

At first separate the parts into baggies, Resistors, capacitors, Transistors & IC, Hardware, etc.

Parts in order of board layout, left side to right. Bold ID's are changed values.

Update [10.04.20](#) **Board 3.04.20** To find a part use Ctrl-F

Bold parts are values changes, different than indicated on the **3.04.20** board.

Underlined parts on PDF list are not on **3.04.20** board, they are specially mounted after the board is stuffed.

A Part on the PCB or PDF with a **Line through it** is not mounted at this time unless stated.

Osc: R5- 10K, R6- 10k, R15- 10K, R19- 10K, ~~R23- 330K~~, **R8- 3.3k**, **R20- 3.3k**, R24- 1M, R21- 1M
R25- 220 ohms, R9- 470 ohm, R30- 100 ohm

Audio: **R37- 1K**, R7- 1K, R18- 4K7, **R26- 220 ohm**, R1- 1K, **R40-1K**, **R41- 470**, **R42- 220**
R33- 10 ohm, R14- 100K, R13- 1M, R11- 100K, R16- 100k, R12- 1Meg, R17- 100K
R29- 22 ohms, R4- 470, R3- 100K, R10- 100K, R2- 220k, **R43- 470**
R31- 33K, **R27- 470 ohm**, R32- 100K, R22- 2K2, R28-10K, **R38-10K**, **R39-10K**

After resistors mounted, **use an ohm meter to verify values**. This will save you time in the long run.

Osc: C20- .1uf, **C3- 100pf**, C16- 47pf, **C17- 10pf**, C27- .1uf, C30- 47pf, **C38- .1uf**, **C19**
~~C13- 47pf~~, C23- 47pf, C31- 100pf, C7- 100pf, C18- .1uf, C22- 47pf, C8- .1uf, **C36- .1uf**

Audio: C28- 10uf, C11- 1uf, **C25- 10uf**, C21- 10uf, C6- 10uf, **C49- .1uf**, **C15- 10uf**, **C35- 10uf**, **C41- 1uf**
C33- 10uf, **C40- 10uf**, C14- 1uf, C5- 1uf, C1- 1uf, **C37- 1uf**, C4- 10uf *tantalum* proper direction is markings
facing 555 IC
C2- .1uf, **C32- 1uf**, **C34- 1uf**, **C26- 10uf**, **C43- .1uf** (C29- 470uf, PP **C39- 220uf** , C9- 1000uf, C10-
2200uf)

L1 & L2 IF Transformer 42IF110-RC [Datasheet \(PDF\)](#) Preferred

L3 3300uh L4 & L5 3300 uh, the high current type, less than 5 ohms or it will not work.

330uh shielded coils — *View Coil orientation in board photos before mounting*

~~L1 & L2 542-8250-331K-RC 5.10 ohms SRF=7.3 MHz Q=65~~

~~L1 & L2 652-9250A-334-RC 6.4 ohms SRF=6.5 MHz Q=55~~

Pot-1- 5K trimmer D1 & D2- 1N914 **D3 1N914** **D4 & D5- 1N4007** **D6 & D7- 1N4007**

Pot-1b 50k Timbre sine to vocal adjust panel mount **Wave shape** on the EWS, **Pot-5- 10k** Pre-Amp

Pot-3- 1K paralleled by R9- 470 for thermal drift control, **Pot-2-** Experimental, may not be used.

Pot-4- 1K paralleled by **R25 220 ohms** panel mounted *Both Pitch Null & Volume Null*

- I don't have an engineers mind; new theremin ideas are grabbed in fragments out of a whirlwind of chaos – [Christopher](#)