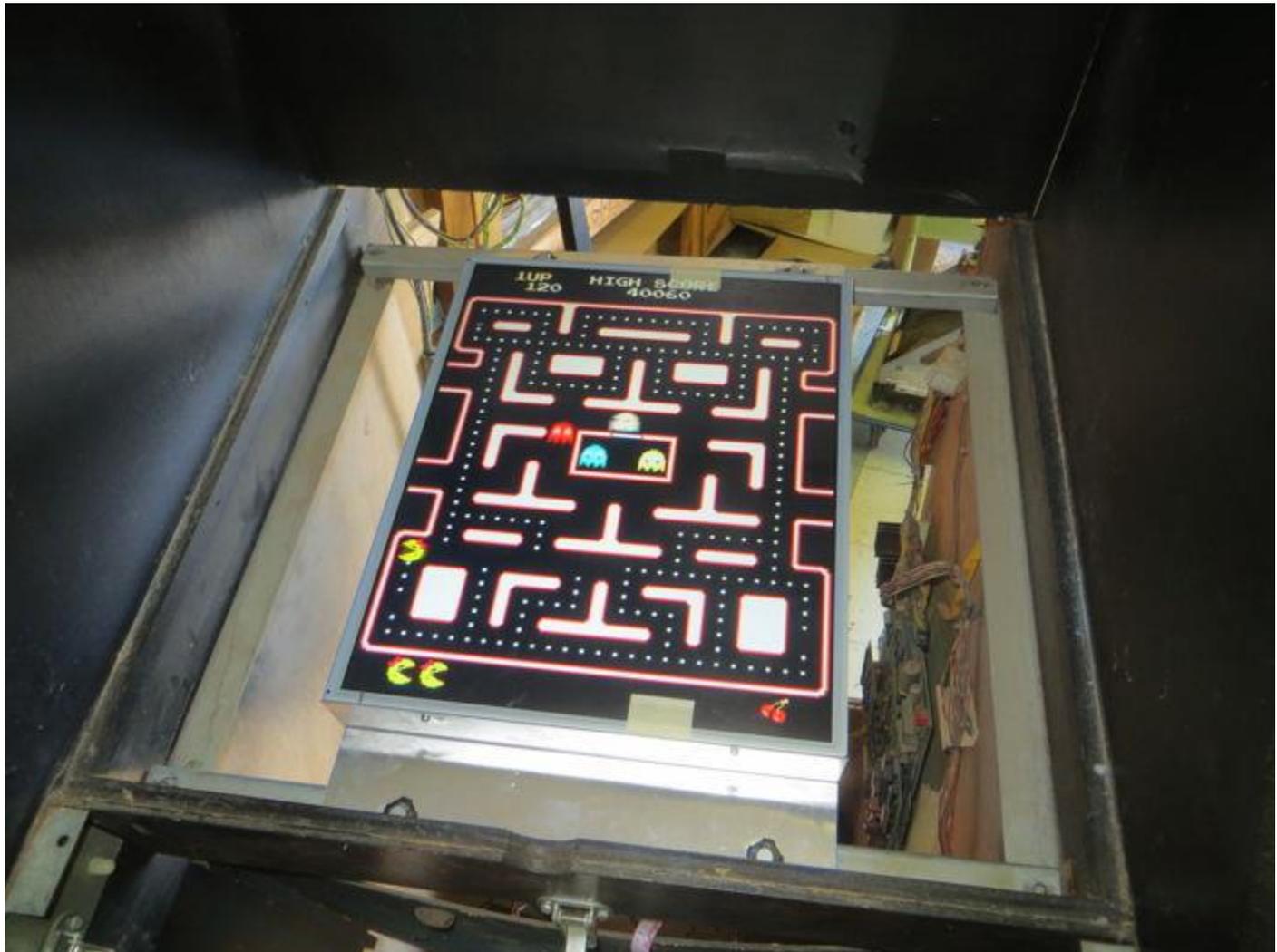
Locate the two pin 110 volt power plug and plug it into the power supply harness we provide. The plug may not match the style in your cabinet but it will plug in. It can go either way, it does not matter which of the two wires goes to which. The other end is a standard computer style power plug that goes into the power supply we provided. Attach the power supply to the inside wall somewhere that it won't get into trouble, so that it isn't floating around inside

the
cabinet and it's not sitting on top of the transformers on the
floor.



Connect the ground blade to the ground wire using the clip

that was attached to the old monitor chassis. You can also just snip the blade off and twist the wire to the cabinet ground braid in a convenient place.



Take one last look around to make sure that there's no loose screws, tools fallen in the bottom of the cabinet or anything else that might short out or otherwise embarrass you. OK? Go ahead and power up the cabinet. It should look something like this!



Peel the clear plastic protective sheet off the face of the LCD. Replace the tempered glass monitor bezel and retaining bracket, but do not install the black plastic shroud or the tinted plexiglass sunlight shield as they are no longer needed. Replace the control panel and you're good to go!



If you have any problems just give us a call and we'll be happy to talk you through it.
