RE-808 Build Guide v1.0

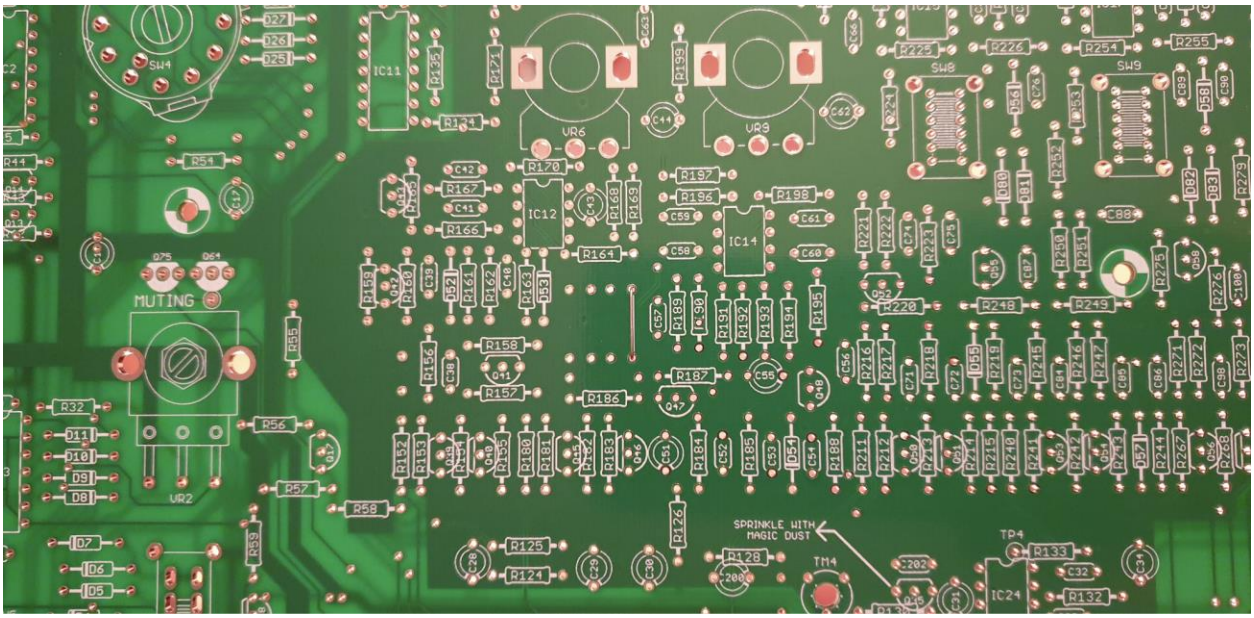
[TOOLS REQUIRED]

Soldering tools
Terminal crimper (if you decide to use connectors and headers)
Flat pliers
Dremel or small metal file
Marker Pen
Small Screwdriver
Metal Saw

[MAIN BOARD]

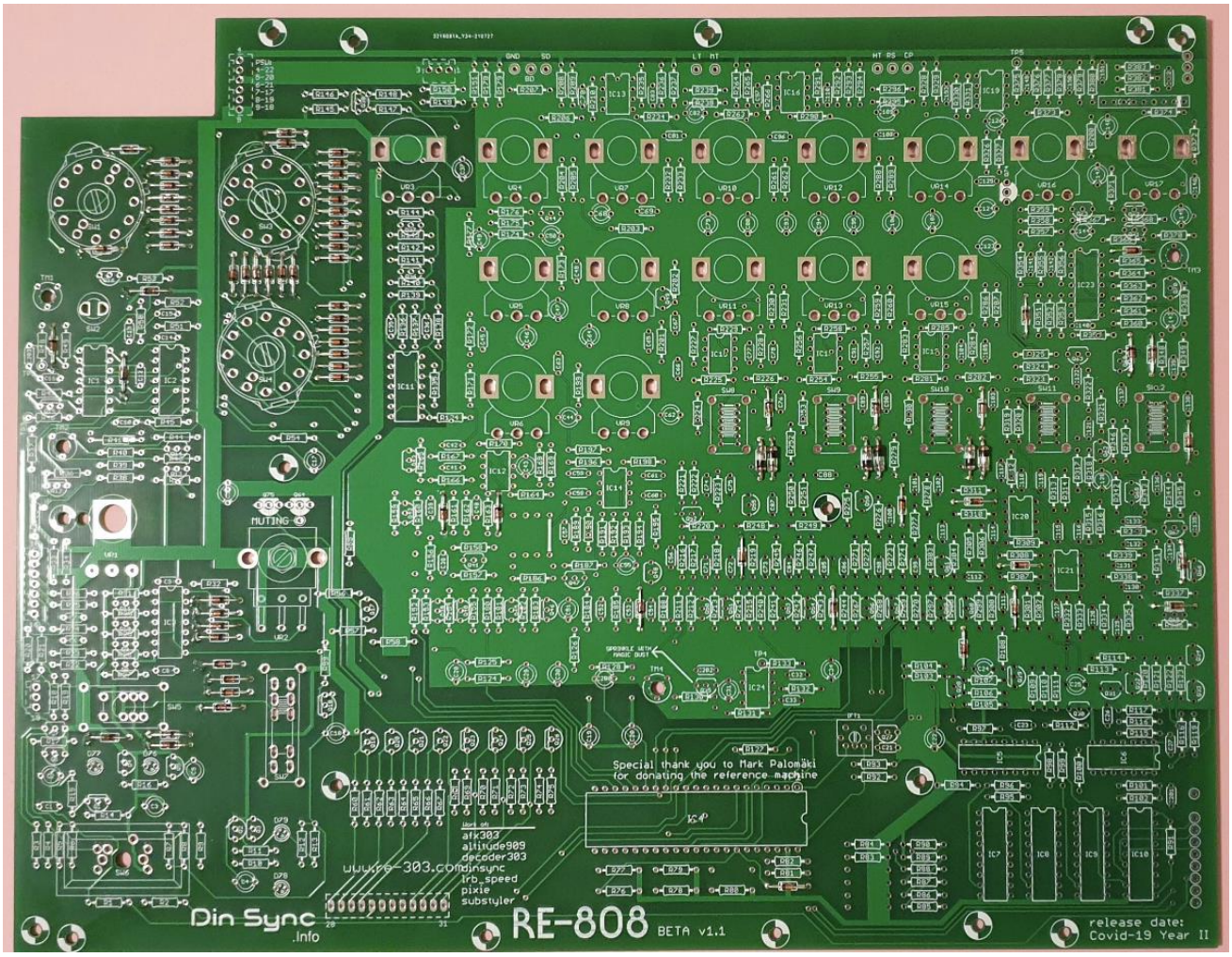
Jumper

1	Wire Jumper



Diode

6	1S188FM
70	1S2473

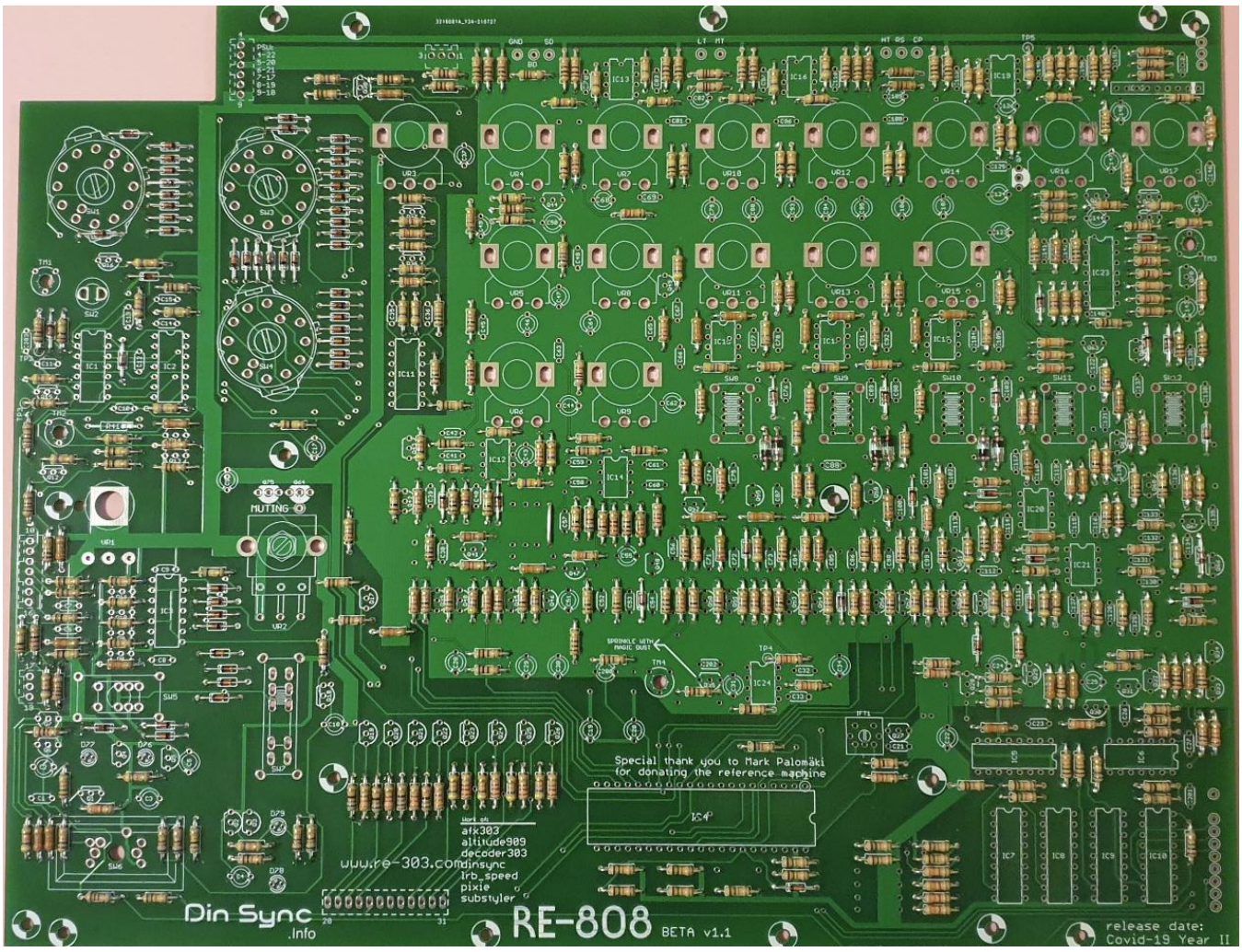


Resistor

1	22
4	68
21	100
2	220
3	330
7	680
23	1k
2	1k5
8	2k2
2	2k7
14	3k3
27	4k7
3	5k6
5	6k8
1	8k2
38	10k
41	15k
32	22k
3	27k
25	33k
1	39k
28	47k
3	68k
3	82k
28	100k
1	150k
5	220k
2	330k
1	390k
14	470k
1	560k
2	680k
8	820k
15	1M
1	1M5
5	2M2

Notes:

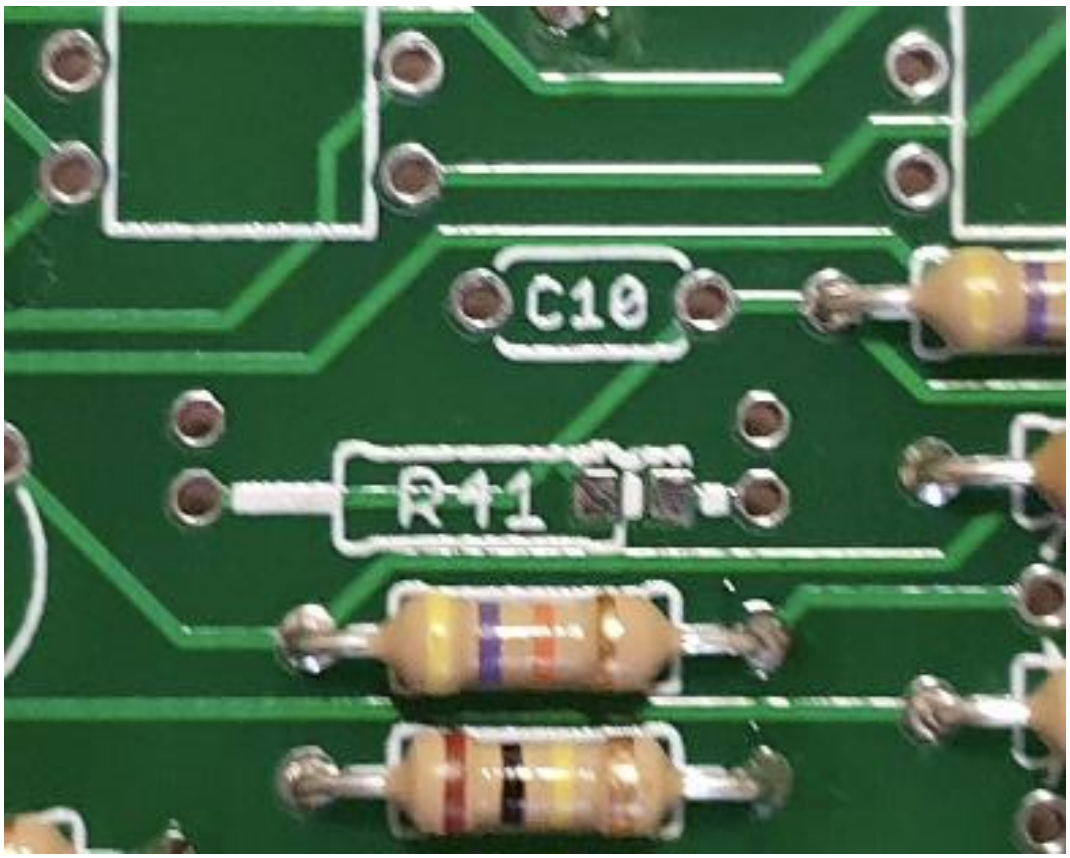
According to the Service Notes R200 in the SD section was replaced by a wire. A 10K resistor designated as R200 was added to the CP. The initial design of the RE-808 had both footprints. This caused some confusion during the beta build, so it was decided to remove the footprint for the R200 in the SD circuit, that required C65 to be rotated by 90º. R85, R86, R87, R88, R83, R84, R89, R90, R95, R96, R98, R99 do not need to be mounted with a Pixie CPU



Posistor

1	560

Notes:
Option 1: Original part 560 ohm PTC
Option 2: 2x 1K PTC in Parallel like in the x0xb0x (use the pads above R41)
Option 3: 0603 smd PTC

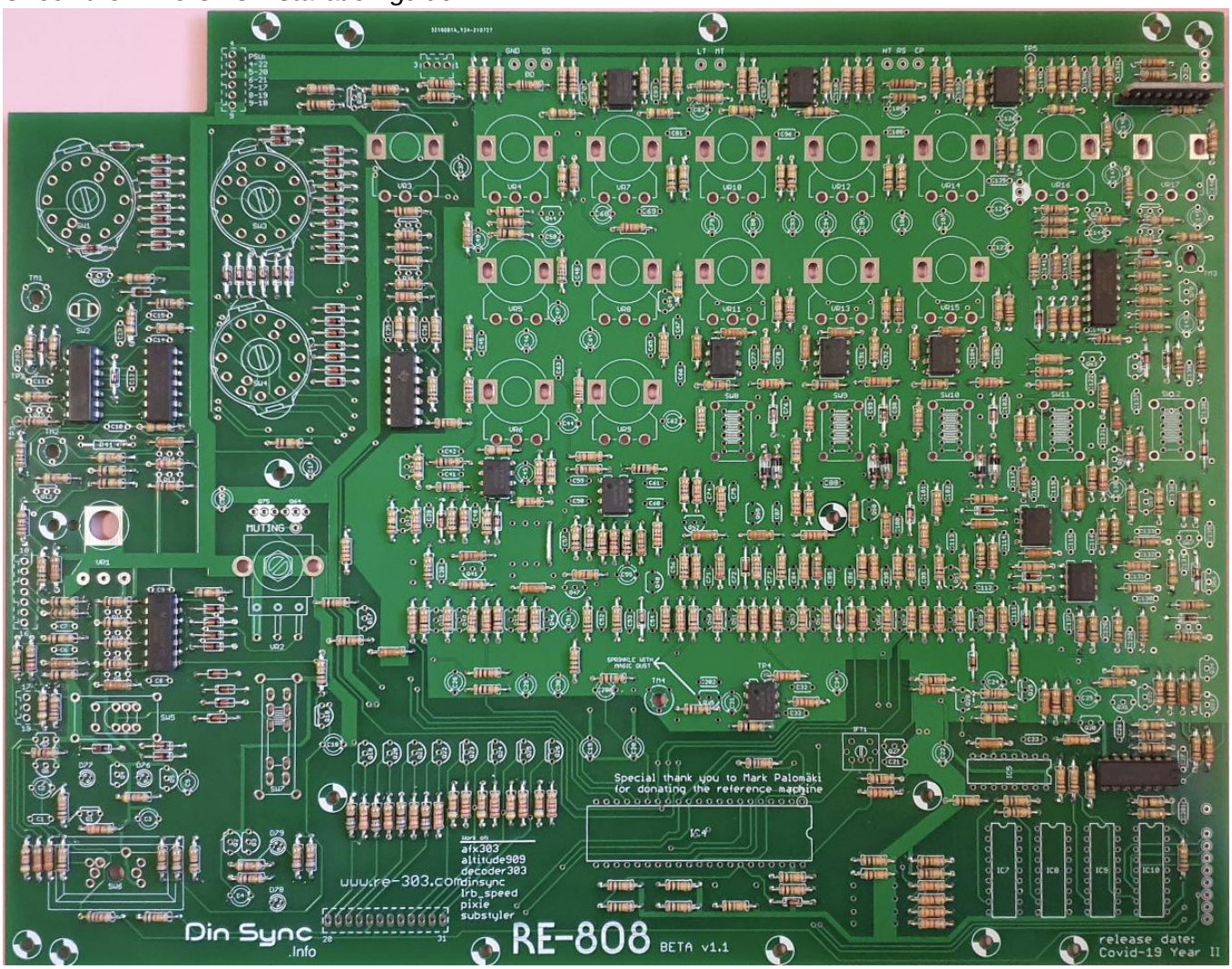


Integrated Circuit

1	MC14001BCP
1	TC4011BP
1	TC4013BP
1	MC14051BCP
1	HD14584B
2	AN6912
1	BA662A
4	UPD444C
1	UPD650
11	µPC4558C

Notes:

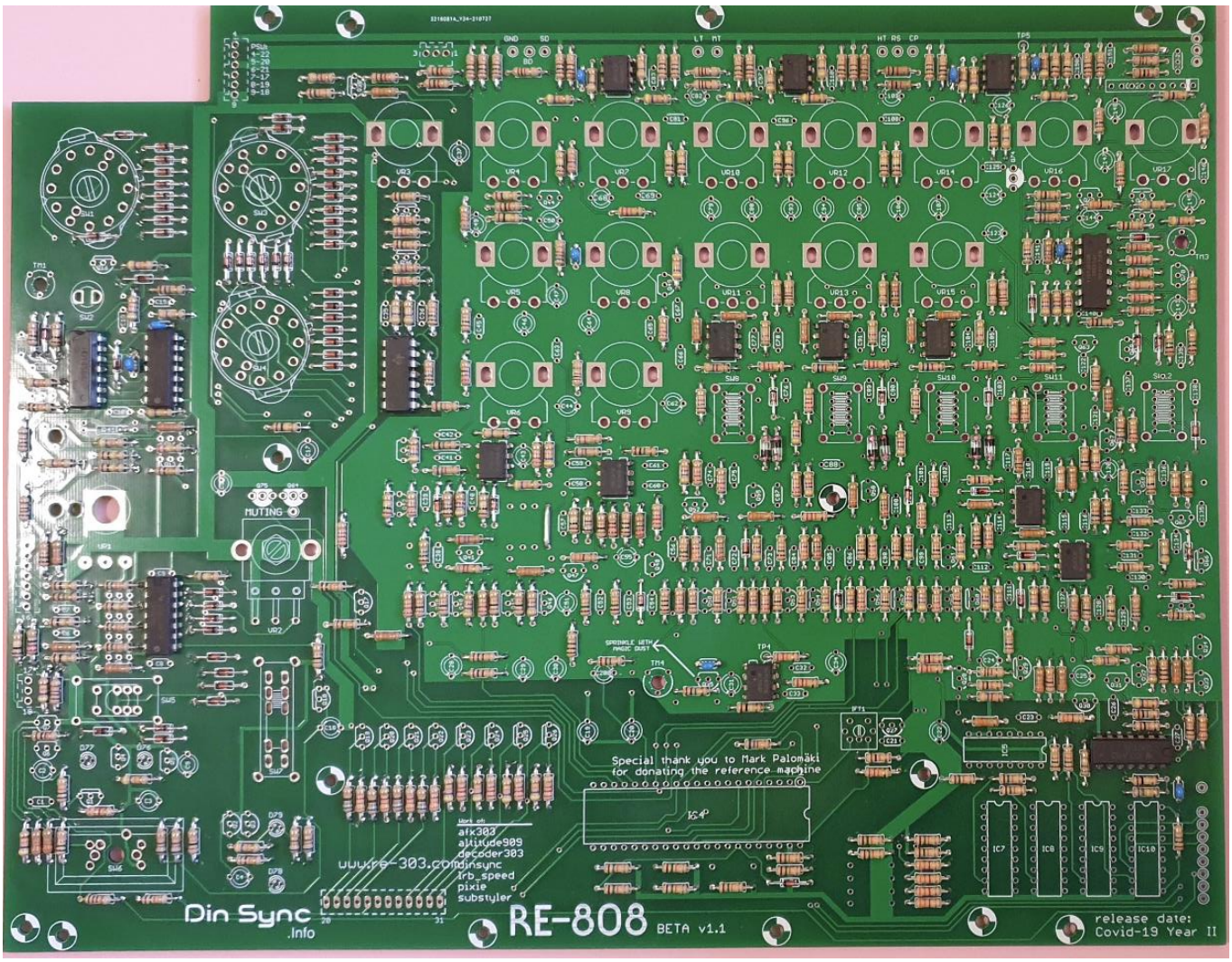
Check the Pixie CPU installation guide



Capacitor

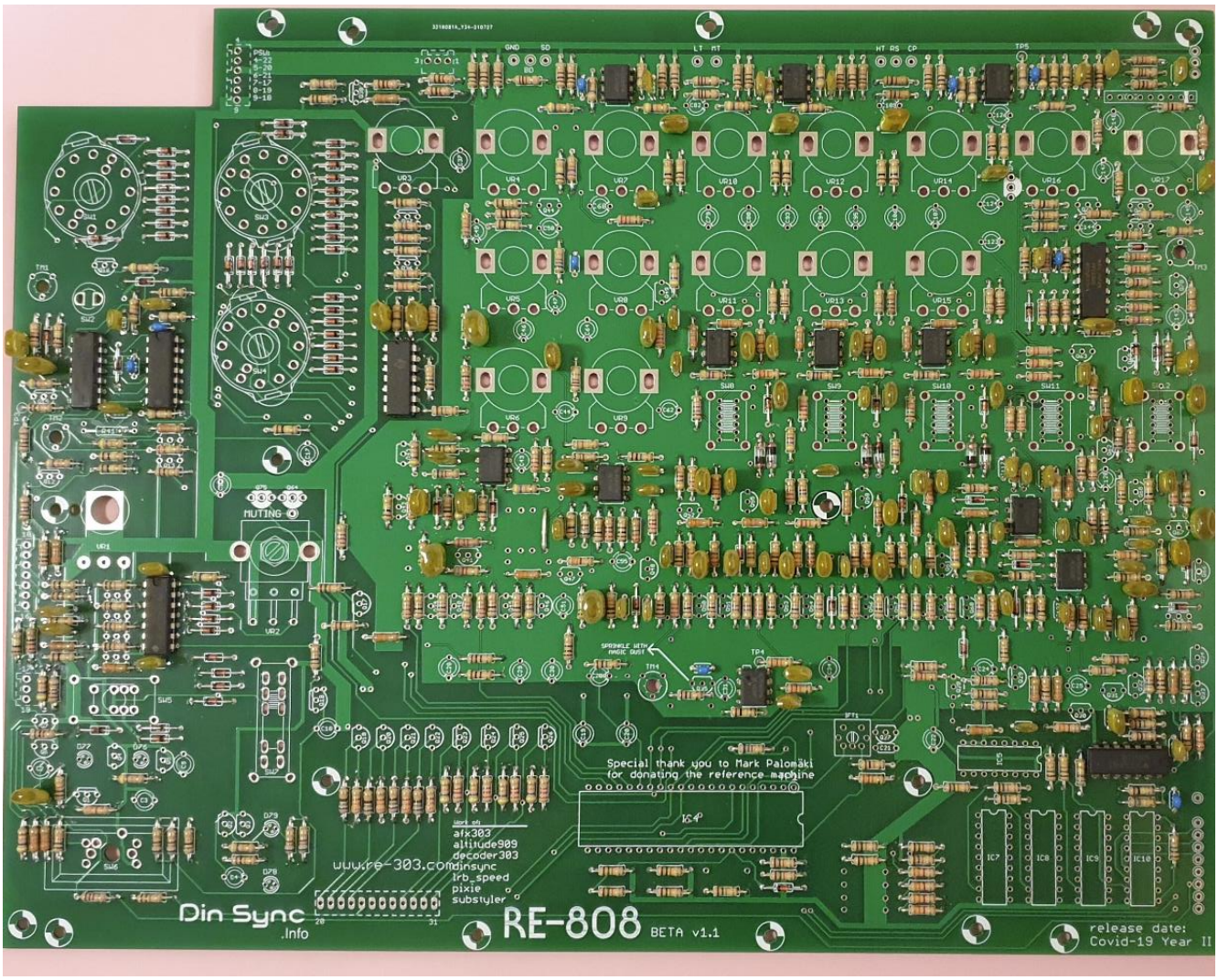
Ceramic

3	22p
6	220p



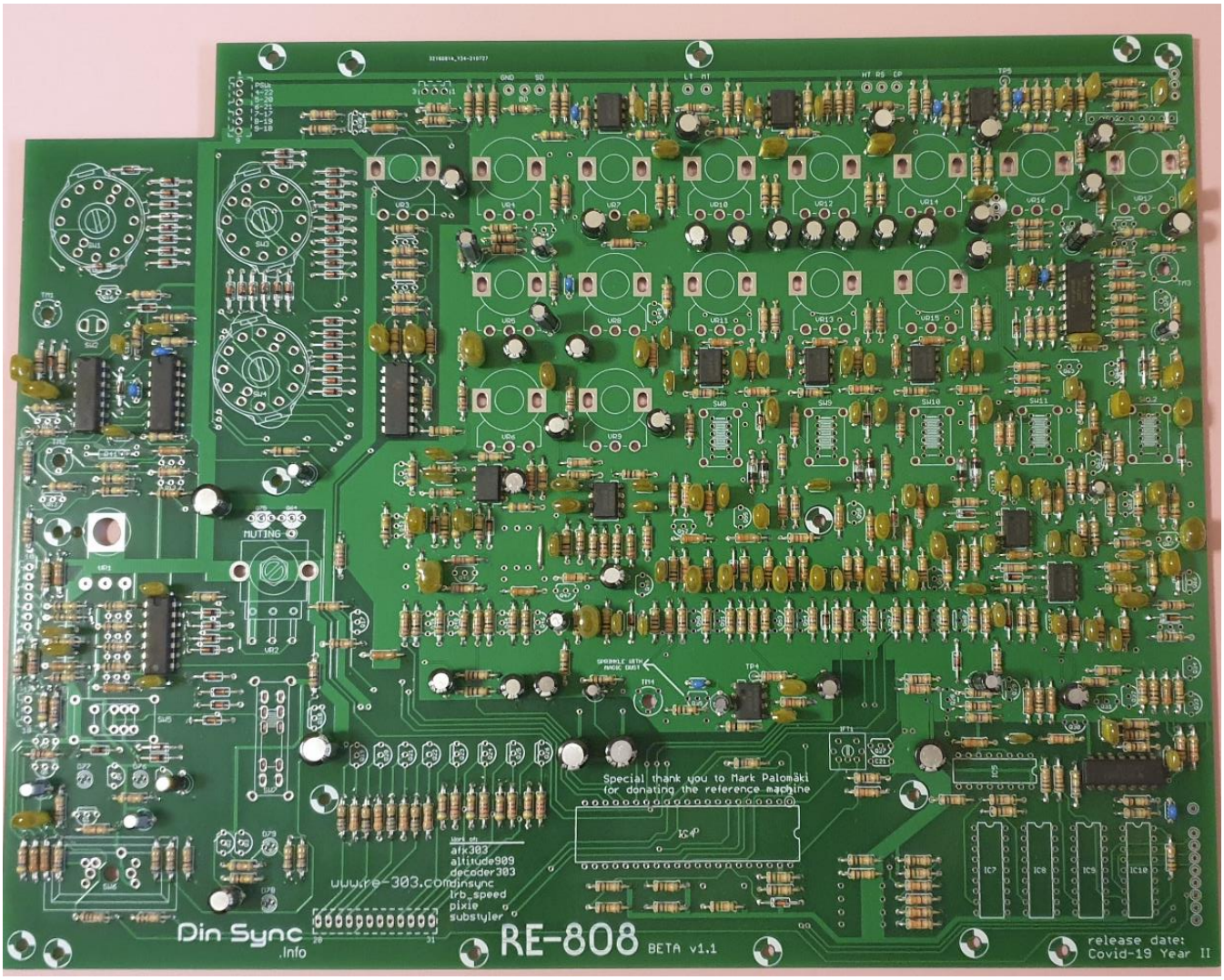
Polyester

12	1n
3	1n8
3	2n2
4	2n7
1	3n3
7	4n7
1	5n6
3	6n8
1	8n2
11	10n
2	12n
5	15n
4	18n
5	22n
6	27n
7	33n
4	39n
15	47n
2	56n
4	100n


MUTING
Special thank you to Mark Palomäki
for donating the reference machine
afx303
altitude909
decoder303
drsync
frb_speed
pixie
substyler
www.re-303.com/drsync
Din Sync
.Info
RE-808
BETA v1.1
release date:
Covid-19 Year II

Electrolytic

5	470n/50V
6	1uF/50V
3	10uF/16V
8	33uF/6.3V
21	47uF/16V
5	100uF/6.3V



Transistor

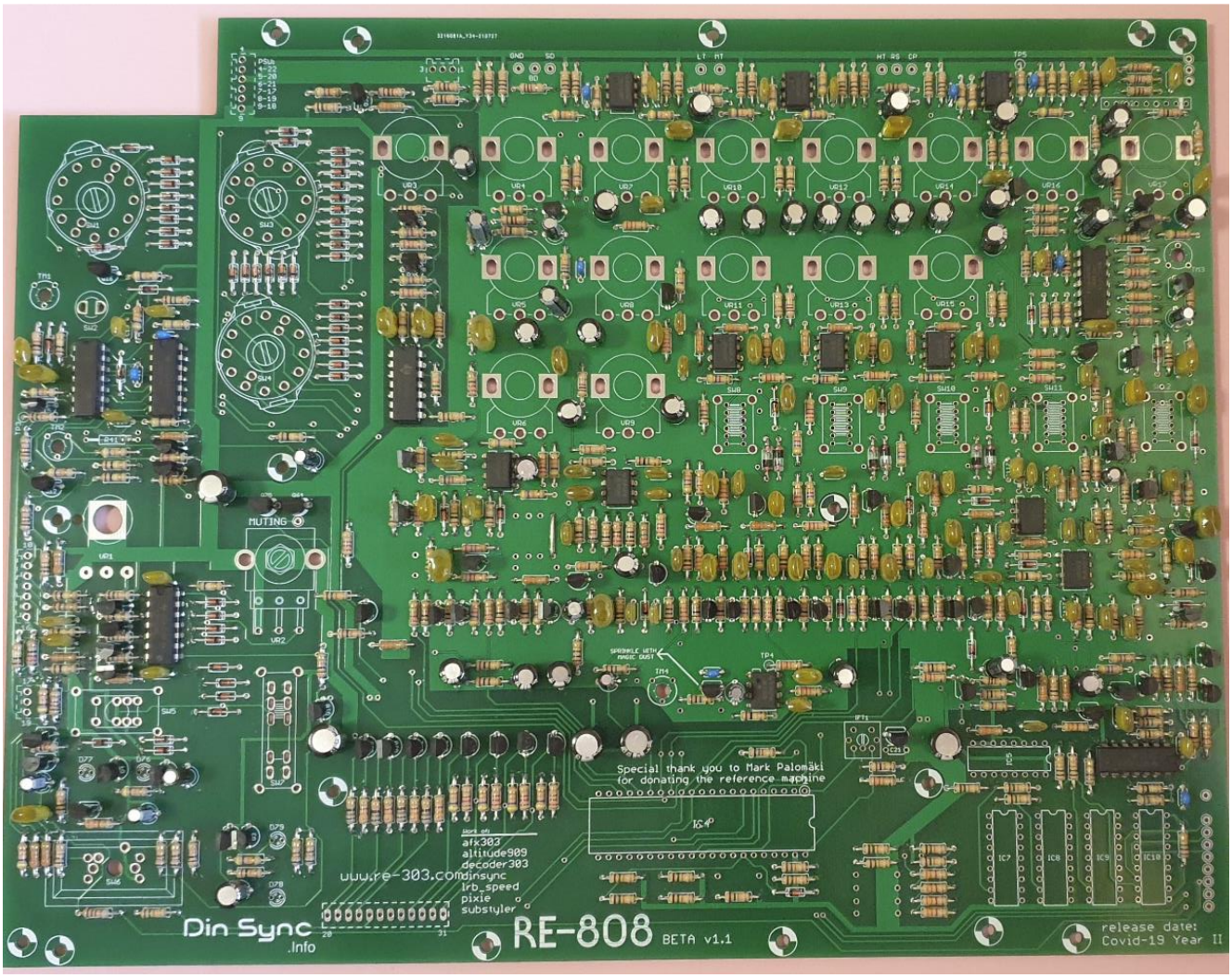
4	2SA1015 (GR) or(Y)
19	2SA733 (P) or (Q)
1	2SC828 (R) or 2SC945 (P) or 2SC536 (F)
48	2SC945 (P) or (Q)
2	2SK30A (GR)
1	2SK30A (Y)

Notes:

The JFET transistors can be replaced with 2SK208 smd parts with the same suffix and using pcb adaptors

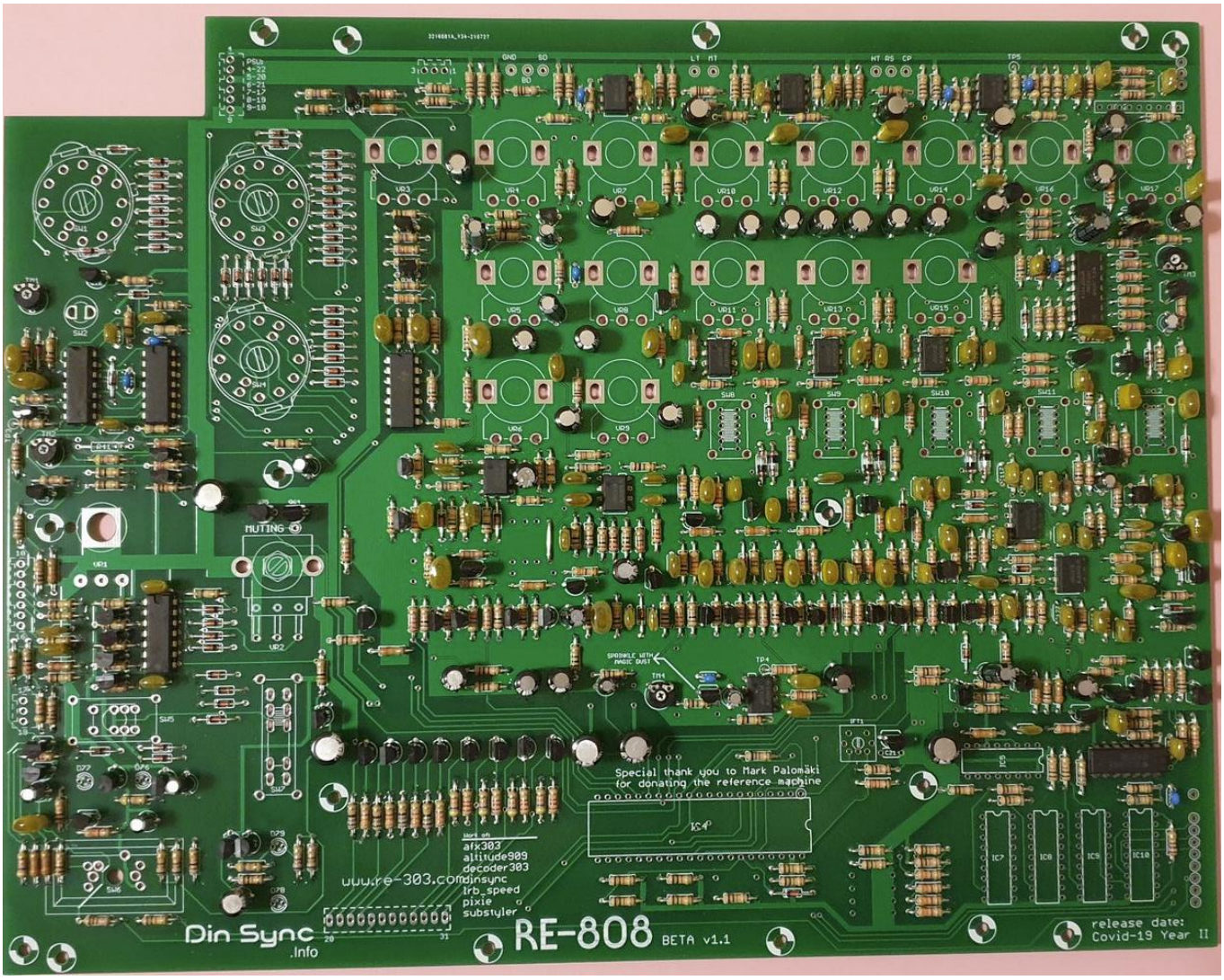
The noise transistor Q35, must be selected according to your Religion.

The 2SC828 magic transistor is a myth.



Trimmer

1	100kB
2	10kB
1	22kB

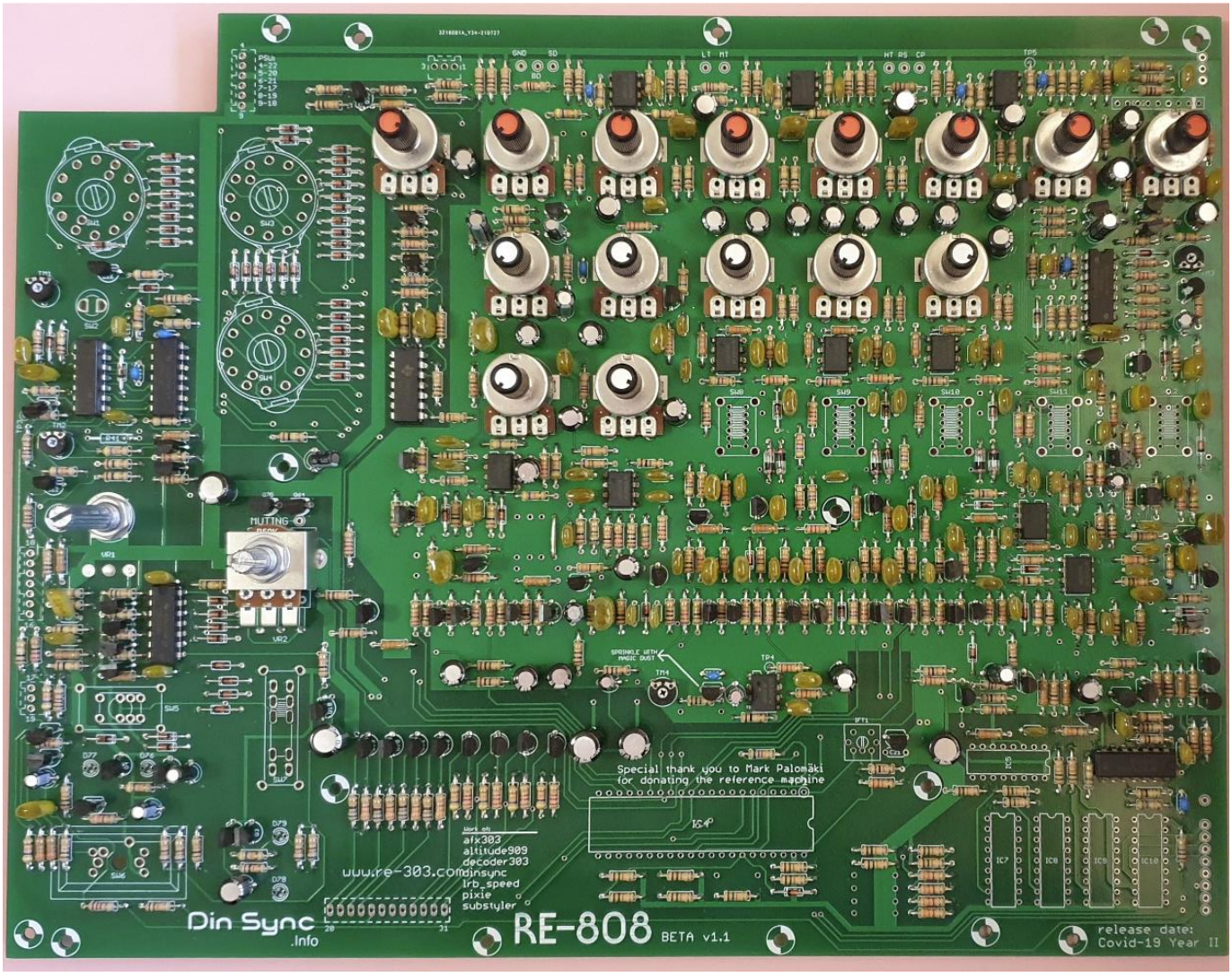


Potentiometer

7	100kA
1	100kB
2	10kB
1	10kC
3	500B
1	500kB
1	50kB
1	10kB x 2
1	Pot Bracket

Notes:

The pins in the tempo potentiometer are a bit short but they will work fine.

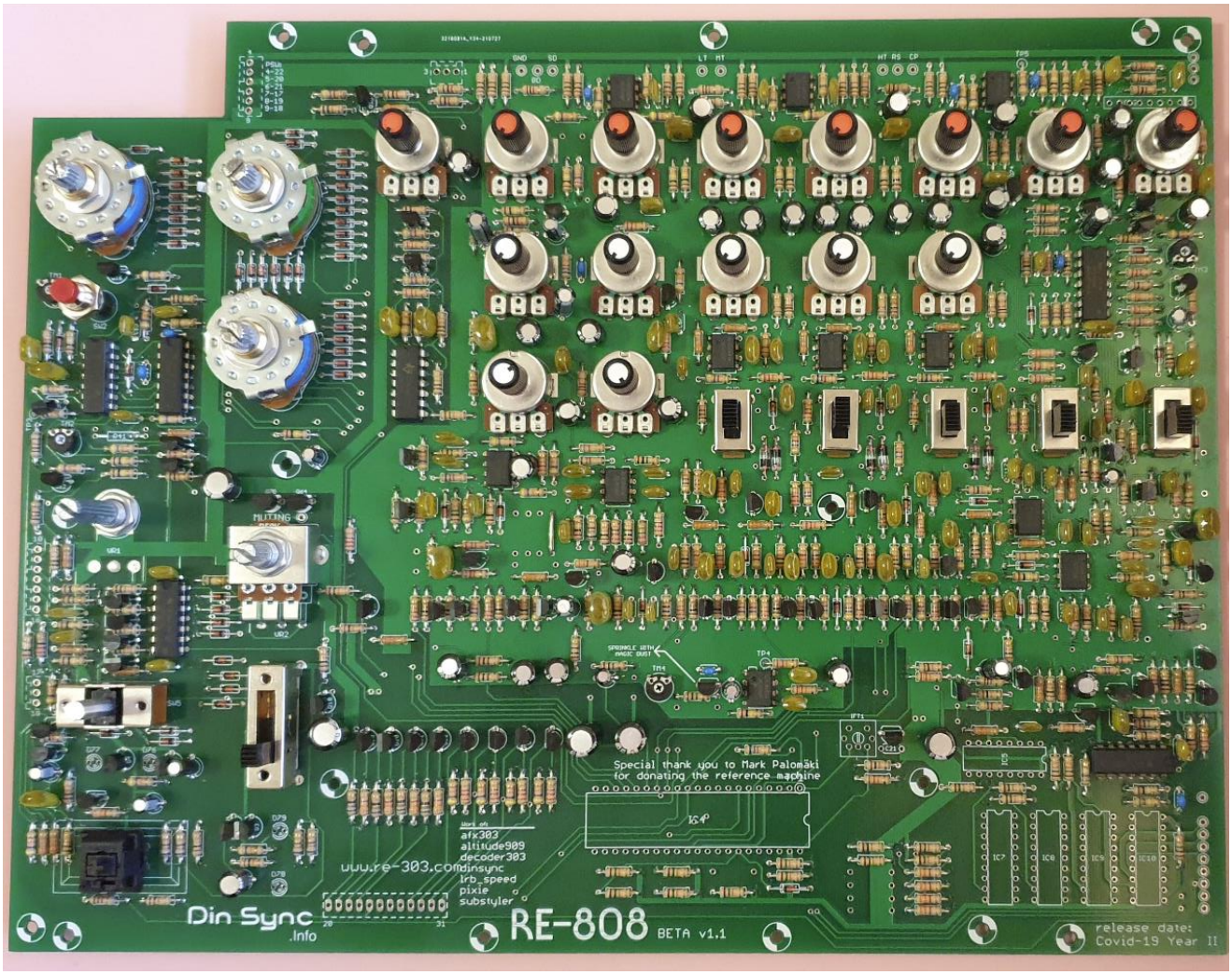


Switch

1	DS102 #44
1	KED10001
5	MSS42_SW_4PDT
1	SRM101C
2	SRM1026
1	SLE62301
1	SQPR24P22S

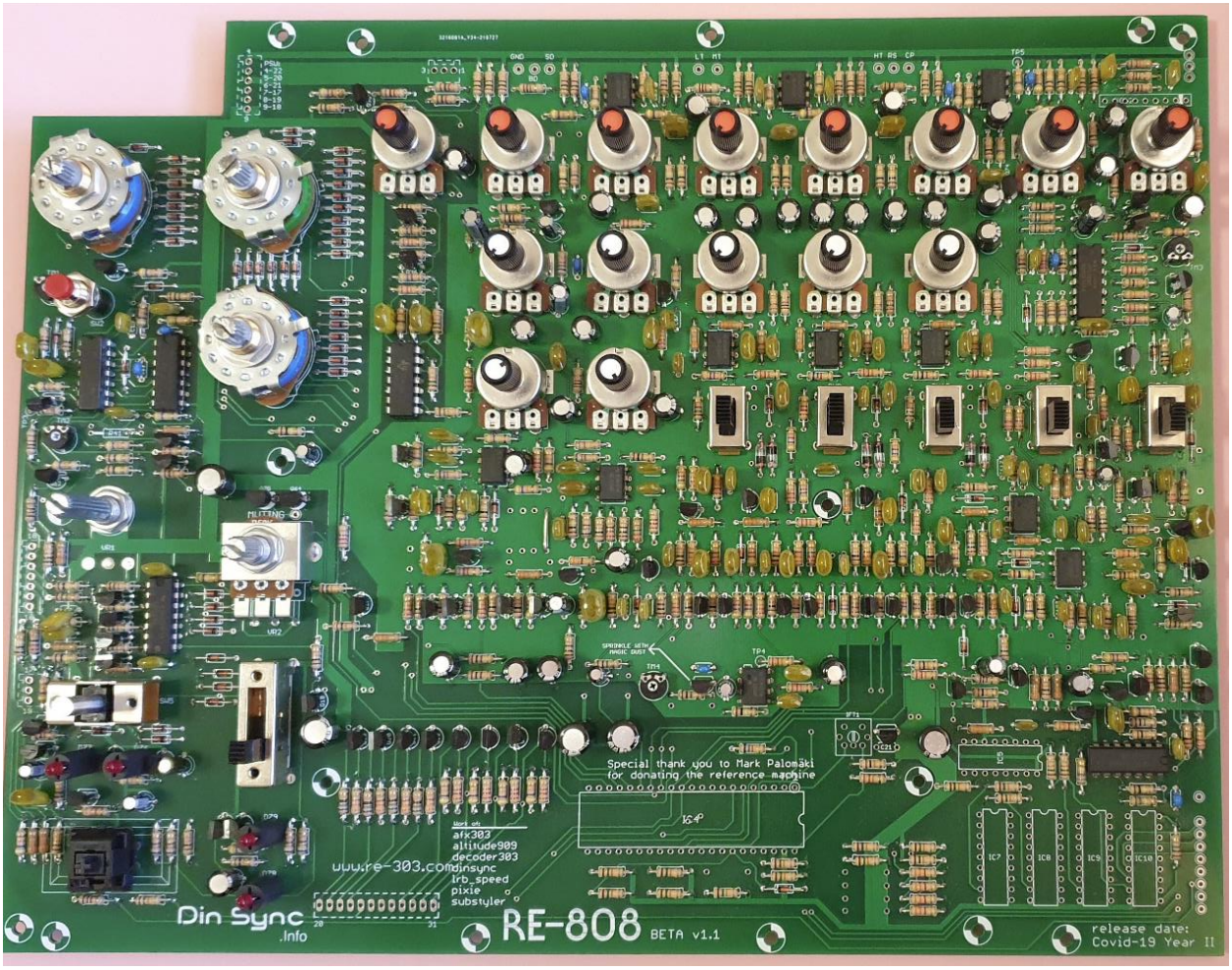
Notes:

Check the tutorial on how to convert the 6 Rotary Switches in this list to make the 3 used in the RE-808.



LED

4	TLLG4400
4	Led Spacer 15mm

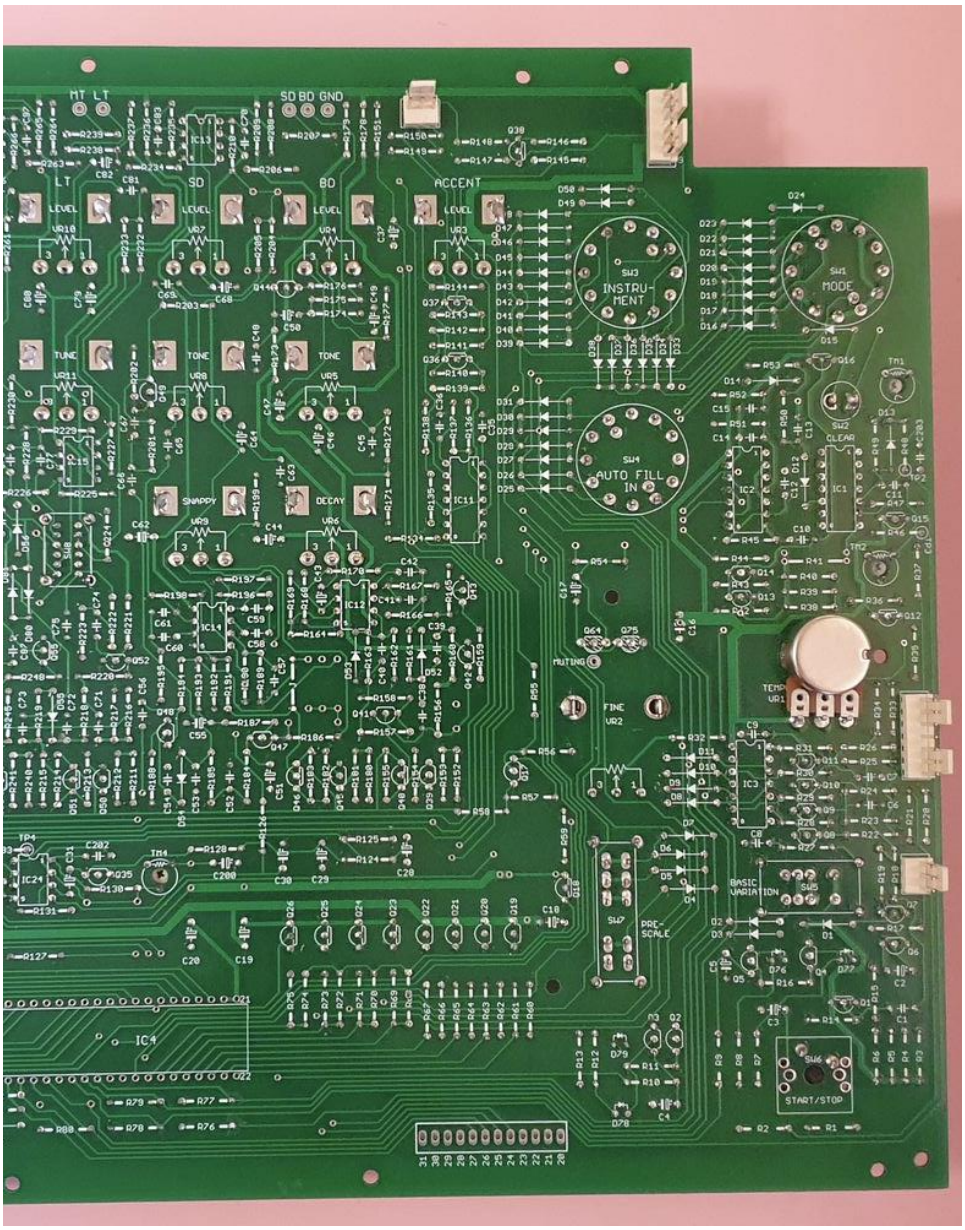


Headers

1	3022-12A
2	5045-03A
1	5045-06A
1	5045-07A

Notes:

The switchboard flat cable was a point of failure in the original design. Instead of the 3022-12A connector and flat cable use the Flexstrip soldered to the pcbs.



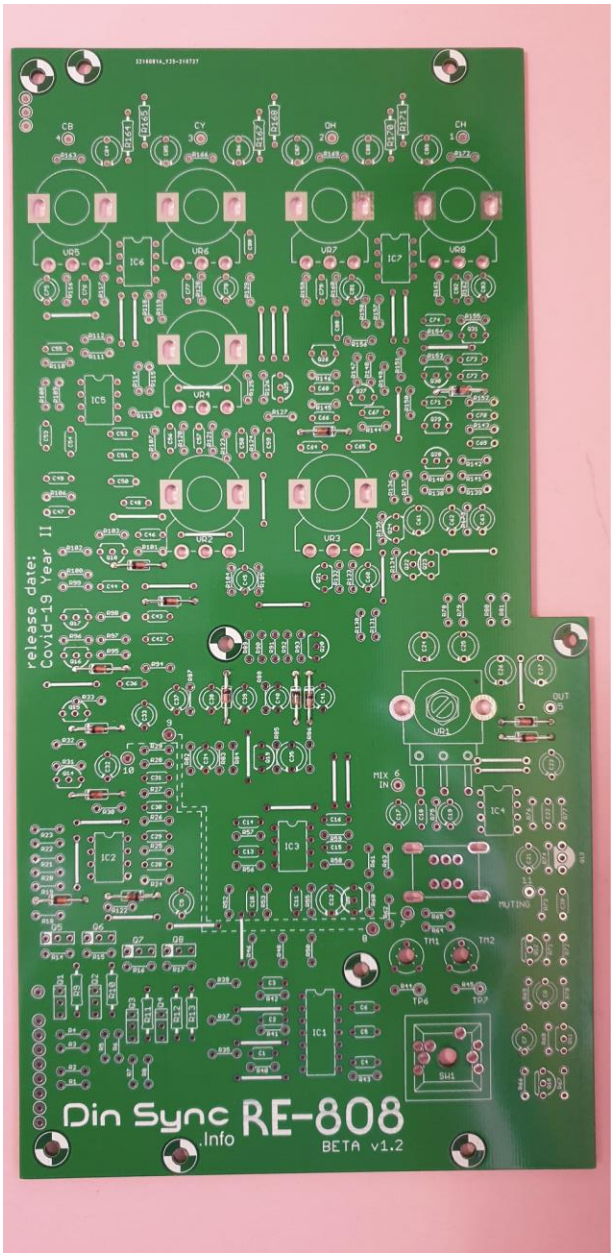
[VOICING BOARD]

Jumper

Notes:
No jumper wires required in this board, they are all in the top layer

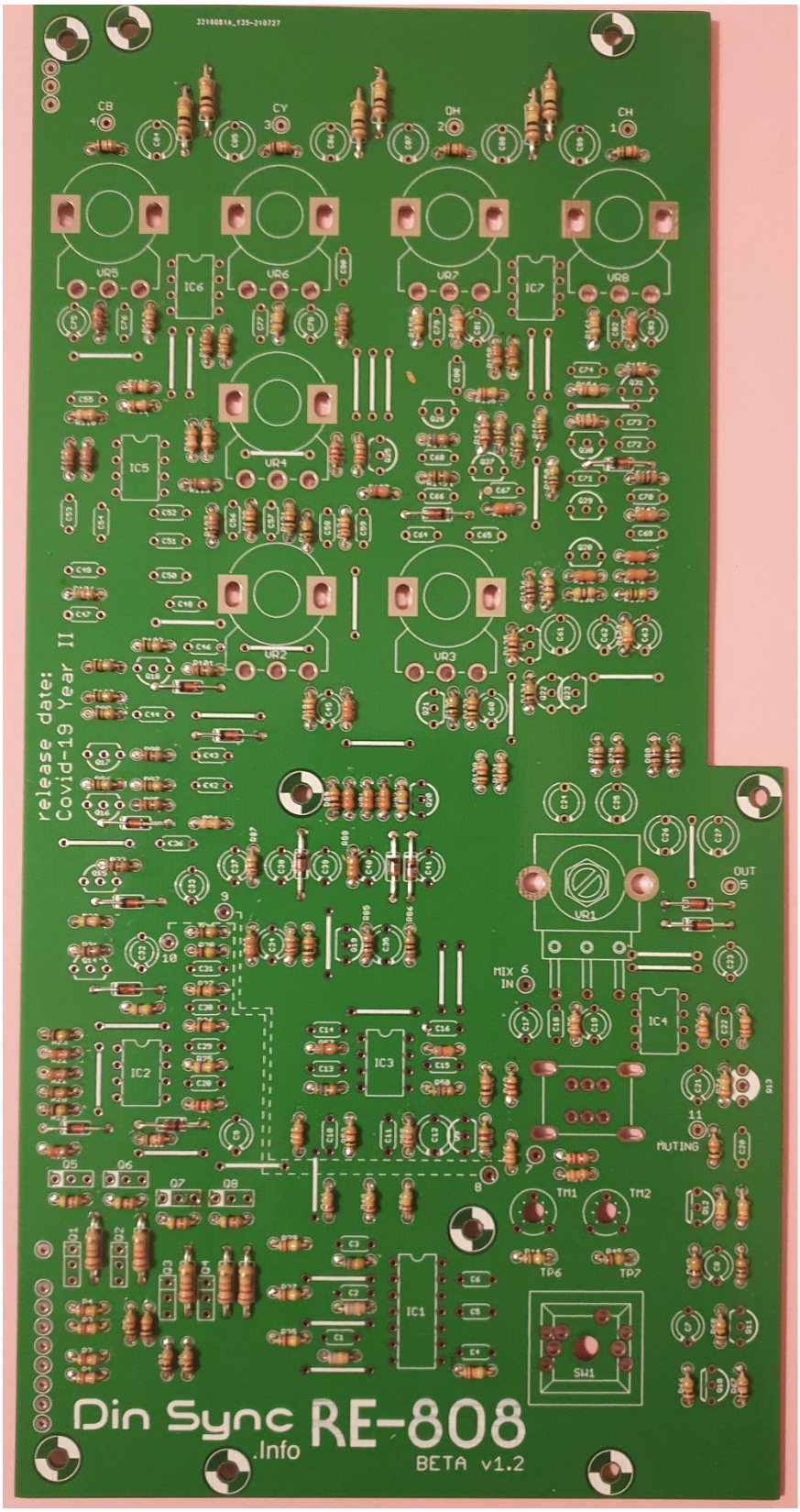
Diode

14	1S2473



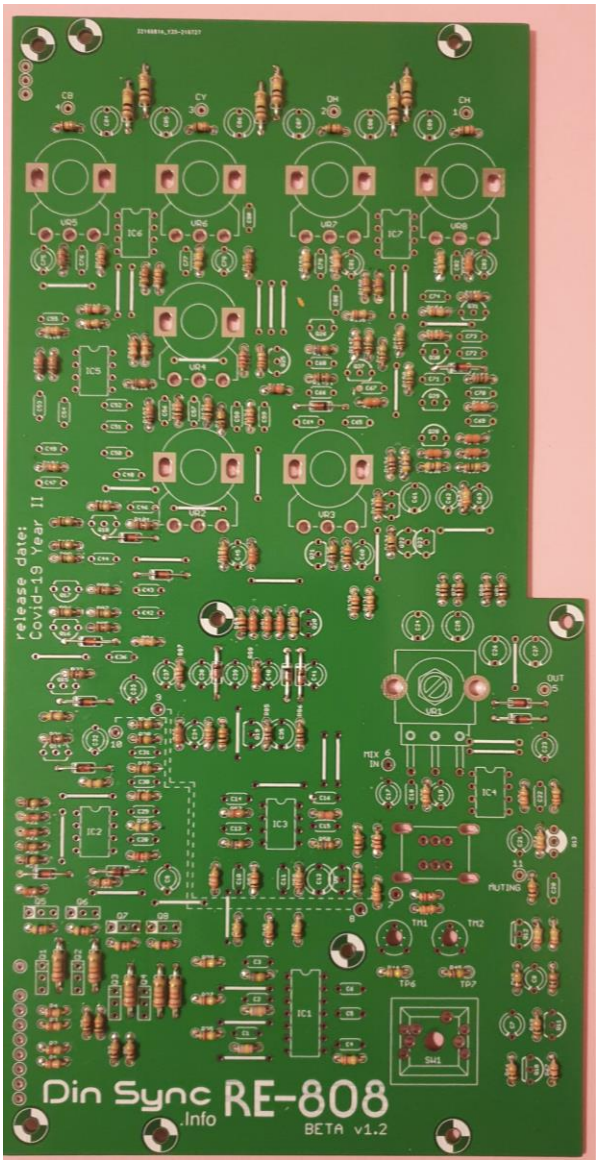
Resistor

15	100
6	100
2	470
2	560
7	1k
4	2k2
2	2k7
3	3k3
4	4k7
1	5k6
1	6k8
1	8k2
17	10k
2	15k
4	18k
18	22k
5	22k
17	33k
5	39k
3	47k
2	68k
3	82k
9	100k
6	120k
1	150k
3	220k
2	330k
7	470k
2	560k
1	680k
11	1M


release date:
Covid-19 Year II
CB
CY
OH
CH
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VR8
IC1
IC2
IC3
IC4
IC5
IC6
IC7
OUT
MIX 6
IN
MUTING
TM1
TM2
TP6
TP7
SW1
Din Sync .Info
RE-808
BETA v1.2

Integrated Circuit

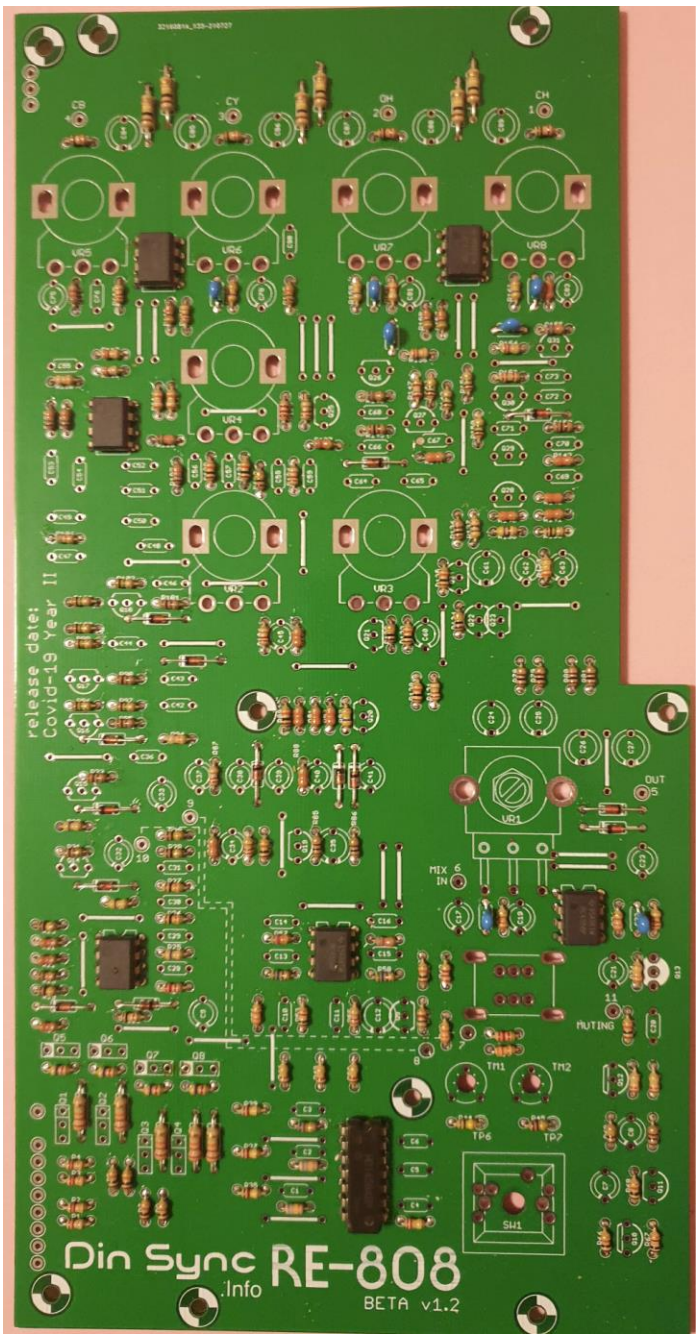
1	HD14584B
6	µPC4558C



Capacitor

Ceramic

5	220p
2	470p

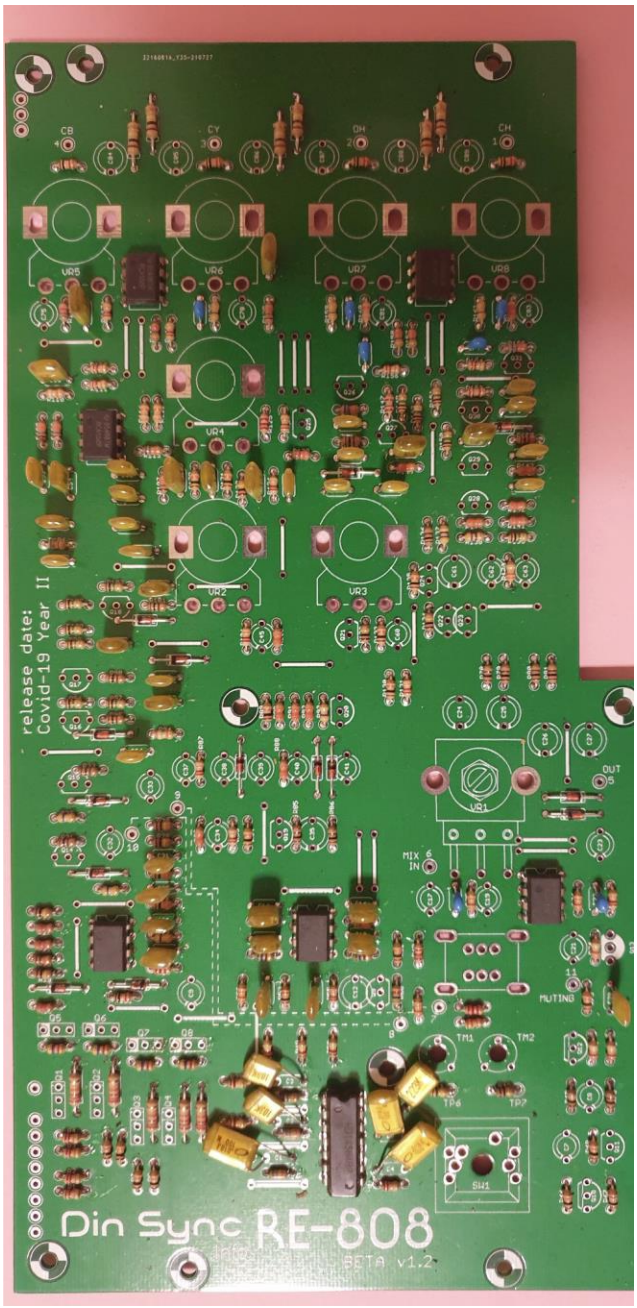


Polyester

8	1n
12	1n5
2	2n2
6	3n3
2	6n8
7	10n
3	18n
7	22n

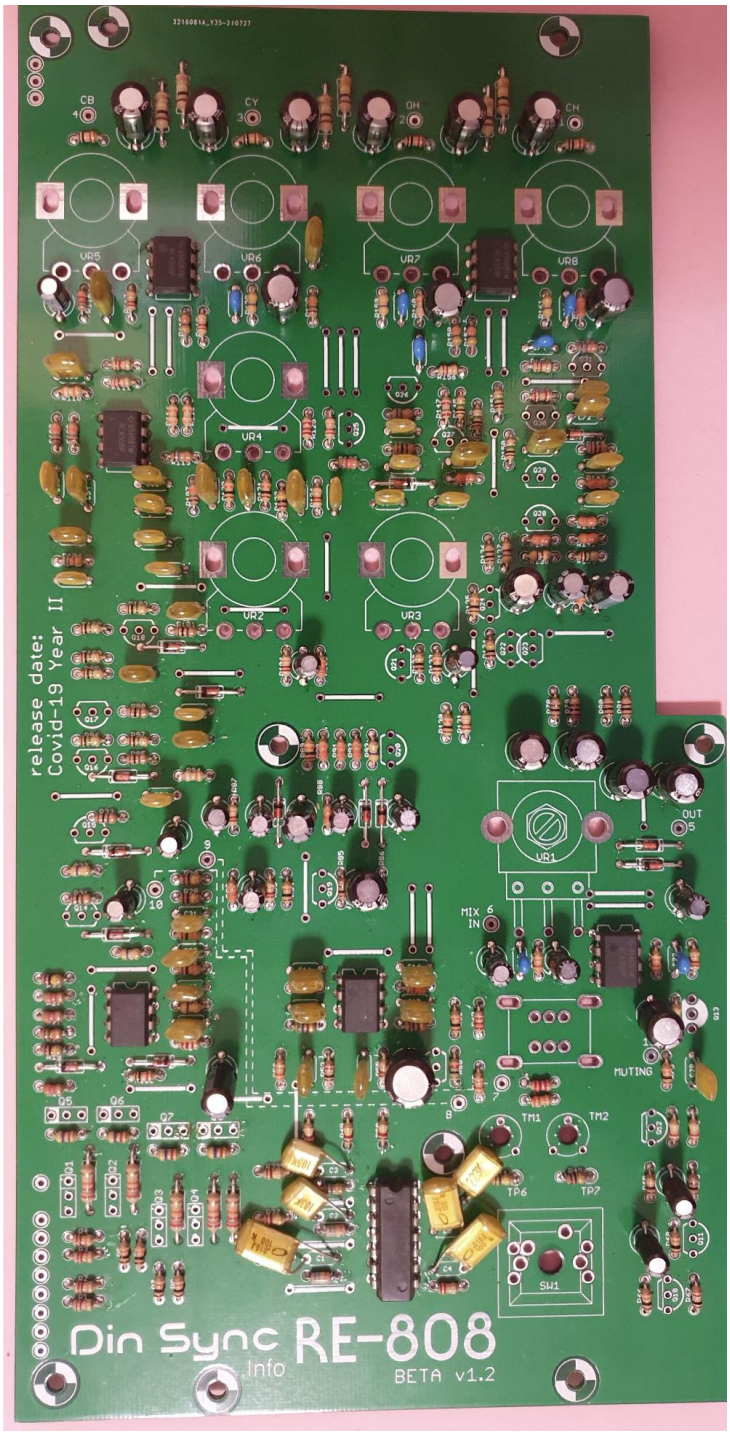
Notes:

Capacitors C1 to C6 need to be bended to allow space for the switchboard
It is better if they are bended down like this image and not like the following images, where they are bended up and almost on top of the trimmer holes.


release date:
Covid-19 Year II
Din Sync RE-808
BETA v1.2
CB
CY
OH
CH
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VR8
MIX IN
OUT
MUTING
TM1
TM2
TP6
TP7
SW1

Electrolytic

4	0.47uF/50V
8	1uF/50V
4	2.2uF/50V
3	10uF/16V
4	33uF/6.3V
12	47uF/16V
1	100uF/6.3V


release date:
Covid-19 Year II
CB
CY
OH
CH
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VR8
OUT
MIX 6
IN
MUTING
TM1
TM2
TP6
TP7
SW1
Din Sync RE-808
.info
BETA v1.2

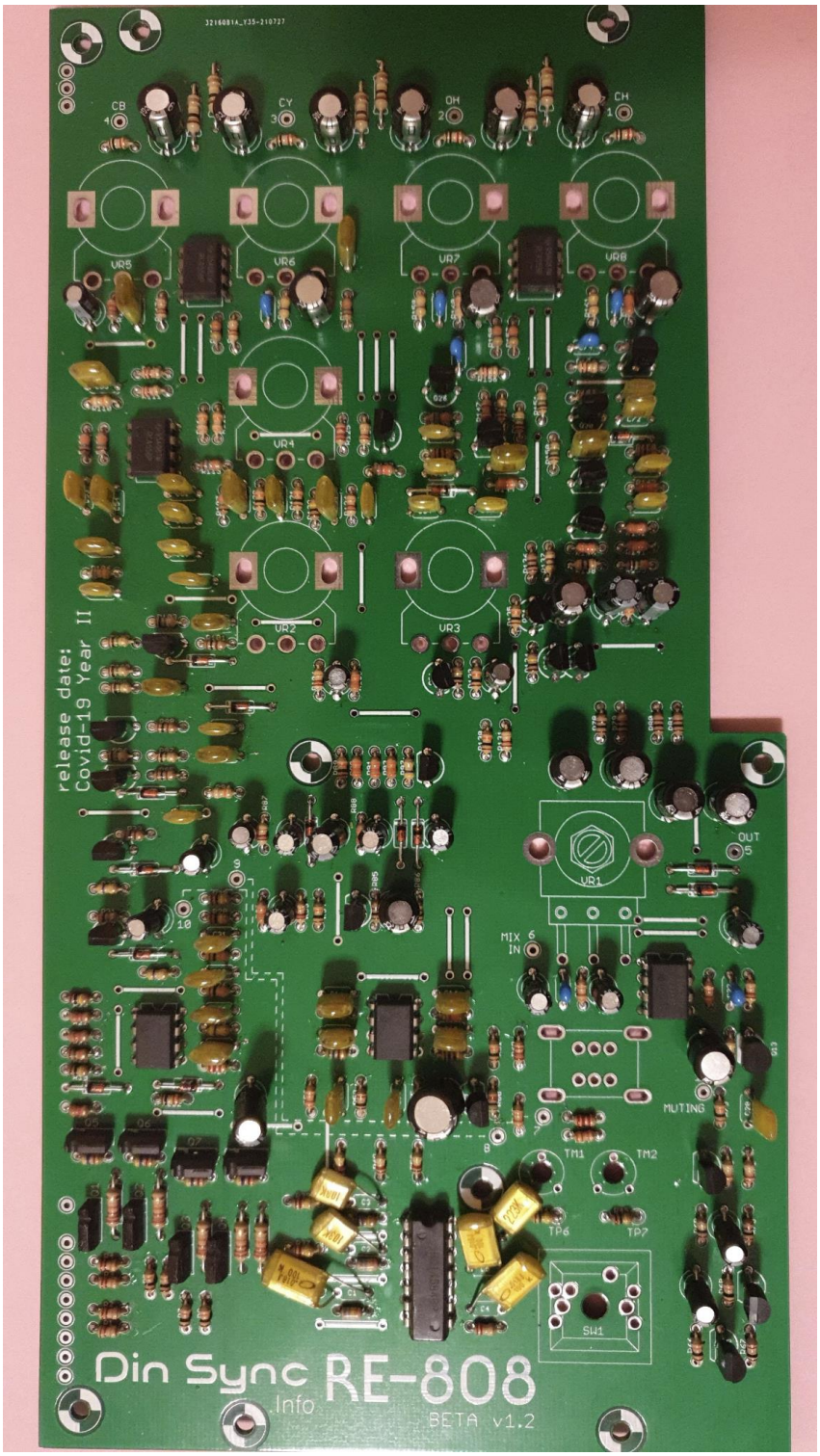
Transistor

2	2SA733 (P) or (Q)
20	2SC945 (P) or (Q)
4	2SC2021 (R) or (Q) or (S)
4	2SA937 (R) or (Q) or (S)
1	2SK30A (Y)

Notes:

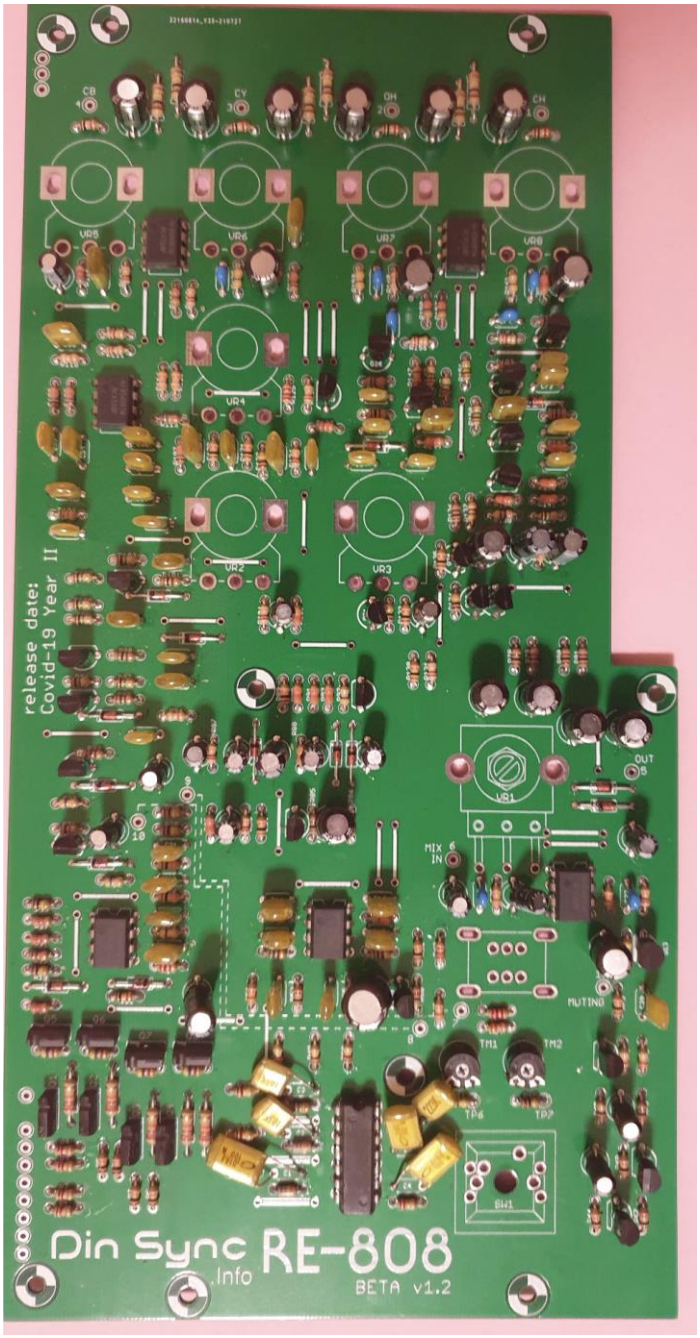
The JFET transistor can be replaced with 2SK208 smd parts with the same suffix and using pcb adaptors

The 2SC2021 and 2SA937 can be replaced with the 2SC945 and 2SA733. Be sure there is enough clearance for the switchboard, 7mm.


release date:
Covid-19 Year II
CB
CY
OH
CH
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VR8
OUT
MIX 6
IN
MUTING
TM1
TM2
TP6
TP7
SW1
Din Sync RE-808
Info
BETA v1.2

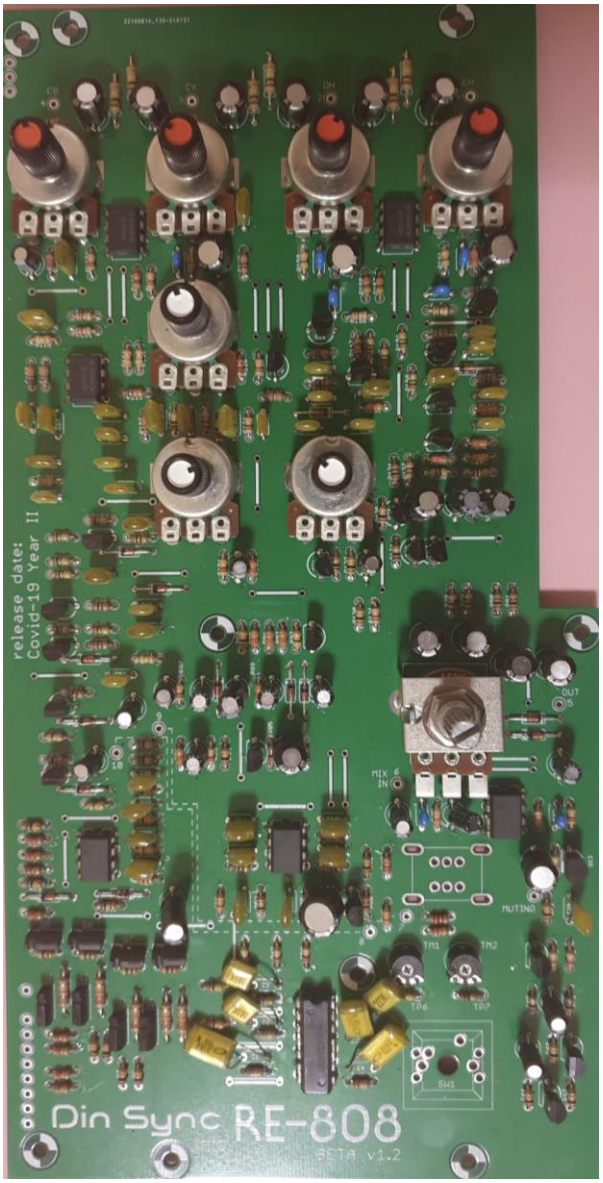
Trimmer

2	220k



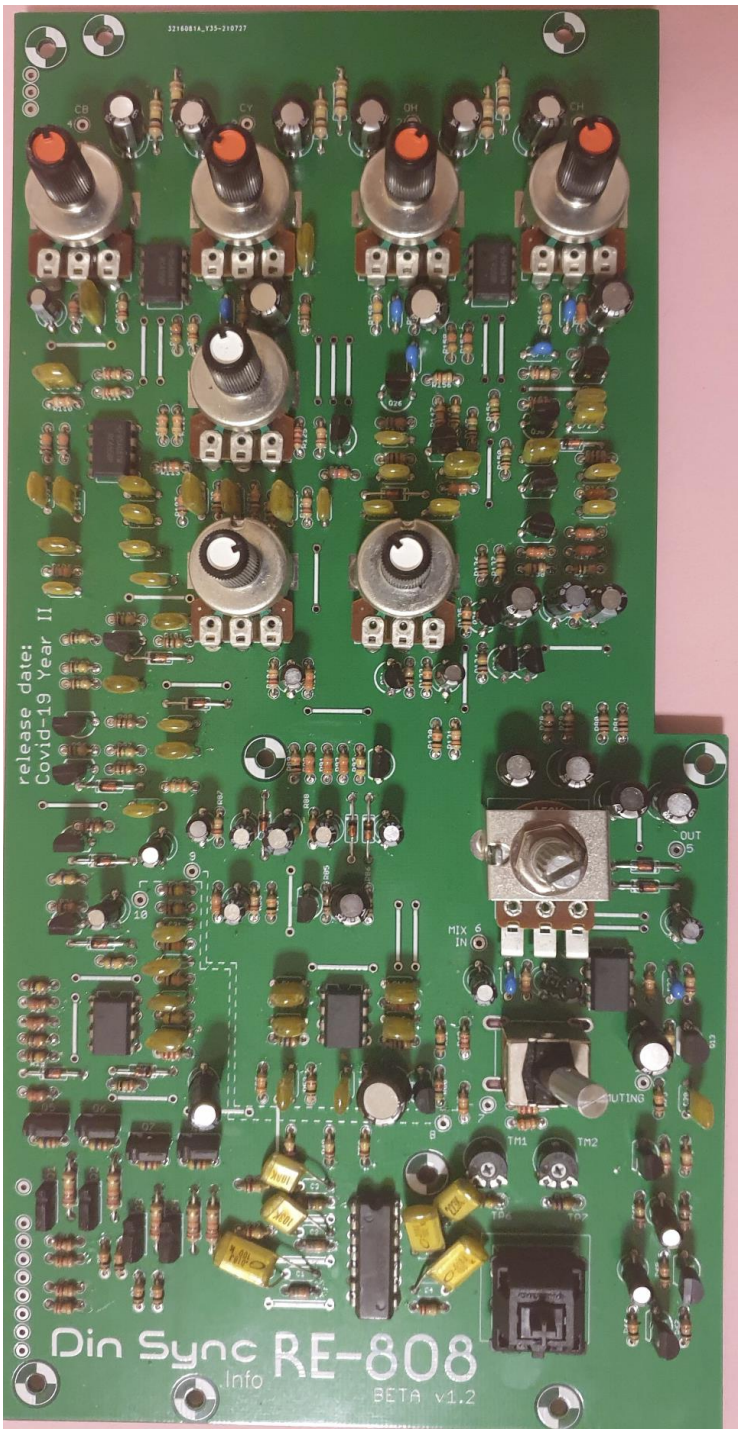
Potentiometer

1	5kA
1	20Kb
3	100kA
2	2MB
1	50kA
1	Pot Bracket



Switch

1	KED10903
1	SLP62208



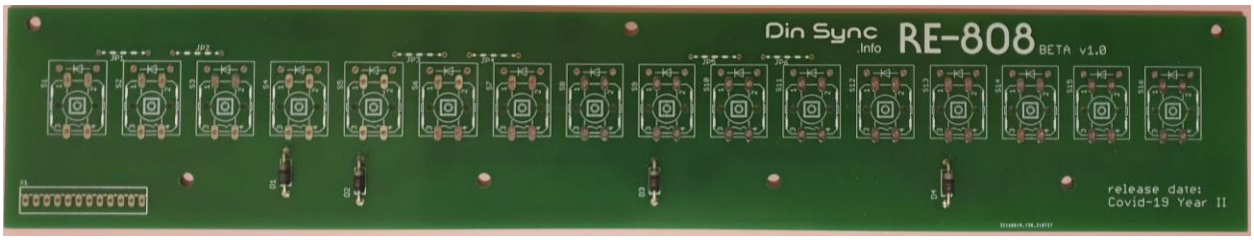
[SWITCH BOARD]

Jumper

Notes:
No jumper wires required in this board, they are all in the top layer

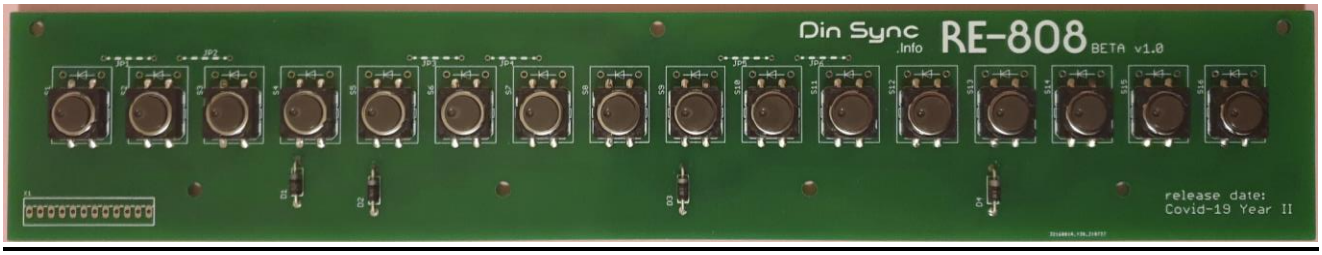
Diode

4	10E-2



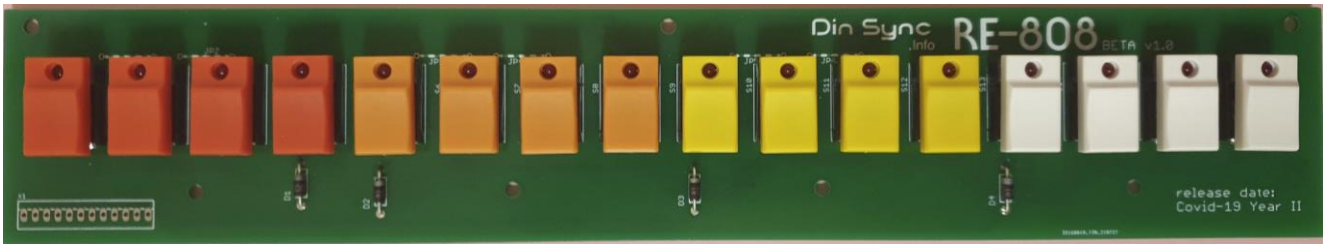
Switch

16	SKHCBFA010



LED

16	TLLG4400
16	Switch Actuator
4	N180
4	N168
4	N169
4	N167



The switch actuators need to be in place when you solder the leds.

[JACKS A BOARD]

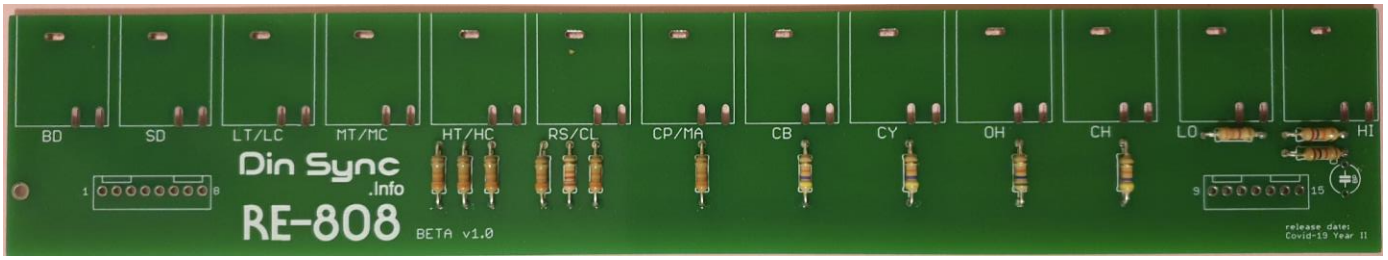
Jacks

5	SG7622

[JACKS B BOARD]

Resistor

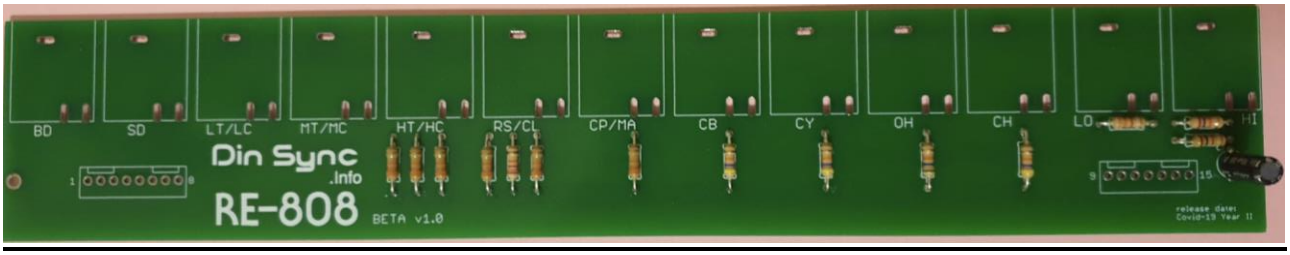
1	1k
1	3k3
1	22k
1	27k
6	33k
3	47k
1	56k



Capacitor

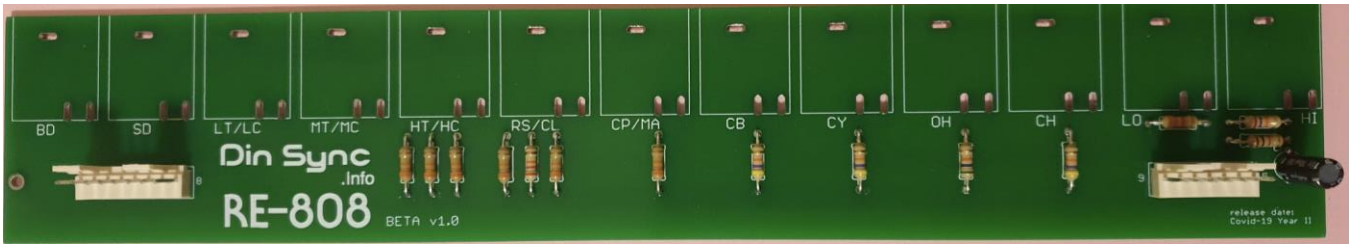
Bipolar

1	10uF/25V BP



Header

1	5045-07A
1	5045-08A



Jacks

13	SG7622