Lint Audio Semplice DIY assembly kit

"They don't know what we know"

Aug 2025

Description

The Lint Semplice (Italian for simple) is a 2 input pre amp. It has a selectable output Level that may be adjusted to suit

Position 1 Leak stereo 20 and clones

Position 2 Solid State, Quad 2 or home theater amps

Position 3 Lint audio mono blocks

The output maybe adjusted for balance to suit amplifiers used

Valves that maybe used

Rectifier

6x4, 6c4p, EZ80, EZ81

Output valve

6n3p, 5670, 2c51 WE 396a and on request 18c51 (takes 18 v heater)


Q-LINE
VOLUME
LINE 1
LINE 2
HÄFELE
HÄFELE
HÄFELE
HÄFELE
HÄFELE

SAFETY first

Tube/Valve amplifiers use potentially **LETHAL HIGH VOLTAGES**.
Building, troubleshooting and testing of these amplifiers should only be performed by someone who is thoroughly familiar with the safety precautions around high voltages.

This statement is not to scare you ! If you follow the guidelines in this manual and take care in switching the unit on. Quote a carpenter "Measure twice cut once" applies to valve audio.

Certain materials used in the kits may contain lead. Always wash your hands before consuming foodstuffs and never consume food on the work area.

Always work in a well lit clean environment, a magnifying overhead lamp is a great addition to your tackle box and inexpensive to buy.

A decent solder station is a good addition to the bench as it has its own stand preventing It from falling over when not in use. Ìf you smell cooked chicken you are definitely holding the wrong end.

Good tools are most important preventing damage when building, needle pliers Screwdrivers, allen keys 5, 5mm and 7 mm spanner are useful.

Whats in the kit

Before you start, check the contents, we are human and as such can make a mistake packing materials. The kit comprises three stages.

Stage 1 Cabinet assembly

Stage 2 PCB assembly

Stage 3 Unit assembly

Each stage has a BOM (bill of materials) check this against supplied materials some labels maybe applied directly such as the cabinet.

The cabinet is partly assembled with labels and fasteners already applied
As well as the pcb mounting rivnuts and tube clips, This allows a much easier assembly.

The PCB it is advised to follow the procedure stipulated.

On assembly, the selector control is pre wired and colour coded

Solder, tools safety wear and tea or coffee is not provided

Stage 1 Cabinet assembly

Detail	Type		
Cabinet chassis	ally	1	Q1
Top panel18c51	ally	1	Q2
C back panel	ally	1	Q3
Bottom panel	ally	1	Q4
End caps	Plastic	2	Q5
Bezel	3d	1	Q6
Iinner q line	Perspex	1	Q7
Air vent eyelet	ally	2	Q8
D handles	ally	2	Q9
Badge Lint	ally	1	Q10
Bezel badge	3d	1	Q11
Zip tie	nylon	3	Q12
Saddle	nylon	3	Q13
Panel knobs	ally	2	Q14
inner pipe 200 mm	ally	1	Q15
inner pipe 180 mm	ally	1	Q16
Sticker bottom	pvc	2	Q17
Sticker rear	pvc	1	Q18
Toggle switch large		1	Q19
RCA black		3	Q20
RCA red		3	Q21
Selector switch with cables		1	Q22
Vol control with pcb		1	Q23
IEC socket		1	Q24
B7g base mounted assy	b7g	1	Q25
B7g spacer laser cut	Q26	1	
m3x 1mm spacer	Q27	2	
M3 washer	Q28	5	
3 mm x 6 mm csk rivet	Q29	2	
3mm x 10 mm csk rivet	Q30	3	

Cabinet Fasteners			
M4 x 15 feet midi	Natural	4	Q31
M4 x 80 csk screws	ms	4	Q32
M4 riv nuts	ms	16	Q33
67 mm spacer tube	ms	4	Q34
Star washer	Carbon	4	Q35
M4 Dome nuts SS	ss	8	Q36
M4 stainless washer	ss	8	Q37
M4 x 30 mm grub	carbon	4	Q38
M4 Nuts	ms	16	Q39
M4 spring washers	ms	8	Q40
M4 washers	ms	8	Q41
M4 x 12 mm BZP	ms	8	Q42
M5 X 16mm brass cheese head	brass	1	Q43
M 5 brass washers	brass	2	Q44
M 5 brass nuts	brass	1	Q45
M5 wing nut	brass	1	Q46

Cabinet assembly procedures

Mount the handles first and apply masking tape to prevent damage when the unit is turned upside down. Using supplied screws and lock with M4 nuts

Screw the transformers to the chassis using M4 x 12mm pan head pozi screws, Twist the ac conductors anti clockwise and shroud with laced binding tube pass through the chassis.

Insert the RCA sockets and M5 ground screw with attached cable and lug. Wire the earth points together with a single strand conductor.

Insert the IEC socket with M3 x 12 mm csk screws.

NOTE a star earth point is ideal so use the ground of the IEC socket. That will be concluded on final assembly.

Insert the toggle on/off switch on being at the top. If you wish to conform to the standards LINT audio has set !

Mount the front panel by using the volume and selector switch

Attach the rear bezel with supplied double sided tape, using the front panel to align the bezel.

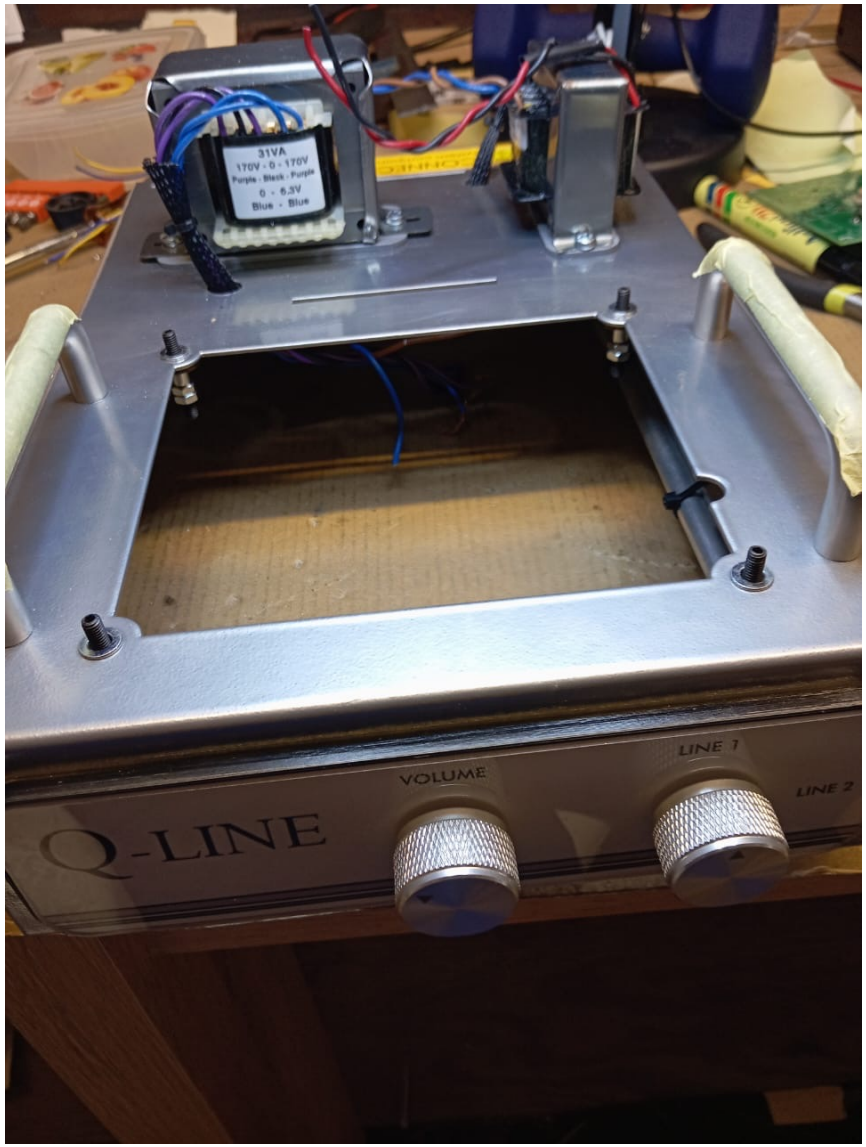
Insert the PCB into riv nuts and assembly screws

The pcb is retained by 4 x m4
riv nuts which are retained by 6 mm
star washers.

4 x m4 x 30 mm grub screws inserted in
The rivnuts leaving 5 mm above the surface
allowing the top plate to sit allowing the dome
nuts to secure.

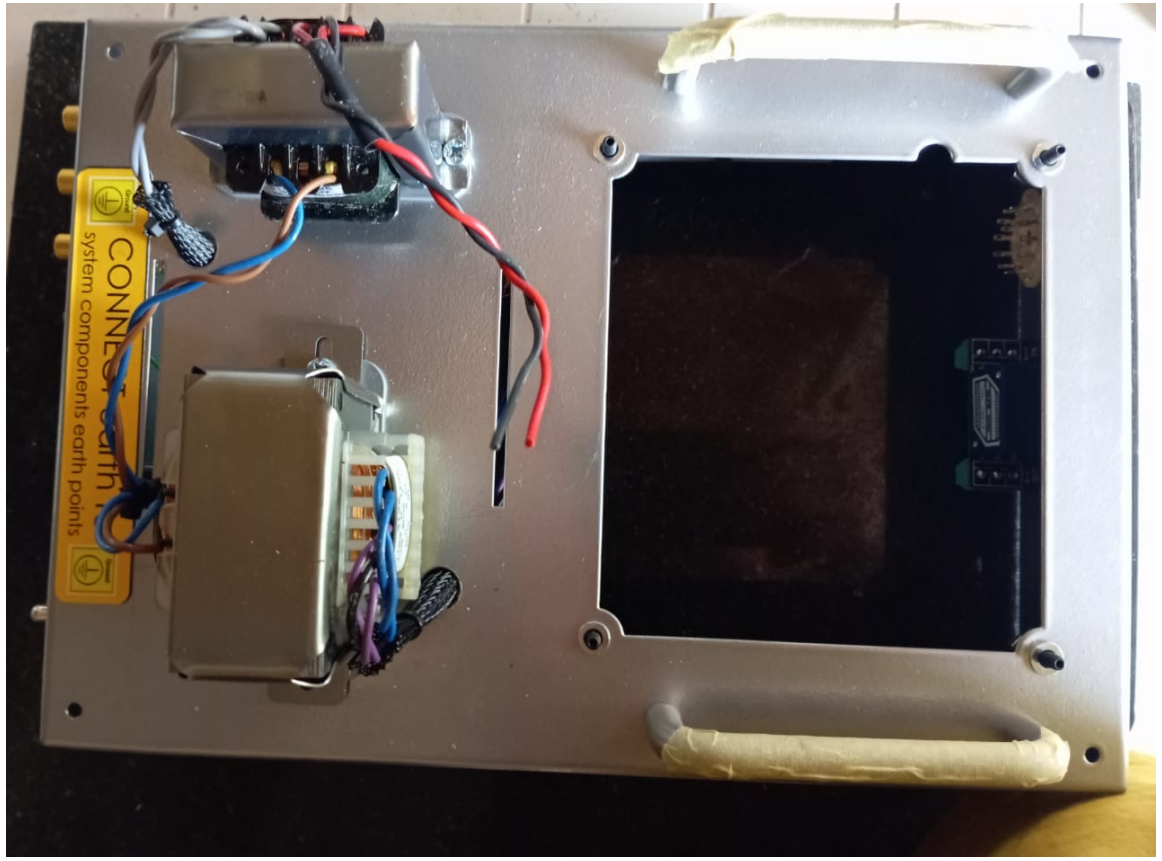
Lock the grub screws with 2 x m4 nuts to space
the pcb from the top panel.

Check the pcb clears the top panel before
assembly.



Mount the transformers on the top and feed the cables through the panel as marked with sleeve to prevent damage on cabinet edges.

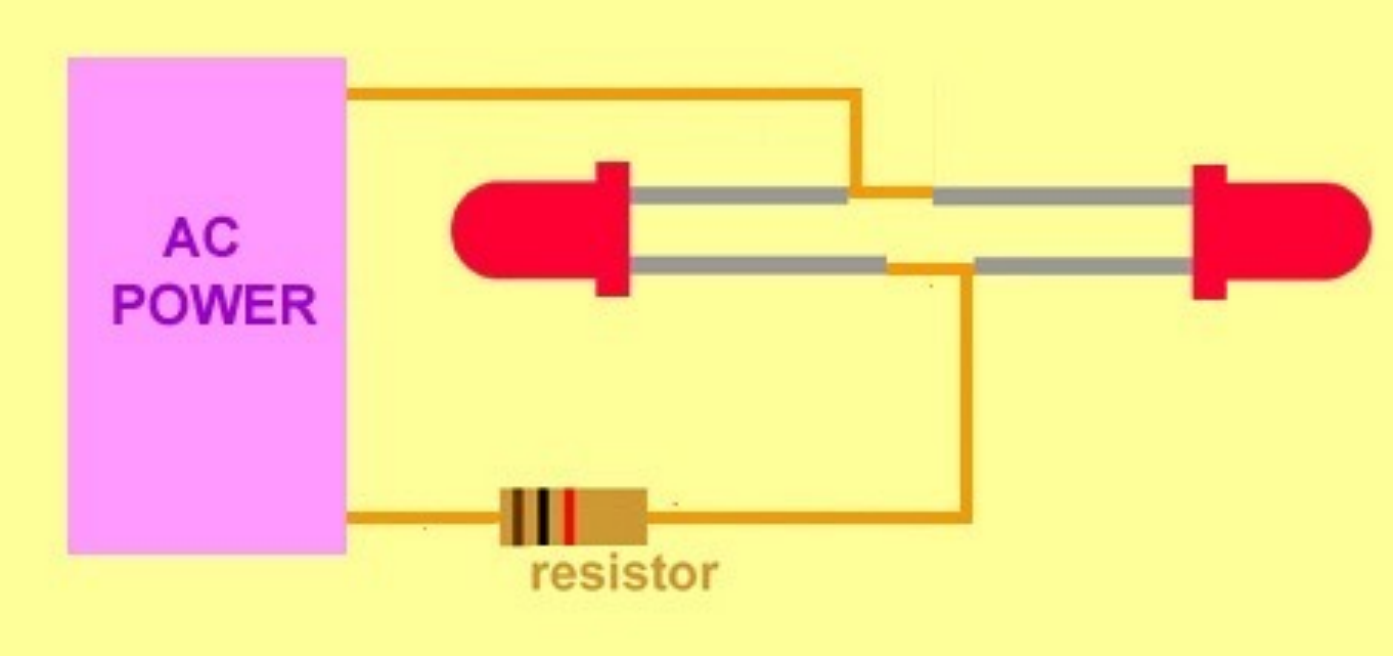
LT supply for DC heater supply and 12v supply for sub control or LED supply



HT transformer and rectifier
Heater supply

Wire LED to 12 v ac supply using two leds

Mount one LED under the cinema lamp and the other facing backwards to shine through the vent holes. Use 470 r resistor



Stage 2 Semplice pcb

Start by identifying the details
Mark the unrequired parts

Check the BOM against the marked drawing

Then with a marker pen mark the pcb itself with the components not used

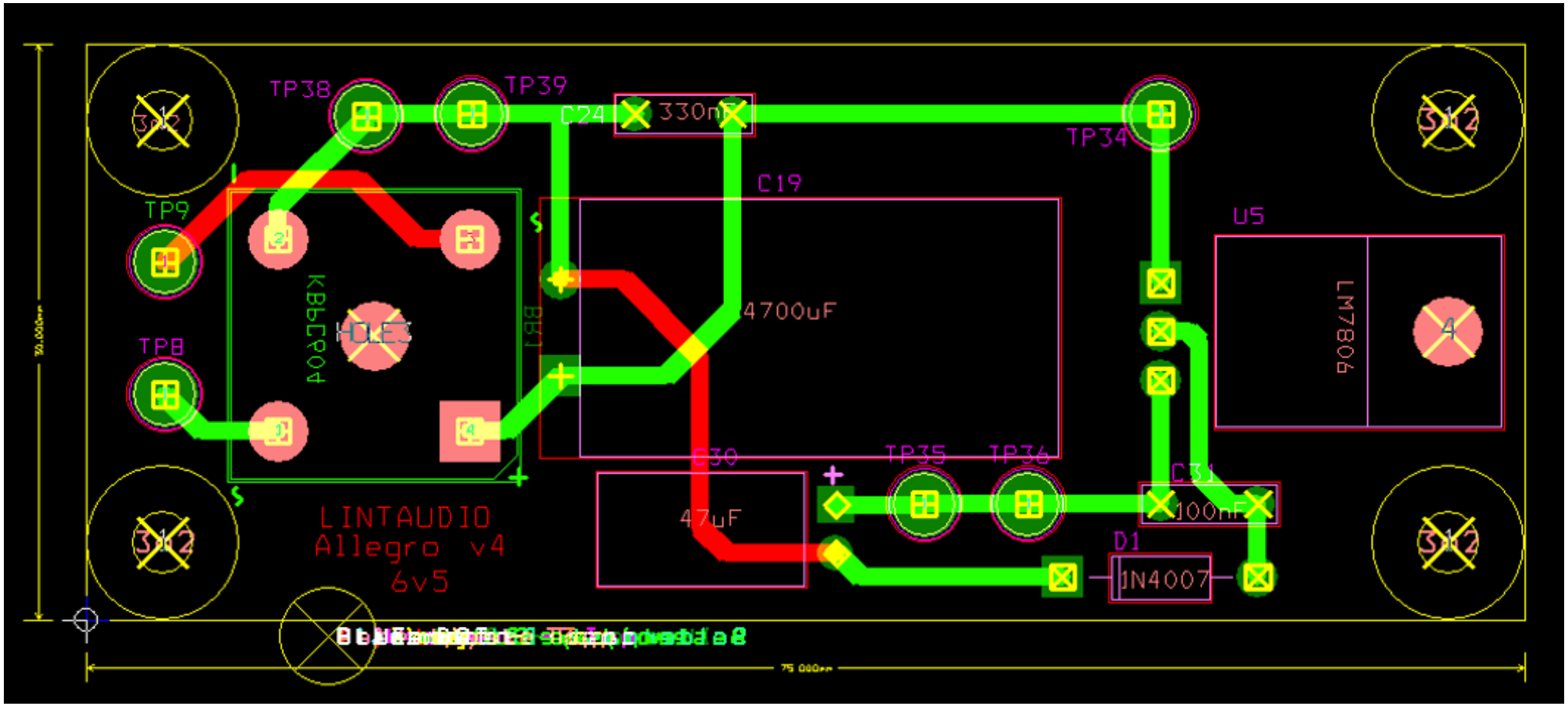
Firstly mount resistors R1, R2 and R3.

Use the trimmings of these resistors to bridge the selector switch holes

Now mount the attenuator shunt pins and place the shunt (prevents losing them)

Mount the valve bases ensuring a fillet of solder on each side of the PCB
Ñote the valves are V1 EZ 80 and V3 5670/6n3p only as ecc88 or the sub is used in this version.

Power supply PCB (assembled)



Depending on the valve being used, will use either a LM7818 for 18 volts
0r LM7806 for 6 volts

Stage 2 Semplice pcb

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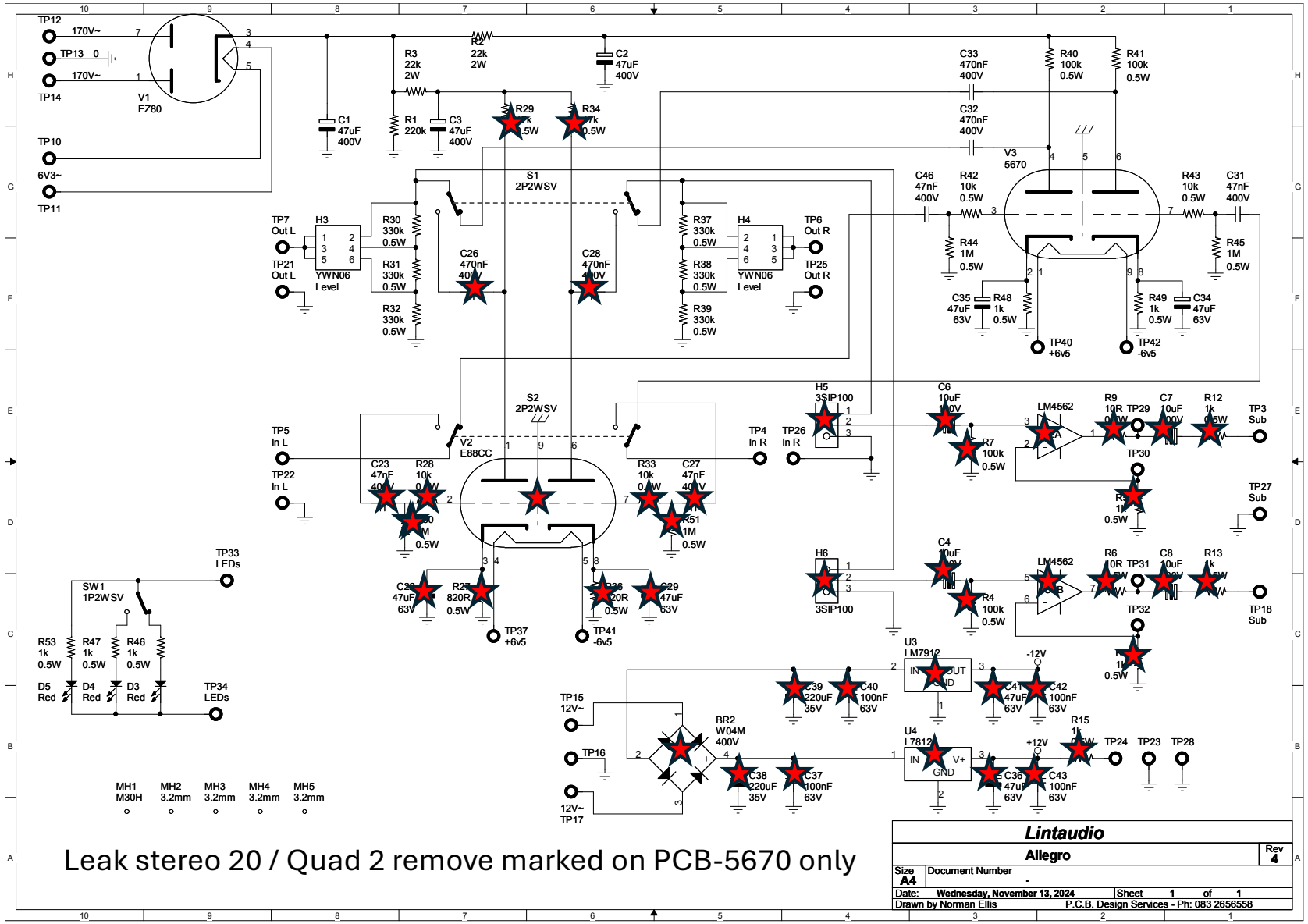
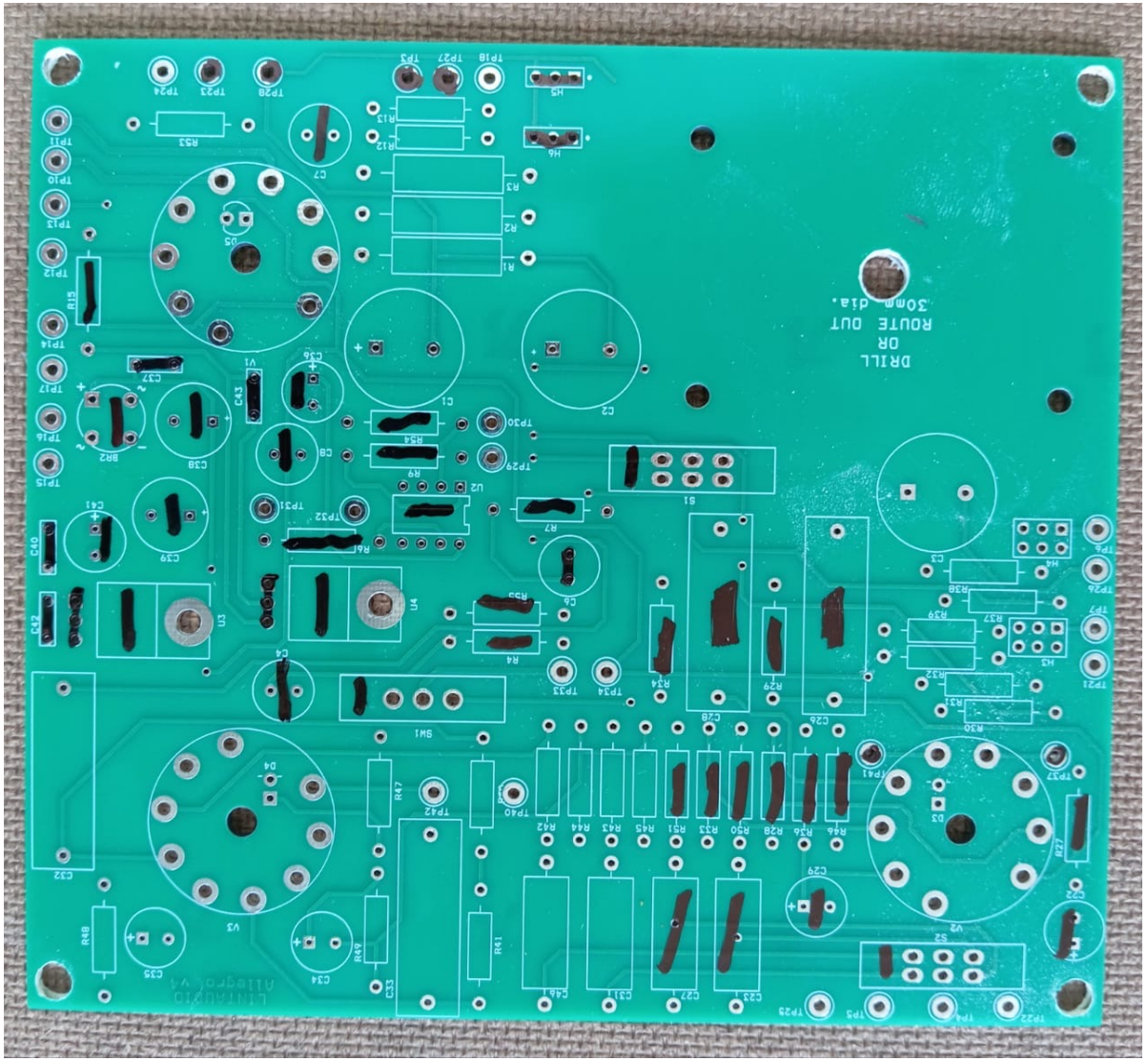


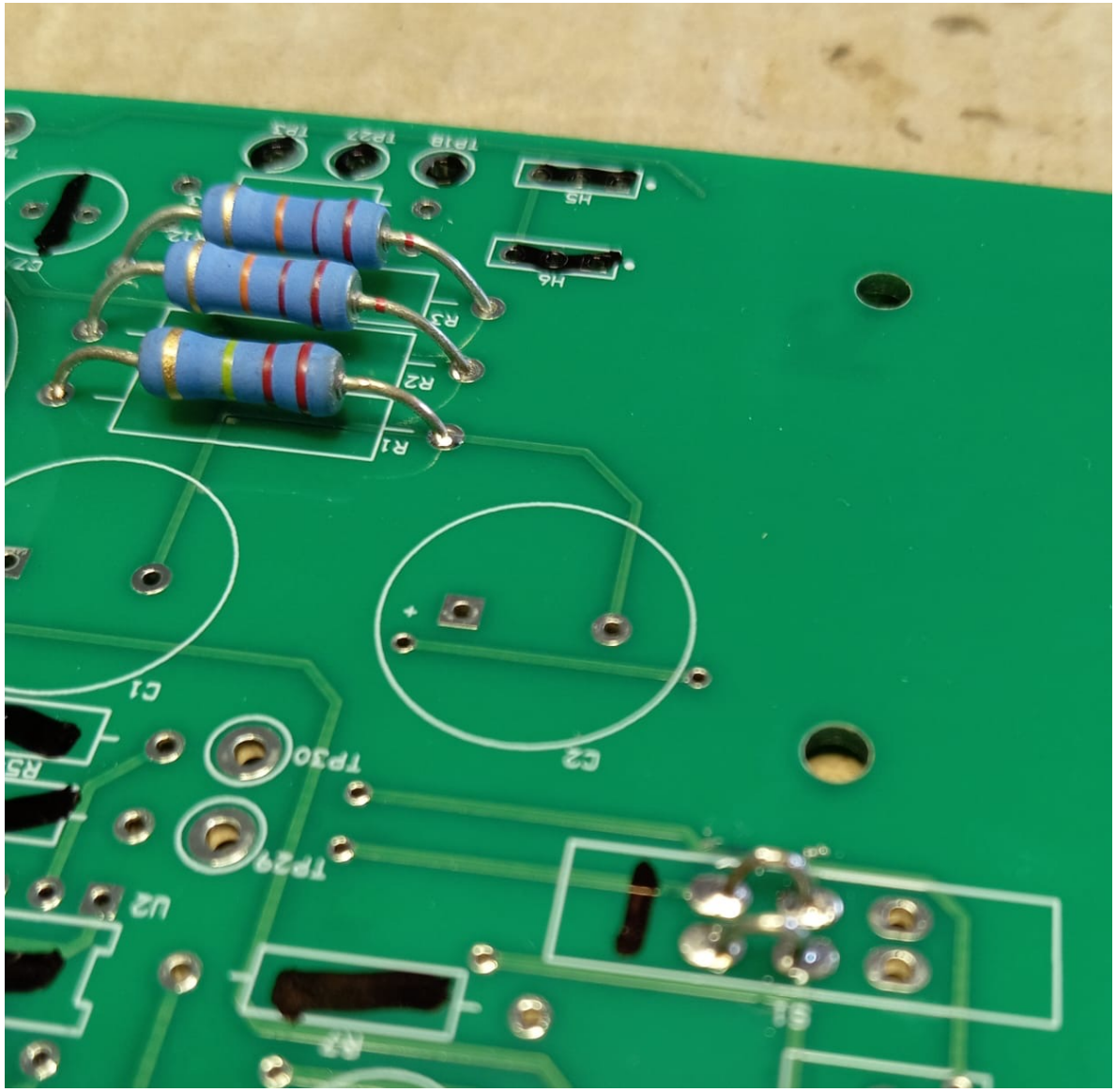
Leak stereo 20 / Quad 2 remove marked on PCB-5670 only

Lintaudio		
Allegro		Rev **4**
Size **A4**	Document Number .	
Date: **Wednesday, November 13, 2024**	Sheet **1** of **1**	
Drawn by Norman Ellis	P.C.B. Design Services - Ph: 083 2656558	



PCB marked with unused components

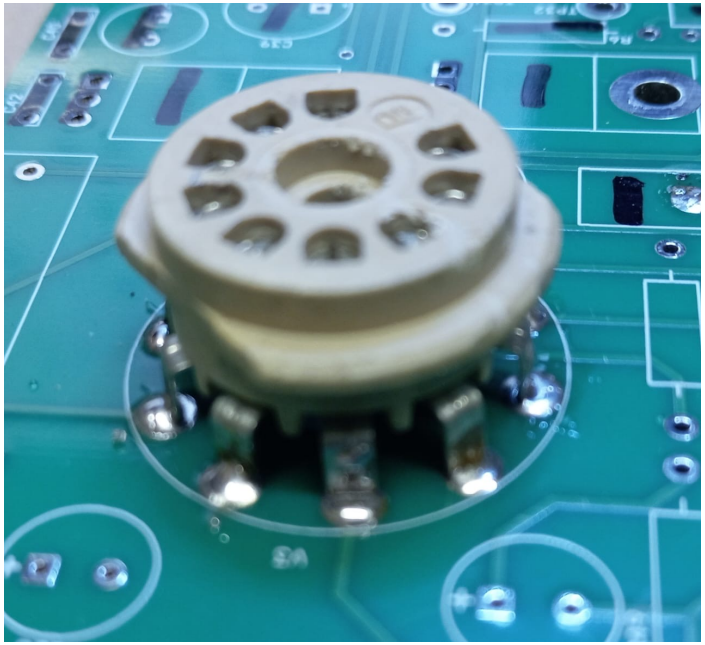
Detail	Type	QTY	Overlay Pt no	Pt number
PCB		1	pcb	QP1
Led switch spst		1	co13	QP2
B9a sockets		1	b9a	QP3
6 mm toggle switch				QP4
6 way shunt		2	h3,h4	QP5
Shunts		2	hshunt	QP6
47 uf 400 v		3	c1,c2,c3	QP7
1 uf	Siemens	2	c26,c28,c32,c33	QP8
47nf x 400 v	Philips	2	c31,c46	QP9
47 uf 63 v		2	c34,c35	QP10
Orange 3 mm led	Hi brite	3	LED	QP12
220 k	2 watt	1	r1	QP13
100k	1 watt	2	r40,r41	QP14
330 k	1 watt carbon film	6	r30,r31,r32,r37,r38,r39	QP15
1m	1 watt	2	r44,r45	QP16
10k	1 watt	2	r42,r43	QP17
1k	1 watt	2	r48,r49	QP18
22k	1 watt	2	r2,r3	QP19
100 k	1 watt	2	r40,r41	QP20
1k	1/4 watt	4	r46,r47,r53	QP21
200 k	trim pot	1	Balance	QP22

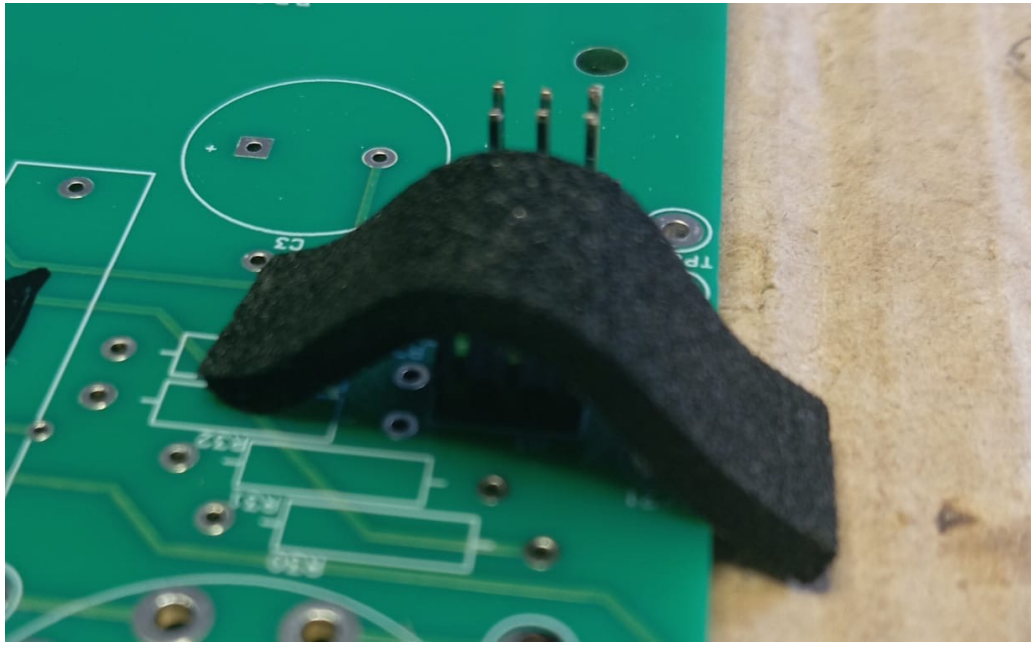


Resistors R1, R2 and R3, use trimmings to bridge S1, S2 and SW1 (leds)

Suggested assembly

Assemble the b9a solder base first, ensure it has a double fillet of solder each side of the pins.

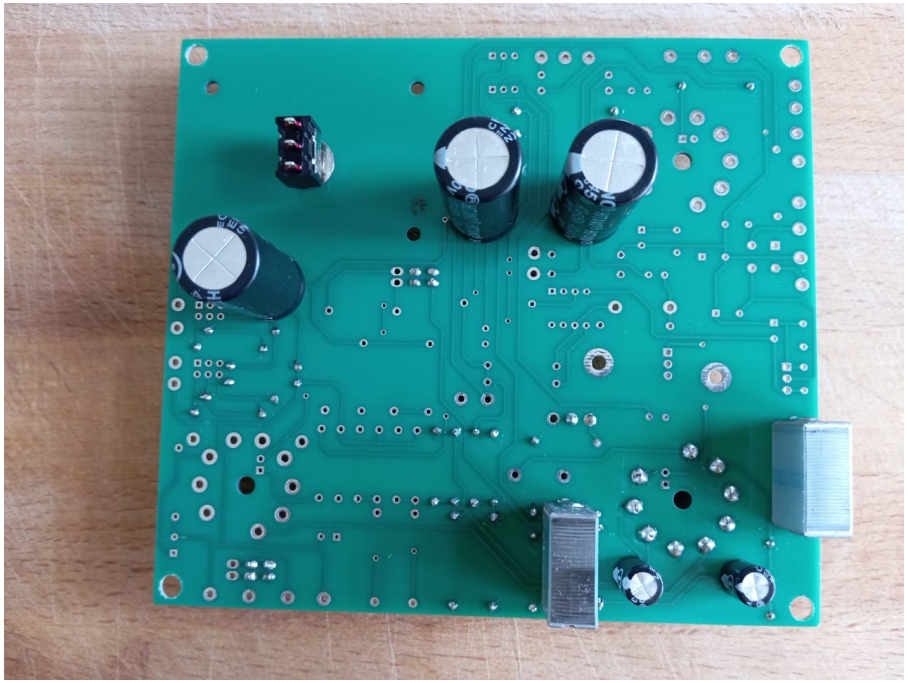


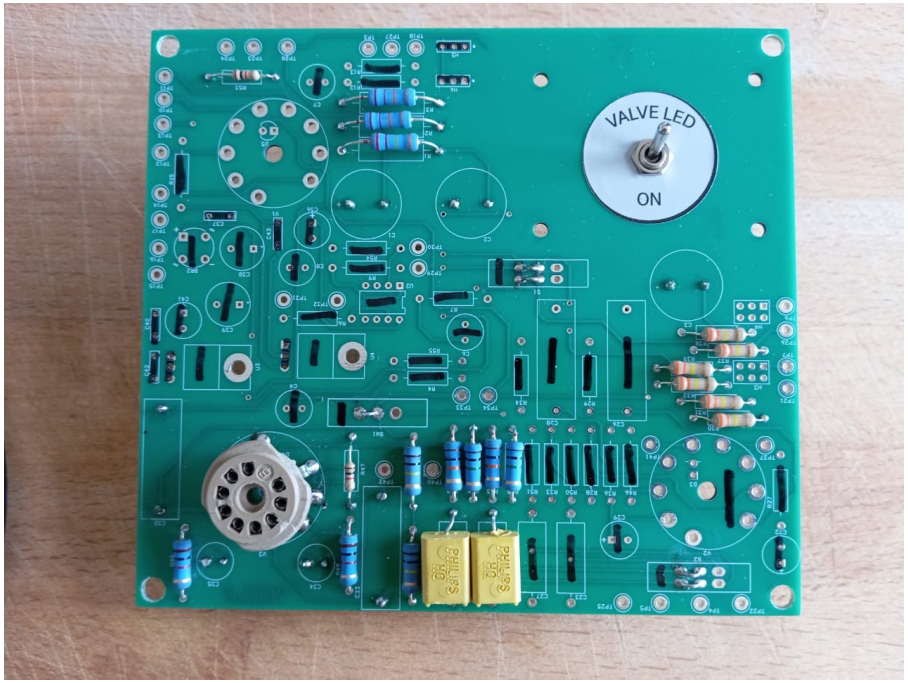


The shunt headers are tricky to solder so suggest a small piece of tape or rubber strip to secure whilst soldering.

Then mount the capacitors C31,C46 on the top of the PCB and C32, C33 mount under the pcb. Note the pcb square is the positive pin and the long leg on the component. Mount all resistors and LEDS
Mount the LED on switch.

Note the B7g socket is wired through the top panel by cables.





Now to cabinet assembly

Stage 3 Cabinet assembly

As the chassis is prepared for assembly and the PCB is prepared, take care not to damage the paintwork, so a good idea is to place a cloth on the work bench.

Start by inserting the selector switch

The cables are colour coded

Output

Red /Black Right channel

White / Blue Left Channel

Input

Red /Black CH1 Right

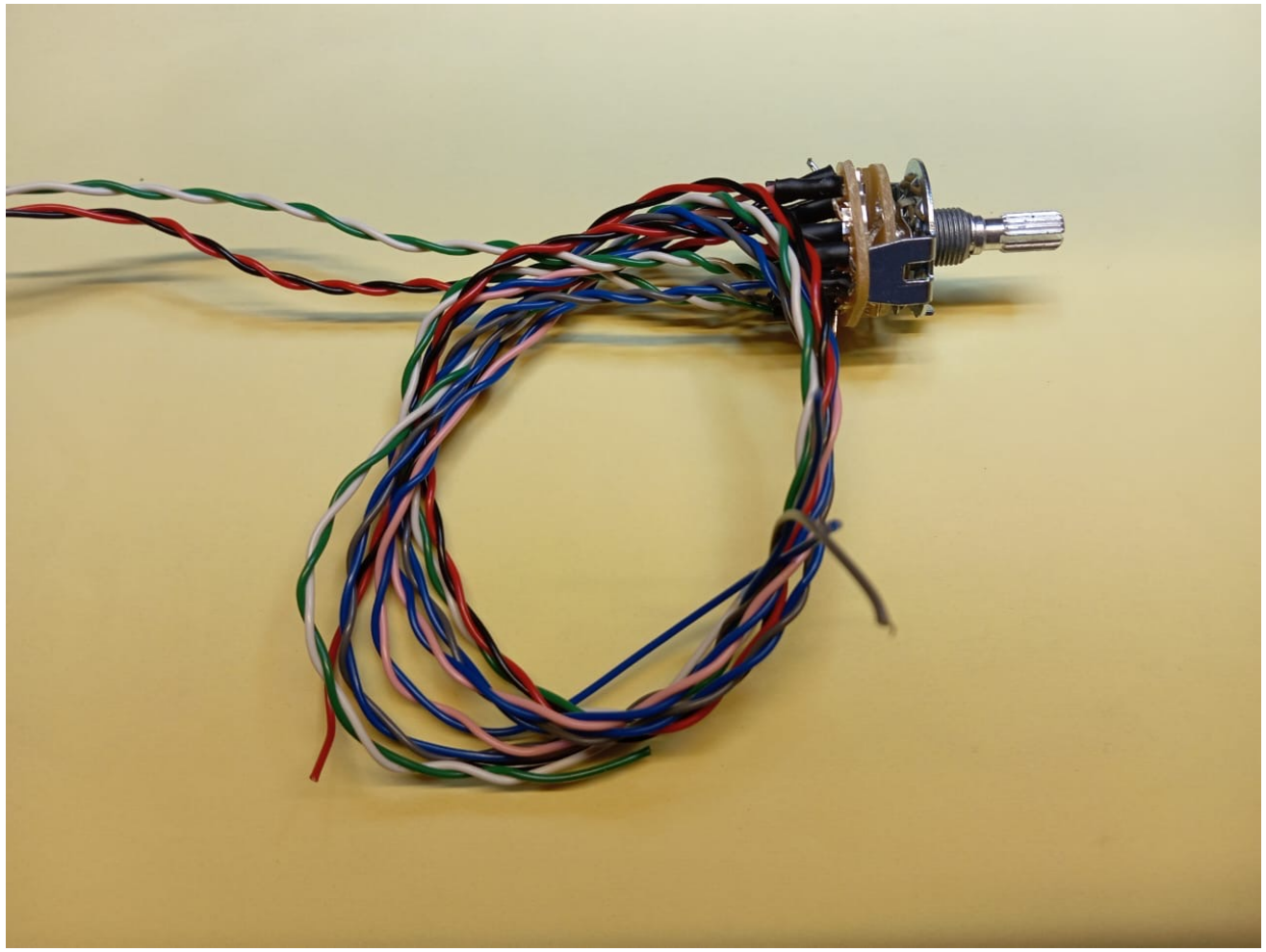
Pink /Blue Ch2 Right

White / Green Ch 1 Left

Grey / Blue Ch 2 Left

Selector switch supplied with leads

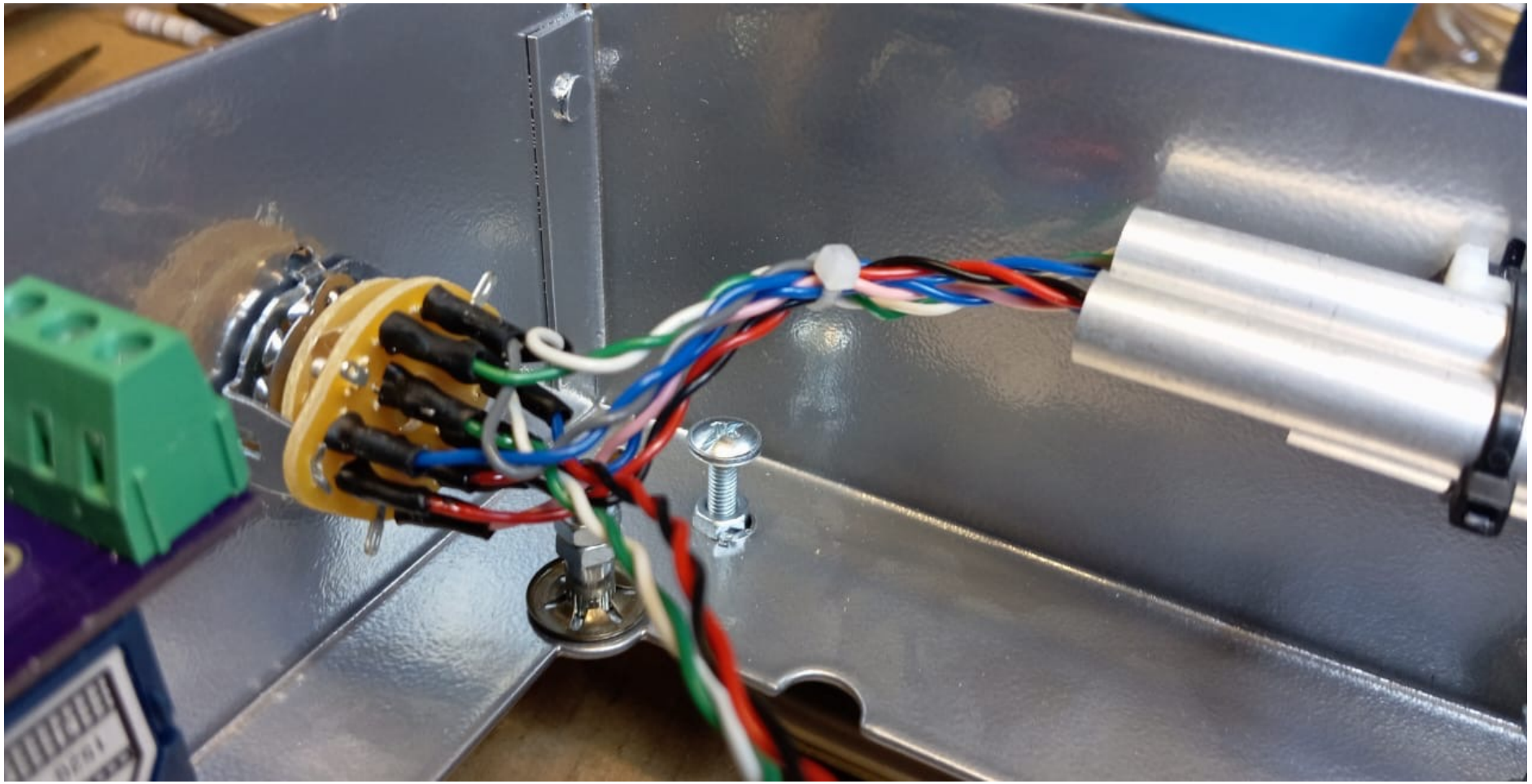
There are three positions 1 – off - 2



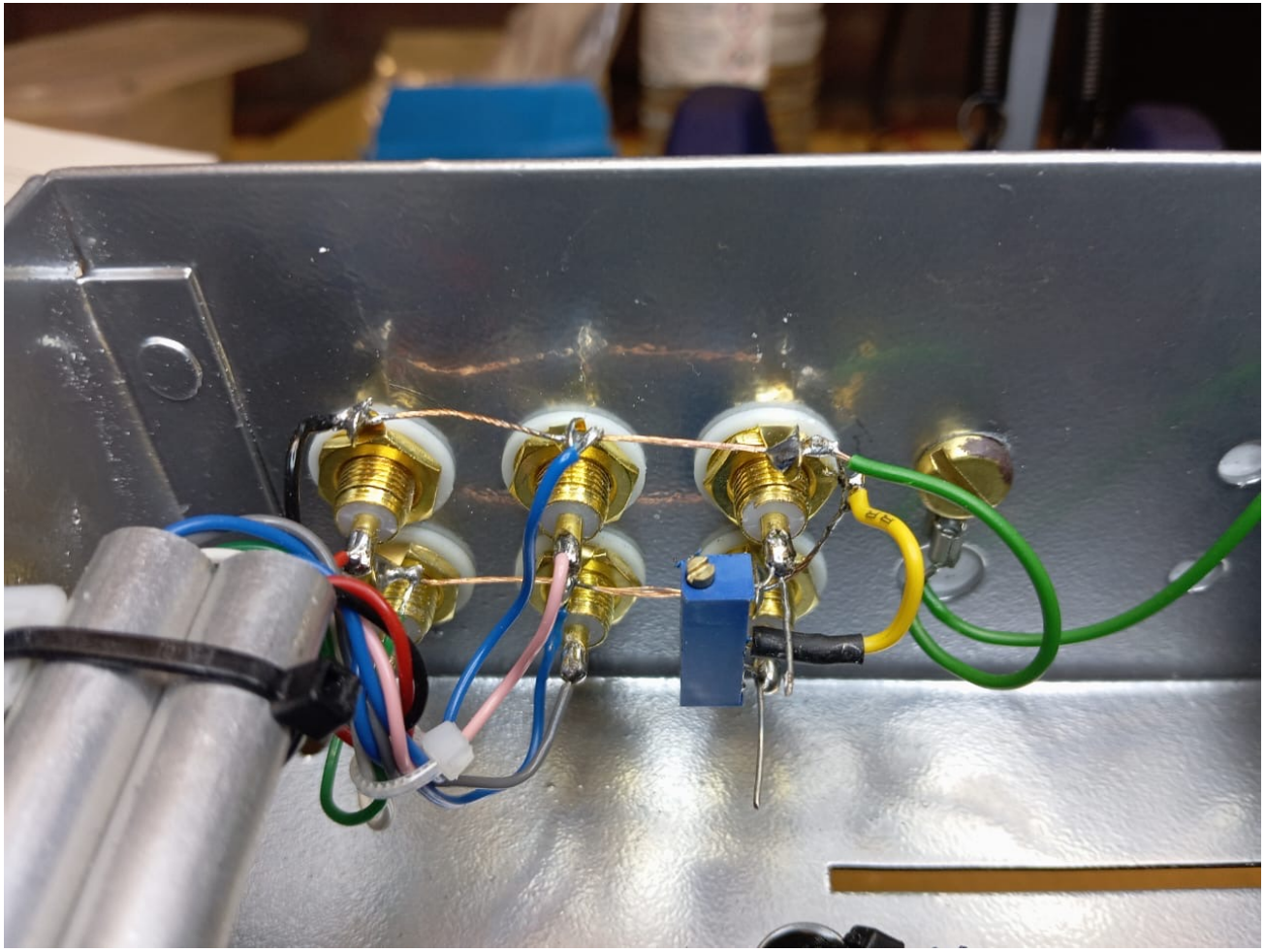
Each conductor has its own ground wrap and for noise purposes in a tube

Insert wiring into tubes and then solder the RCA end

Before placing PCB

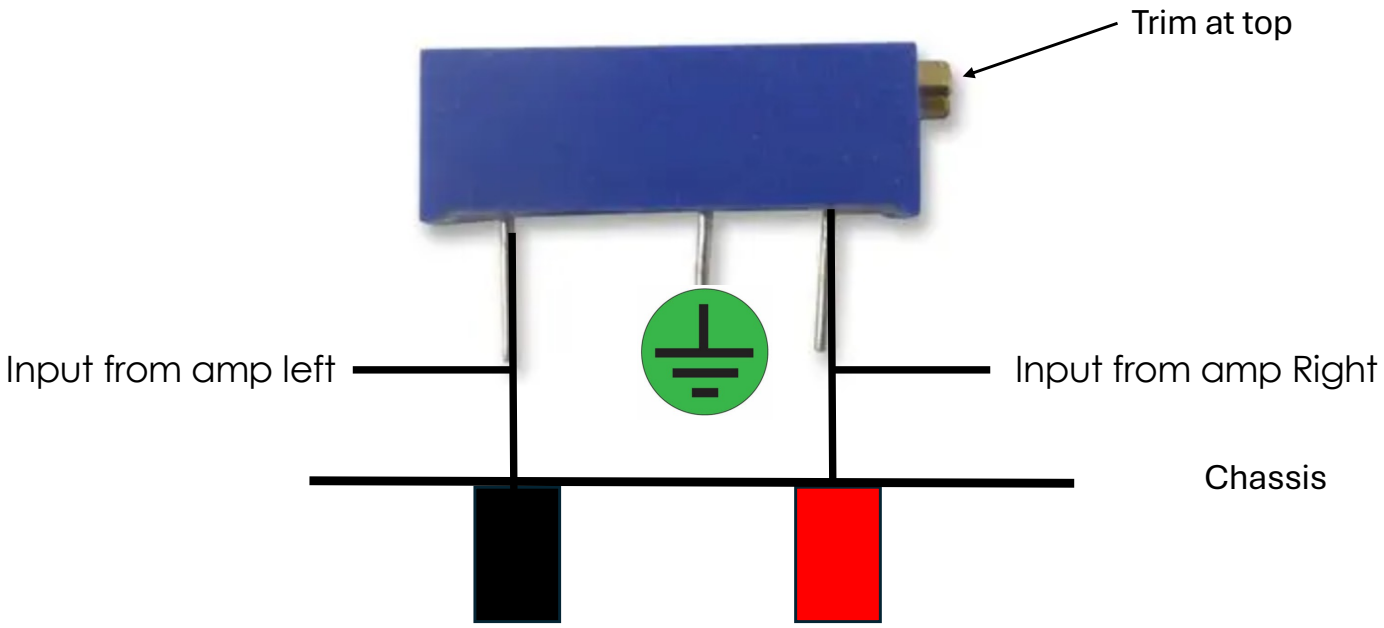


Wire balance resistor across the output RCA
And ground to common ground centre pin



Leak stereo 20 22 k
Quad 2 and solid state and similar 50k
Lint monoblocks leave out or 100k

Wiring of balance control



Solder the trailing leads to the PCB that will go to the volume control

TP 4 Red right, TP 26 Black right
TP 5 White left TP 22 Black left
Spiral wrap these pairs allowing enough cable to reach the volume control

Connect the volume control to the selector and the PCB

Mount the pcb to the cabinet using 4 x M4 washers and nuts.

Now wire the output from the PCB feeding through the 180 mm long aluminum tube
Now connect the balance control to the output pins of the RCA socket. Using off cuts from the 1 watt resistors to extend the pins of the RCA sockets

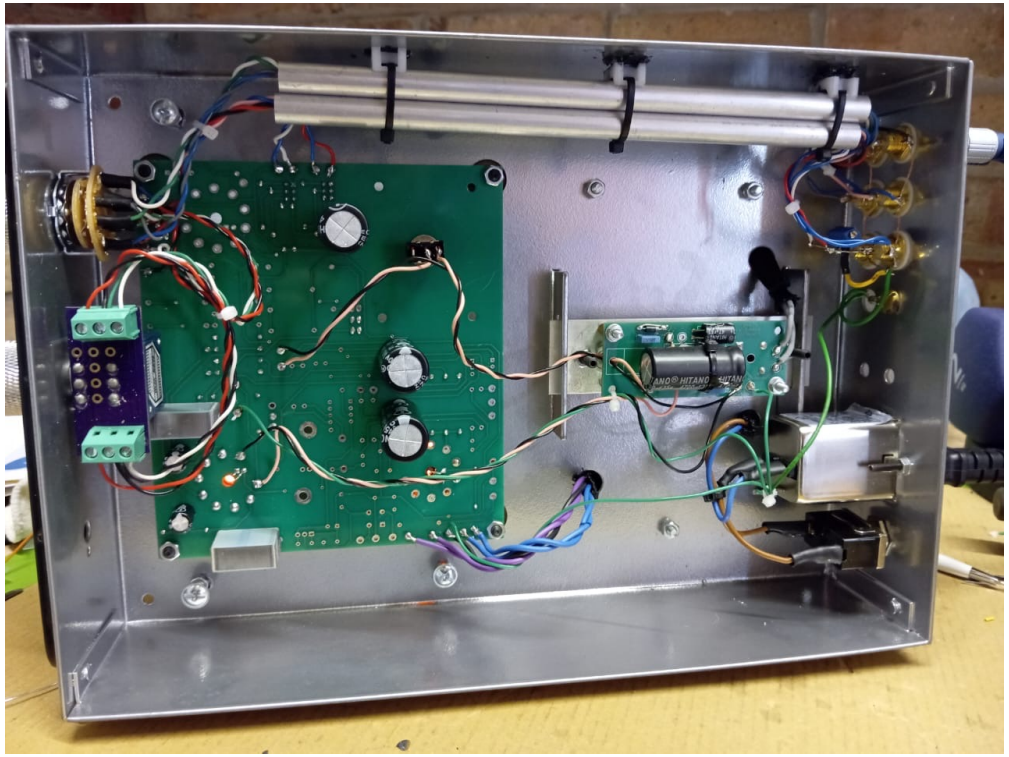
With the PCB installed

Start with the HT transformer connections, the cables enter the chassis suitably close To the PCB tabs. 6v3 heater first then the HT supply

Mount the power supply, ensuring its protected from damage with bubble wrap

First insert the led in the top panel. Secure with hot melt glue.

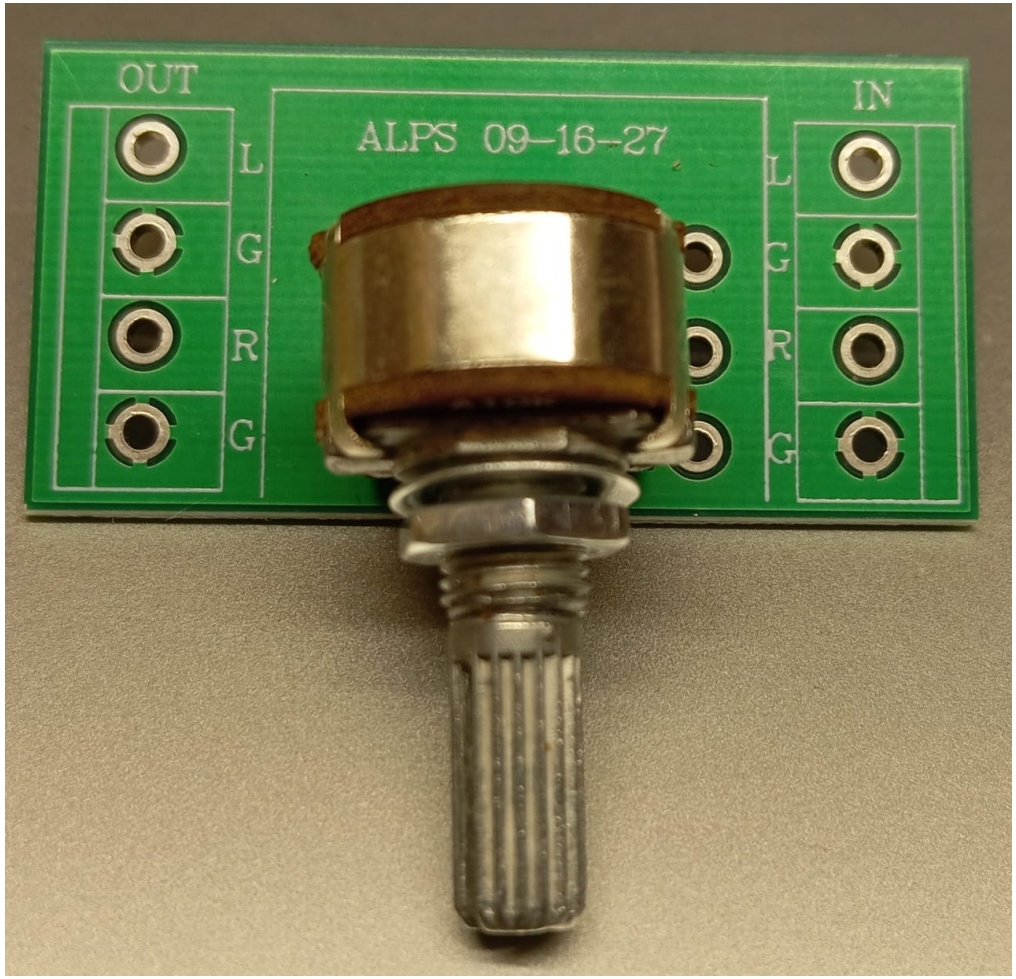
Now solder the output from the transformer to the power supply



Volume control

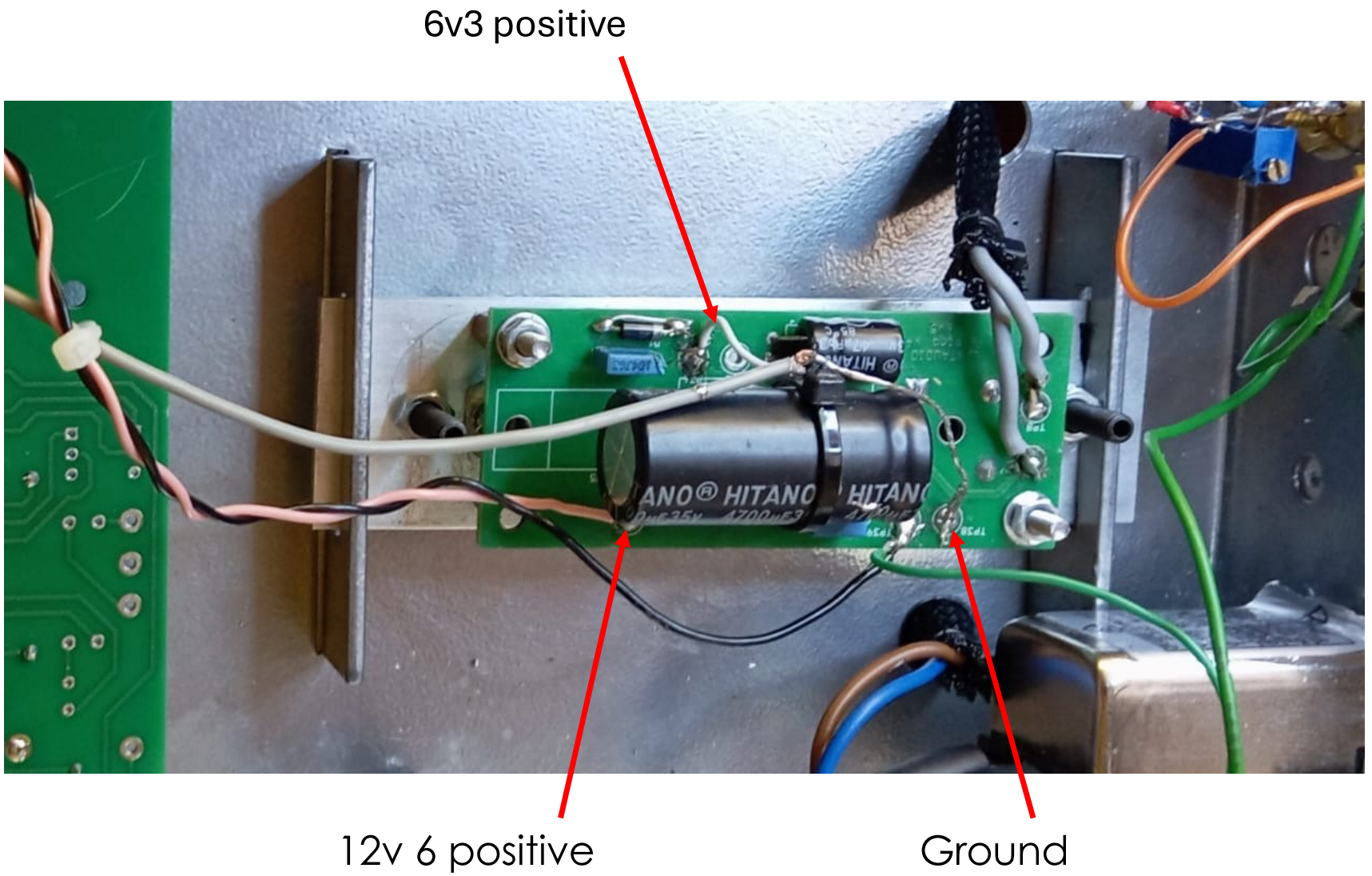
The volume control is made simple by using a proprietary pcb, depending on the vol control, wiring is identical. It must be a log A curve potentiometer uses a A10k dual

Out to PCB

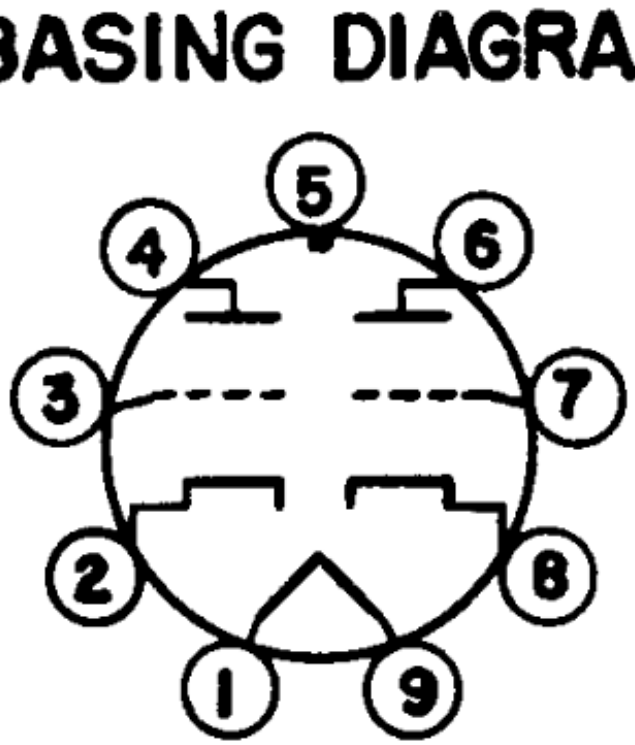


In from selector

Wire the power supply to the heater connection with the shielded cable



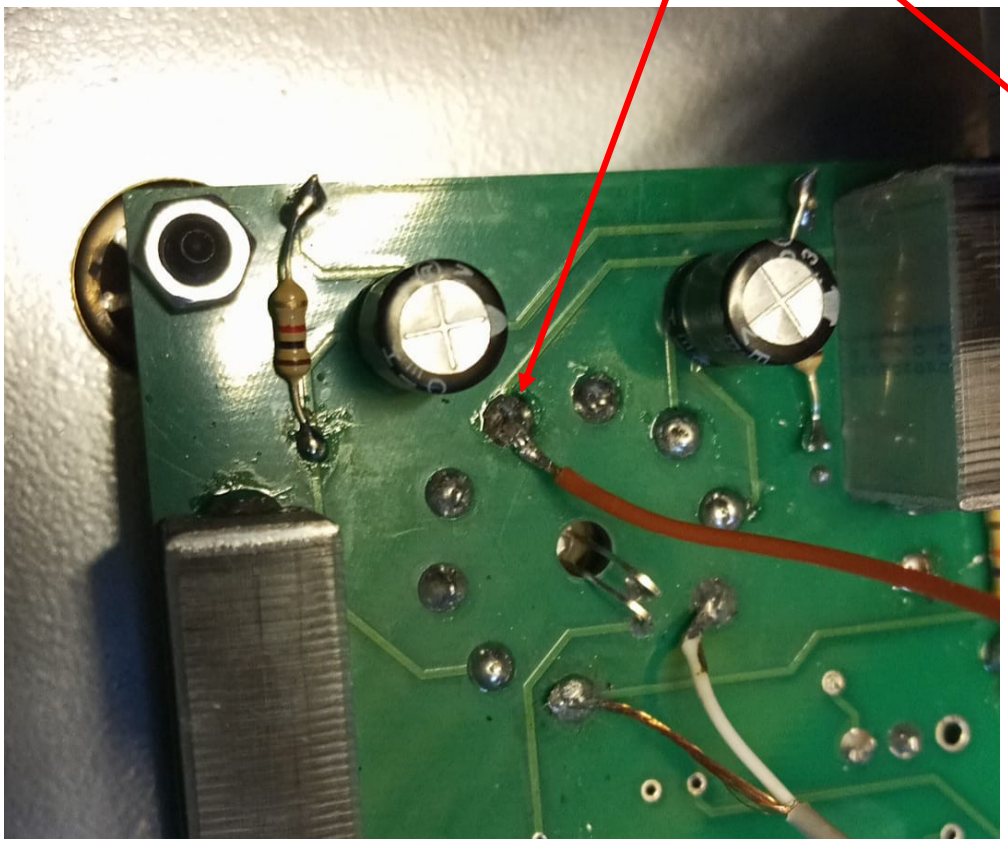
Always read the valve pin numbers from the bottom

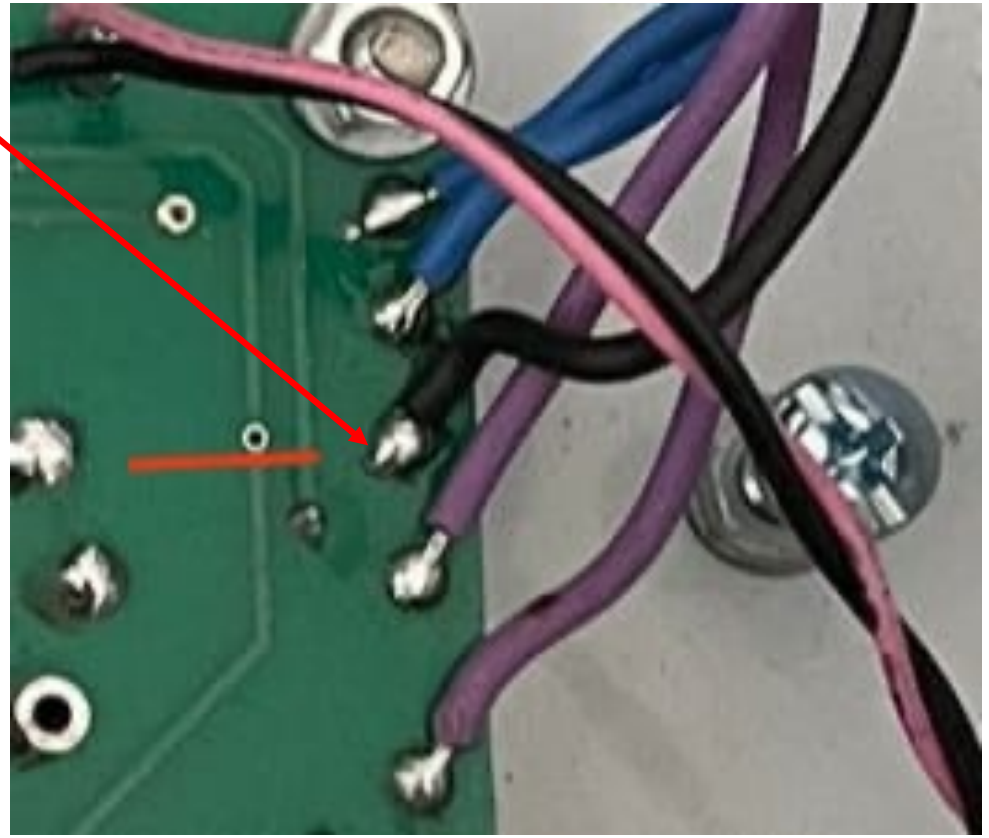


5670, 6n3p, 2c51 and 18c51 pin outs note different to ECC88
read from the bottom, heater are pin 1 positive and pin 9 negative
pin 5 goes to ground as above

Connect the earth to the centre pin of the 5670 direct to ground of the ht transformer

Pin 5 to transformer ground

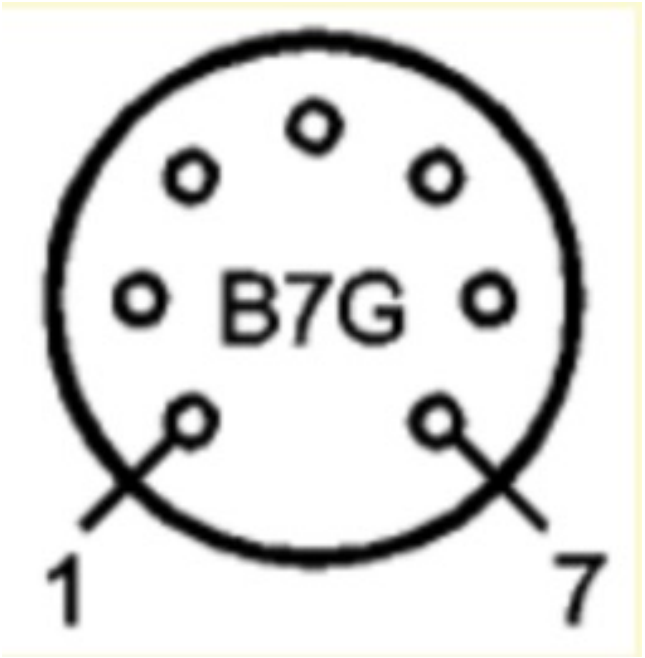




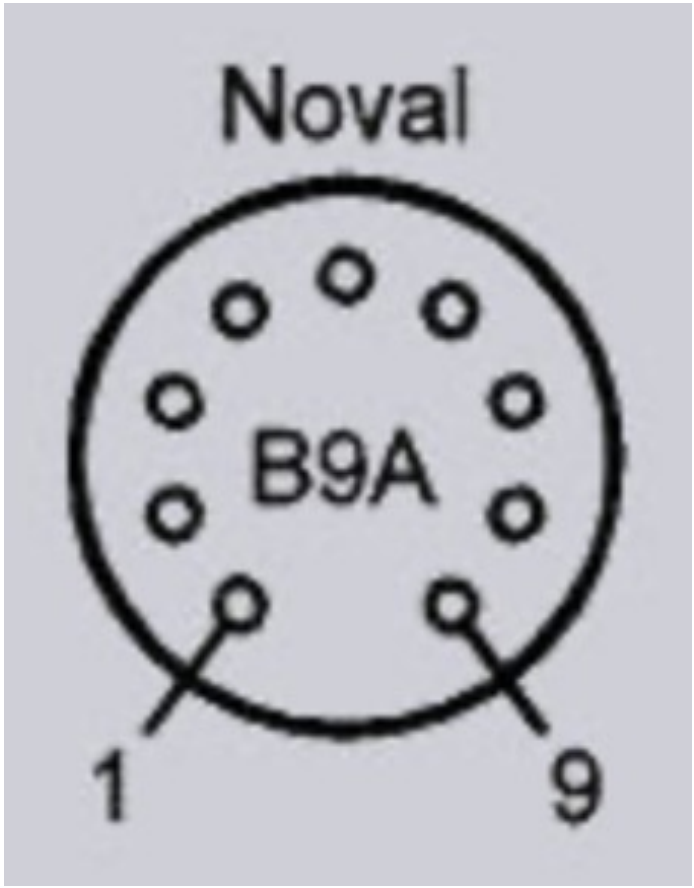
Pin 1 positive heater, Pin 9 negative heater

Now wire the rectifier to the top panel
The unit may accept any 9 pin or 7 pin rectifiers at 6v3

Hard wire the base of the B7g that is attached to the top panel, remember to number from underneath, pin 1 is to the left. Then cut approximately 100 mm wires to connect to the PCB wire to suit valve to be used as the following charts



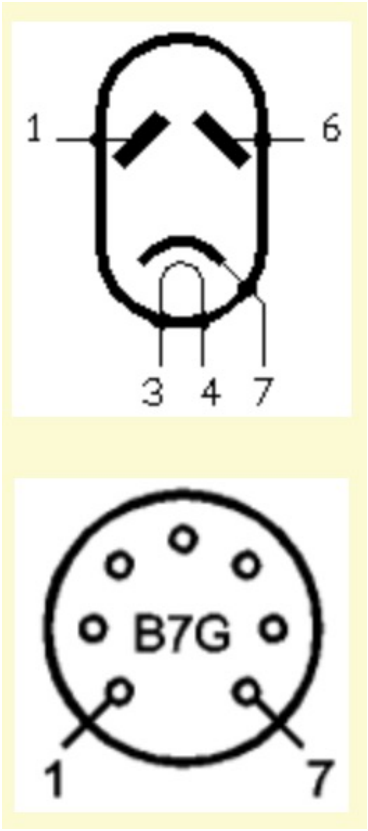
From the bottom



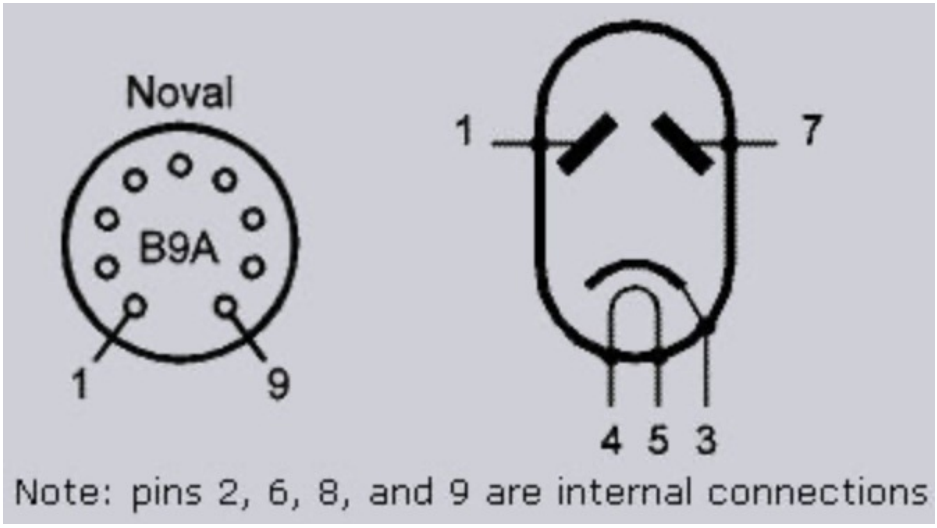
From the top

EZ90 to EZ80

EZ90

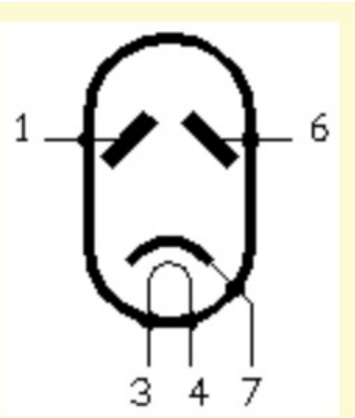


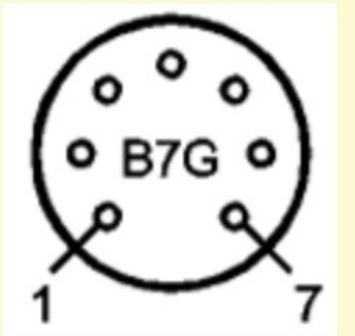
EZ80



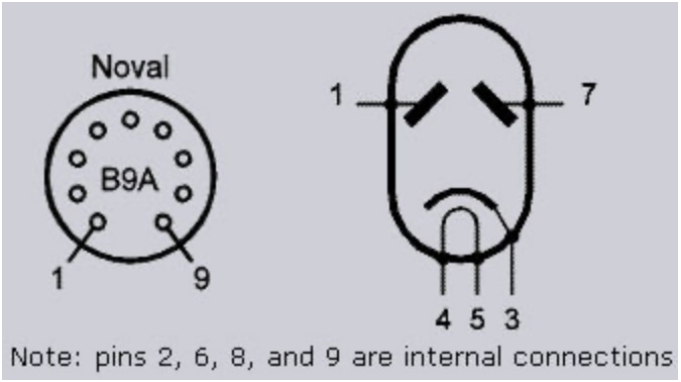
EZ90	EZ80/pcb
Pin1-	Pin1-Yellow
Pin6-	Pin7-Blue
Pin3-	Pin4-Red
Pin4-	Pin 5-Black
Pin7-	Pin3-White

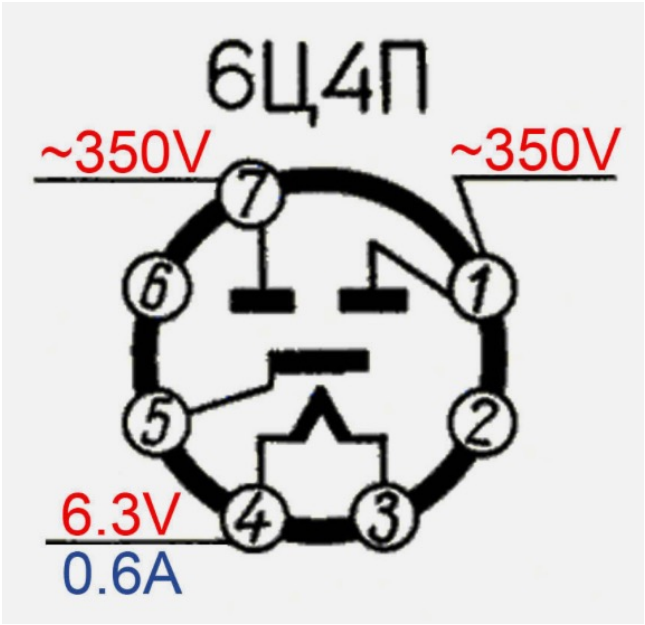
EZ90





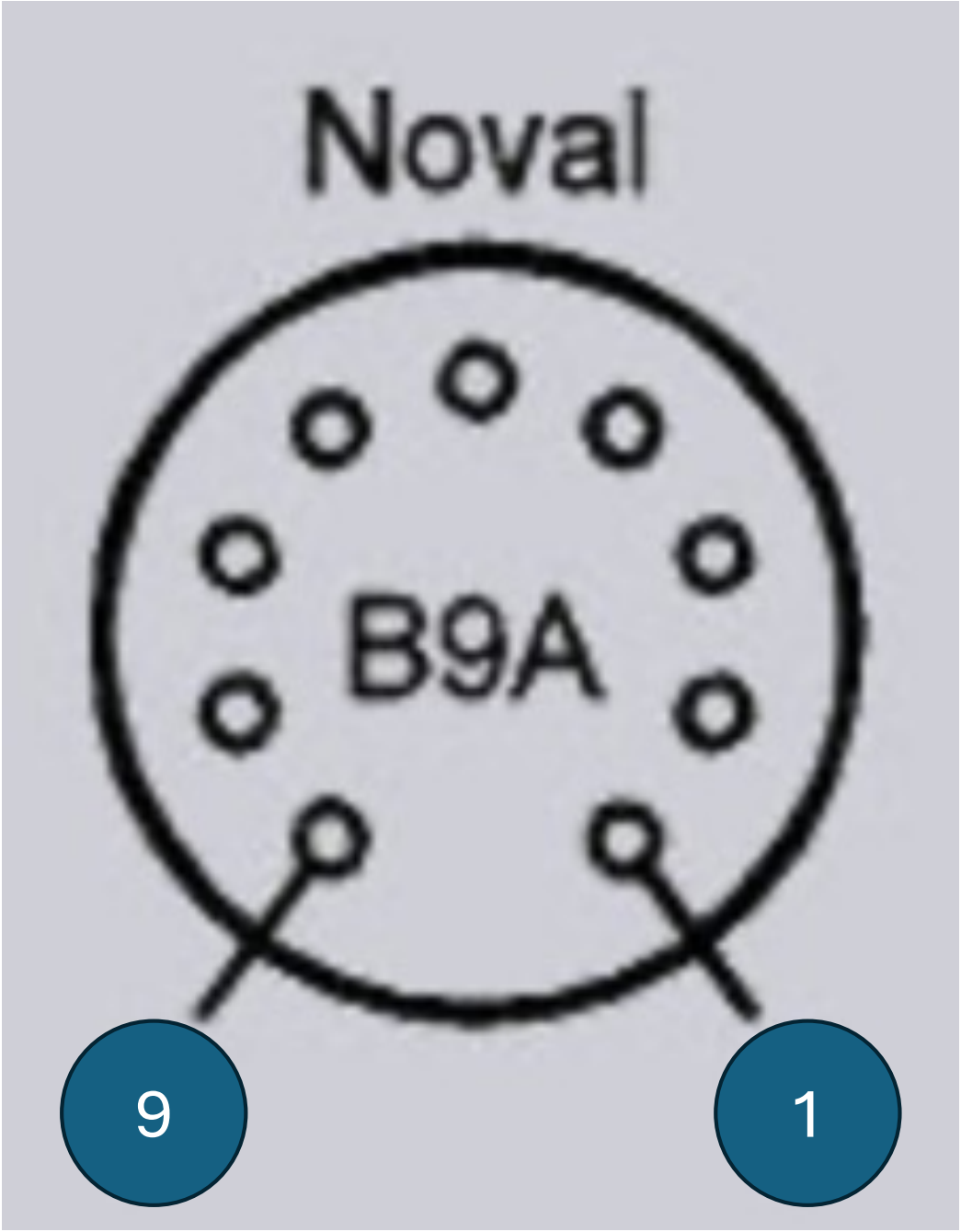
EZ80





6c4p	EZ80 Pcb
Pin1-	Pin1-Yellow
Pin7-	Pin7-Blue
Pin3-	Pin4-Red
Pin4-	Pin5-Black
Pin5-	Pin3- white

Socket numbering from the top PCB side



Balance control Semplice/ Crest line/ Q line/ Allegro

Optional to suit

The secret to the outstanding soundstage of the Lint range of products is the simplicity and choice of materials used. Mainly the choice of valves and the way they are used. The 5670 /6n3p series are available freely…however these do not necessarily have a balanced triode,.

This will result in a channel in balance (one speaker is louder than the other)

In the Lint range, this is not as noticeable (due to its 2 volt sensitivity designed in) as when used with a lower input requirement such as a Leak stereo 20 quad 2 or a solid state amplifier.

Valves maybe selected to have matched triodes which is first prize. The potentiometer is a Alps unit, also matched.

So the internal balance control (components supplied) may not be required which is the first prize.

To achieve the balance a internal circuit is used. Trim to suit after installing.

To prevent any potential loss of soundstage, the balance control is also used as a gain attenuator, thus allowing the Pre amplifier to be set to its maximum output and the balance in turn uses its balance potentiometer.

This alleviates the internal gain setting which is a t bar attenuator. Less attenuation is a better solution and keeping the circuitry simple.

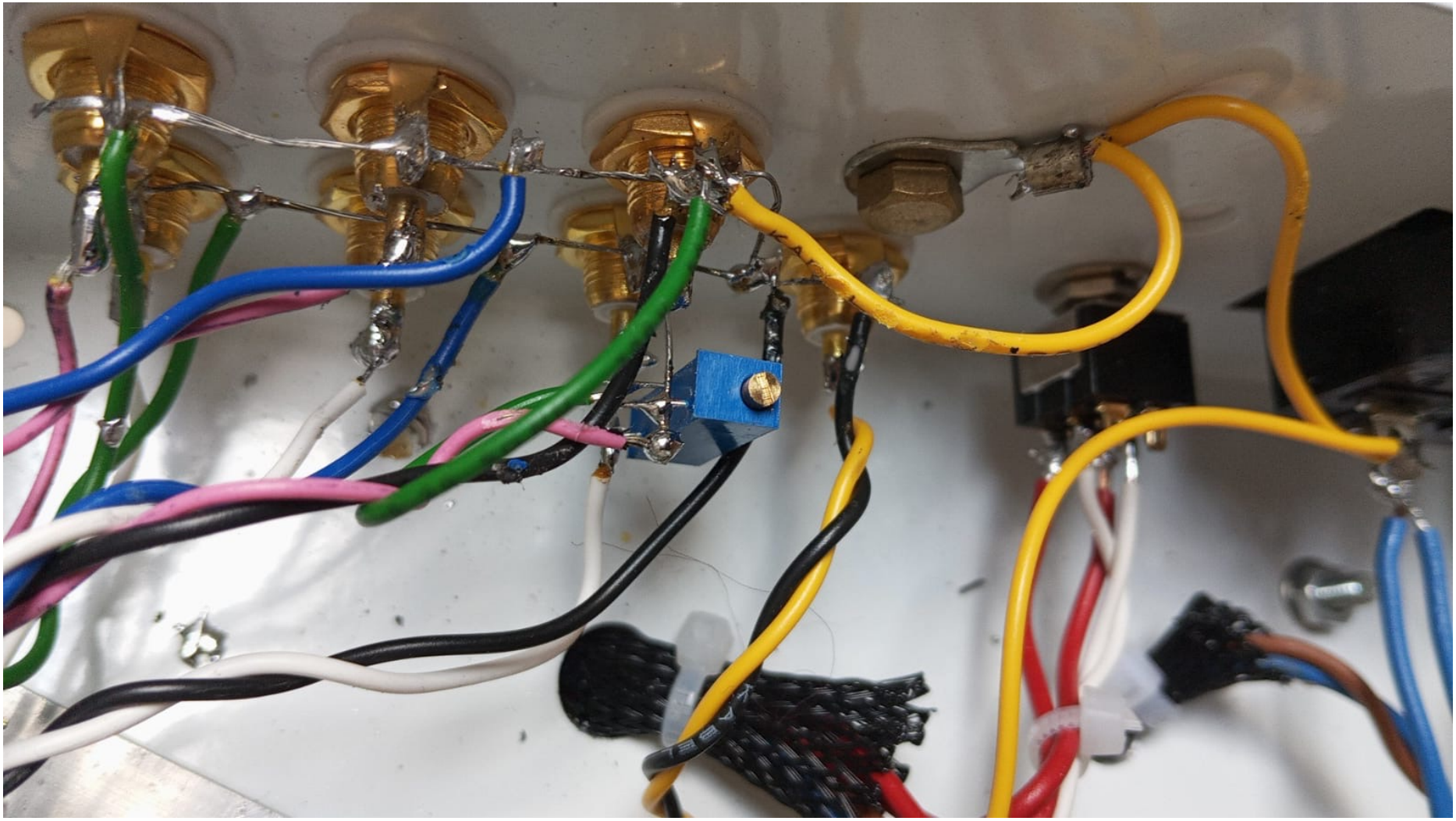
Leak stereo 20 set at 150mv set a 200k trim pot parallel with the output socket. Trin with a frequency generator 150 mv to achieve a 600 mv RMS output balance to suit.

Solid state set a 25 turn 200k trim pot in parallel with the output socket. Trim with a frequency generator 150 mv to achieve a 2 volt RMS output balance to suit. All at 1 khz

Lint Audio leave on maximum settings.

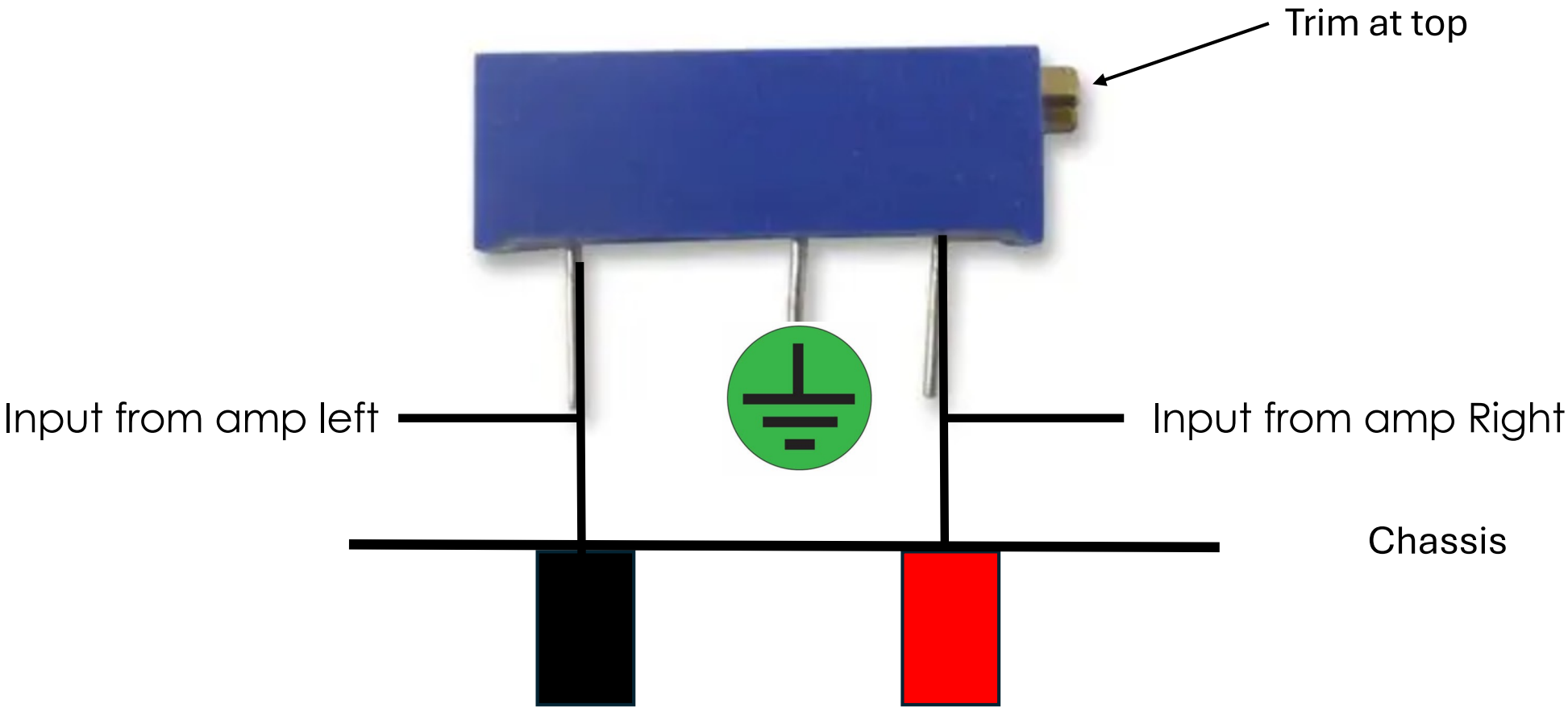
Adjust gain jumper to suit as in the main instructions

June 25



200 k trim pot all versions

Wiring of balance control



Now test the RCA input and outputs

Firstly, lets confirm that the RCA input is playing music !
Plug a audio source to the RCA input and headphones amplifier.

If you are rocking the daisies, now to check your attenuation calculations.

To do this we need a variable frequency generator, no problems…

You can download a suitable online frequency generator, this will give you a very nice feel for your work so far.

Load this site which will give you a nice system.

https://onlinetonegenerator.com

You can set to 1000hz firstly and adjust the input to 150 mv using a multimeter

Plug the ground to ground and then by using the probe in the RCA input to obtain a output voltage.

Increase volume to maximum and adjust balance trim pot to match both channels

Connect using a 3,5 mm to 2 x RCA cable

Now with the cabinet assembled and tested by means of
a frequency generator and balanced, now it can be tested..

Ideally the unit can use a headphone amplifier as a perfect test, the valves need To warm up a few minutes. Mains noise, check all

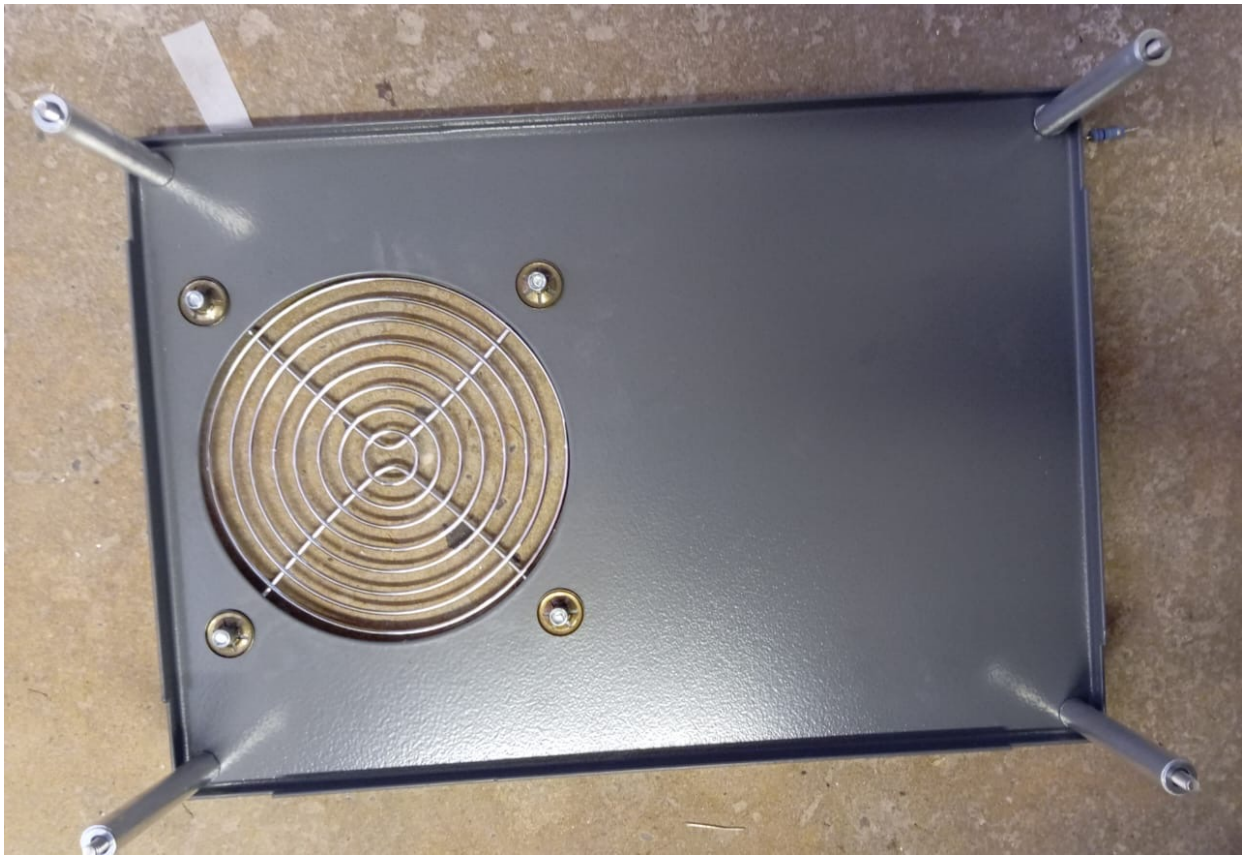
Listen without a input for mains hum, this may be evident by using poor quality RCA cables.
As the balance is actually set the system should be perfect. However certain Integrated amplifiers may be unbalanced due to age related factors. This will be adjusted by listening tests.

With all tests complete, you can screw the top panel and base panel.

Apply bottom labels and screws and spacers using

4 x M4 midi feet, M4 x 80 mm screws, M4 Rivnuts, 67mm aluminum tubes and dome nuts with washers.

Attach feet as per the picture with the grille on the outside.



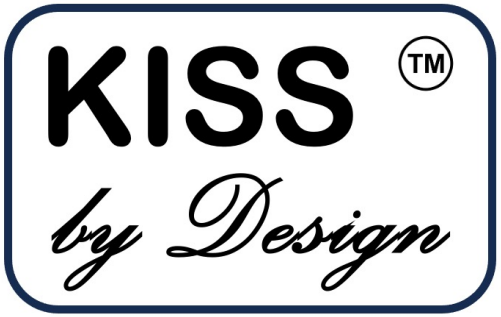
Apply base labels as follows

For further information contact

Lint Audio

www.lintaudio.com

lintaudio@icloud.com



Lint audio also make valve monoblock amplifiers, phono stages. Bespoke materials are made in house, transformer bells, spun torroid covers, leather transformer boxes.

All cabinets are powder coated for durability.

All UK production use aluminum chassis.

Join us on Lint Audio UK kit builders