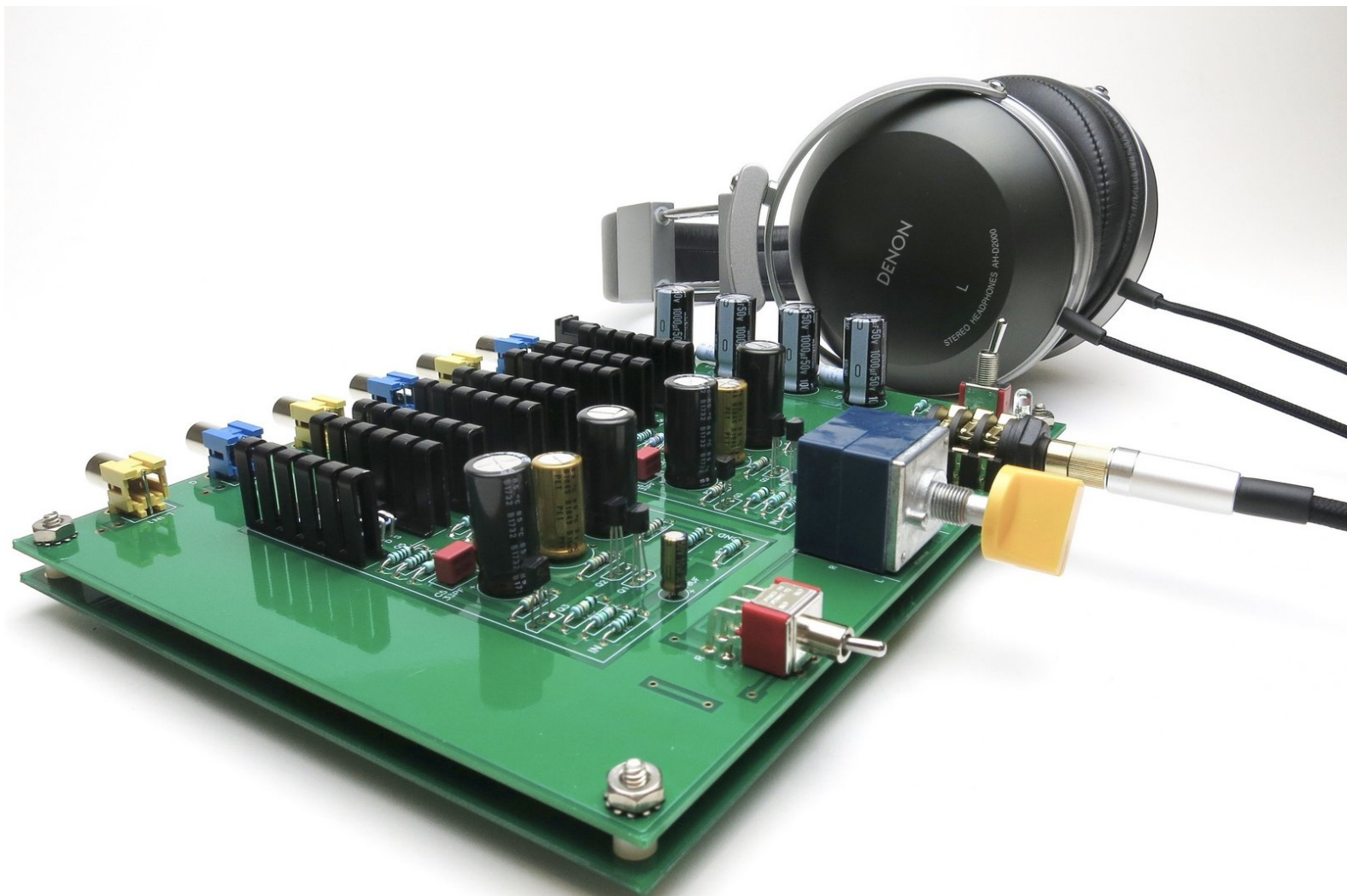


# diyAudio Guides

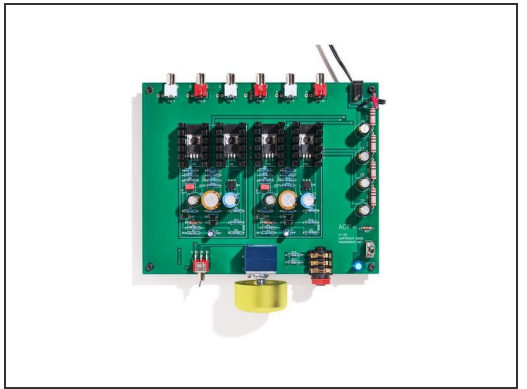
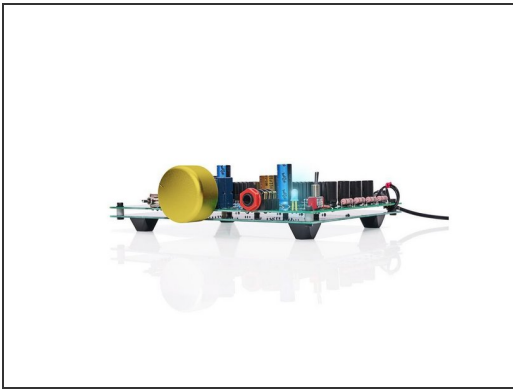
## ACP+ Headphone Amp / Linestage

The sequel to the famous Amp Camp Amp, the Amp Camp Preamp Plus! Guide under construction, will be updated soon.

Written By: 6L6



## Step 1 — The Pass ACP+ Headphone amp / Linestage



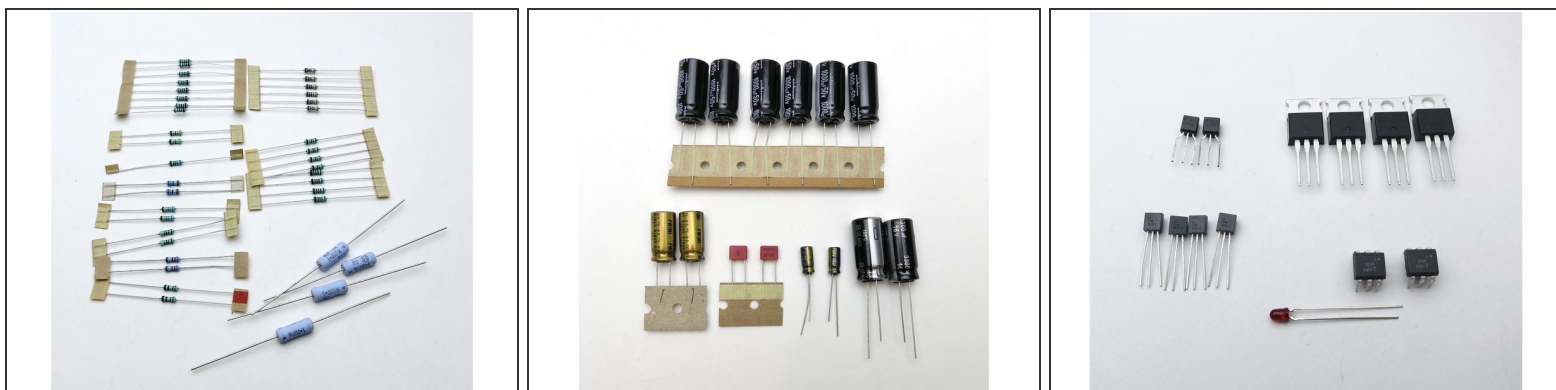
- Guide under construction.
- The body of the guide is 90% complete at this time.

## Step 2 — Current kit parts



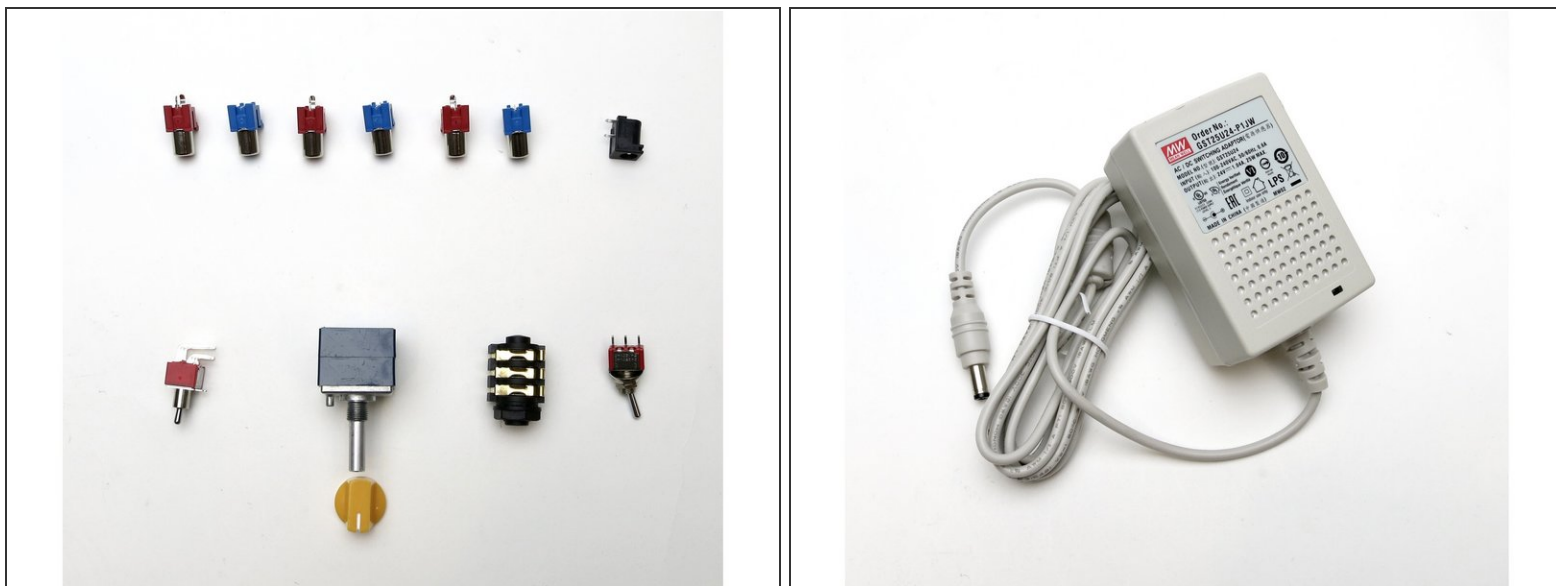
- A fantastic kit of parts available with all the components, hardware, fasteners and PSU.
- Although some of the aesthetics of the parts do not match the photos in the guide, they are electrically and qualitatively a 1:1 match.

## Step 3 — Components



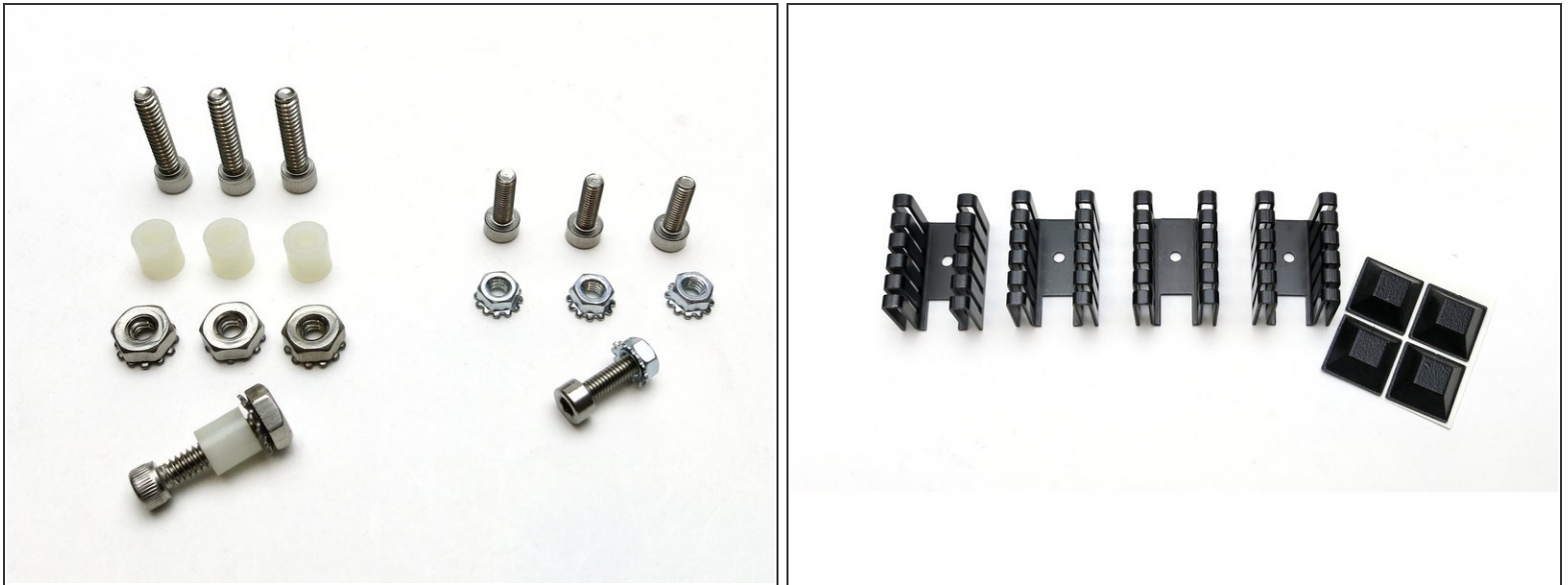
- Photo 1 - Resistors
- Photo 2 - Capacitors
- Photo 3 - Semiconductors

## Step 4



- Photo 1 - Jacks, switches, and Potentiometer. (Red are incorrect style to fit PCB , this photo will be updated)
- Photo 2 - Example 24VDC power supply with 5.5x2.1mm plug.

## Step 5 — Components



- Large - Groundplane attachment bolts Small - Mosfet attach bolts
- Heatsinks and stick-on feet

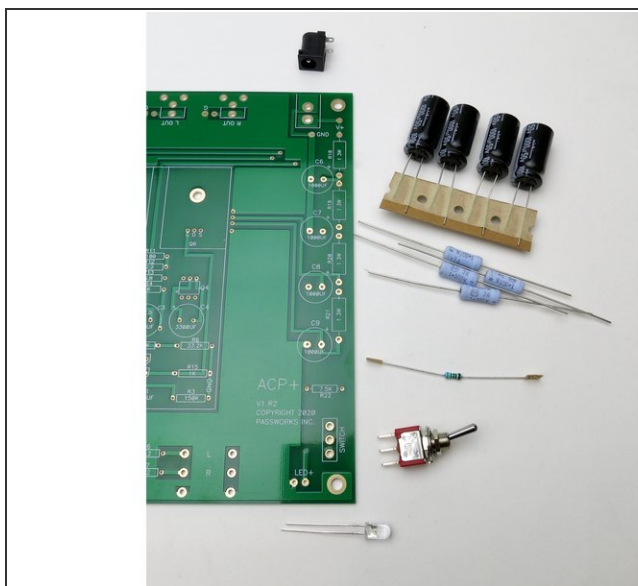
## Step 6 — Circuit boards



- Circuit PCB
- Ground Plane board
- Both are the same size
- Note: If you plan on building this without a chassis (I.E., as shown...) you must use the ground plane.

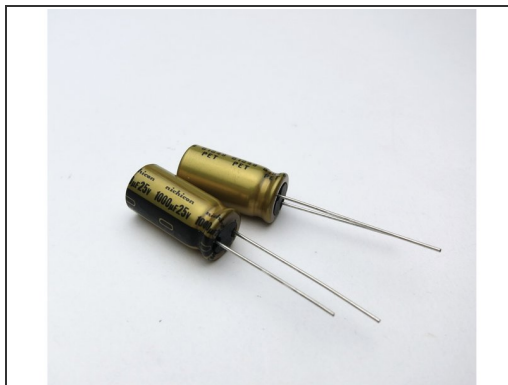
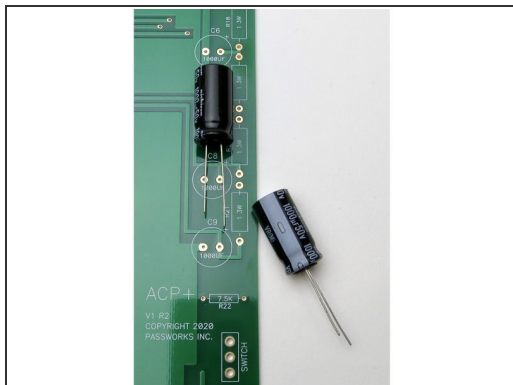


## Step 7 — Build PSU first



- Gather these components
- Stuff PCB smallest to largest, resistors, then power jack,

## Step 8 — PSU Capacitors



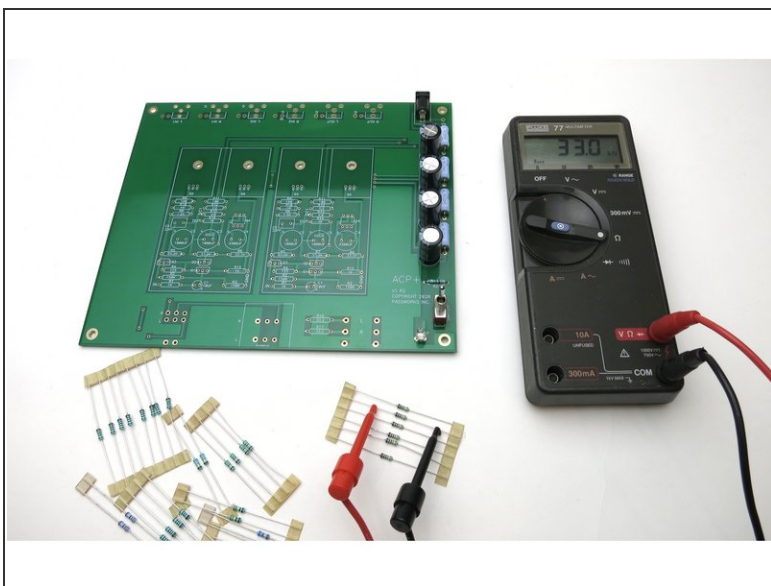
- Capacitors are polarized.
- The Negative side is marked on the can
- The positive lead is longer
- The PCB has a "+" marked for the positive lead
- Finish stuffing PSU capacitors and watch polarity.

## Step 9 — Test PSU



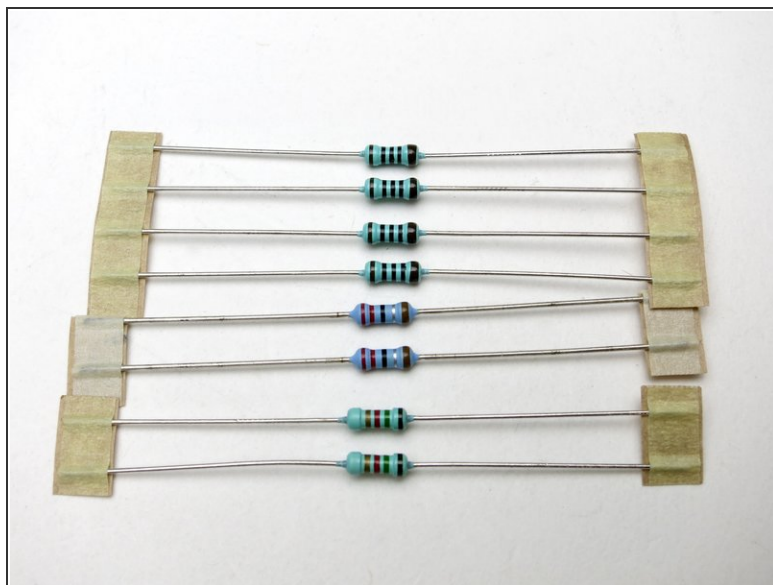
- Add testing procedure

## Step 10 — Measure all resistors



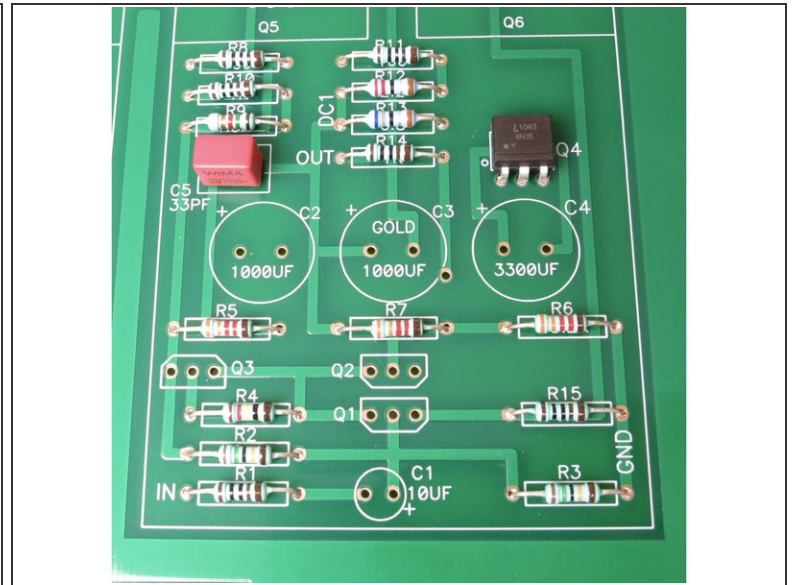
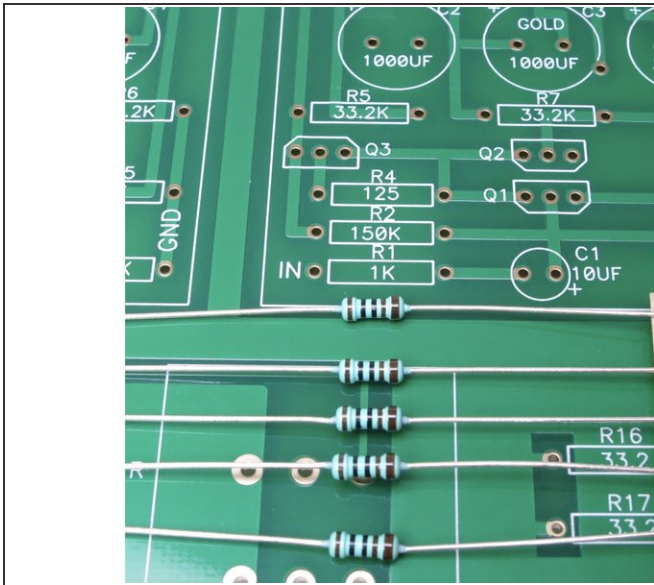
- Measure all resistors before inserting into the PCB. This greatly reduces errors during construction.

## Step 11



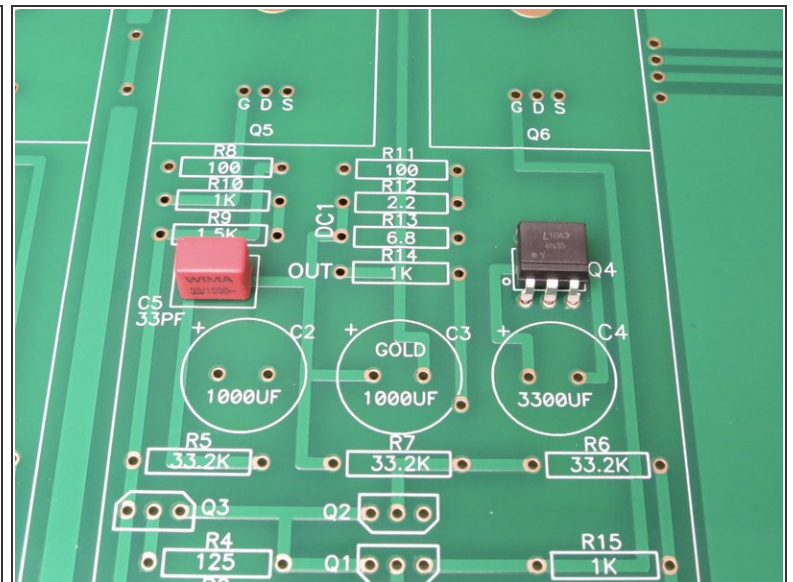
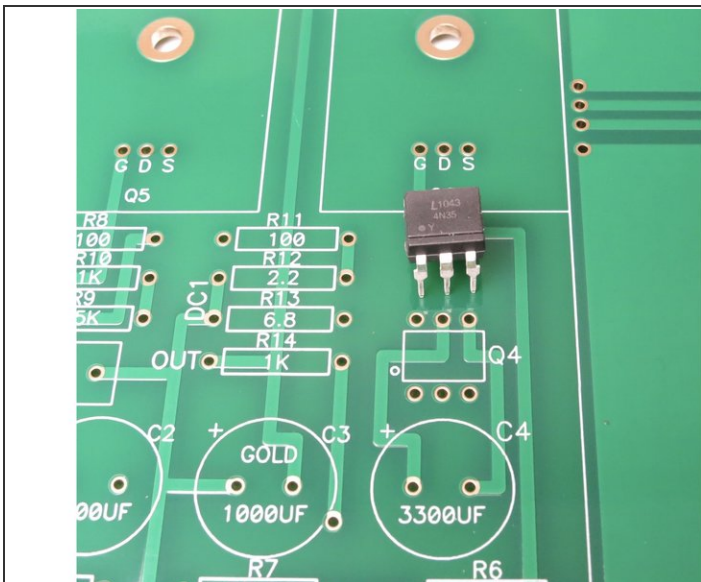
- All smaller resistors are on a 0.5 inch lead spacing. A lead bender tool is recommended.
- Remember, stuff resistors with the brown band to the right.

## Step 12 — Resistors



- Stuff resistors with the slightly thicker brown band to the *right*.

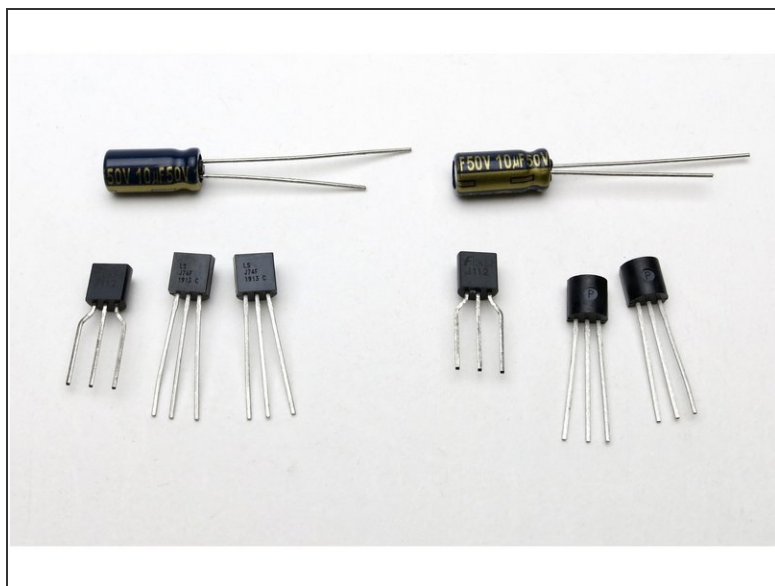
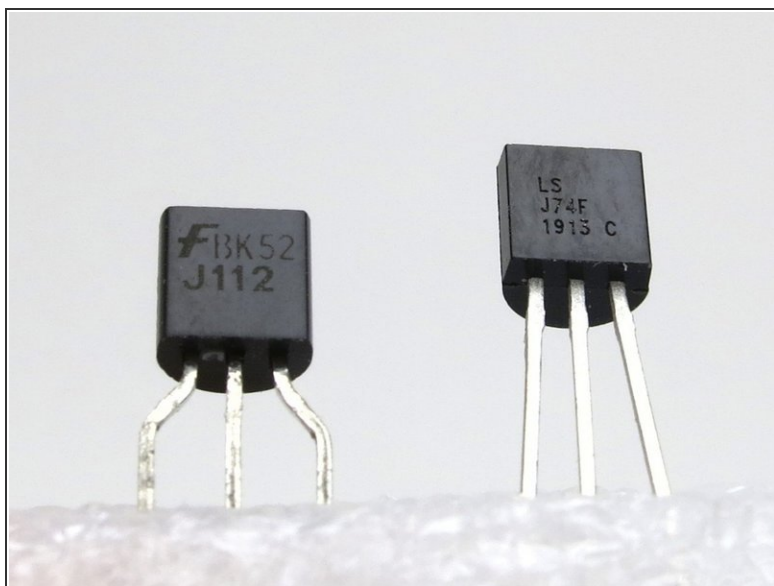
## Step 13 — Optocoupler



- Optocoupler has a dot at pin 1, this aligns with dot on PCB

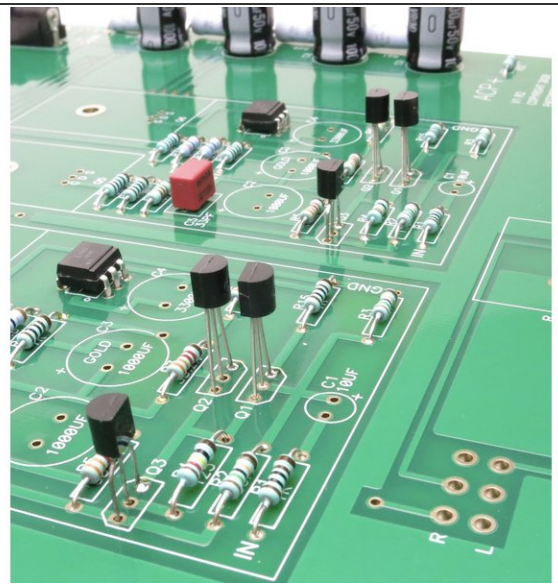
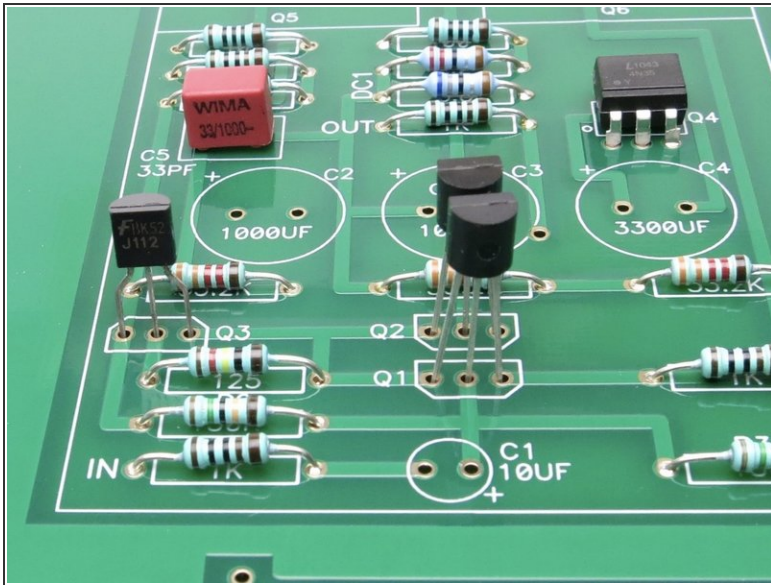


## Step 14 — Jfets



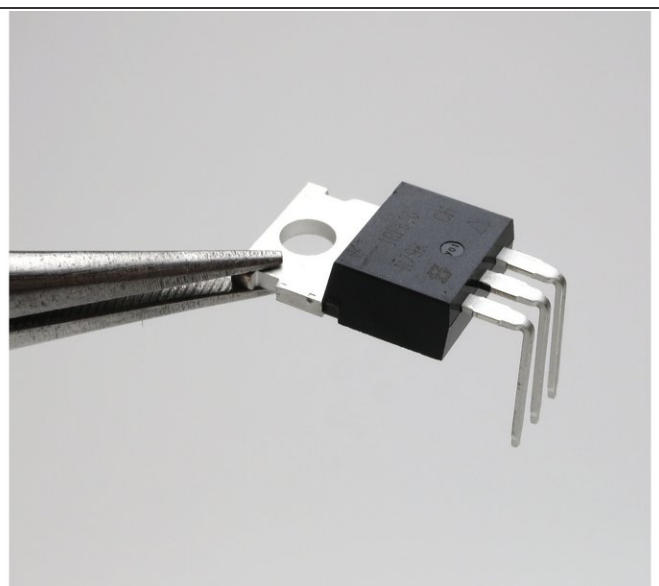
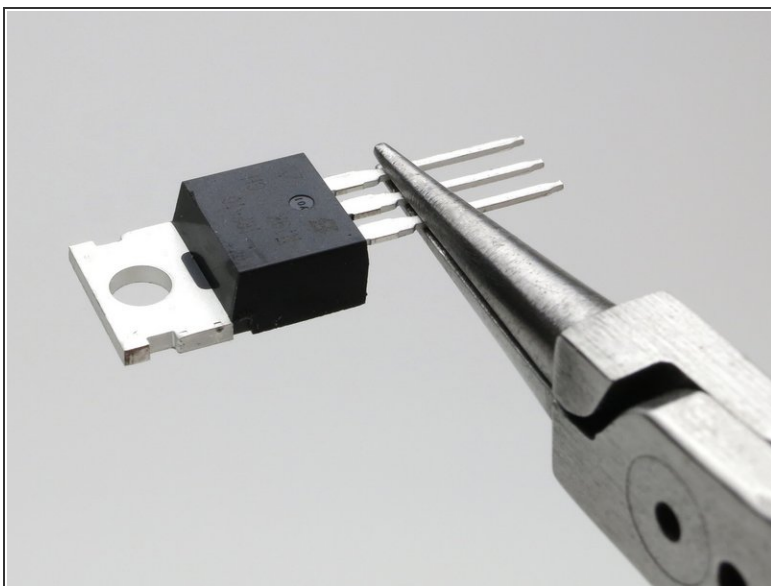
- Left side J112.
- Right side LSJ74.
- J74s in this circuit need to be matched.

## Step 15 — Jfets



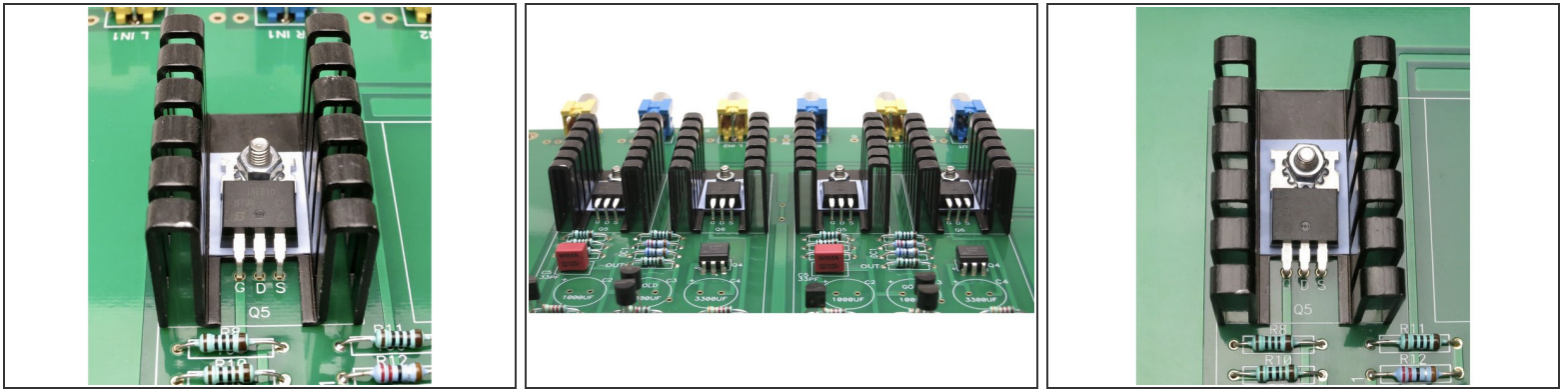
- The flat of the transistors aligns with the flat of the transistor mark on the silkscreen.
- Q2, Q2 are a matched pair of LSJ74
- Q3 is a J113 selected for  $V_p$  of 2.5v,  $\pm 1v$

## Step 16 — Mosfets



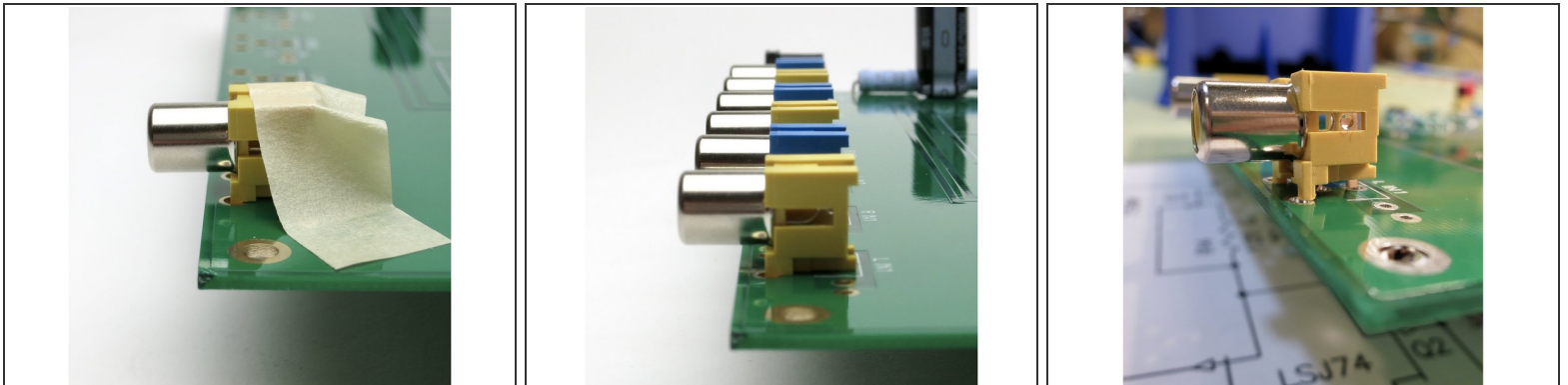
- Bend legs down at point shown.

## Step 17 — Mosfet mounting



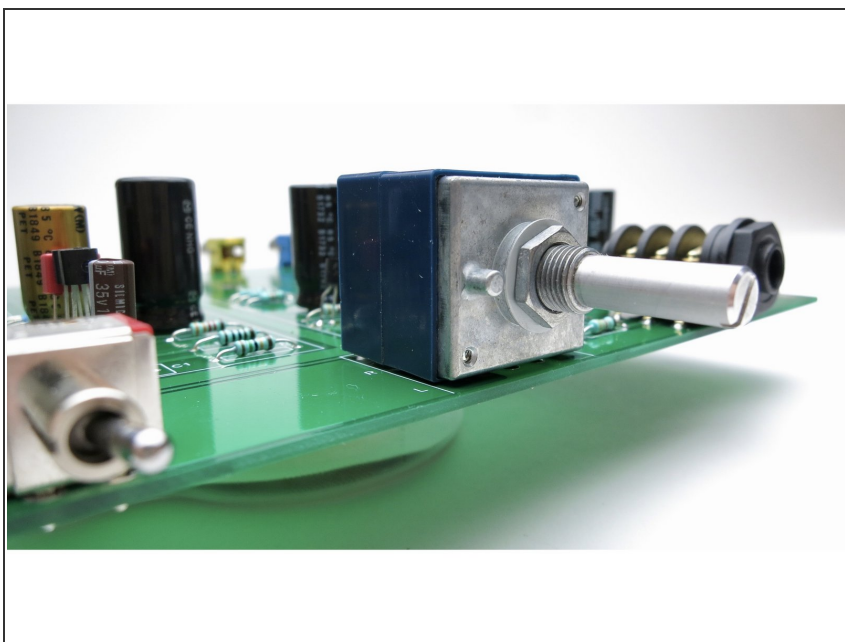
- Thermal interface (pad or paste) not strictly required, but not a bad idea.
- Mosfets do not need to be electrically isolated from the heatsinks.
- Make sure heatsinks are aligned and do not touch each other.

## Step 18 — RCA jacks



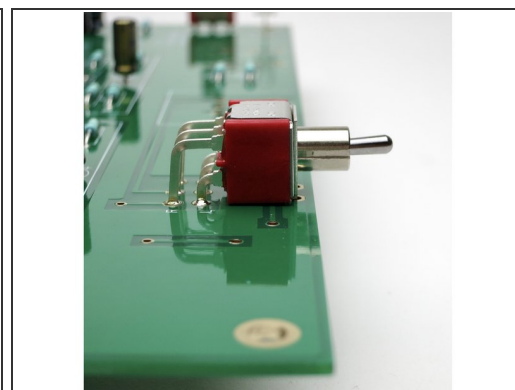
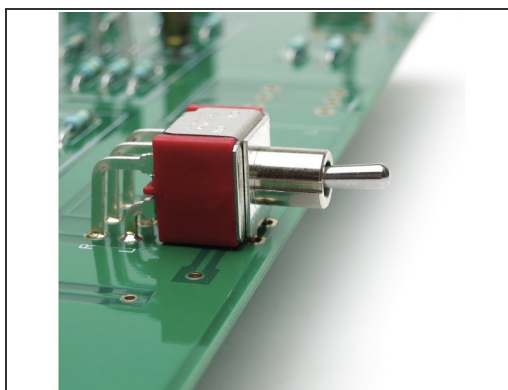
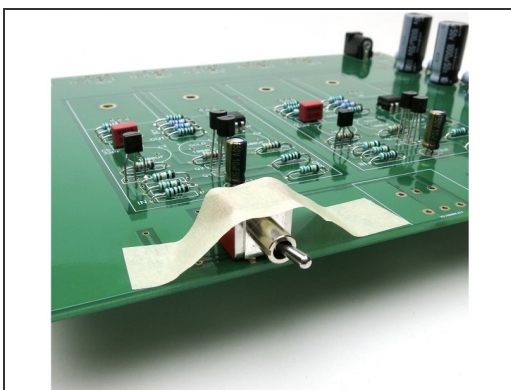
- A bit of tape will hold the jack completely flat on the PCB for soldering.
- Photo 3 - Improper alignment. Make sure the jack is entirely flat on the PCB before soldering.

## Step 19 — Potentiometer and Headphone Jack



- Make sure potentiometer is flat on the PCB before soldering.

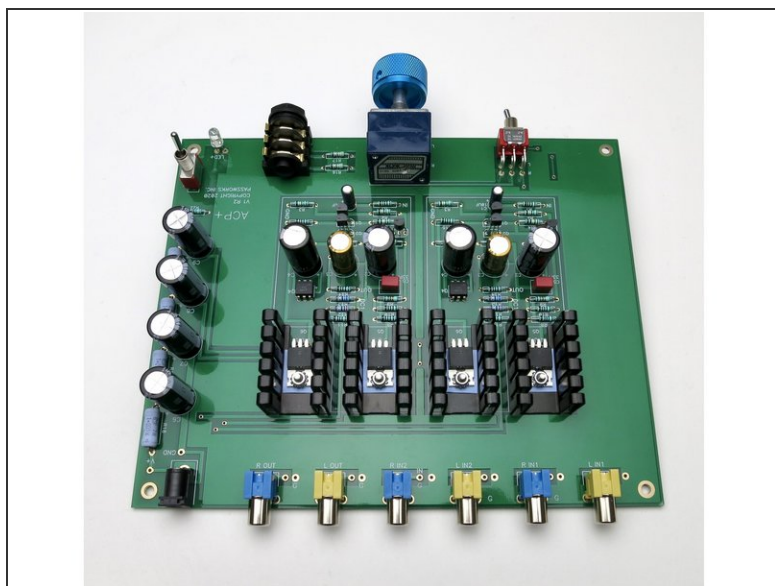
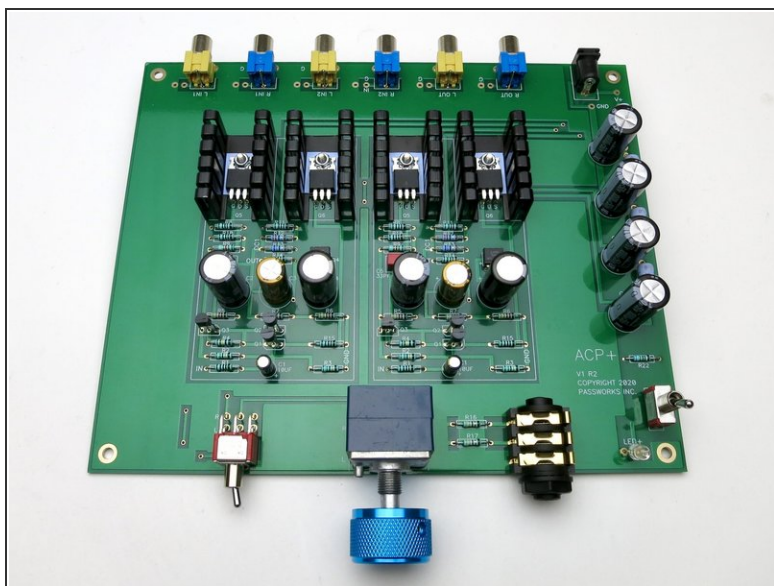
## Step 20 — Select Switch



- Make sure the switch is flat and flush with the PCB before soldering

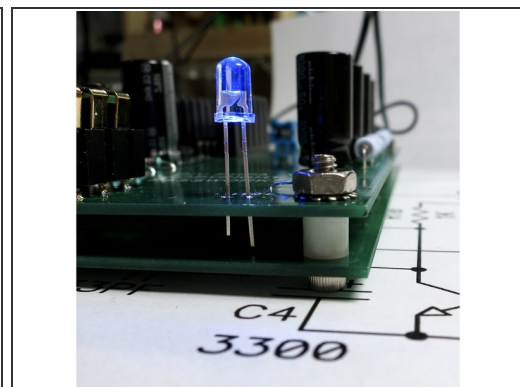
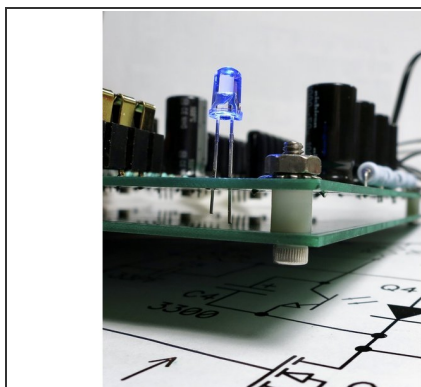


## Step 21 — Final overview



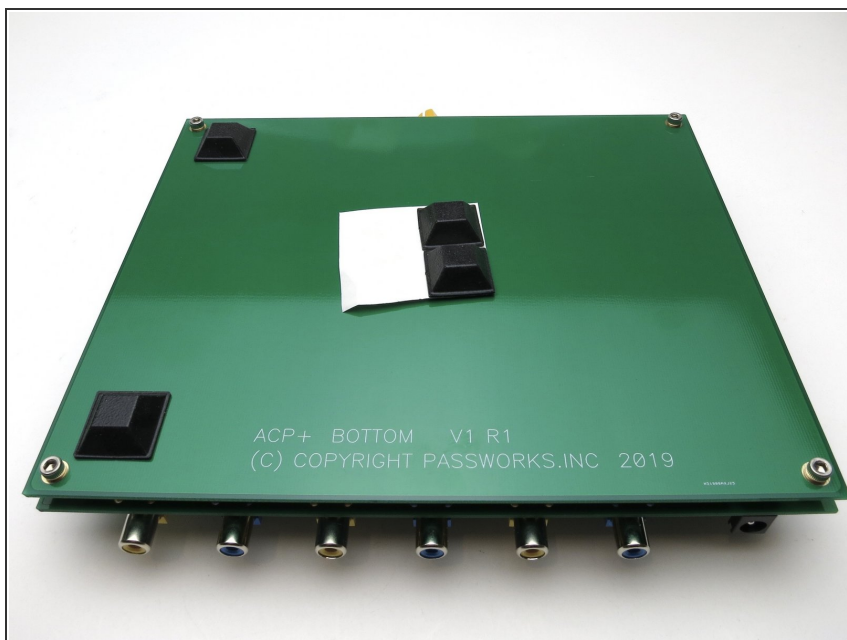
- Insert wisdom here.

## Step 22 — Mounting ground plane board



- Screw from bottom, spacer in-between, nut on top.

## Step 23 — Stick-on feet



- Place as shown