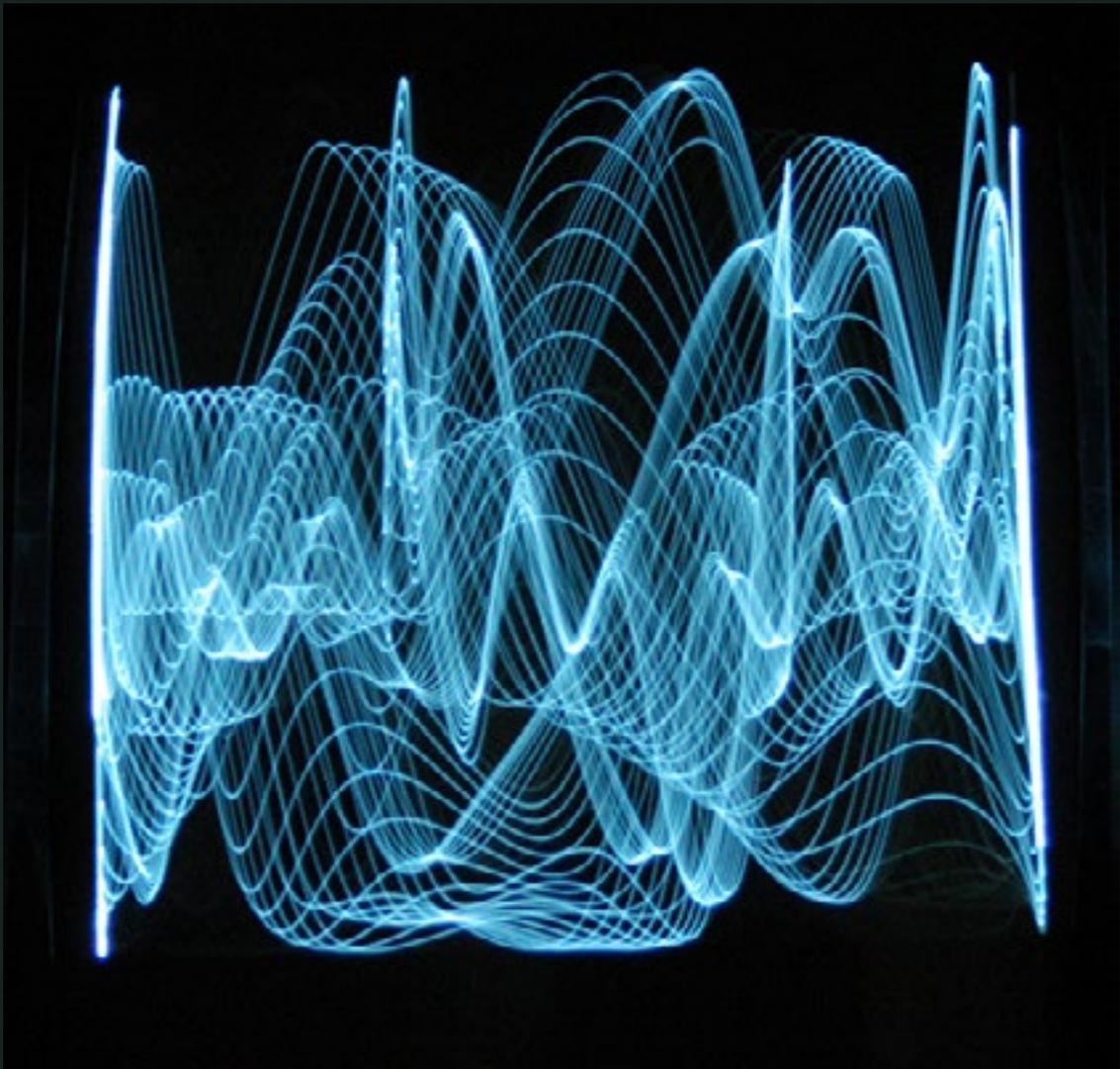


Vectrex

minijack-input mod



Disclaimer: I take no responsibility for any damage to the Vectrex or your own person, whilst performing this modification.

This unit can contain dangerous/heart-stopping amounts of electricity.

BEFORE EMBARKING ON THIS MODIFICATION, ENSURE THE VECTREX UNIT IS DISCONNECTED FROM ANY POWER SOURCE!

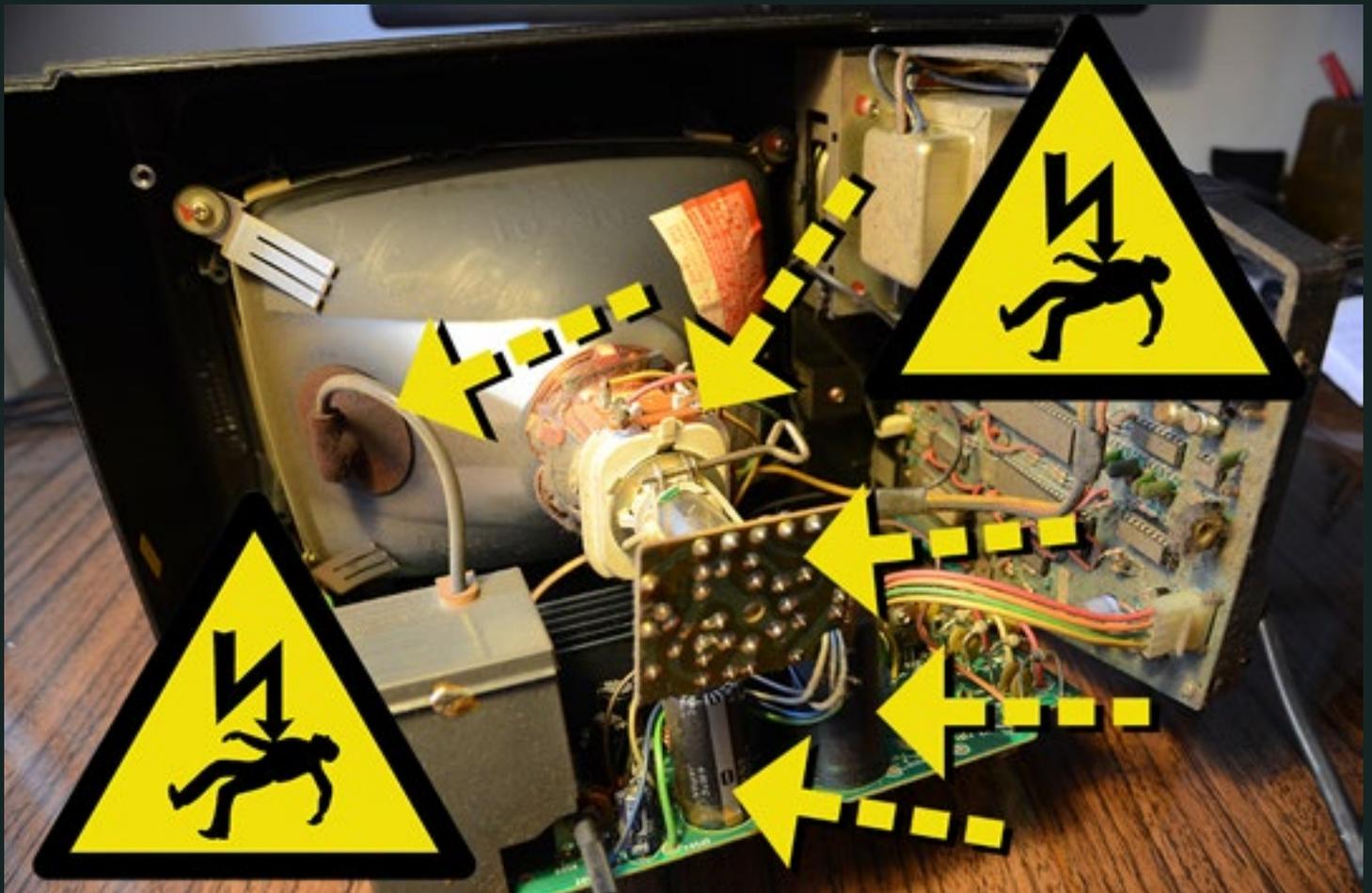


**Danger
of death**

Before you attempt this modification, read through this guide and make sure you know how to discharge your Vectrex safely. It is advisable to leave your Vectrex unplugged for a week before even opening it up, and follow a CRT discharge guide.

This image highlights the DANGER areas within the Vectrex. The tube, anode and capacitors can contain heart-stopping voltages, AVOID touching these parts of the unit until you are confident you have fully discharged the CRT.

IF YOU ARE UNSURE OF FOLLOWING THIS PROCEDURE STOP NOW AND SEEK PROFESSIONAL ADVICE.



To begin, put the Vectrex face down and unscrew 5 screws (marked in red) on the rear cover of unit (the one on the bottom in the centre by the power cord is long and annoying to lift out...).

Once undone, you can now lift off the rear cover - notice the BRIGHTNESS knob (marked green) that sticks through the case, you'll need to be aware of this knob when you put the cover back on.



Remember this image from earlier?!

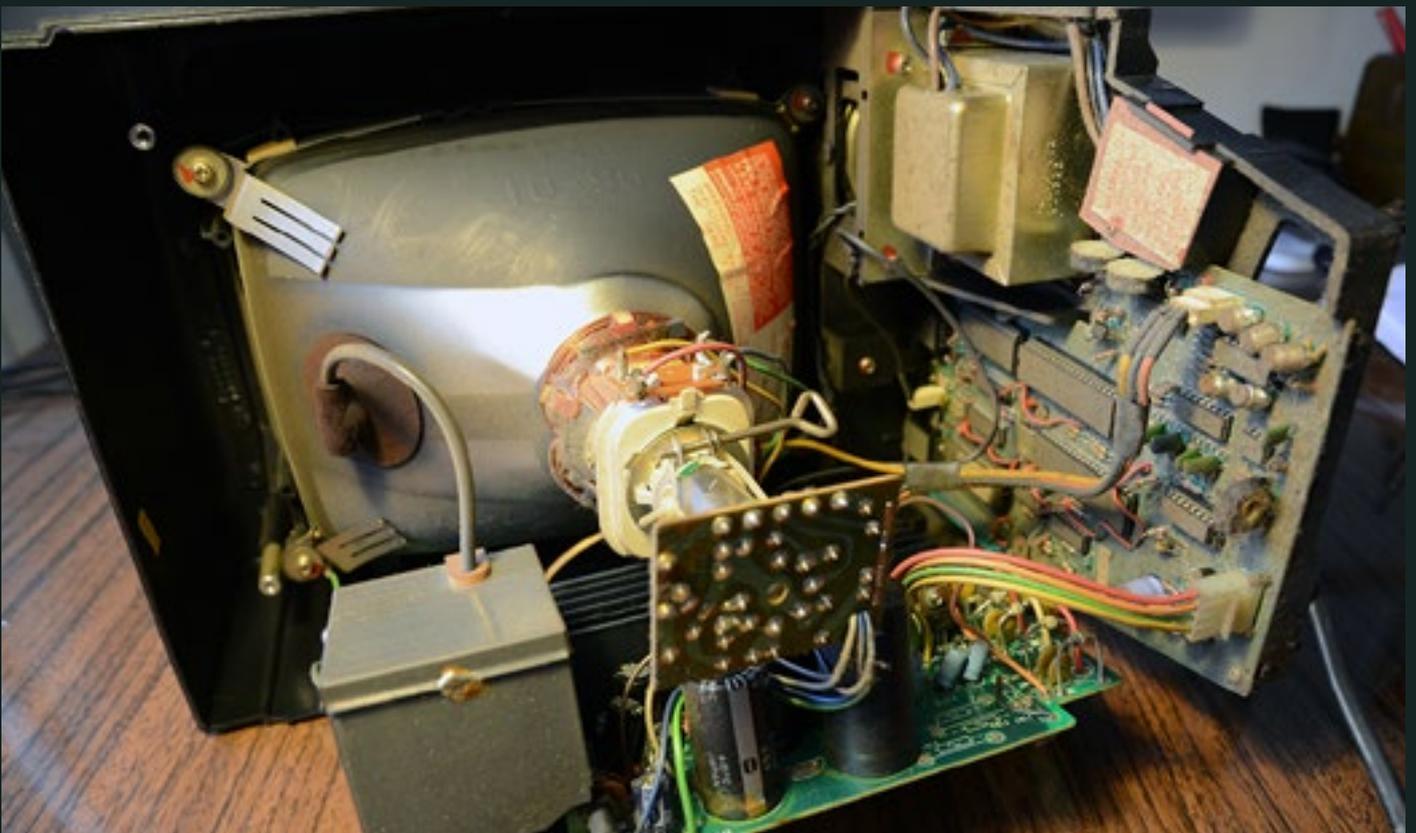
This image highlights the DANGER areas within the Vectrex.

The tube, anode and capacitors can contain heart-stopping voltages, AVOID touching these parts of the unit until you are confident you have fully discharged the CRT.

IF YOU ARE UNSURE OF FOLLOWING THIS PROCEDURE STOP NOW AND SEEK PROFESSIONAL ADVICE.



Turn your Vectrex on to its side (as the picture shows) and have a look at all the crap that has accumulated in there over the years.



Please follow a CRT discharging procedure such as one found here:

https://www.youtube.com/watch?v=XFmKqZji_XM

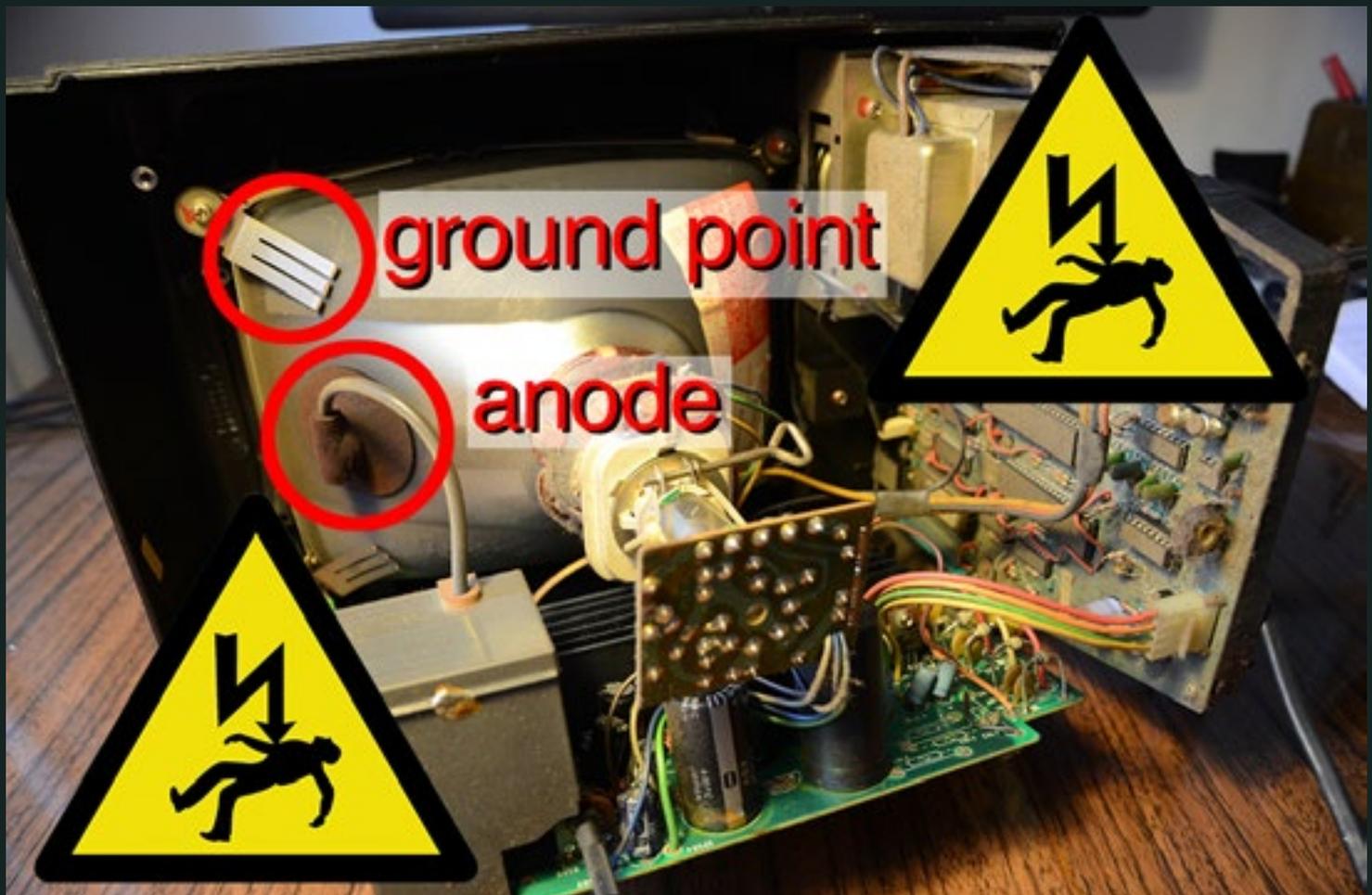
or here

http://www.playvectrex.com/shoptalk/discharge/discharge_f.htm

To discharge the CRT anode, you need a flat headed screw driver with an insulated handle, and wire with alligator clips on both ends.

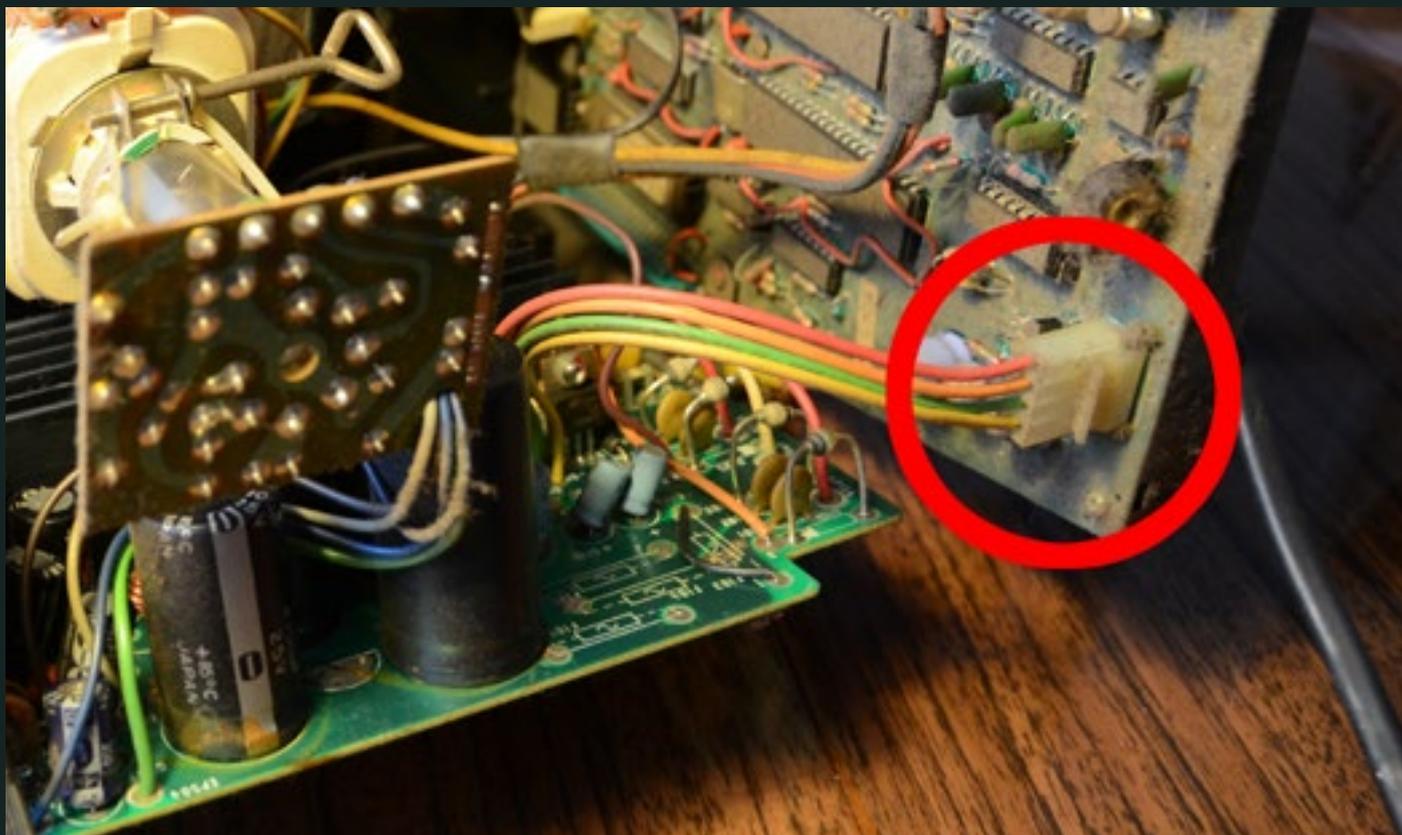
1#. Connect one clip to the screw driver, the other to a suitable ground point on the unit (see links above).

2#. Push the end of the screw driver under the suction cup on the CRT to touch the anode. Make contact a few times until you don't hear the crack of a spark/discharge anymore.

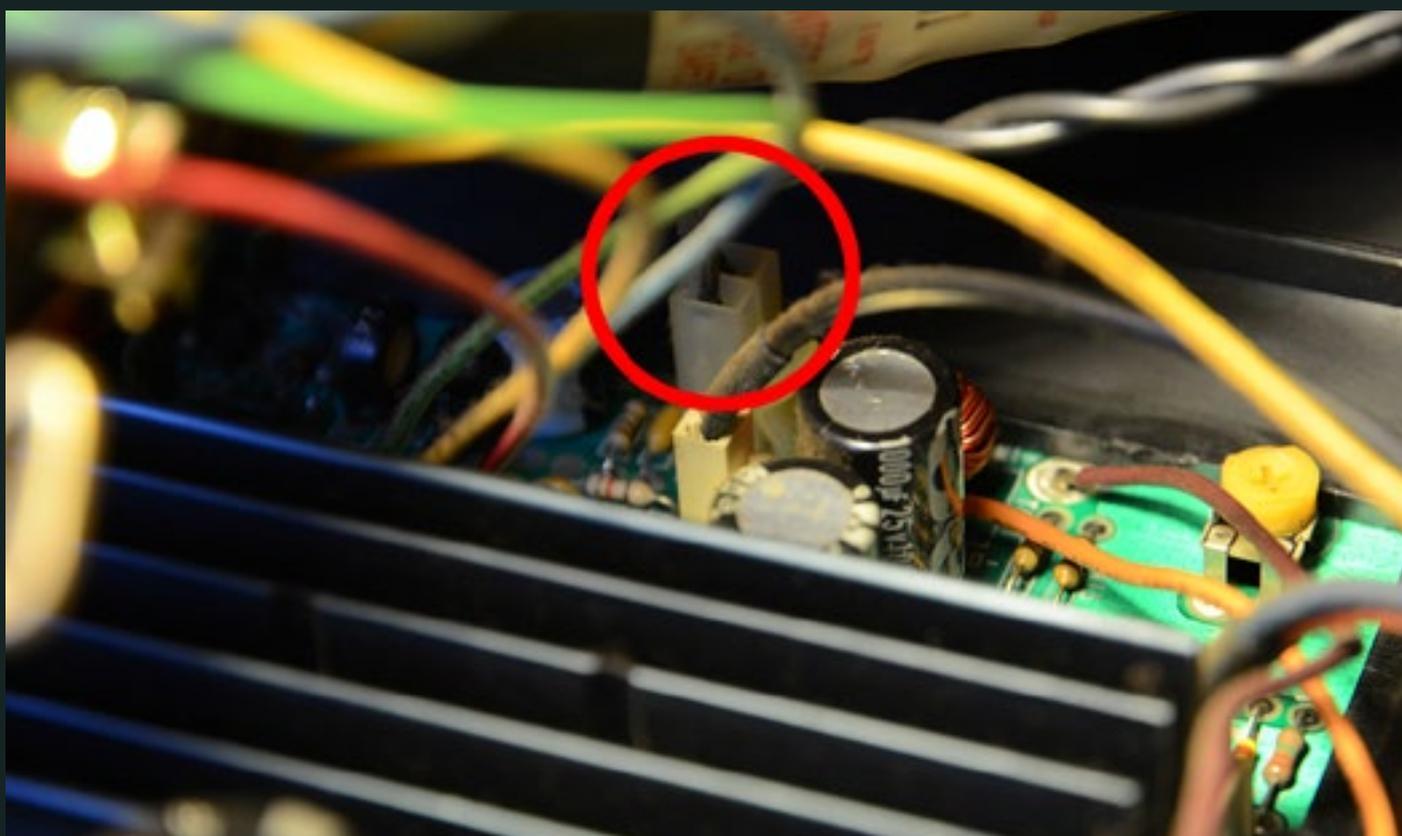


Now you Vectrex should be safe for you to pull out four PCB connectors:

The 4 pin game board connector
(if you don't want the game to start up every time you switch the unit on).

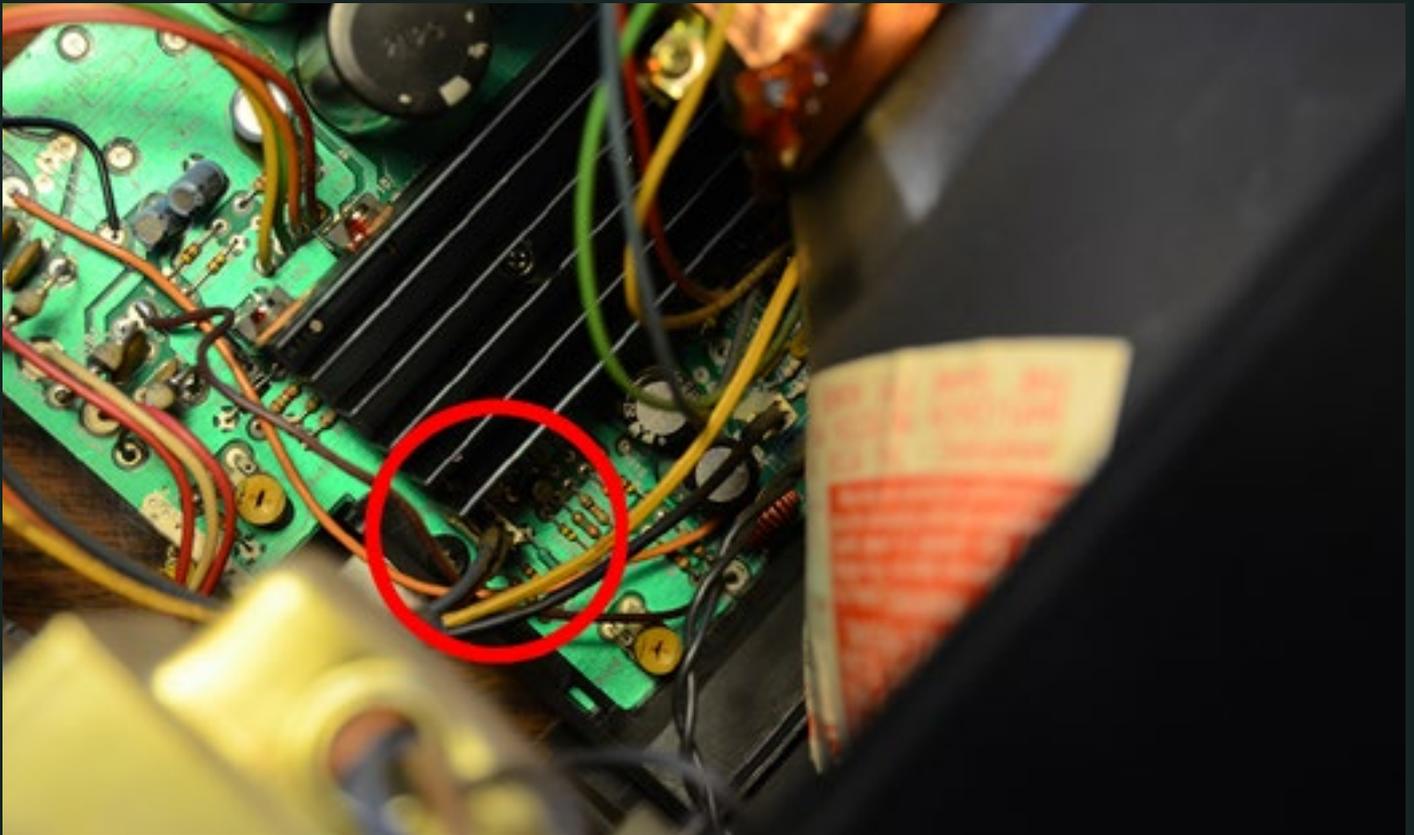


The (larger one at the rear) 2 pin speaker connector
(if you don't want to hear the speaker-buzz or game music).

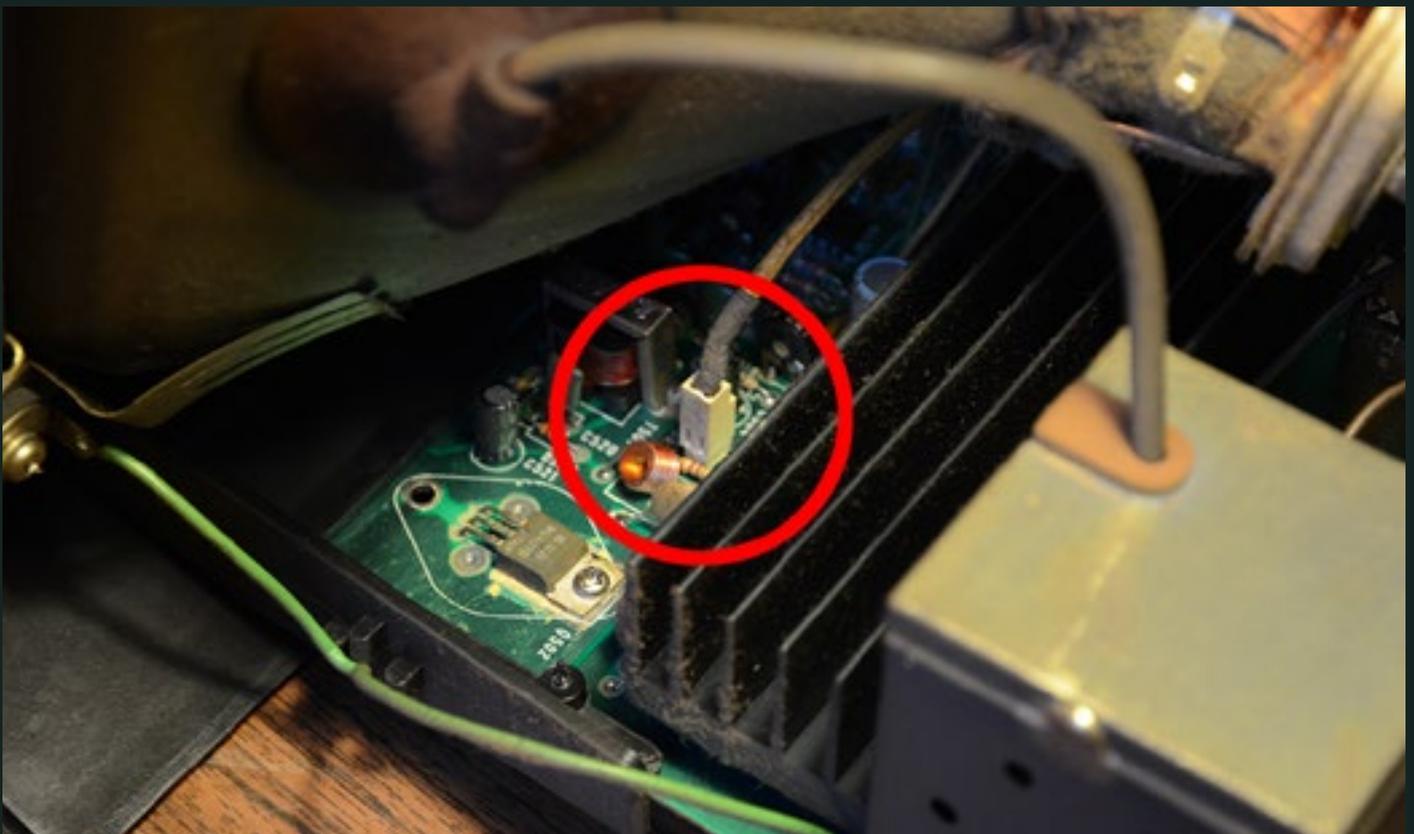


These two connectors are a bit fiddly to pull out!
Try not to touch anything else.

The 4 pin X/Y connector behind the large black heat-sink.
- This is being swapped -



The 2 pin Z connector behind the large black heat-sink.
- This is being swapped too -



These are the connectors you've pulled out, coil them up and try and keep them off other components inside.



Get your replacement cables, headers and jacks sorted out.

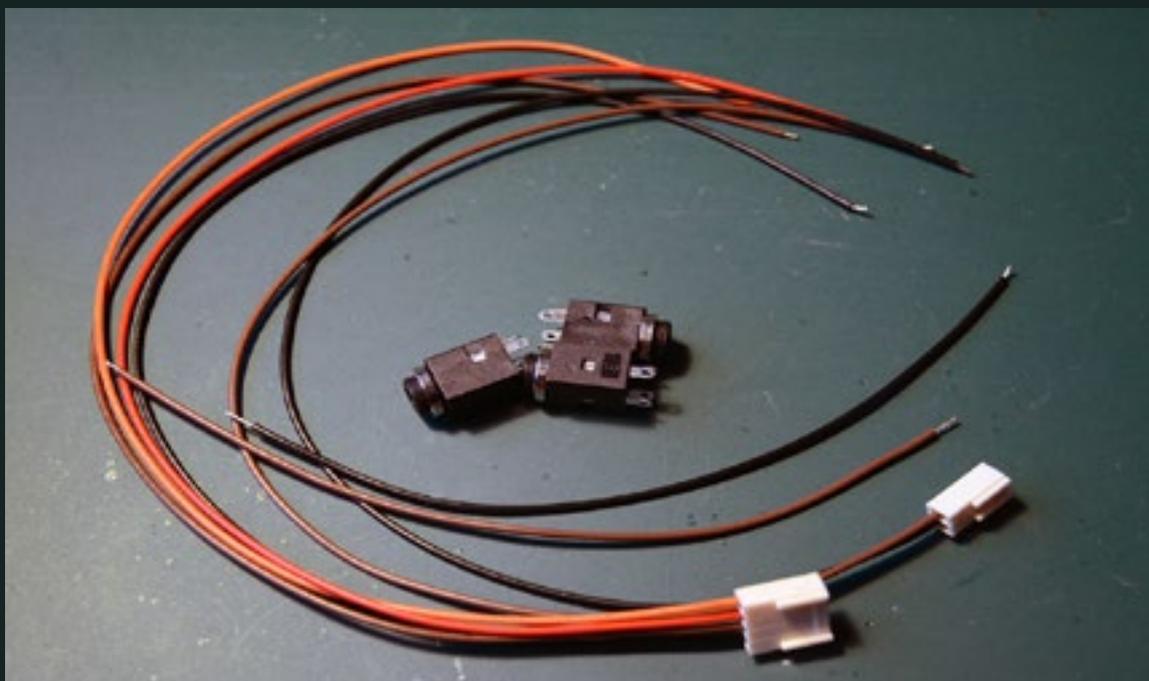
These are the cables, Molex headers and jacks I use for my mod.

Cables & headers came from here:

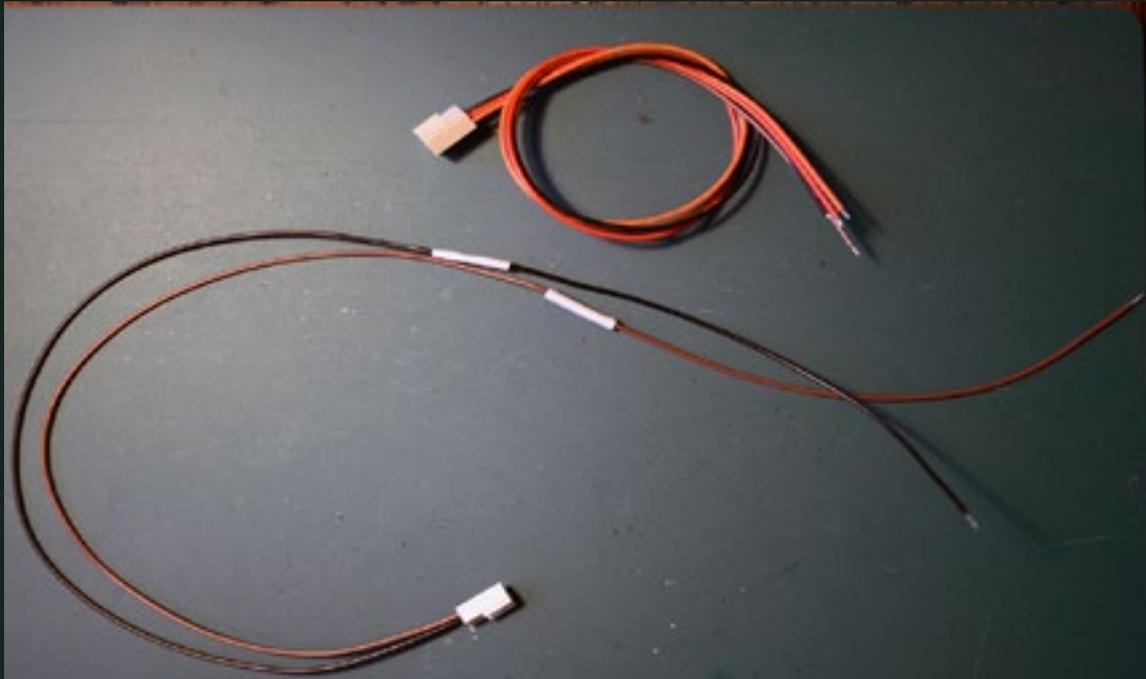
<http://www.musikding.de/PCB-Connectors>

Jack sockets came from here:

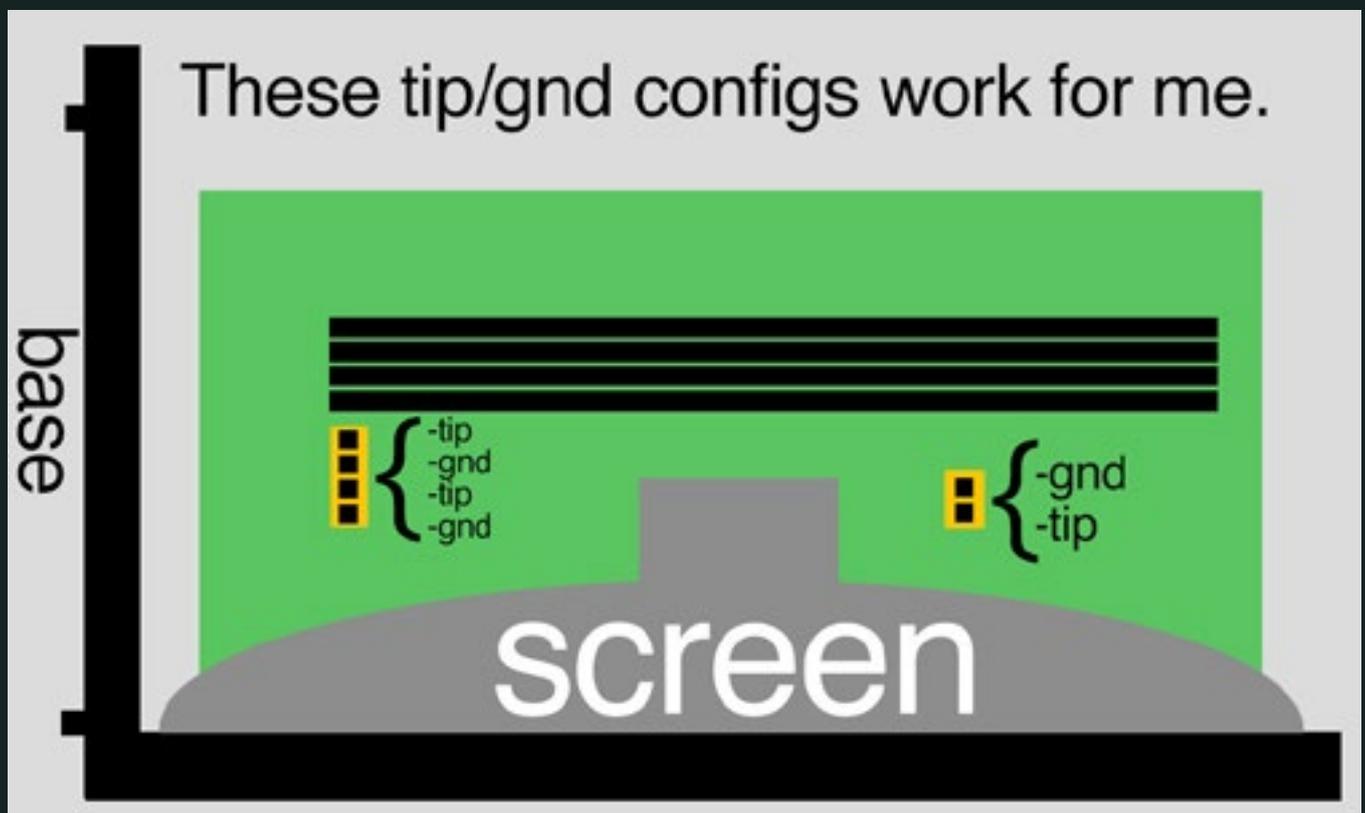
<http://www.thonk.co.uk/shop/pj3410-3-5mm-jack-sockets-x50/>



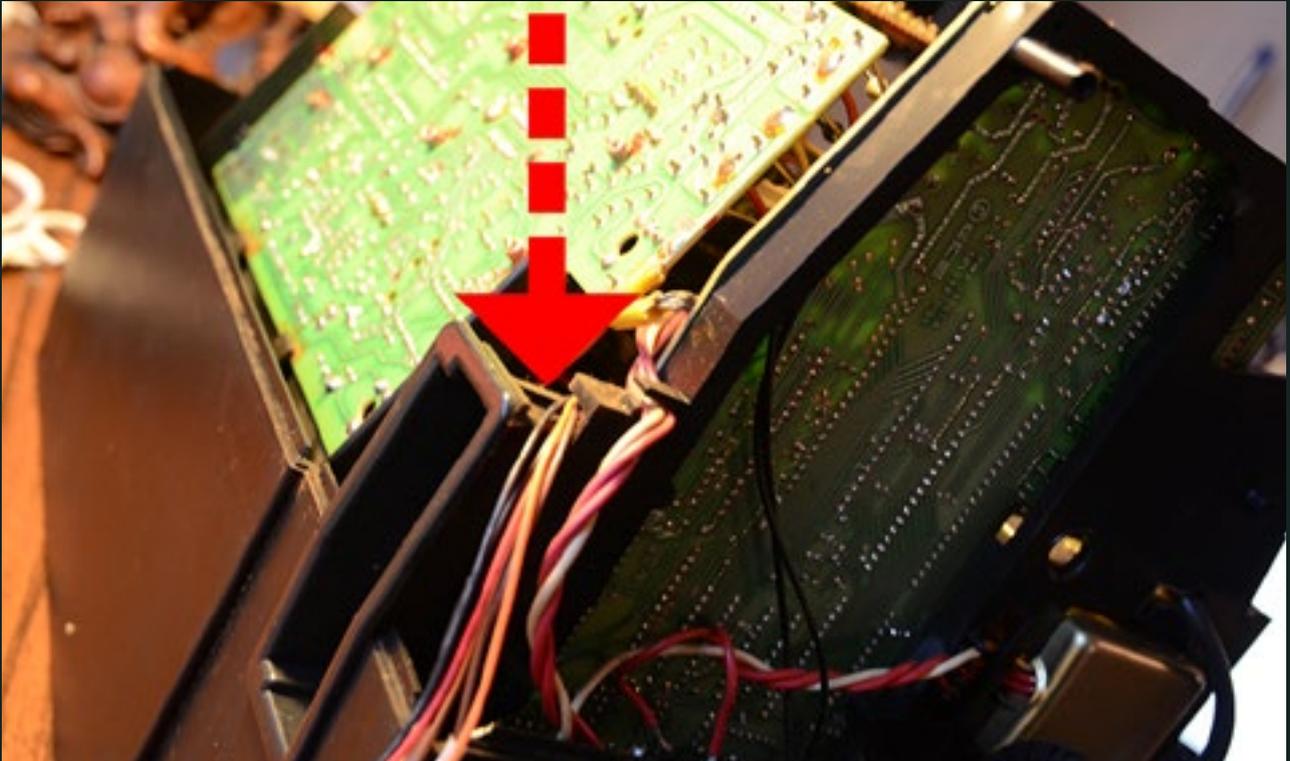
The Z cable needs to be about 6 inches longer than the X/Y if you want to poke the cables out of the bottom of the case.



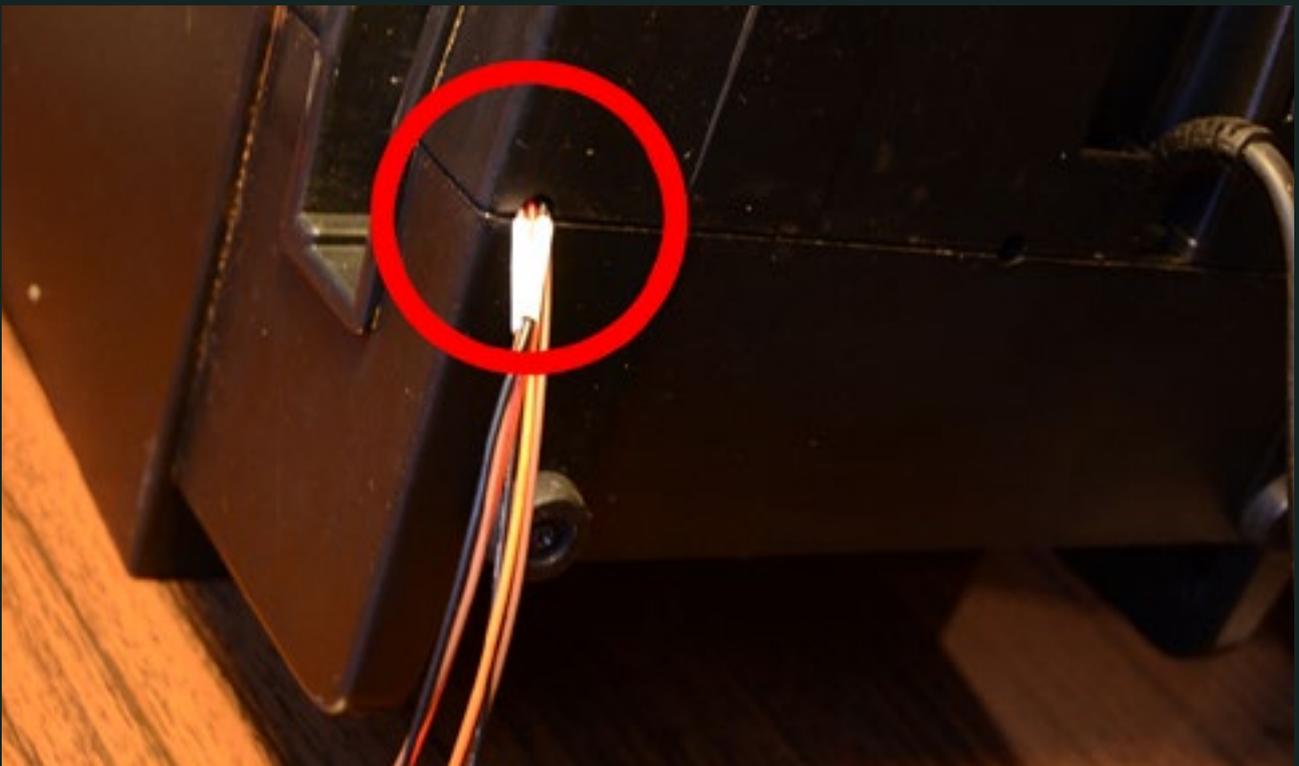
This image shows you the tip and ground configurations you should need to get your cables and headers right for inputting audio signals.



Fit the cables in to their relevant positions: Z = 2 pin, X/Y = 4 pin. Then feed the cables through the gap at the bottom of the big board. Now position the cables so they can be lined up with the round hole at the bottom of the case.



Replace the rear cover carefully, make sure the wires are not caught anywhere - I wiggle them about as the cover goes down.
Note: Make sure you line things up right and the BRIGHTNESS knob should pop through its hole again.



Test your modified Vectrex out with some audio signals.
My set-up uses Thonk/Fonitonik CASCADE and Synovatron CVTools
eurorack modules to modify the three input signals.
This allows the X, Y and Z inputs to be scaled to fill the screen and
positioned centrally

**And, if it's not working properly, remember to follow the CRT
discharge procedure before you start pulling cables out again!!!**

Huge thanks to Liz Larsen / LZX for the original info and inspiration:
<http://www.muffwiggler.com/forum/viewtopic.php?t=69637>

This doc repurposes info from the above thread and following pdf:
<http://www.muffwiggler.com/forum/viewtopic.php?t=69637>
<http://www.zektor.com/zvg/downloads/vectrex.pdf>

Say thanks - please share what you make with this info.

sync24/@allthesixes666/halfofmeis333
<http://tinyurl.com/brightonmodularmeet>
Andrew Duff, December 2014
allthesixes666@gmail.com
a.duff@sussex.ac.uk