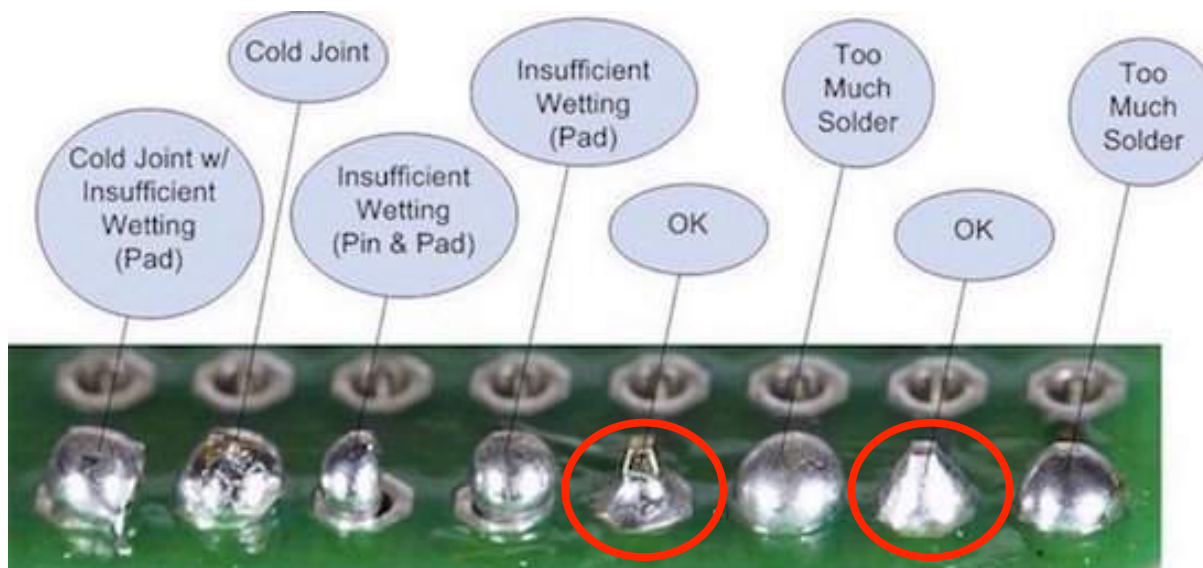
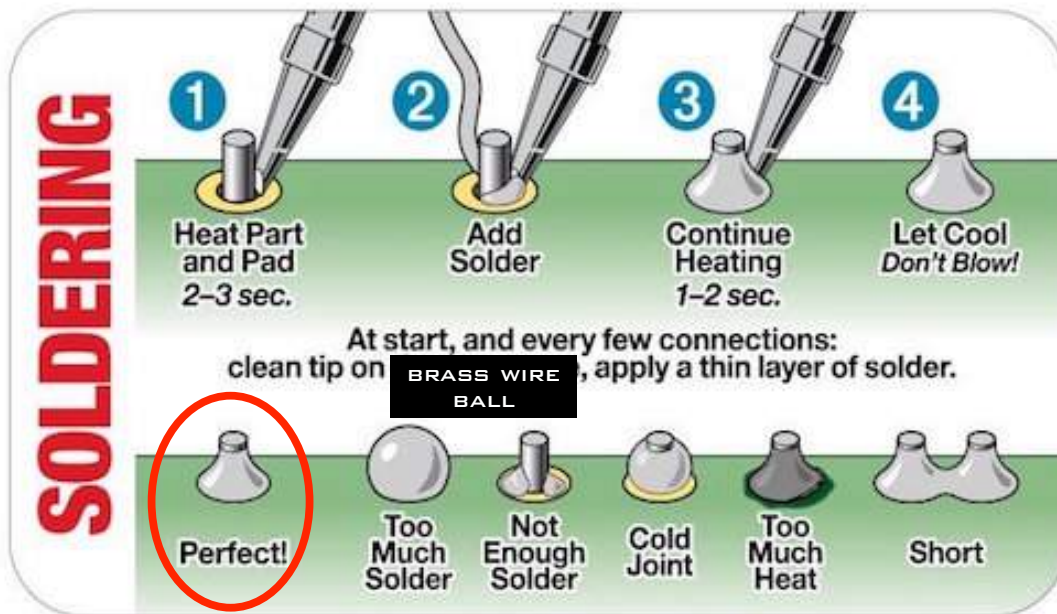
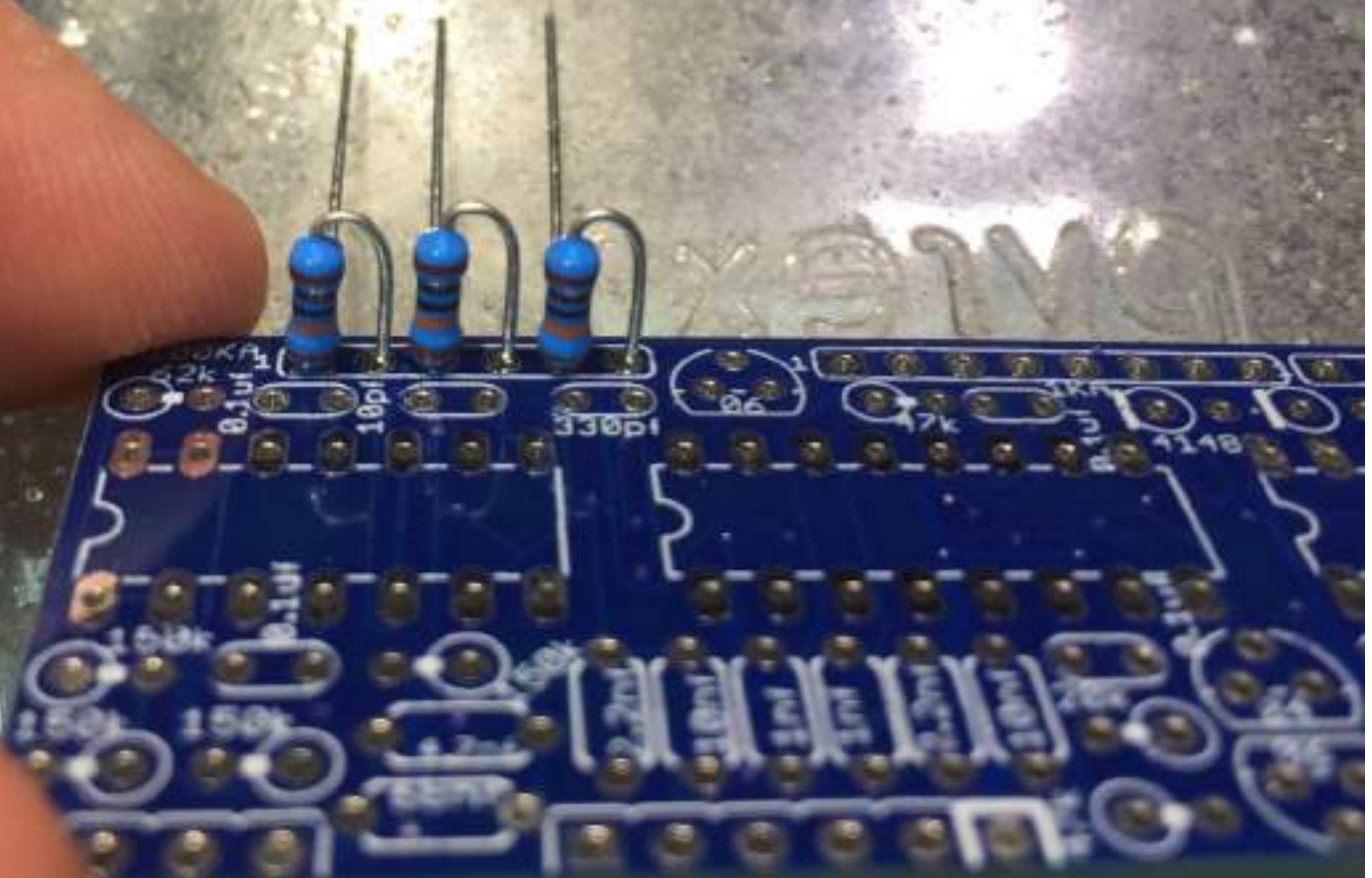
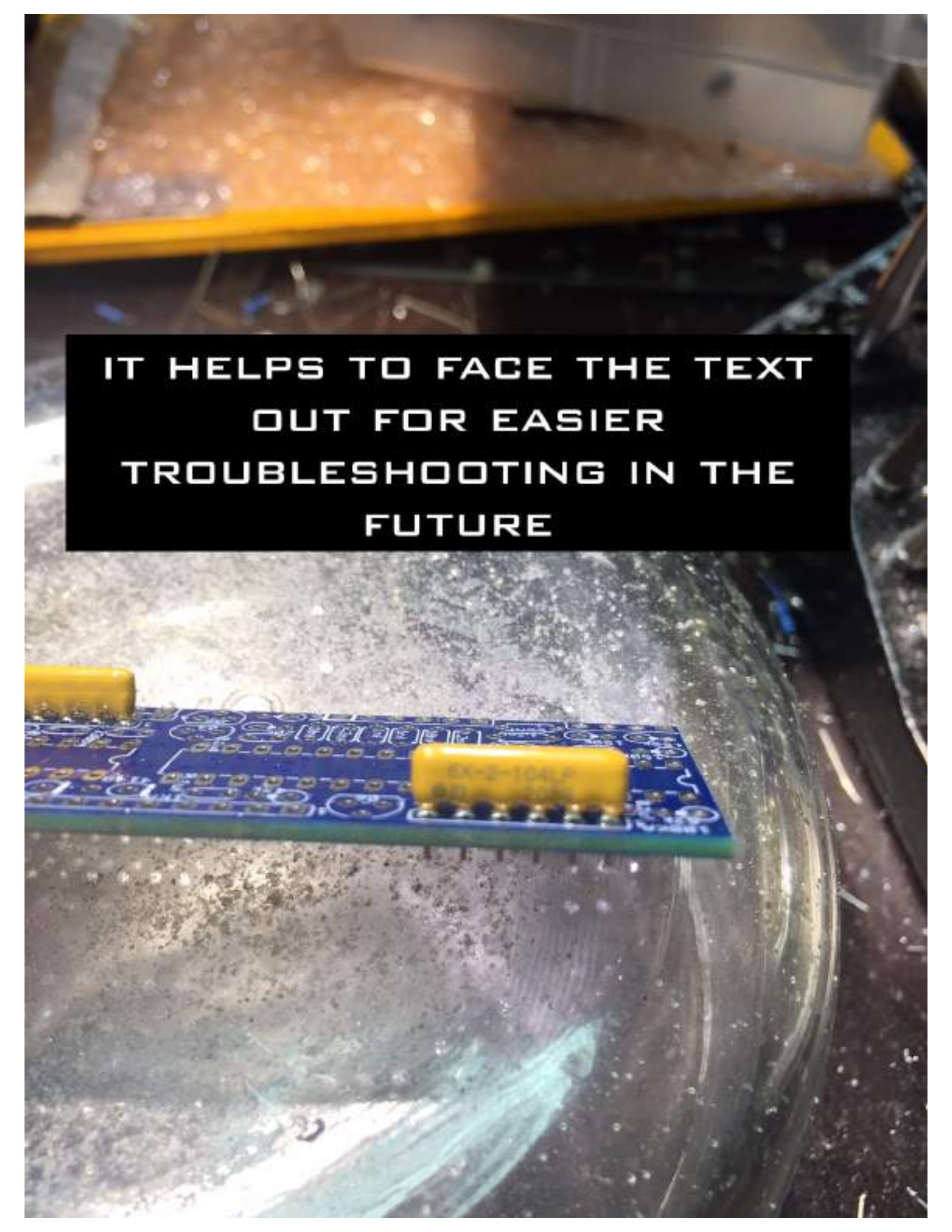


IF YOU CAN FOLLOW THESE TECHNIQUES
BELOW AND SOLDER UP TO THESE
“PERFECT” AND “OK” SPECS YOU SHOULD
HAVE MUCH LESS TROUBLESHOOTING AND
PROBLEMS WITH THIS BUILD AND ALL
OTHER DIY PROJECTS.



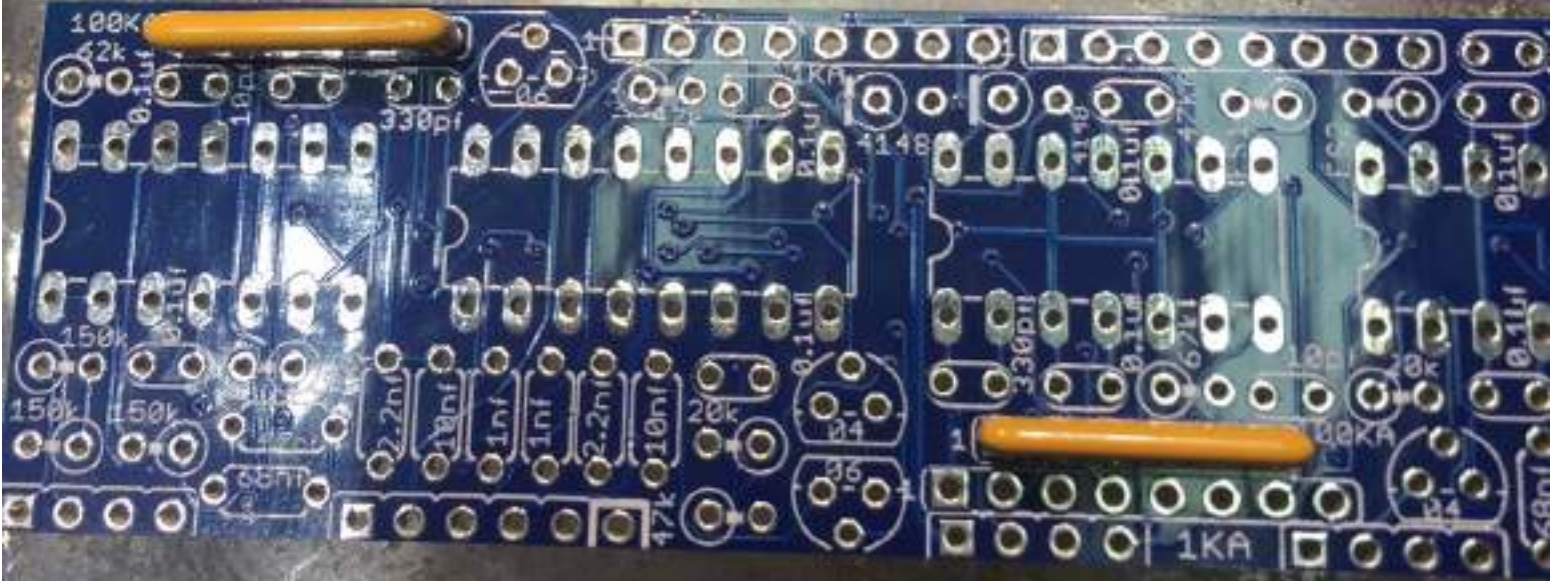
I AM NOT AFFILIATED WITH ADAFRUIT AND
CLAIM NO RIGHTS OR OWNERSHIP OF
THESE PICTURES. THEY ARE PROVIDED FOR
EDUCATIONAL PURPOSES



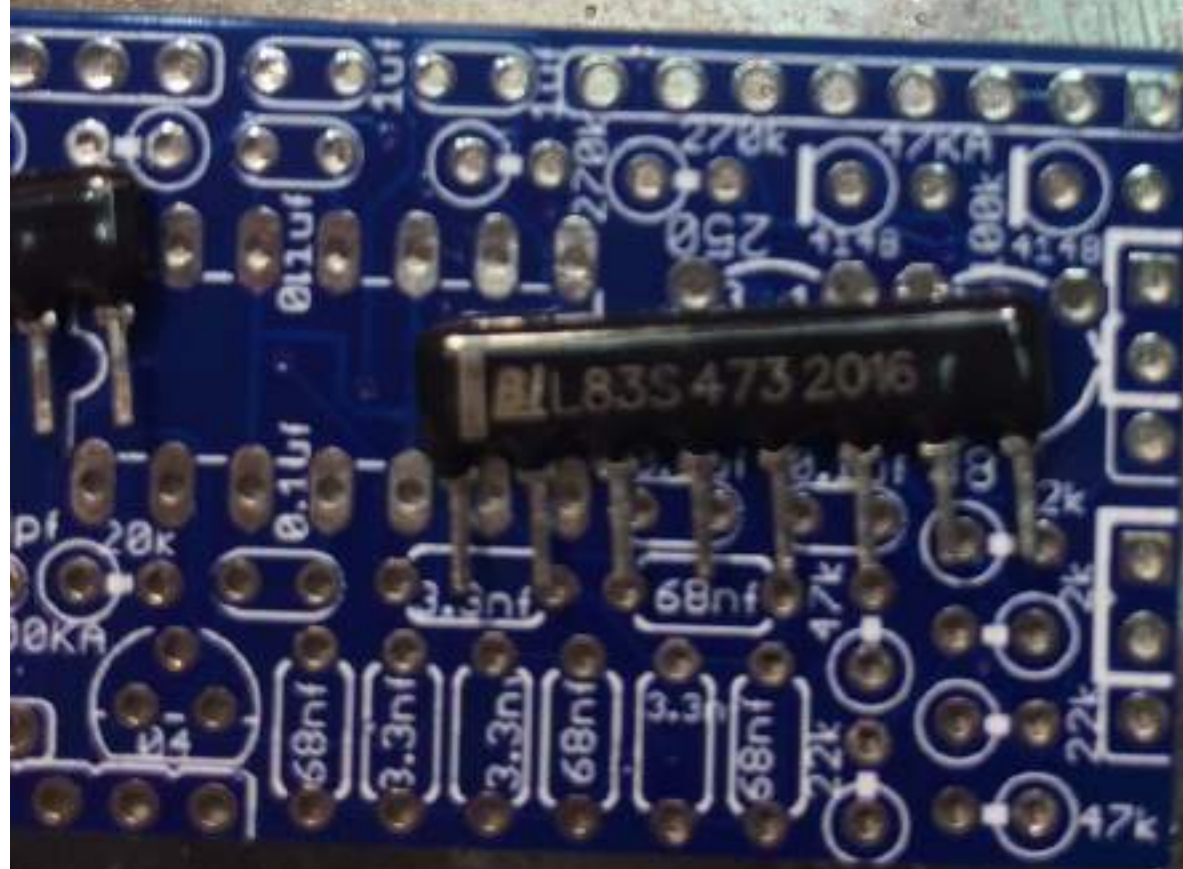
A blue printed circuit board (PCB) is shown with two yellow components mounted on it. The PCB is resting on a metal surface, and a clear plastic protective cover is visible in the foreground. The background is slightly blurred, showing a workshop environment with a yellow object and some debris.

**IT HELPS TO FACE THE TEXT
OUT FOR EASIER
TROUBLESHOOTING IN THE
FUTURE**

100K ARRAYS



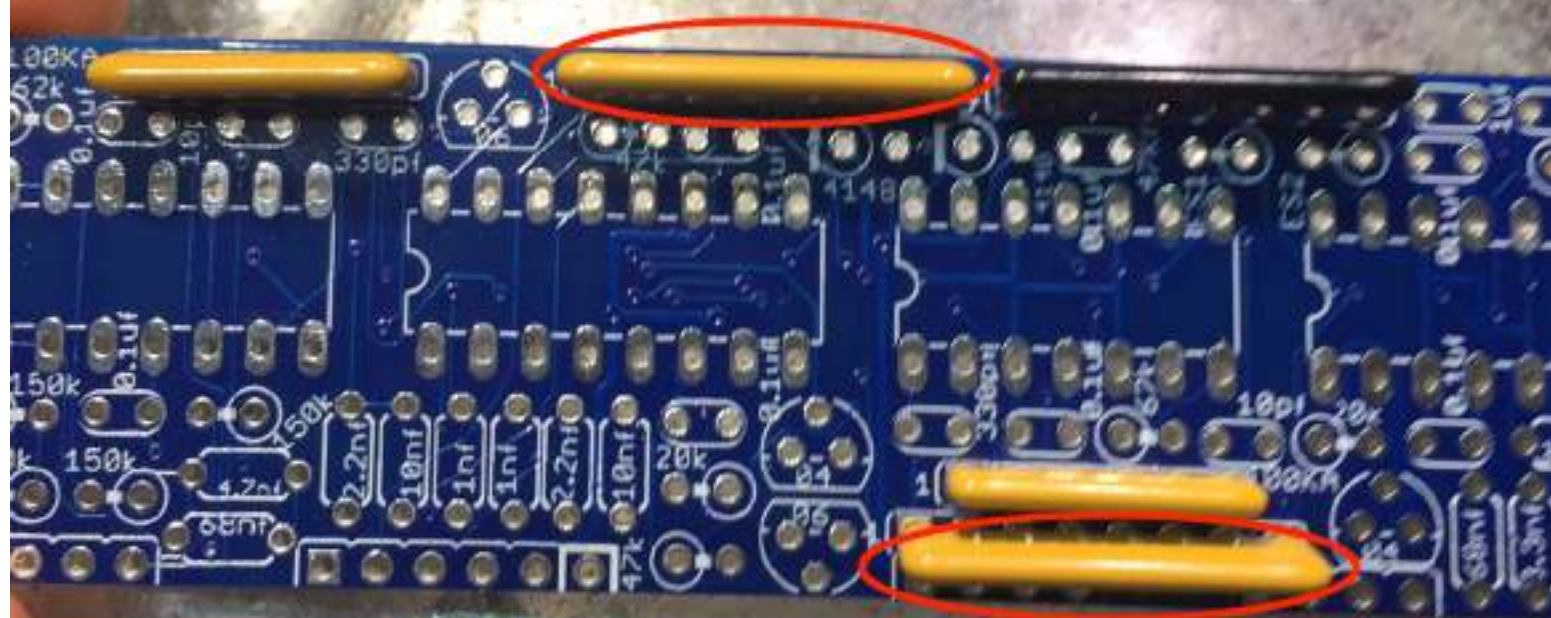
TWO 47K 8PIN
RESISTOR ARRAYS
CODE IS 473



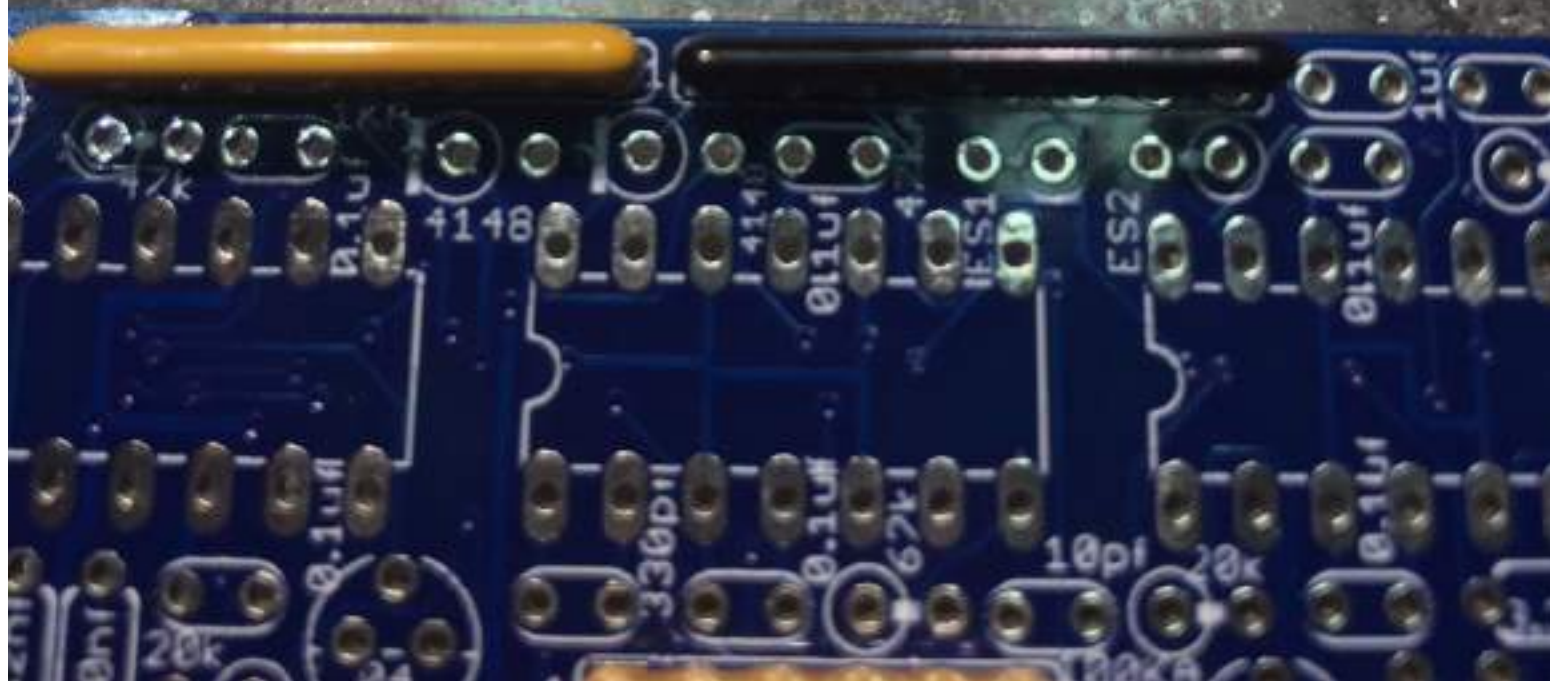
FACE TEXT OUT
47K ARRAYS

**TWO 1K 8PIN
RESISTOR ARRAYS
CODE 102**

1 K ARRAYS

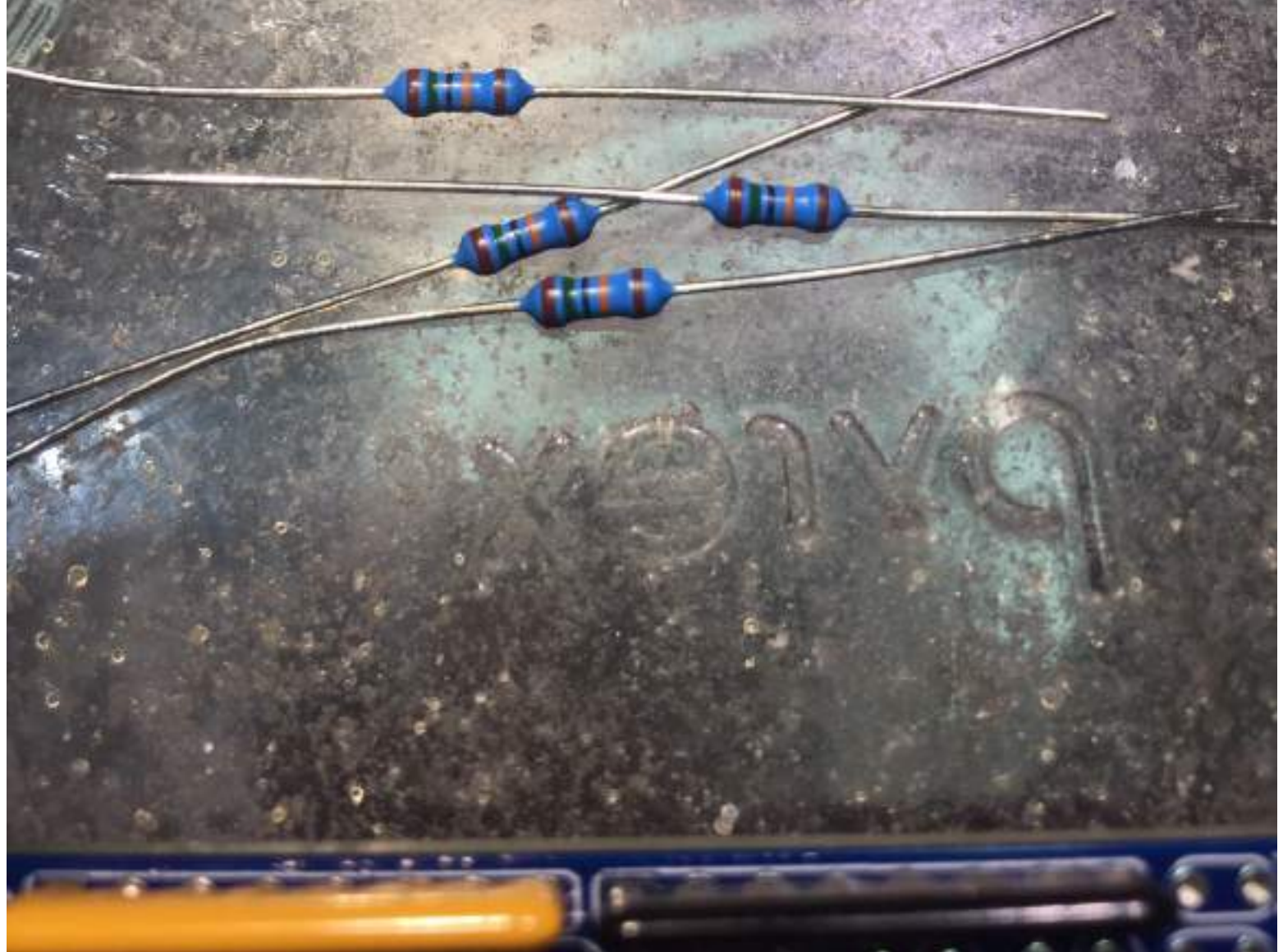


**TWO 270K
RESISTORS
RED,PURPLE,BLACK
,ORANGE,BROWN**

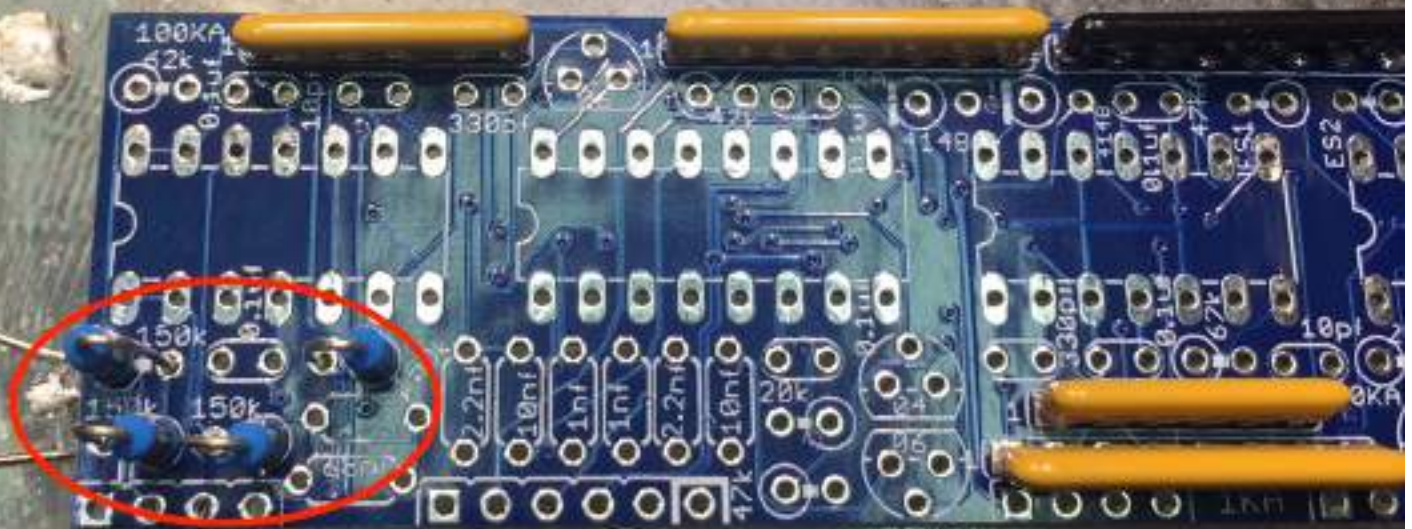


TWO 270K

**FOUR 150K RESISTORS
BROWN, GREEN, BLACK, ORANGE,
BROWN**



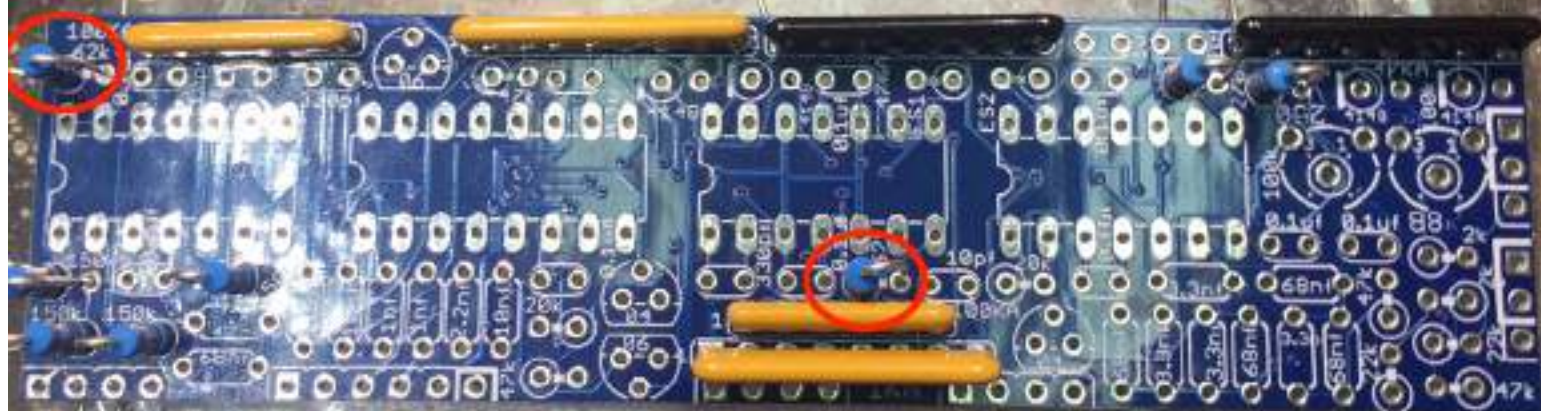
FOUR 150K



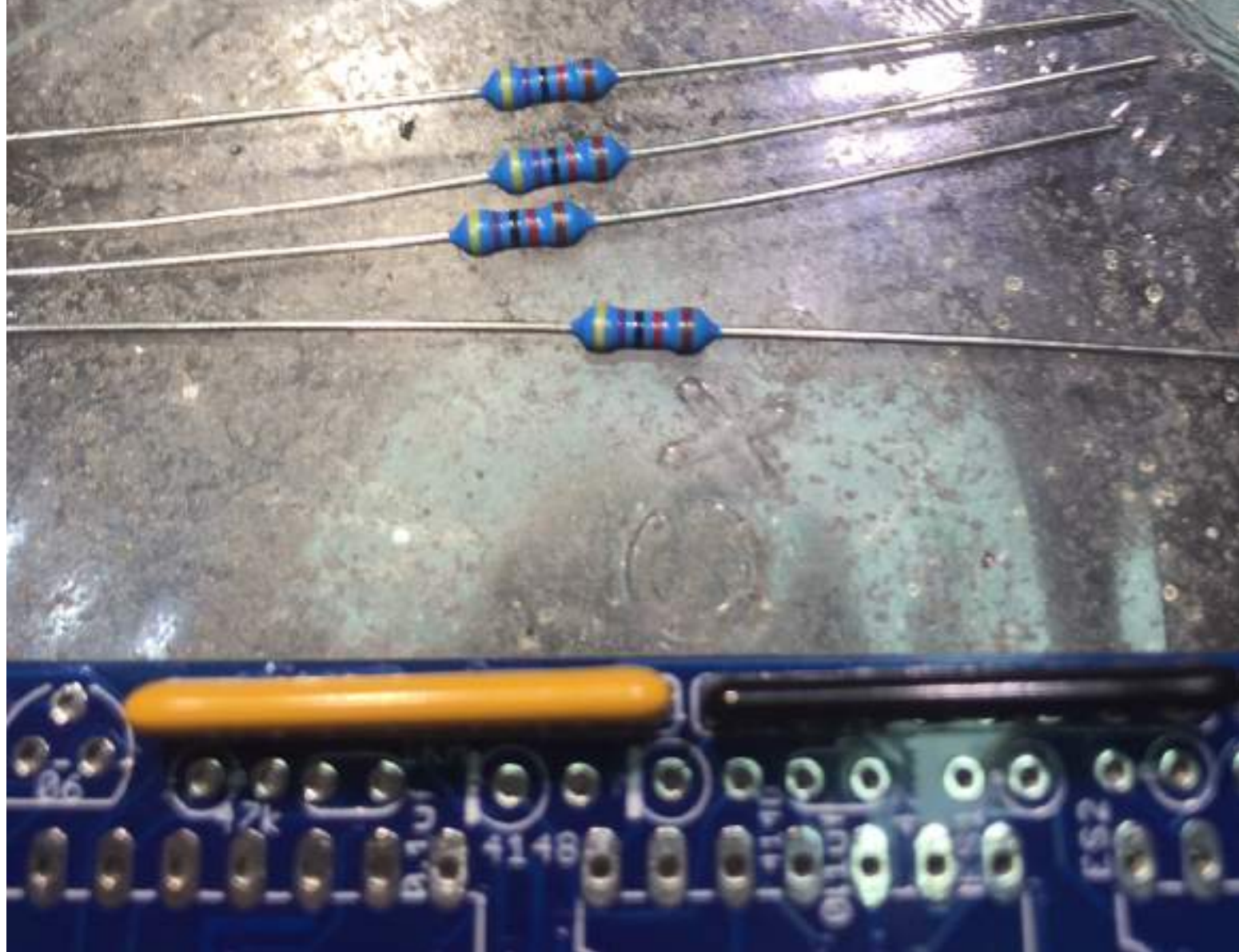
**TWO 62K
BLUE,RED,BLACK,
RED,BROWN**



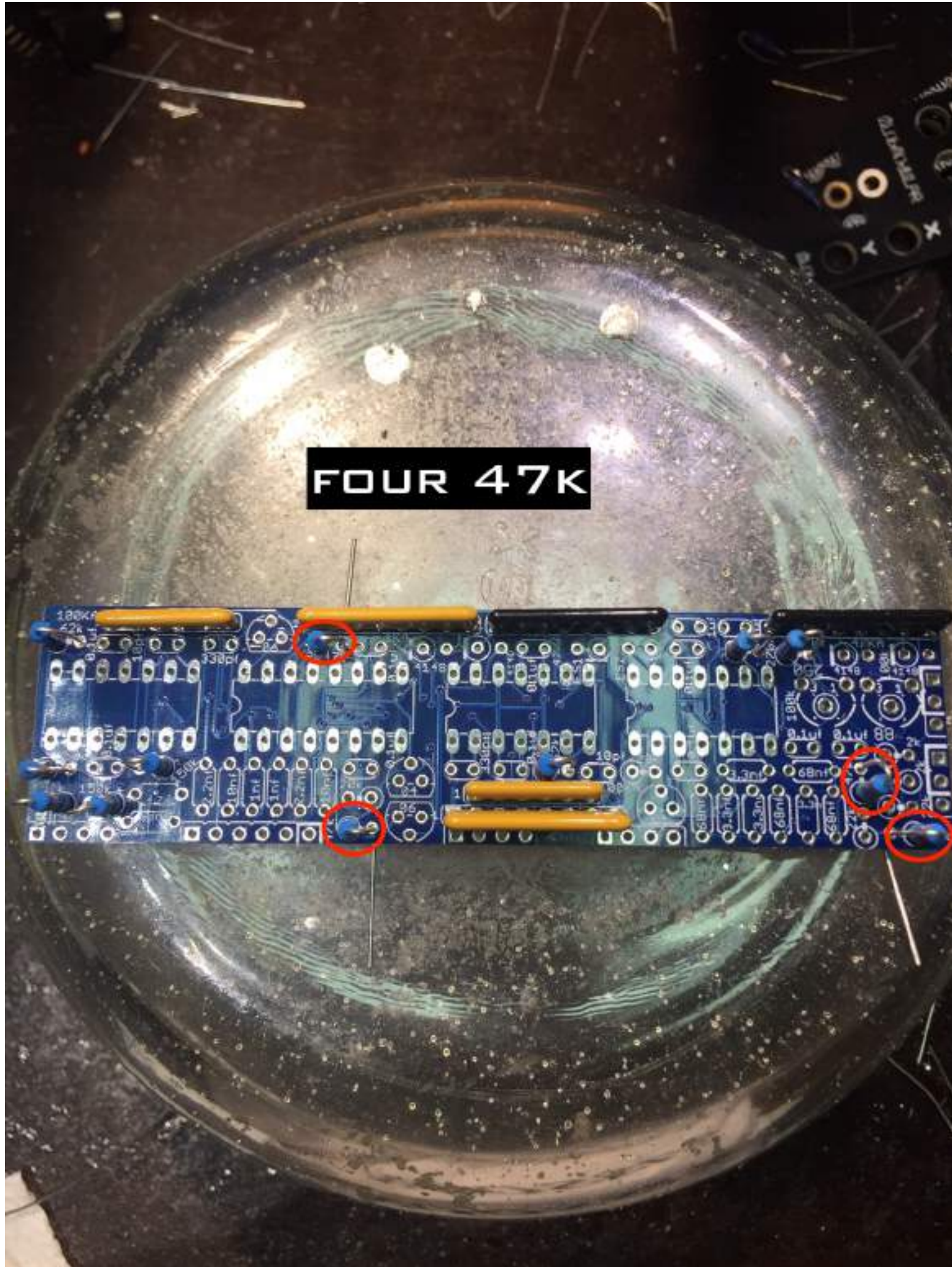
TWO 62K



**FOUR 47K
YELLOW,PURPLE,BLACK,
RED,BROWN**

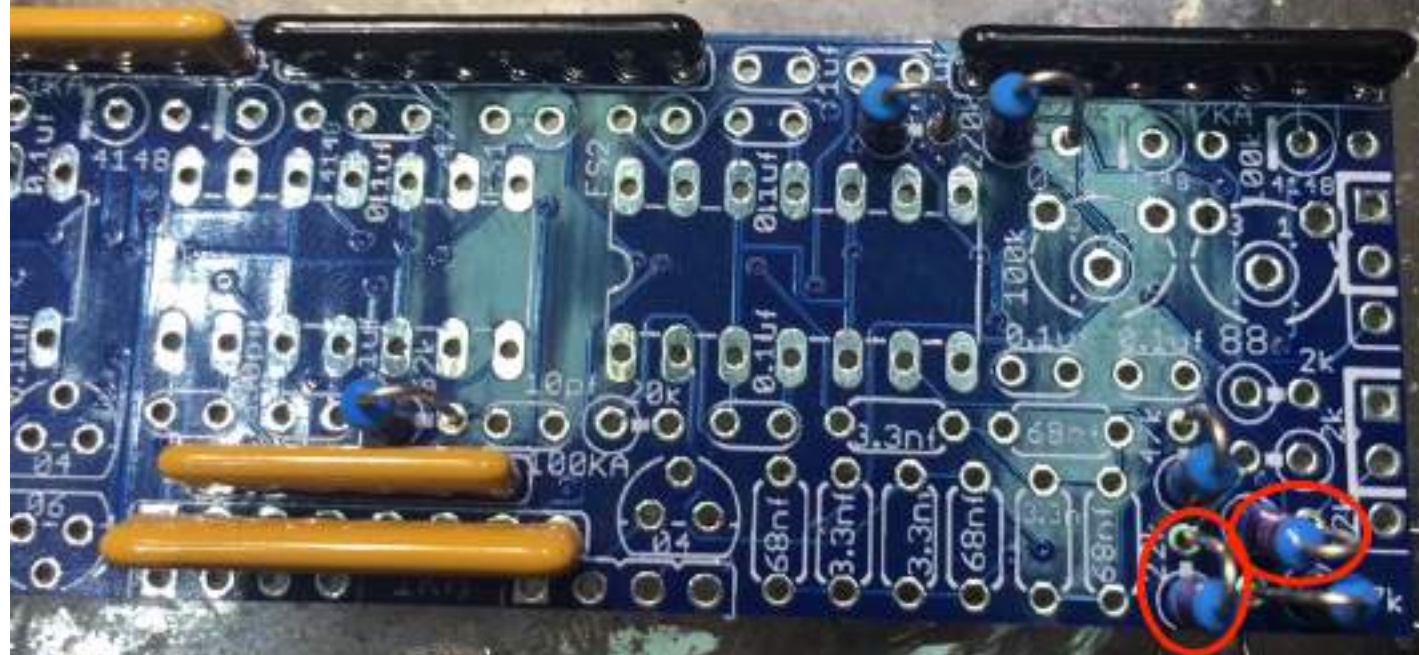


FOUR 47K



**TWO 22K
RED,RED,BLACK,RED,BROWN**

TWO 22K

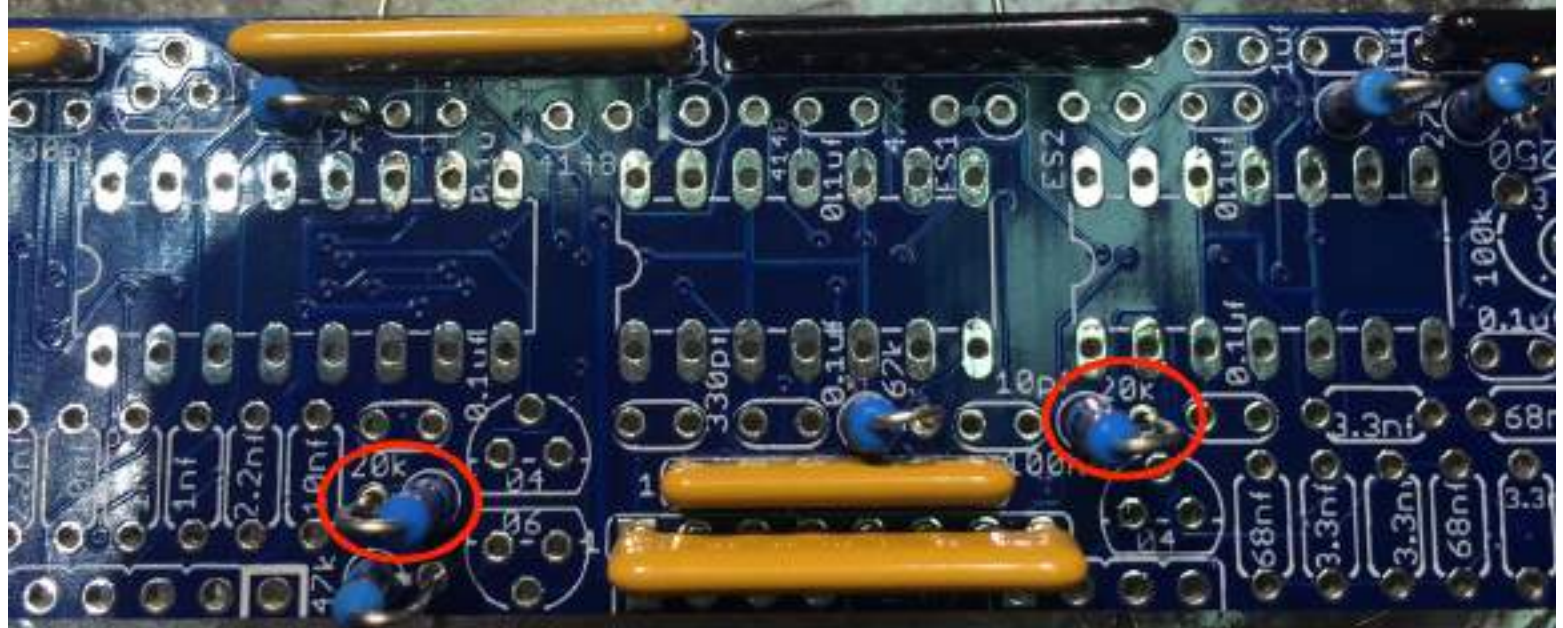


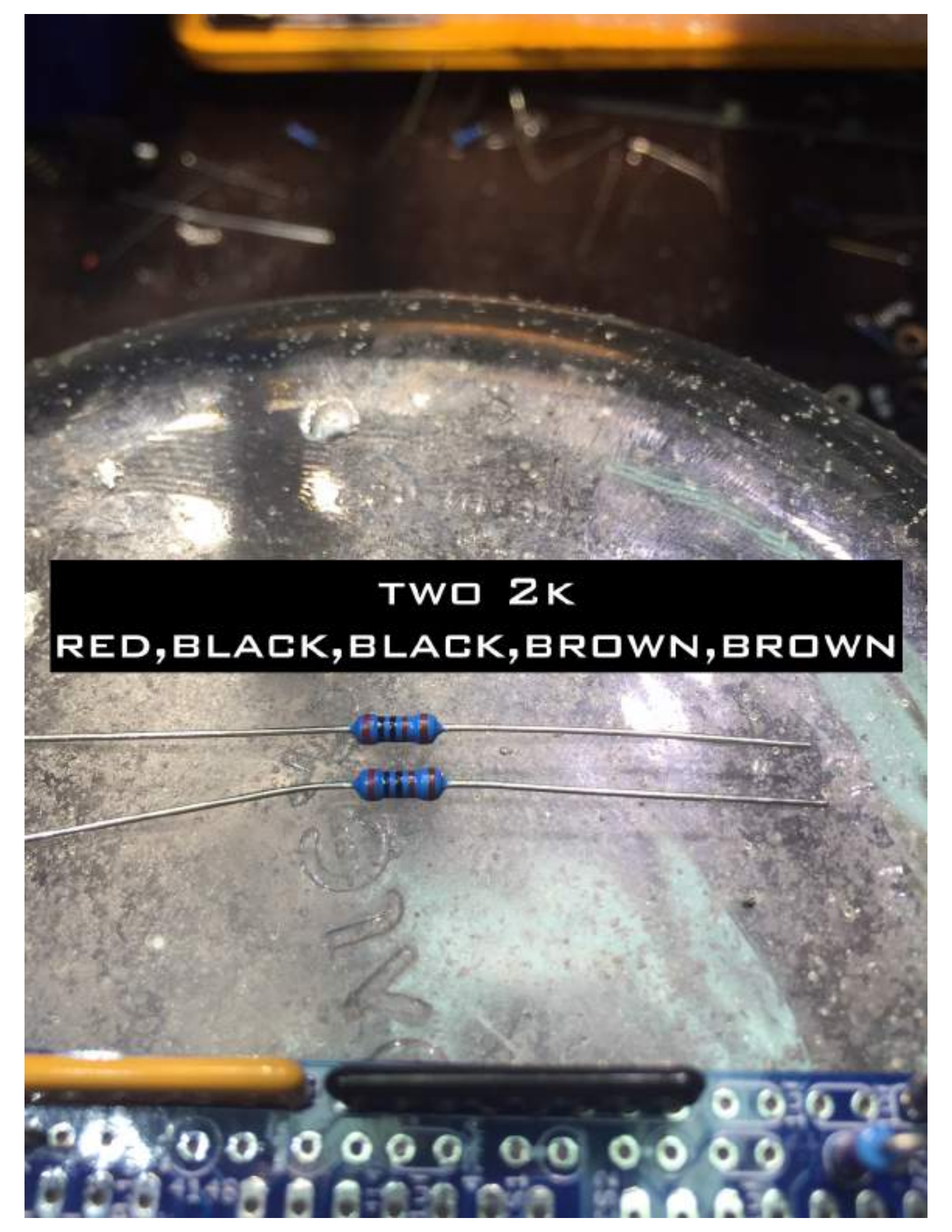
**TWO 20K
RED,BLACK,BLACK,RED,
BROWN**

**BE CAREFUL SINCE
THERE ARE 2K,
20K,AND 22K ON THIS
BUILD**



TWO 20K



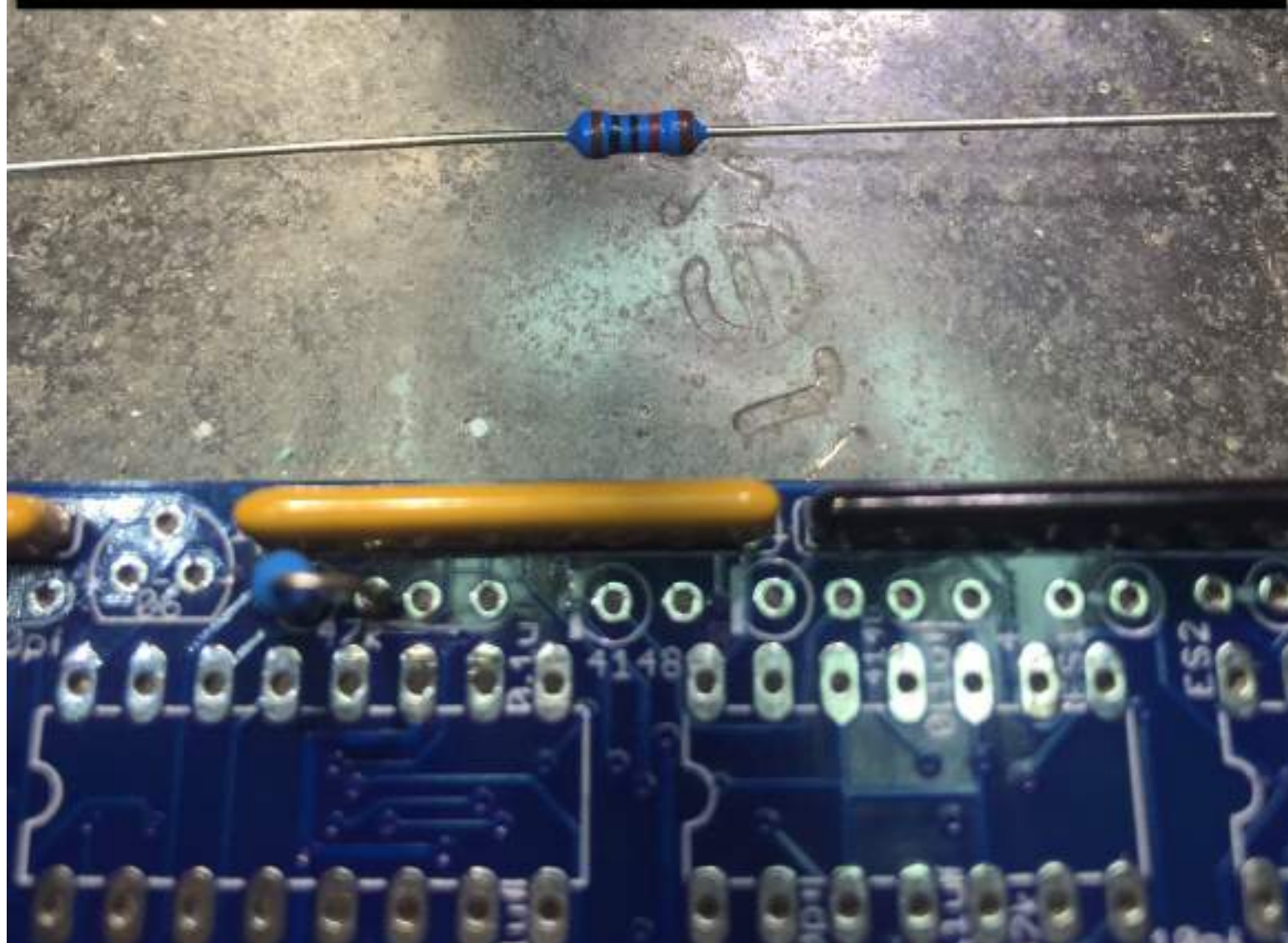
A close-up photograph of two resistors lying on a metallic, reflective surface. The resistors are cylindrical with four color bands: red, black, black, and brown. Their long leads extend horizontally. In the background, a blue breadboard is partially visible at the bottom, and various tools and components are scattered in the upper, out-of-focus area. A black text box with white text is centered over the middle of the image.

TWO 2K
RED,BLACK,BLACK,BROWN,BROWN

TWO 2K

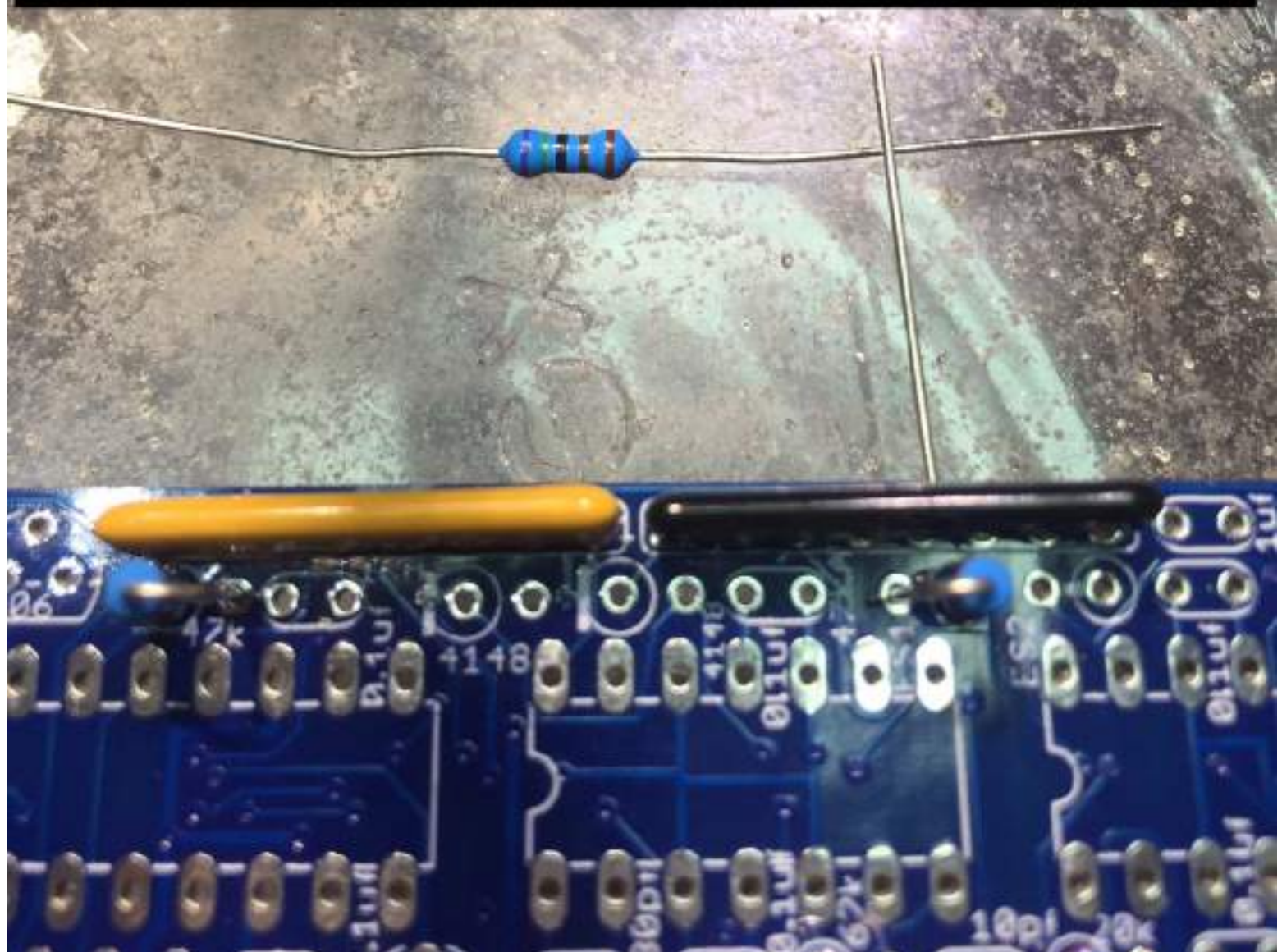
ONE 10K
BROWN,BLACK,BLACK,RED,BROWN

THIS IS FOR ES1 WHICH STANDS FOR
ENVELOPE SENSITIVITY FOR THE 88HZ
ENVELOPE FOLLOWER. SO THIS CAN BE
CHANGED DEPENDING ON HOW
HIGH/REACTIVE YOU WANT THE
VOLTAGE AMPLITUDE OF THE ENVELOPE
TO GO FOR THIS BAND.

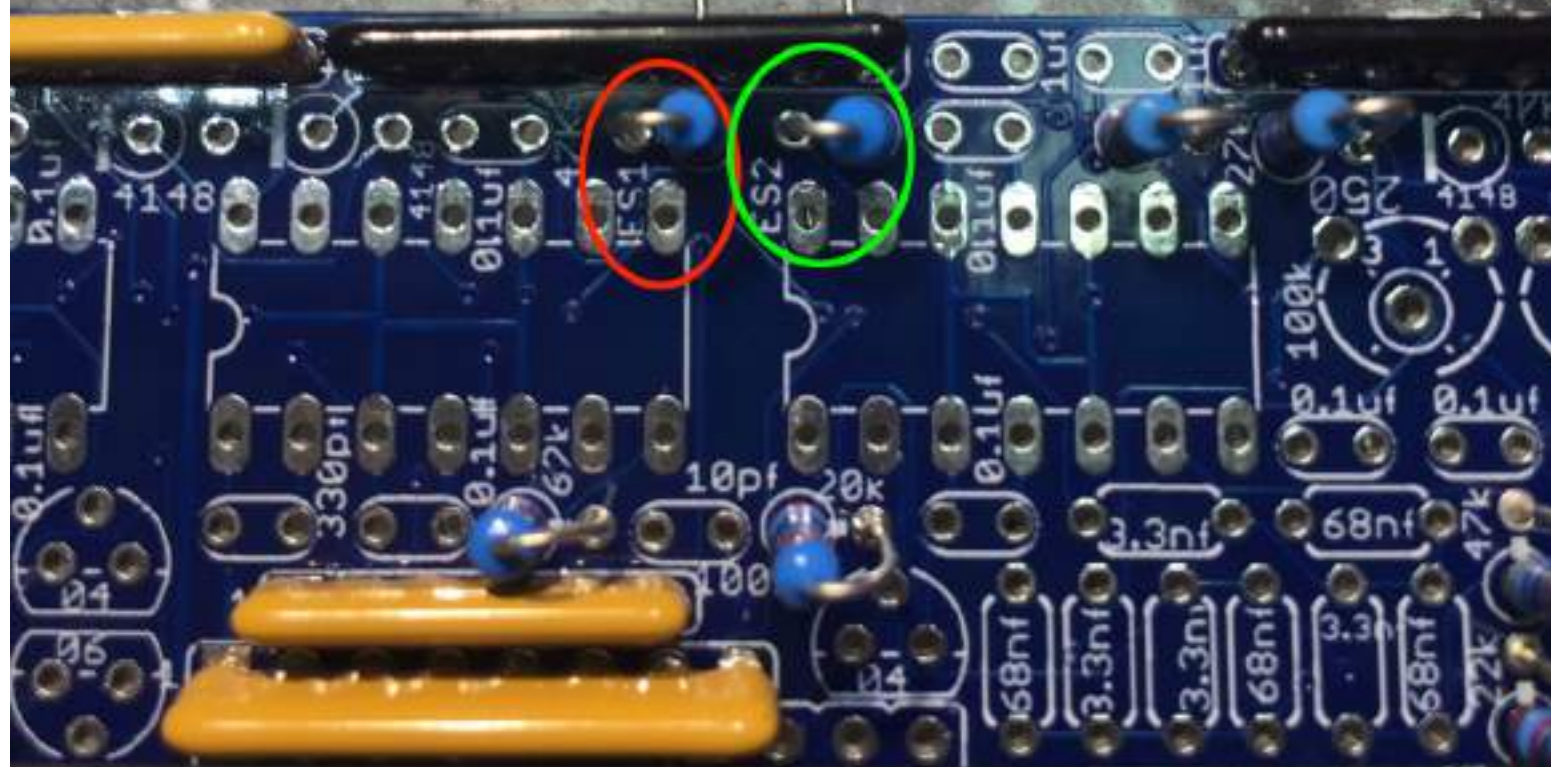


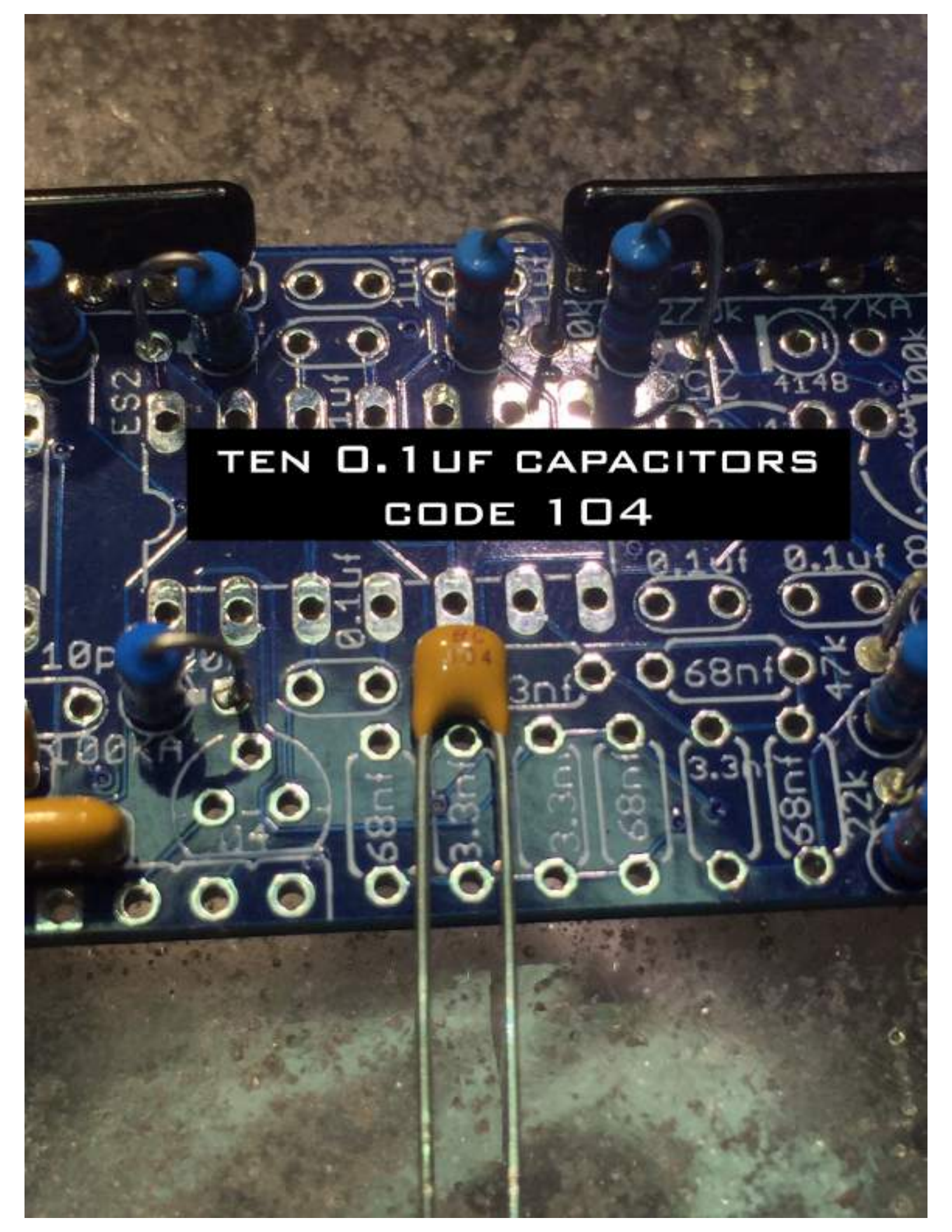
ONE 7.5K
PURPLE, GREEN, BLACK, BROWN, BROWN

THIS IS FOR ES2 WHICH STANDS FOR
ENVELOPE SENSITIVITY FOR THE 250HZ
ENVELOPE FOLLOWER. SO THIS CAN BE
CHANGED DEPENDING ON HOW
HIGH/REACTIVE YOU WANT THE VOLTAGE
AMPLITUDE OF THE ENVELOPE TO GO FOR
THIS BAND.



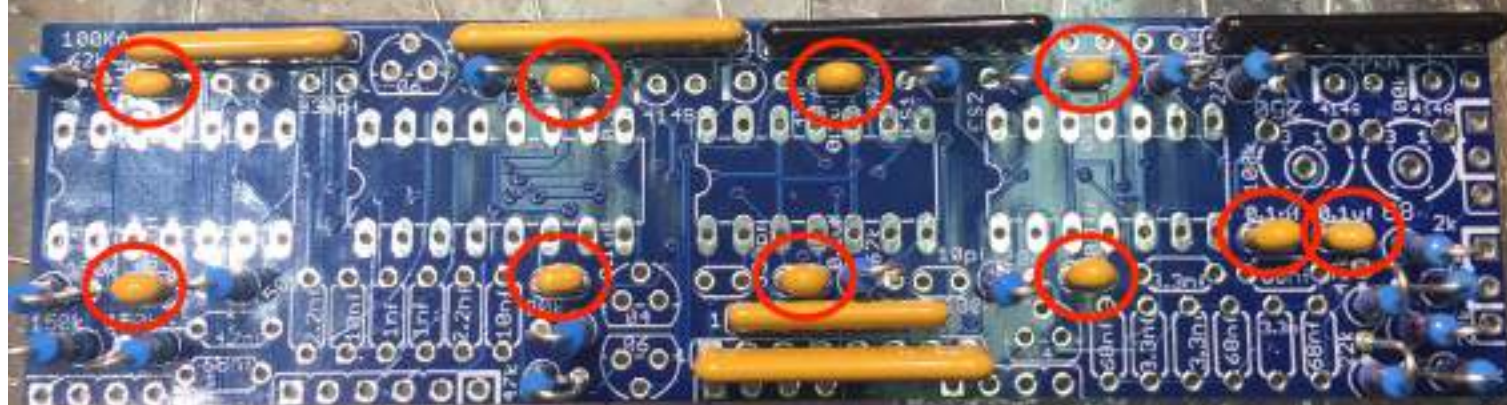
10K IS IN RED
7.5K IS GREEN





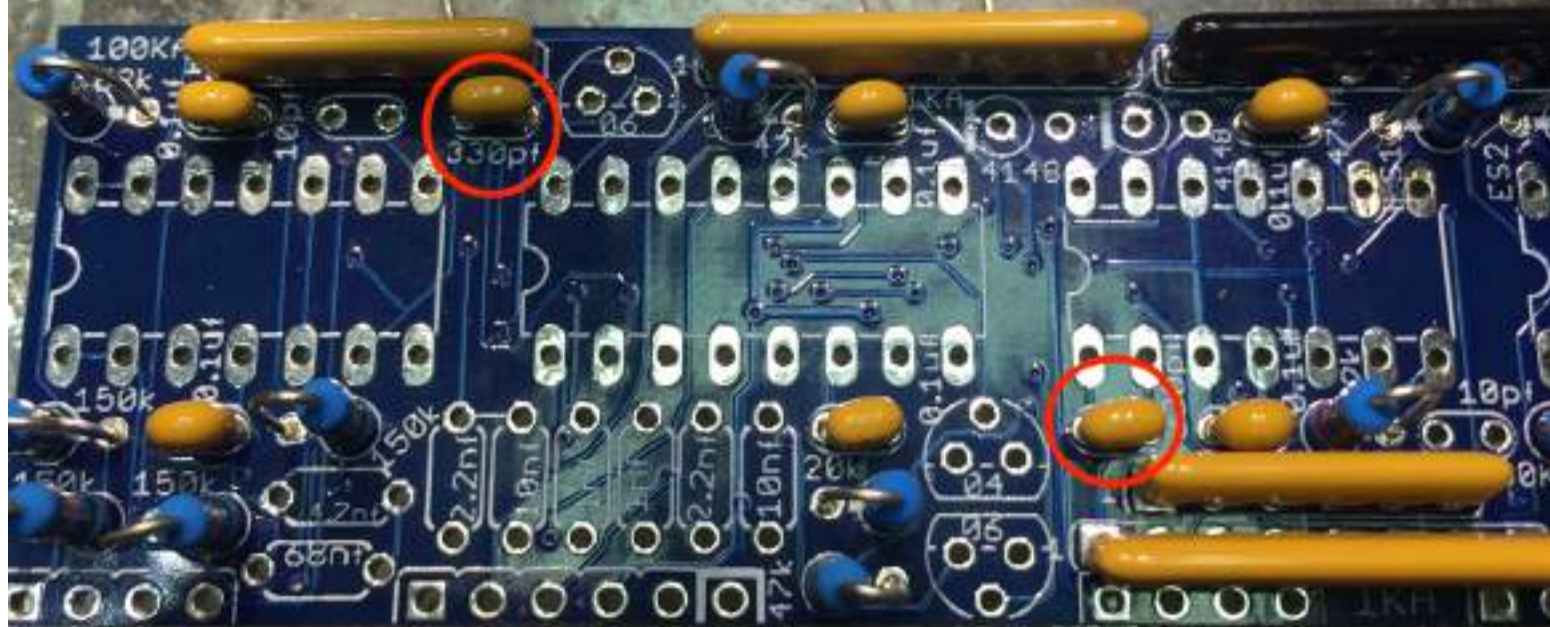
**TEN 0.1UF CAPACITORS
CODE 104**

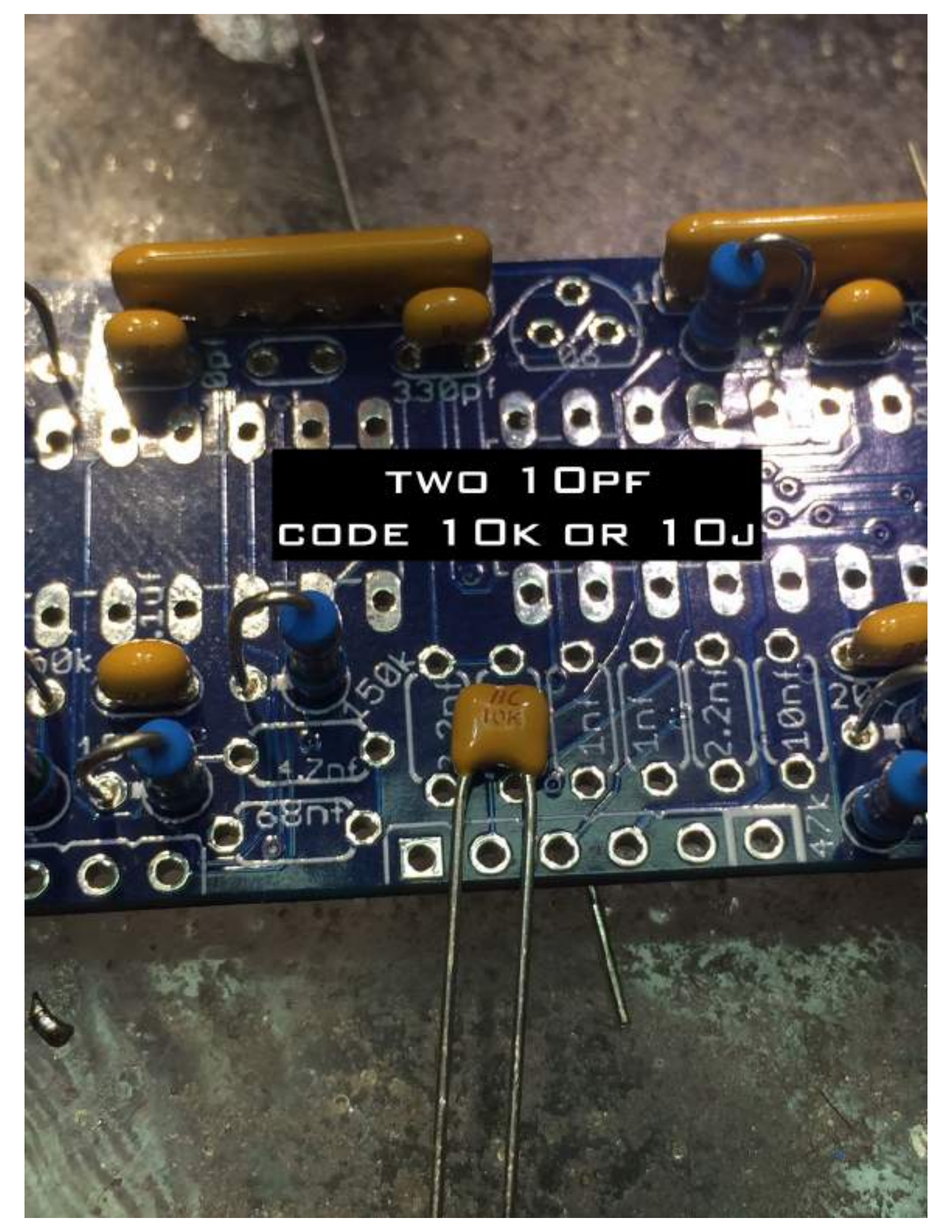
TEN 0.1UF



TWO 330PF
CODE 331

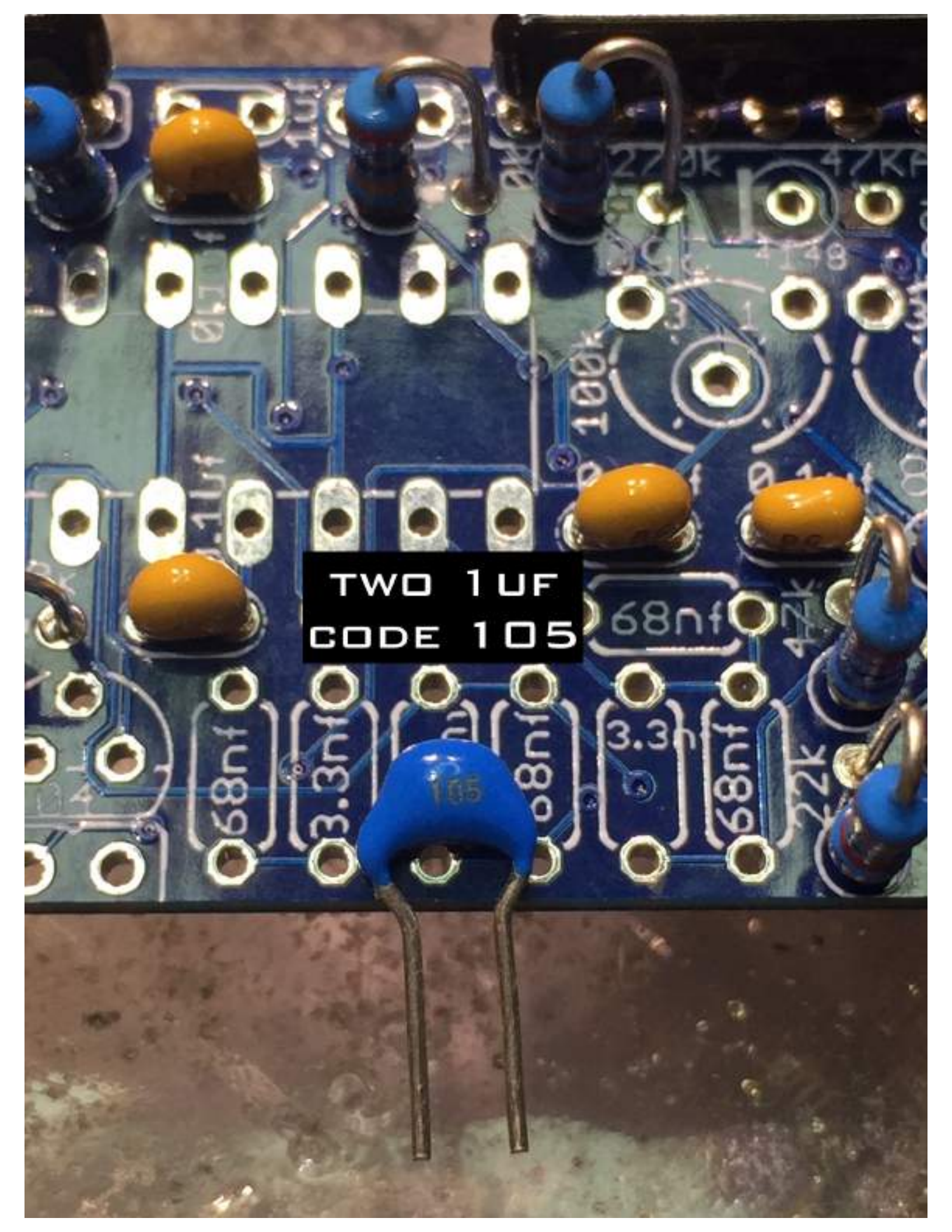
TWO 330PF



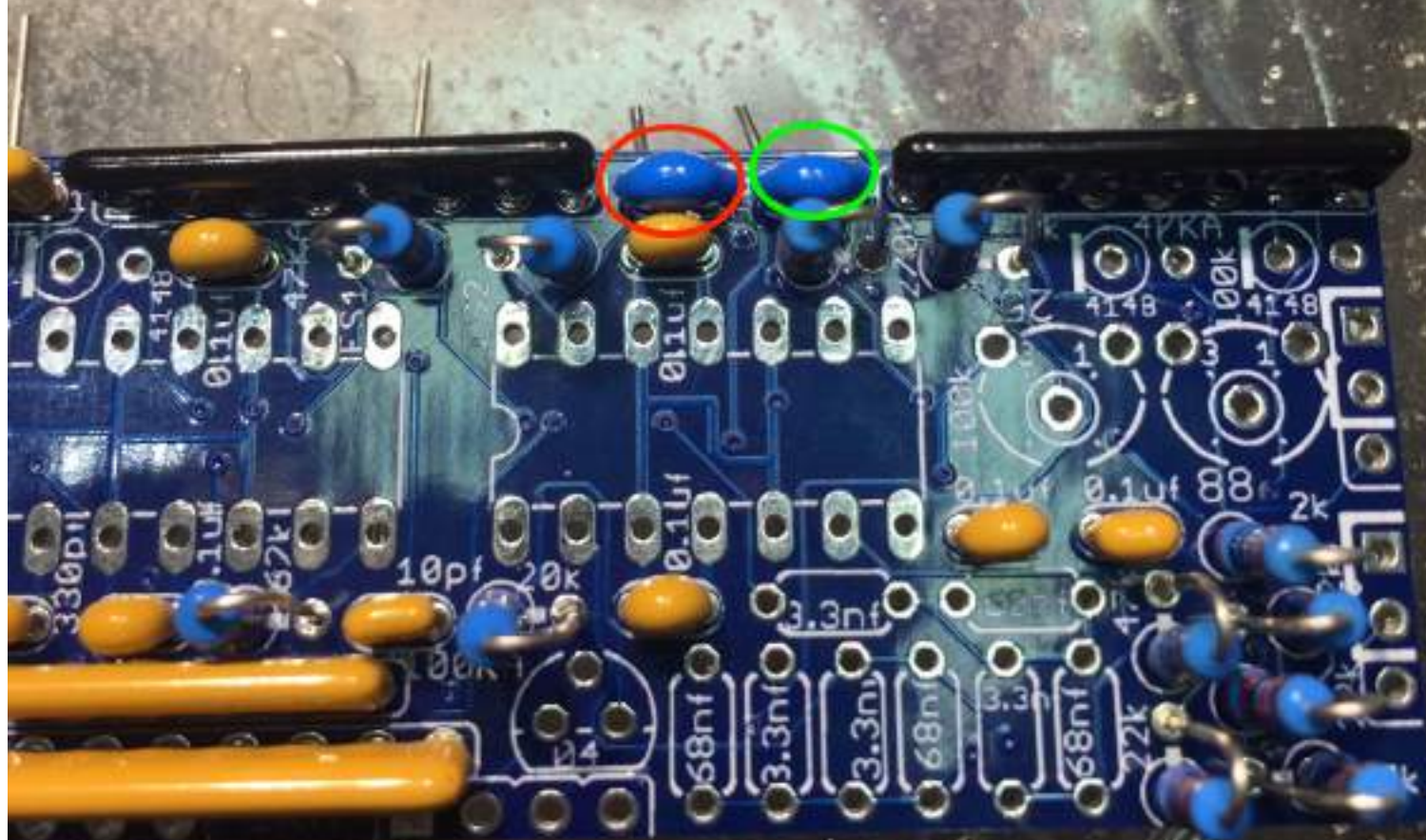


TWO 10PF
CODE 10K OR 10J

TWO 10PF



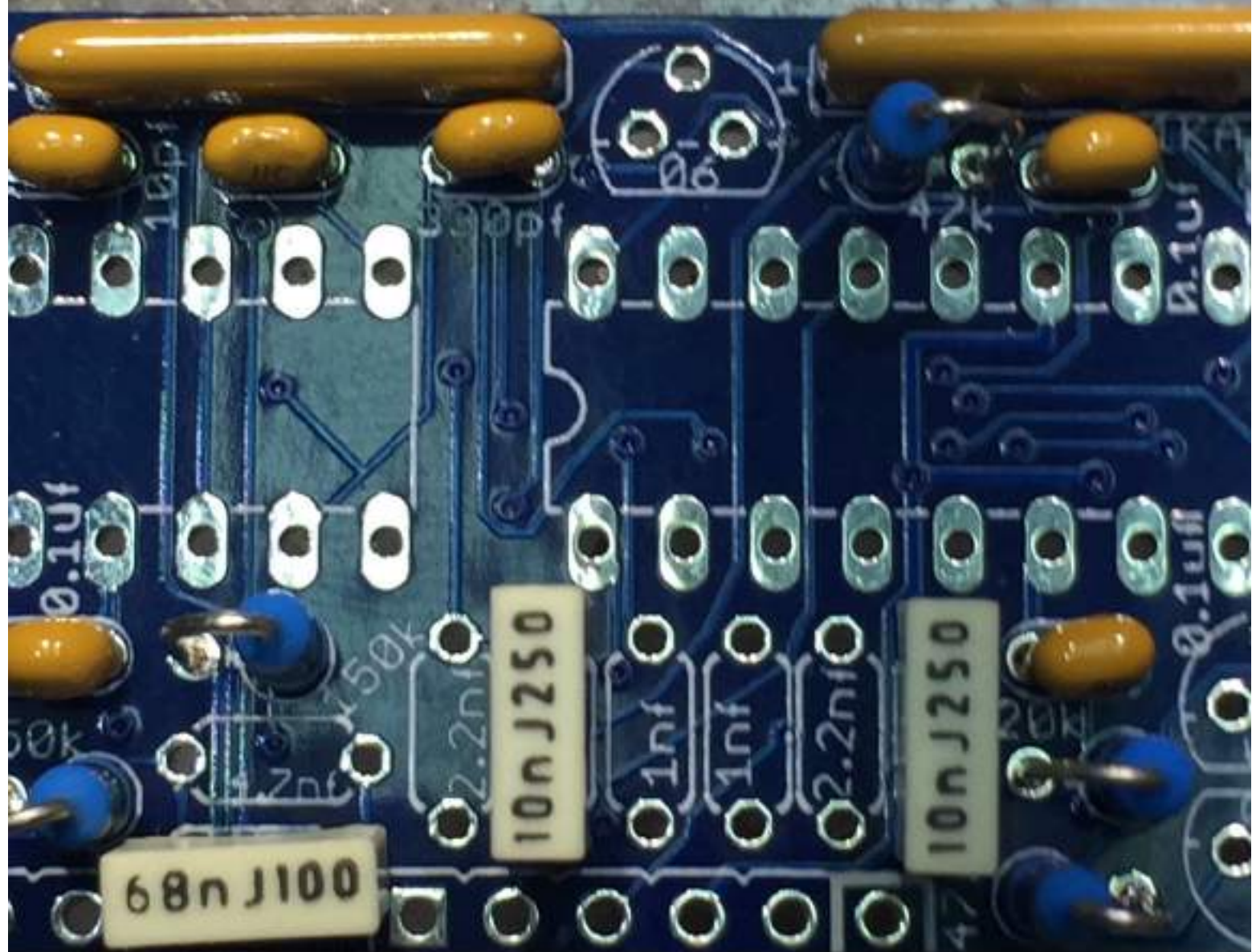
TWO 1UF
CODE 105



FIVE 68NF
POLYESTER CAPS
CODE 68N



2 10NF
CODE 10N



ONE 4.7NF
CODE 4N7

4n7J100

68nJ100

10nJ250

FOUR 3.3NF
CODE 3N3

3n3J100

68nJ100

001f u89

3n3J100

3n3J100

001f u89

3n3J100

001f u89

TWO 2.2NF
CODE
2N2

4n7J100

68nJ100

2n2J100

10nJ250

2n2J100

10nJ250

TWO 1 NF
CODE 1N

4n7J100

68nJ100

2n2J100

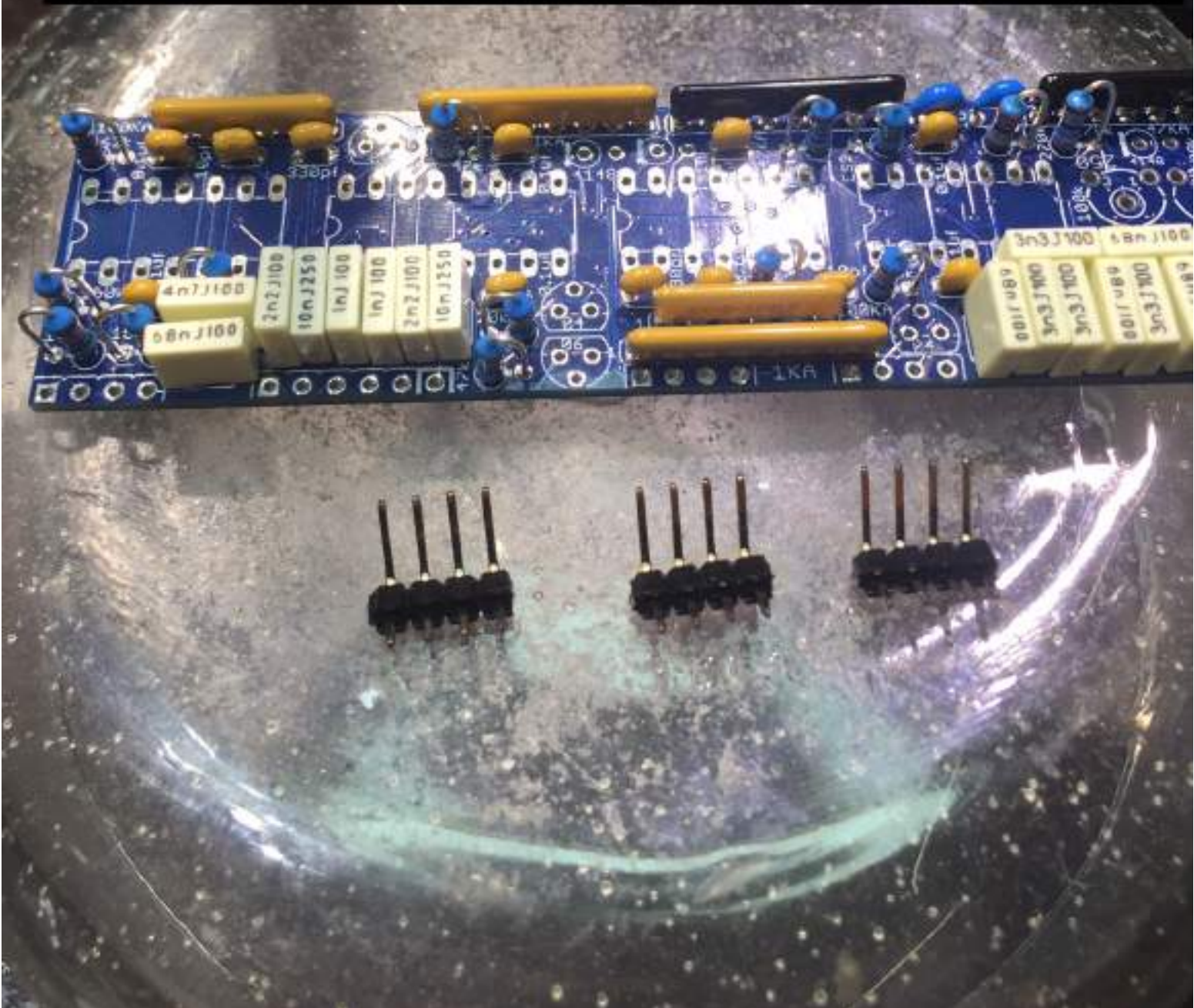
10nJ250

1nJ100

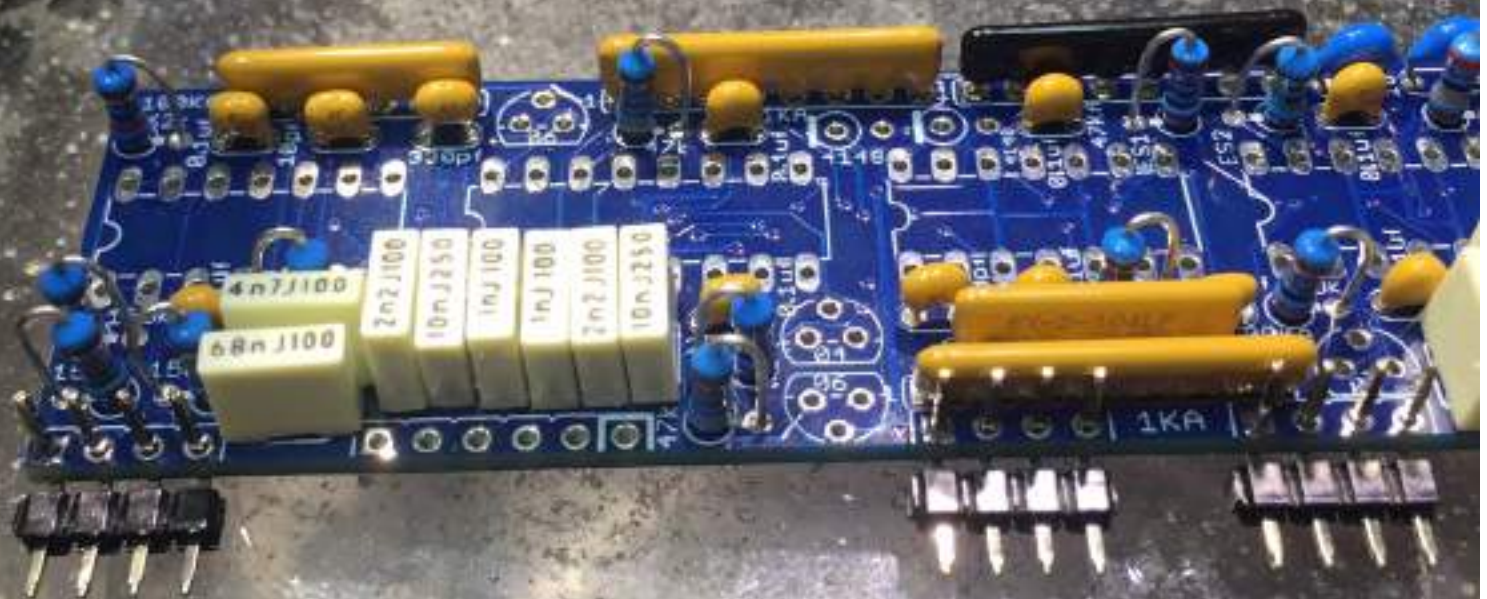
1nJ100

2n2J100

10nJ250



**PRESS UP AGAINST A FLAT
SURFACE AND SOLDER. MAKE
SURE THEY ARE FLUSH WITH
THE PCB. I LIKE TO TACK A PIN
OF EACH ON TOP AND THEN
SOLDER THE PINS FROM THE
BOTTOM OF THE PCB.**

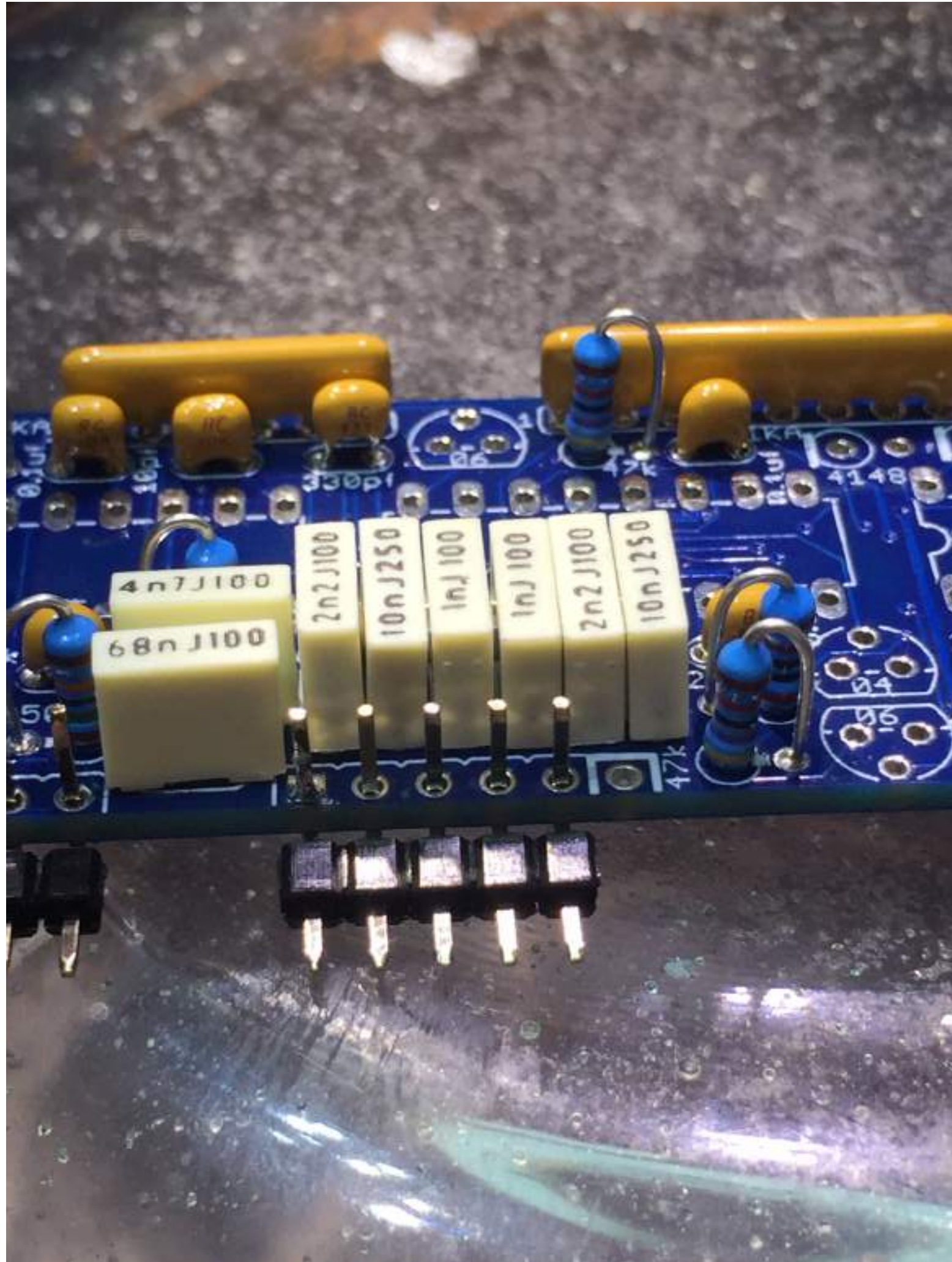


**YOU MIGHT HAVE TO FILE THE
RIGHT SIDE OF THE 5 PIN HEADER
DOWN A LITTLE BIT. BECAUSE
LATER ON WE WILL ADD A 1 PIN
HEADER NEXT TO IT**

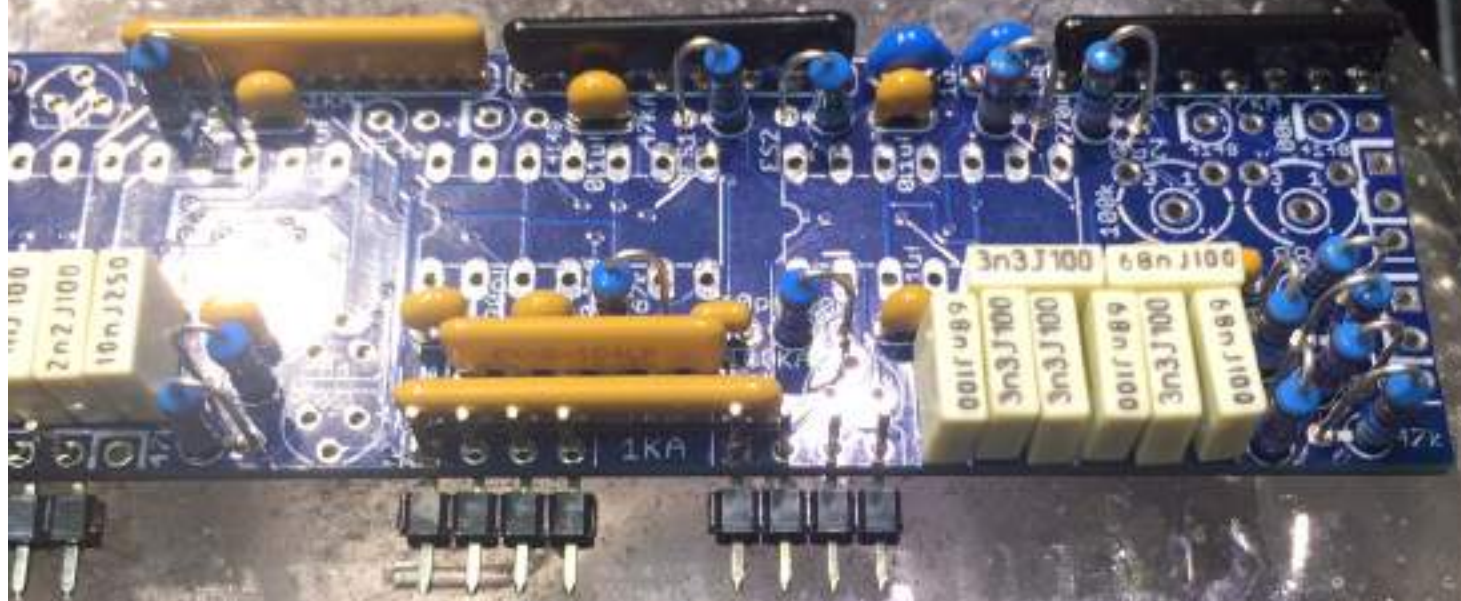


ONE FIVE PIN HEADER(GOES IN RED)
BE CAREFUL WITH THE PLACEMENT.
USE THE 5PINS ON THE LEFT. THERE
IS AN ANCHOR POINT NEXT TO IT. THIS
1 PIN HEADER WILL BE ADDED LATER.

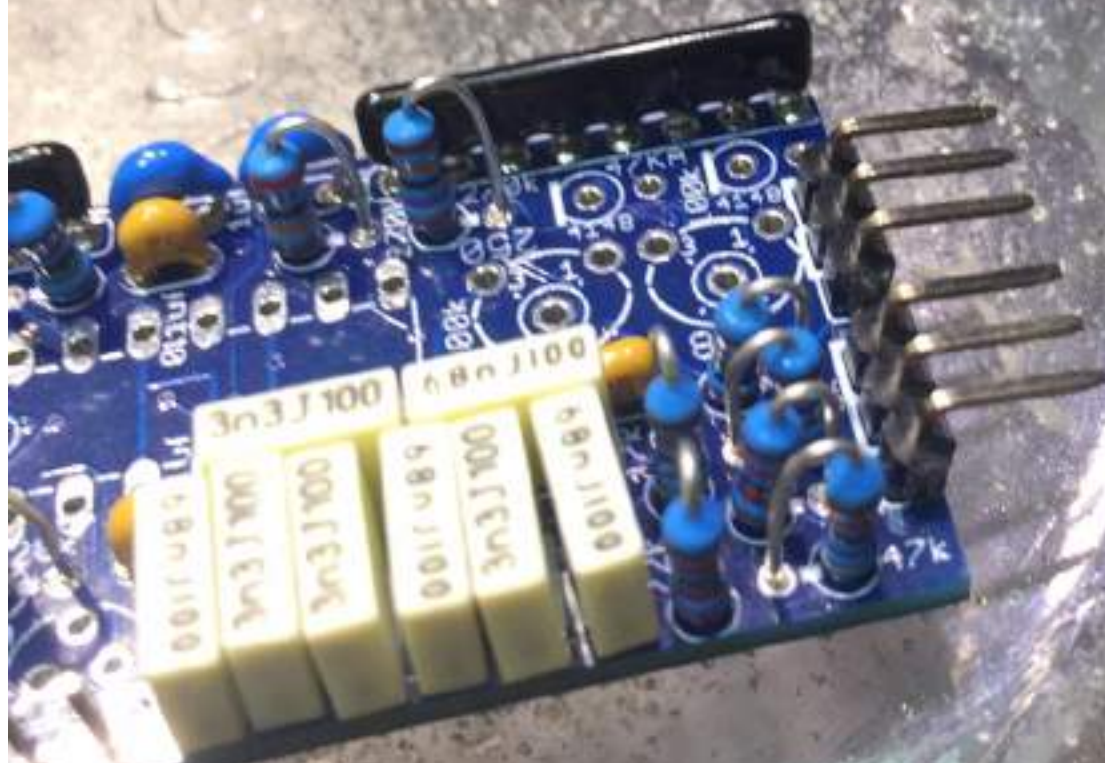




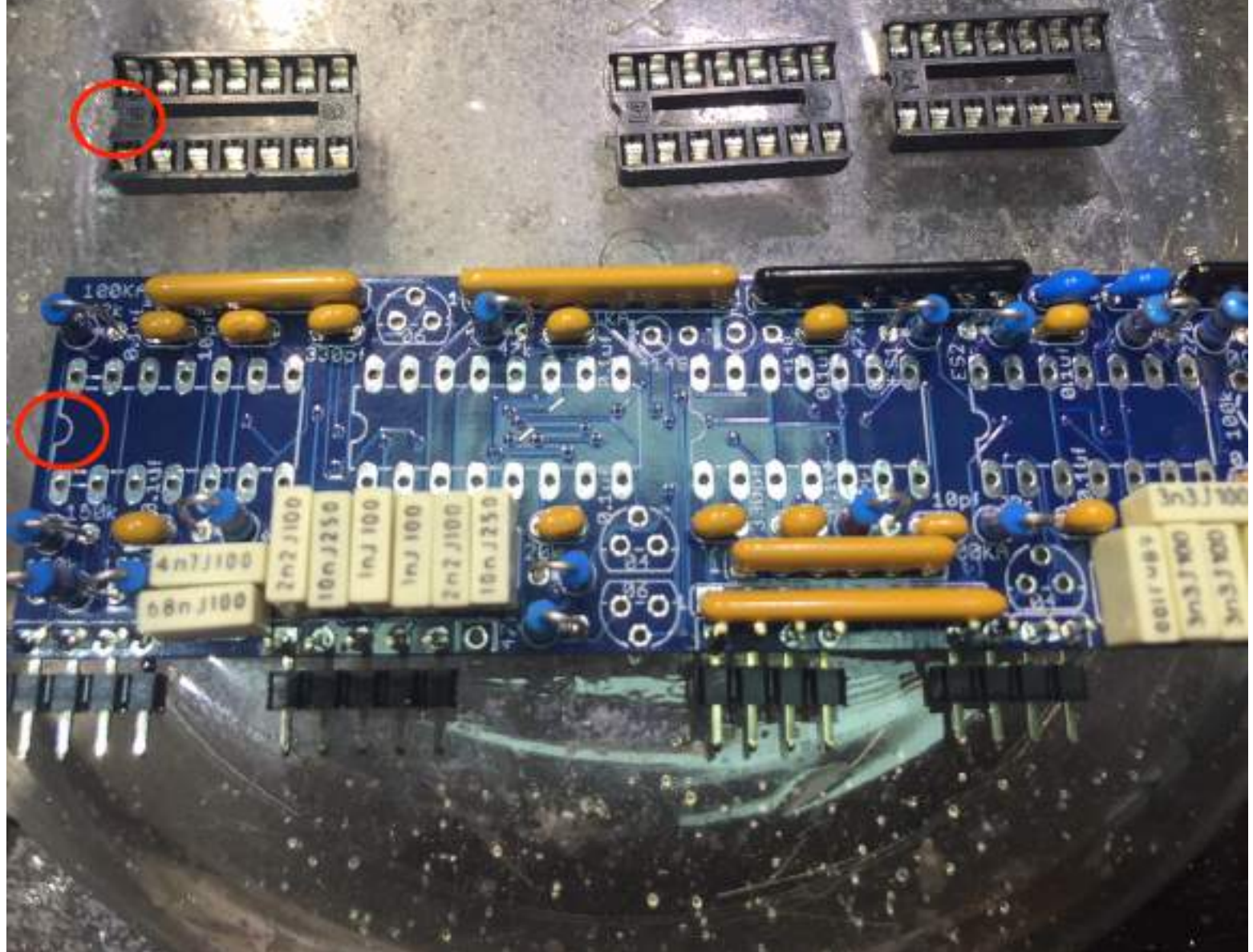
**TWO 3PIN HEADERS. THESE GO
SHORT END THROUGH TOP OF THE
PCB**



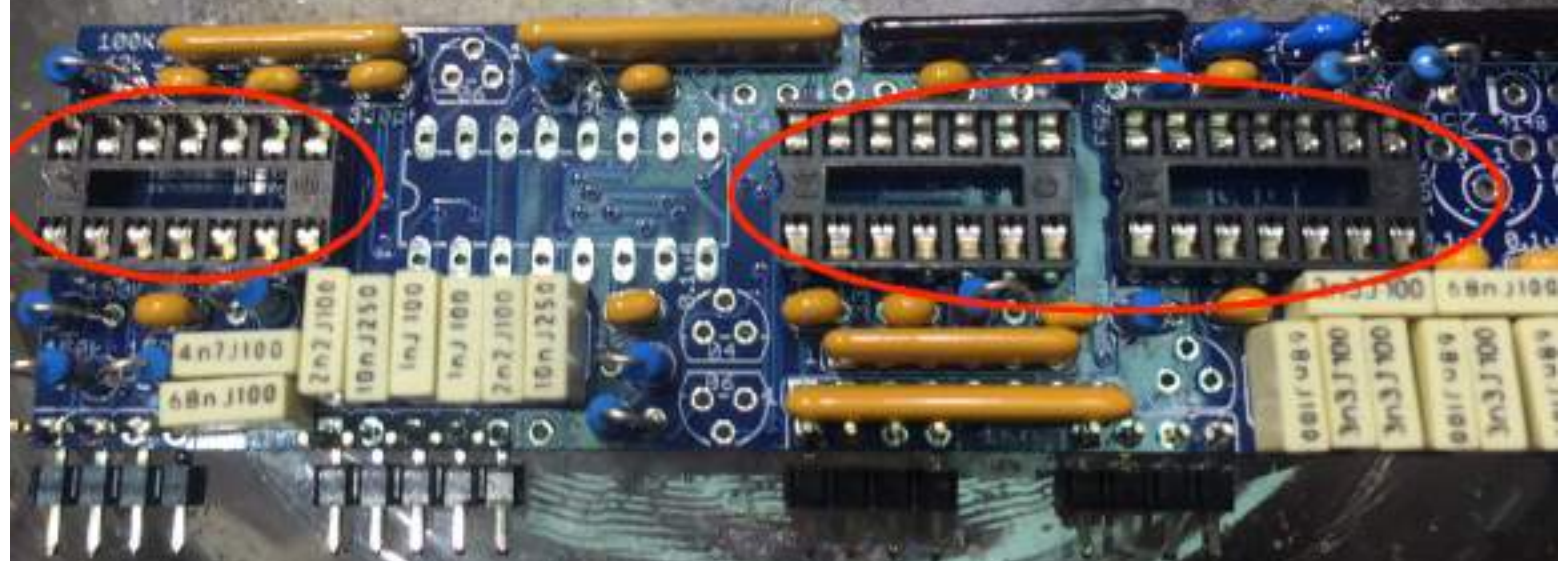
TWO 3PIN HEADERS



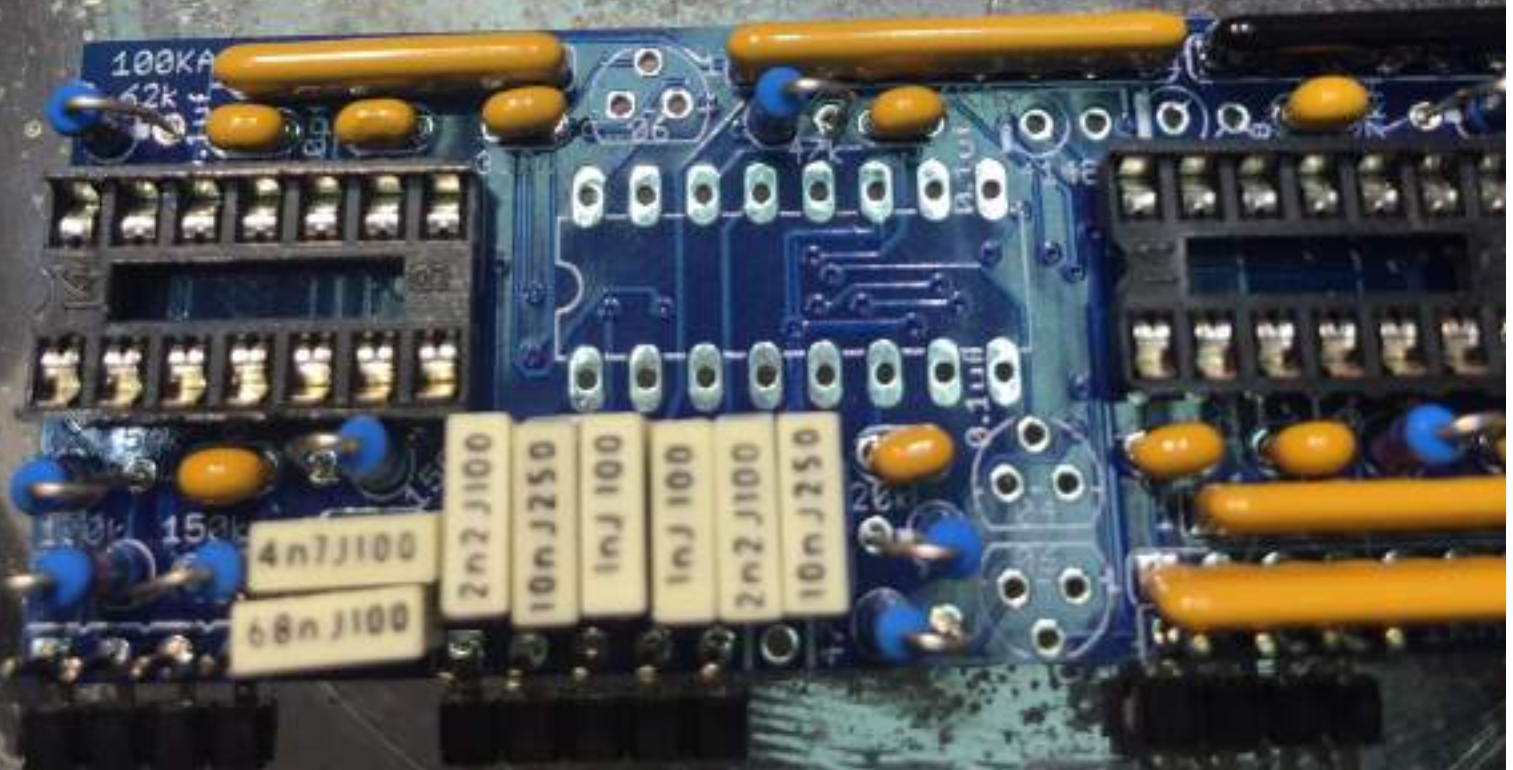
THREE 14PIN DIP SOCKETS. MAKE SURE THE NOTCH LINES UP WITH THE SILKSCREEN WHICH SHOULD LINE UP WITH THE IC ITSELF.



14 PIN SOCKETS



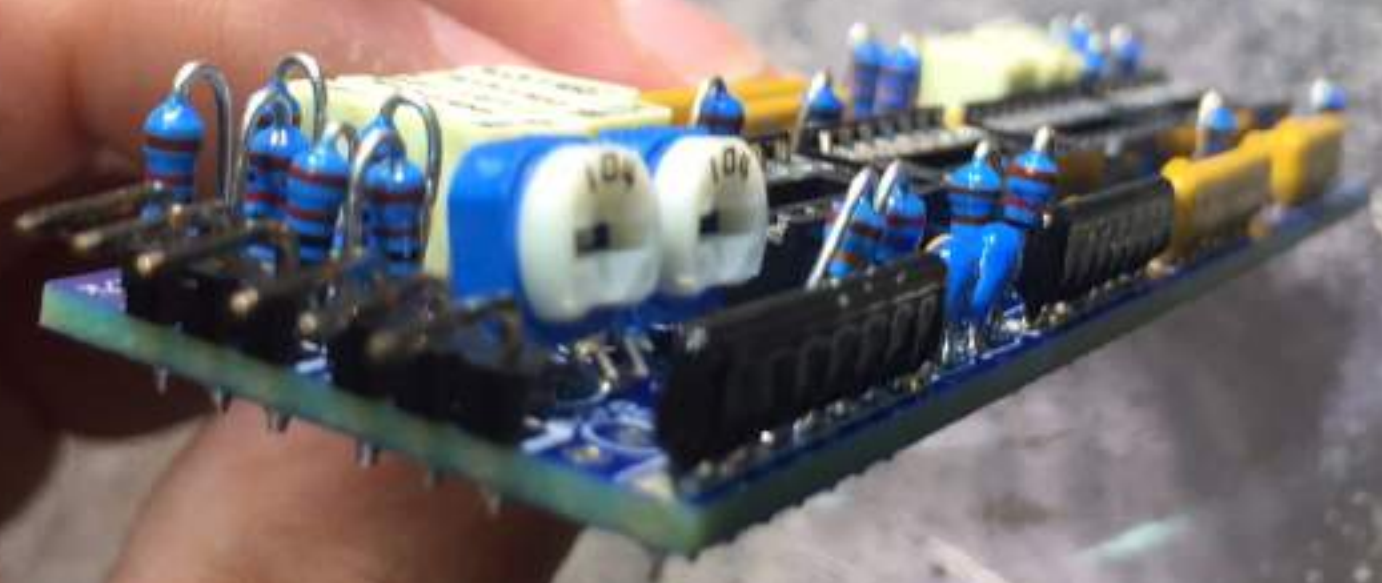
**ONE 16PIN DIP
SOCKET. MAKE SURE
NOTCHES ALIGN**



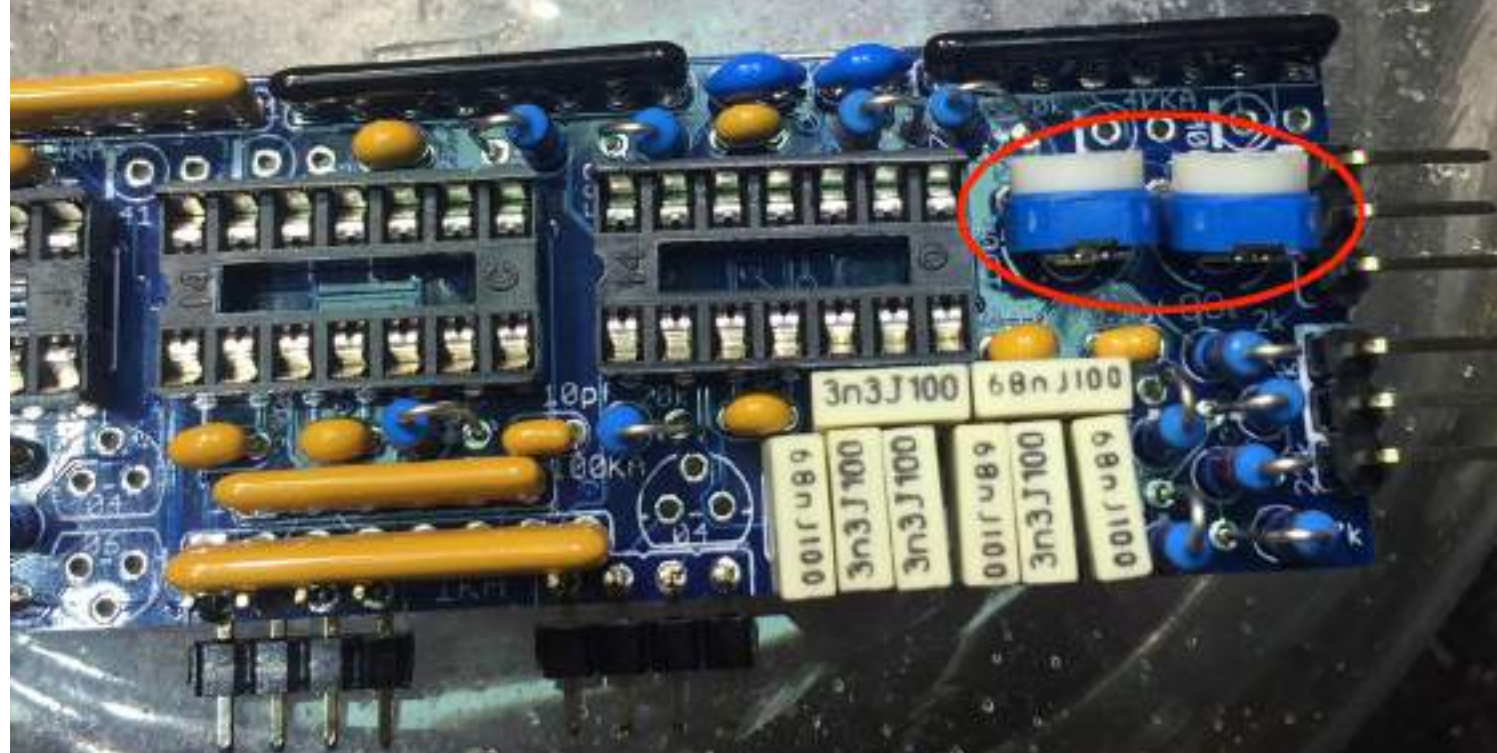
TWO 100K 6MM SIDE TRIMS



I PUT MINE AT A BIT OF AN
ANGLE SO A SCREWDRIVER
IS EASIER TO ACCESS.
SINCE THERE WILL BE
SOME DIODES BELOW AND
ARRAYS IN FRONT



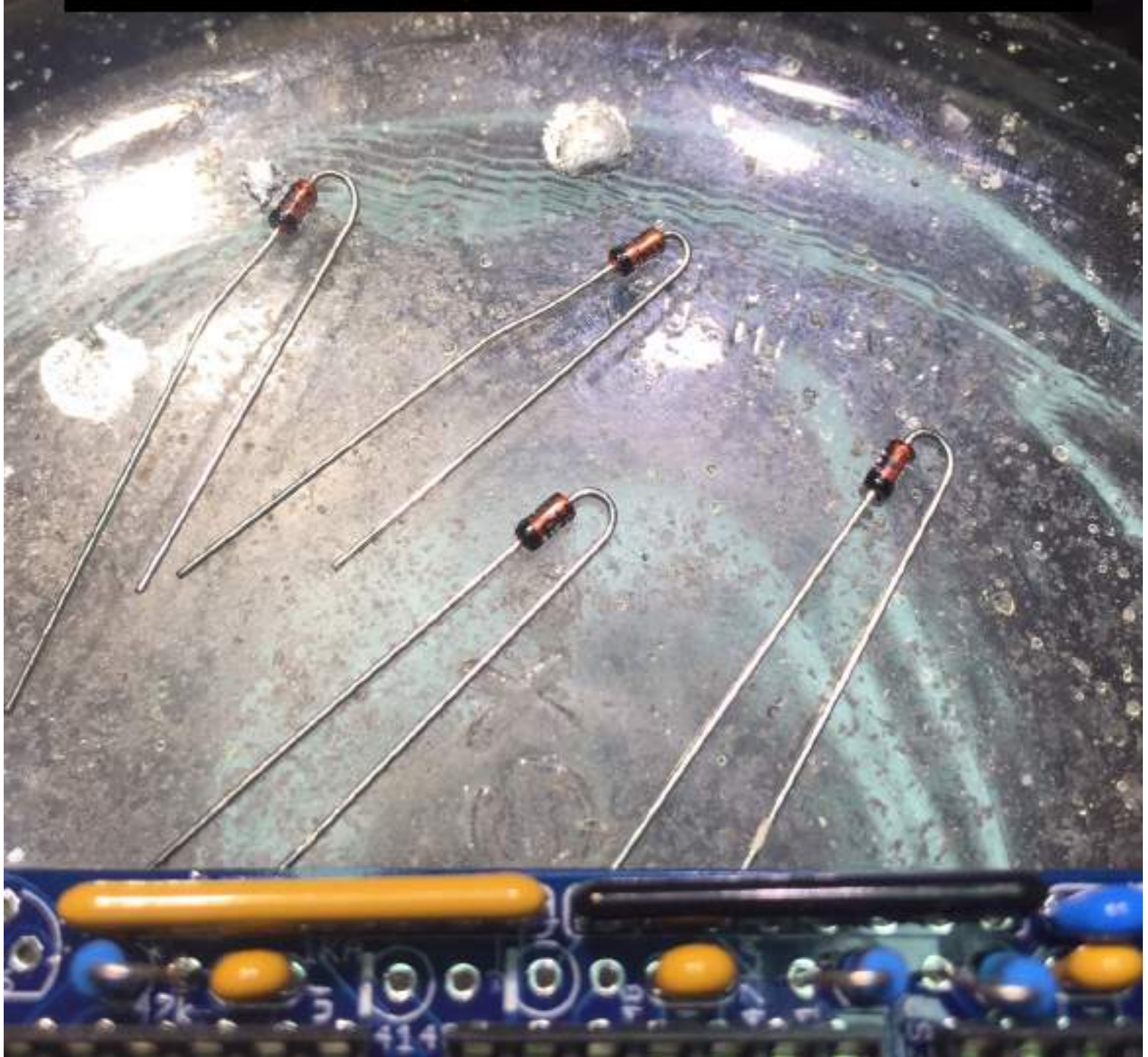
TRIMS



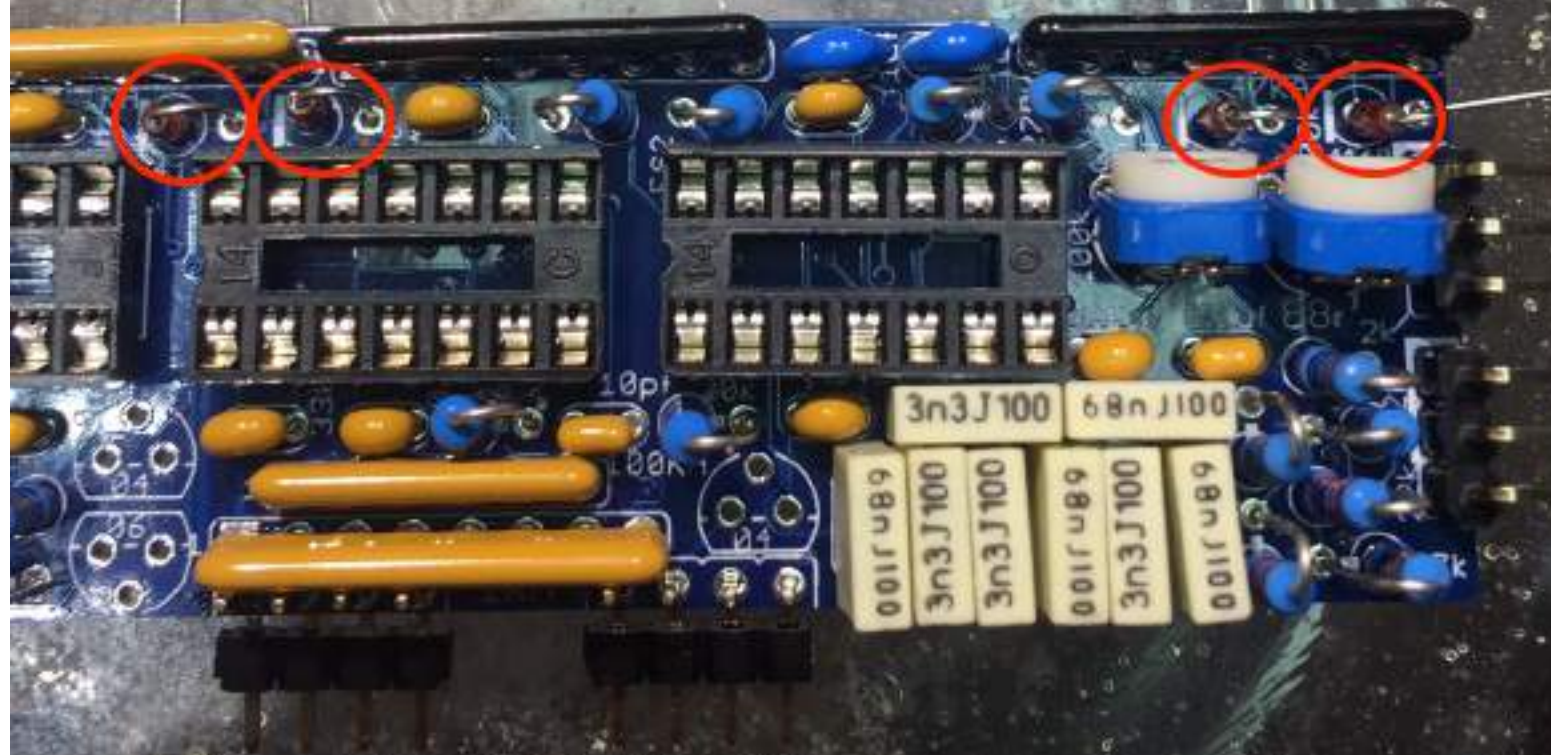
**FOUR 4148 DIODES
BE CAREFUL WITH
ELECTROSTATIC DISCHARGE
THESE HAVE AN
ORIENTATION. THEY GO
CATHODE DOWN (BLACK
STRIPE DOWN)**

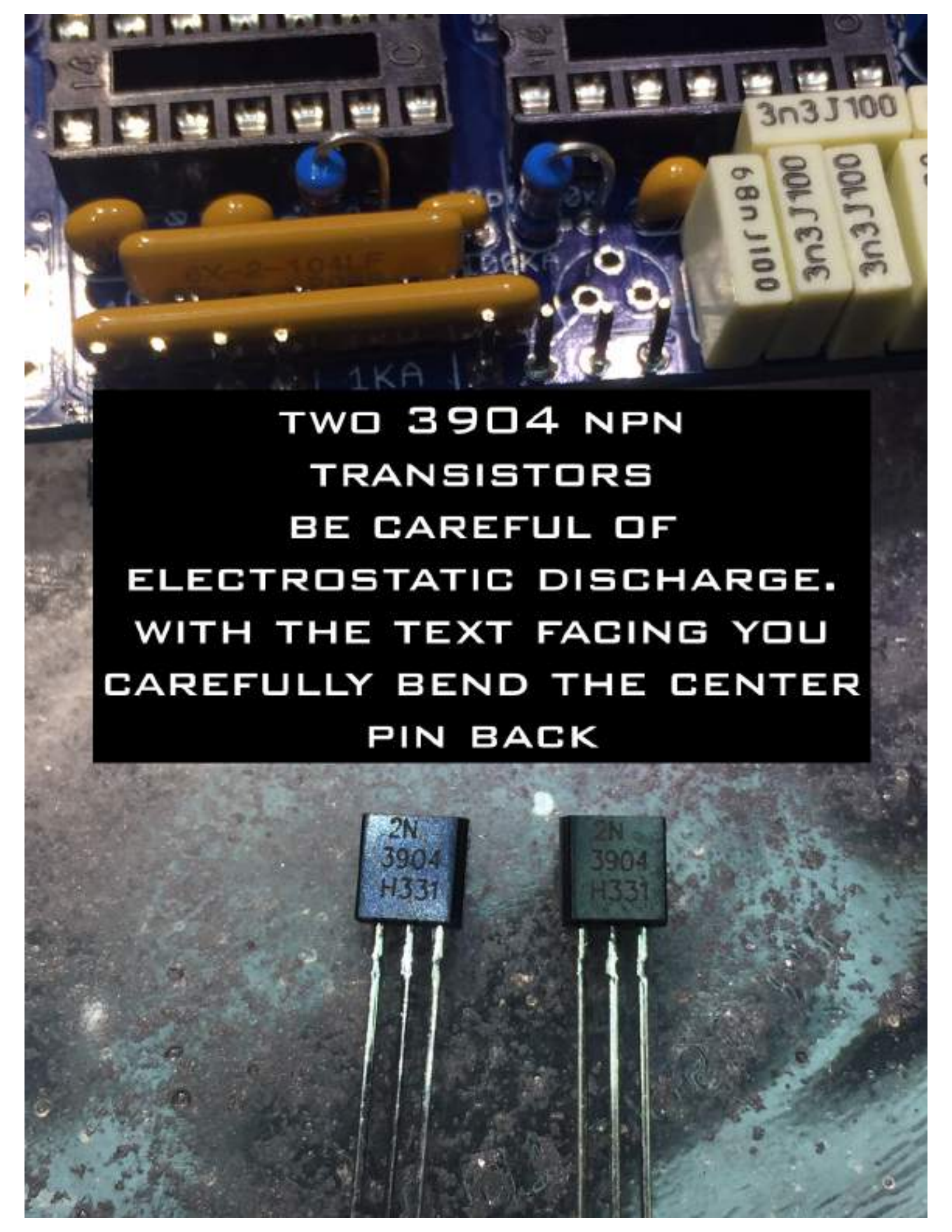


**HOLD THE DIODE VERTICAL AND
BEND THE ANODE SIDE DOWN**



FOUR 4148
TRY TO GET THE ONES ON THE
RIGHT FLUSH WITH PCB SO
THEY ARENT IN THE WAY OF
THE TRIMMERS BEHIND

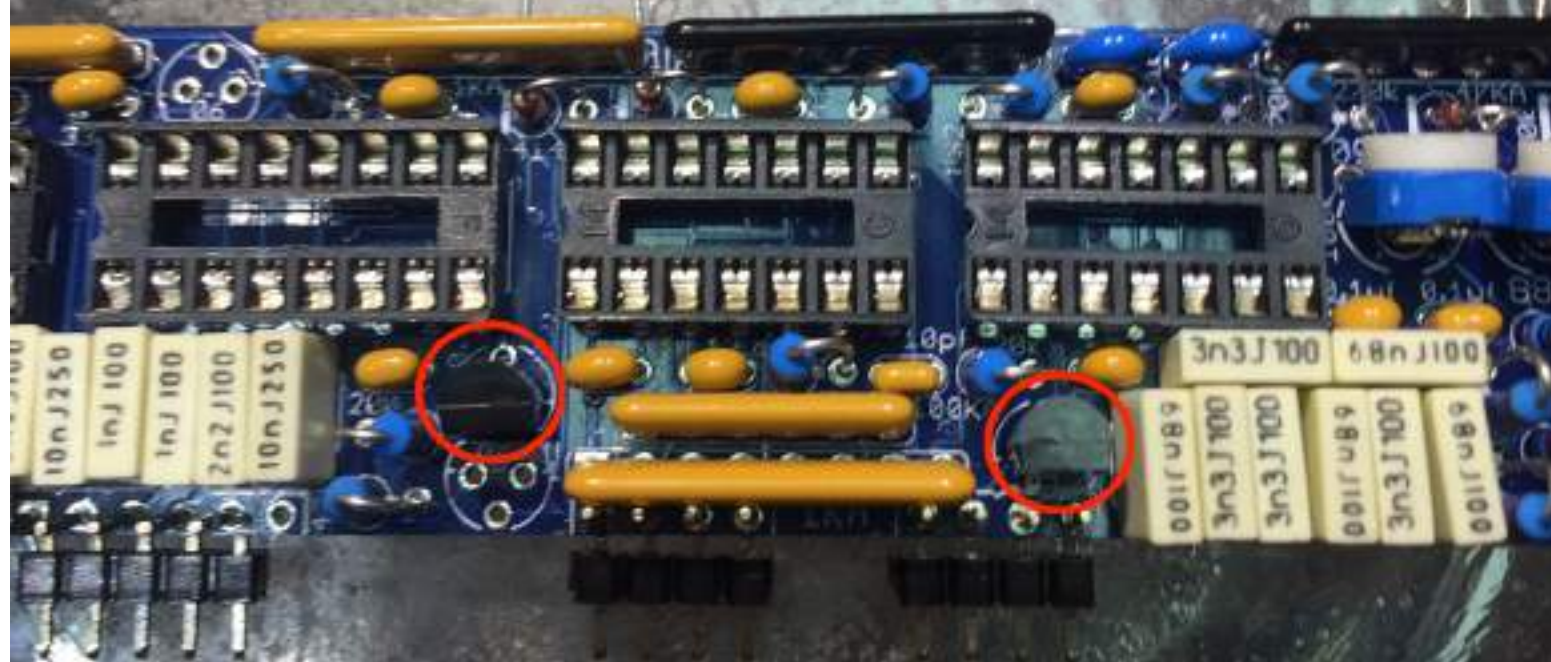


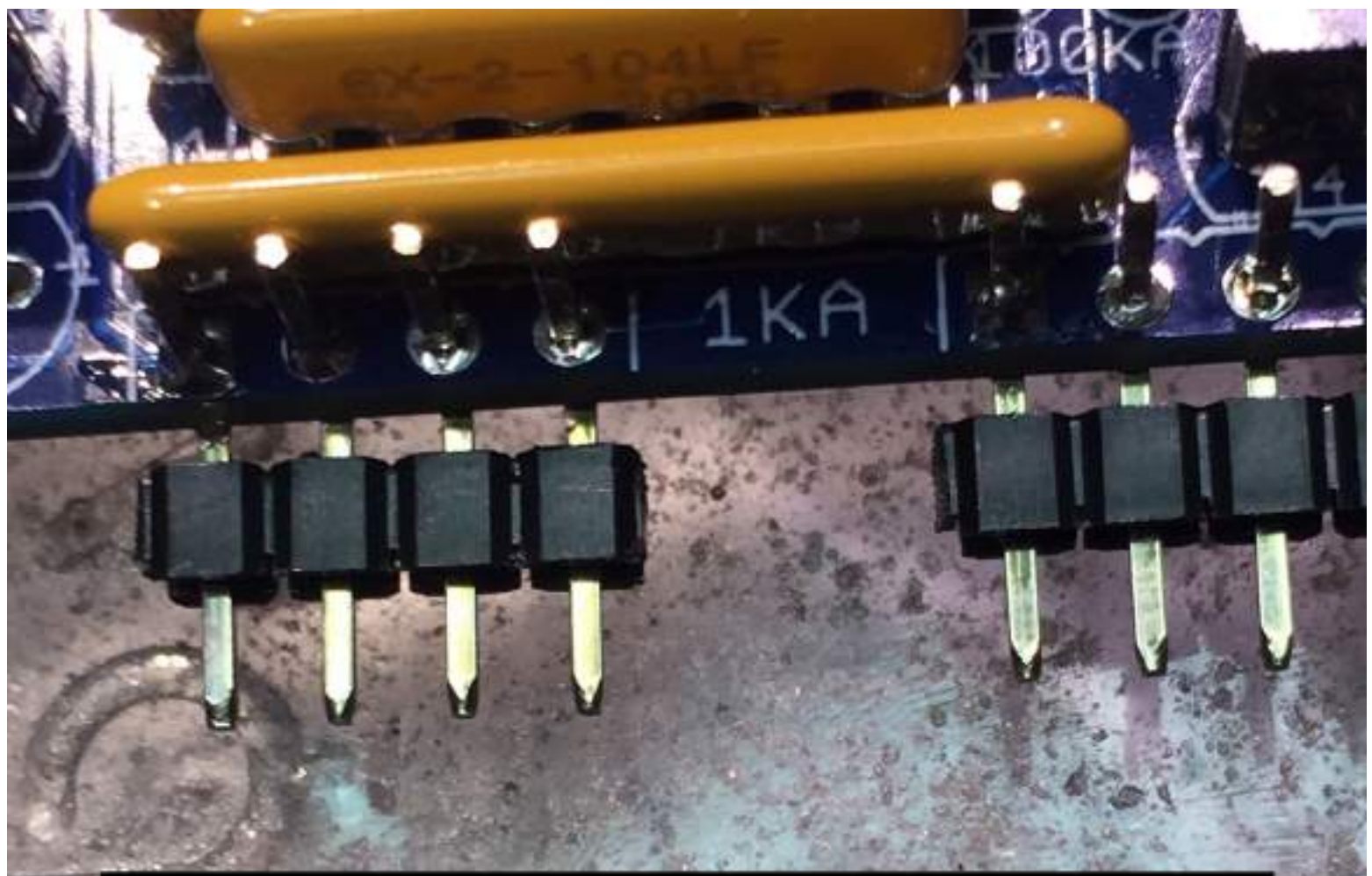


**TWO 3904 NPN
TRANSISTORS
BE CAREFUL OF
ELECTROSTATIC DISCHARGE.
WITH THE TEXT FACING YOU
CAREFULLY BEND THE CENTER
PIN BACK**

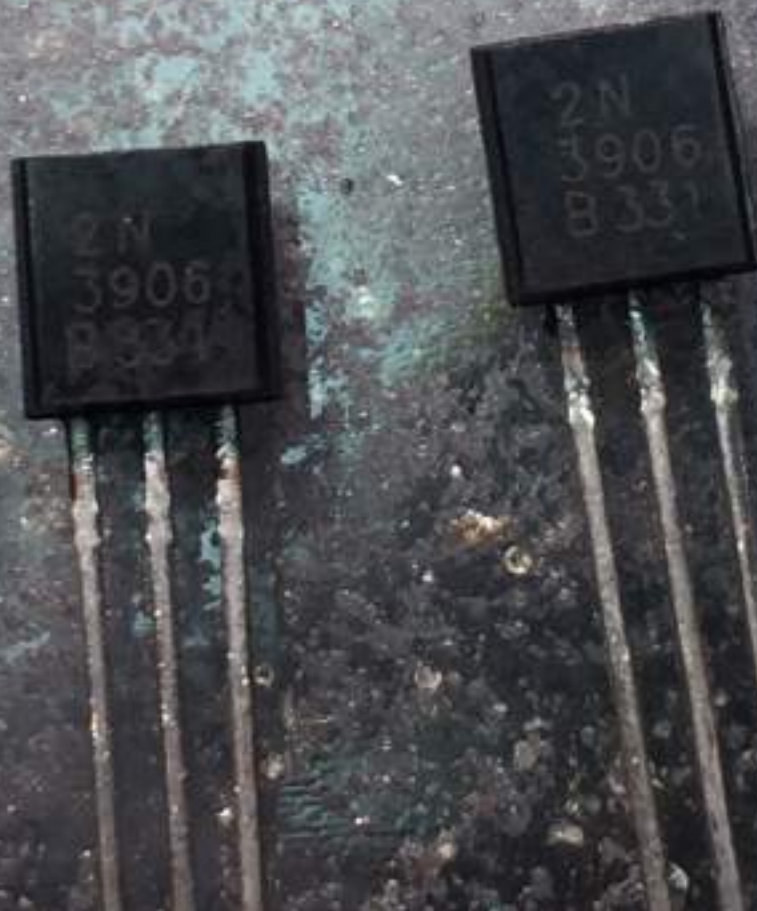


TWO 3904





TWO 3906 PNP TRANSISTORS

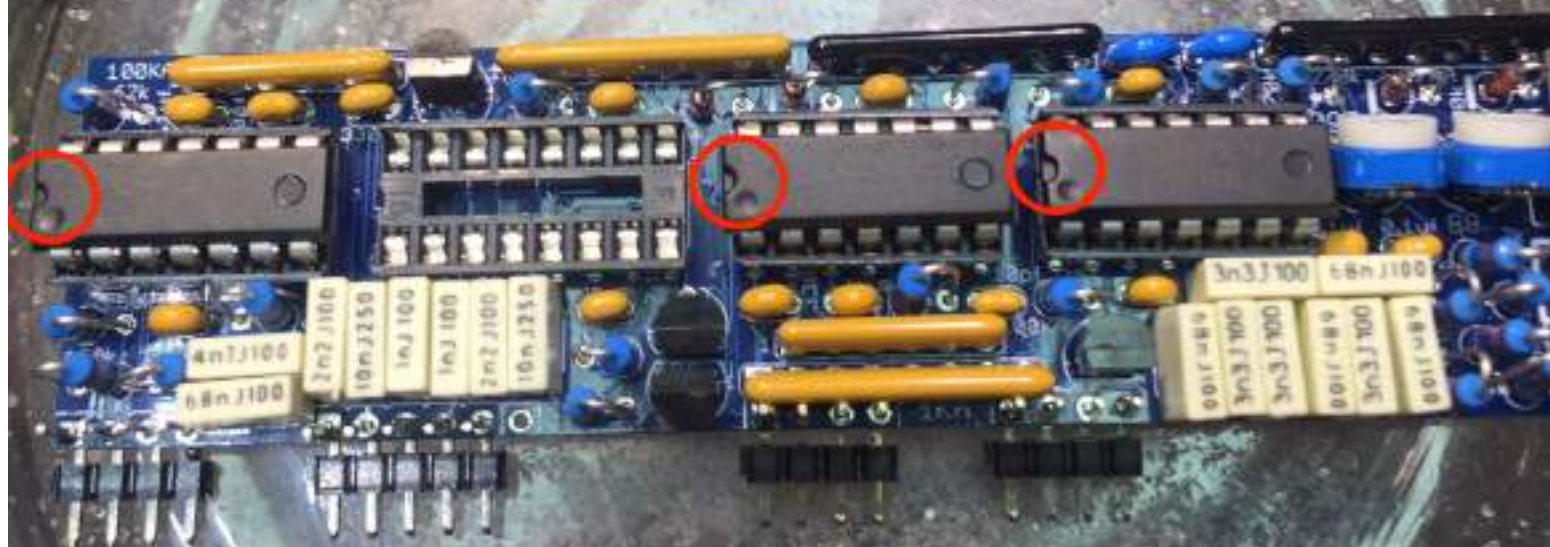


A photograph of a circuit board, likely a radio receiver, with two 3906 transistors circled in red. A black box with the text "TWO 3906" is overlaid on the image. The board is populated with various electronic components, including capacitors, resistors, and integrated circuits. The background is a dark, textured surface.

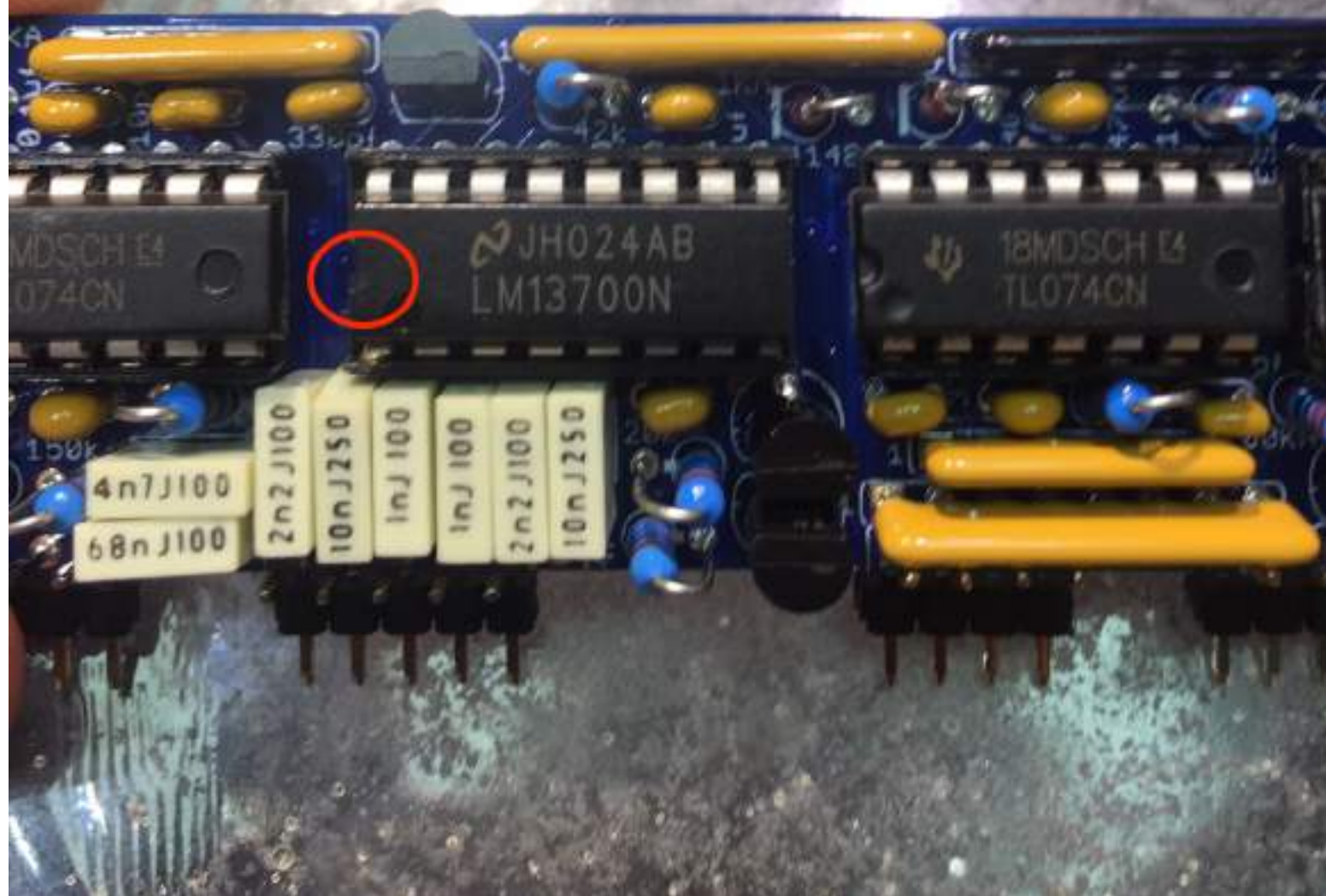
**THREE TL074
NOTCH ON THE LEFT. BE
CAREFUL OF ELECTROSTATIC
DISCHARGE**



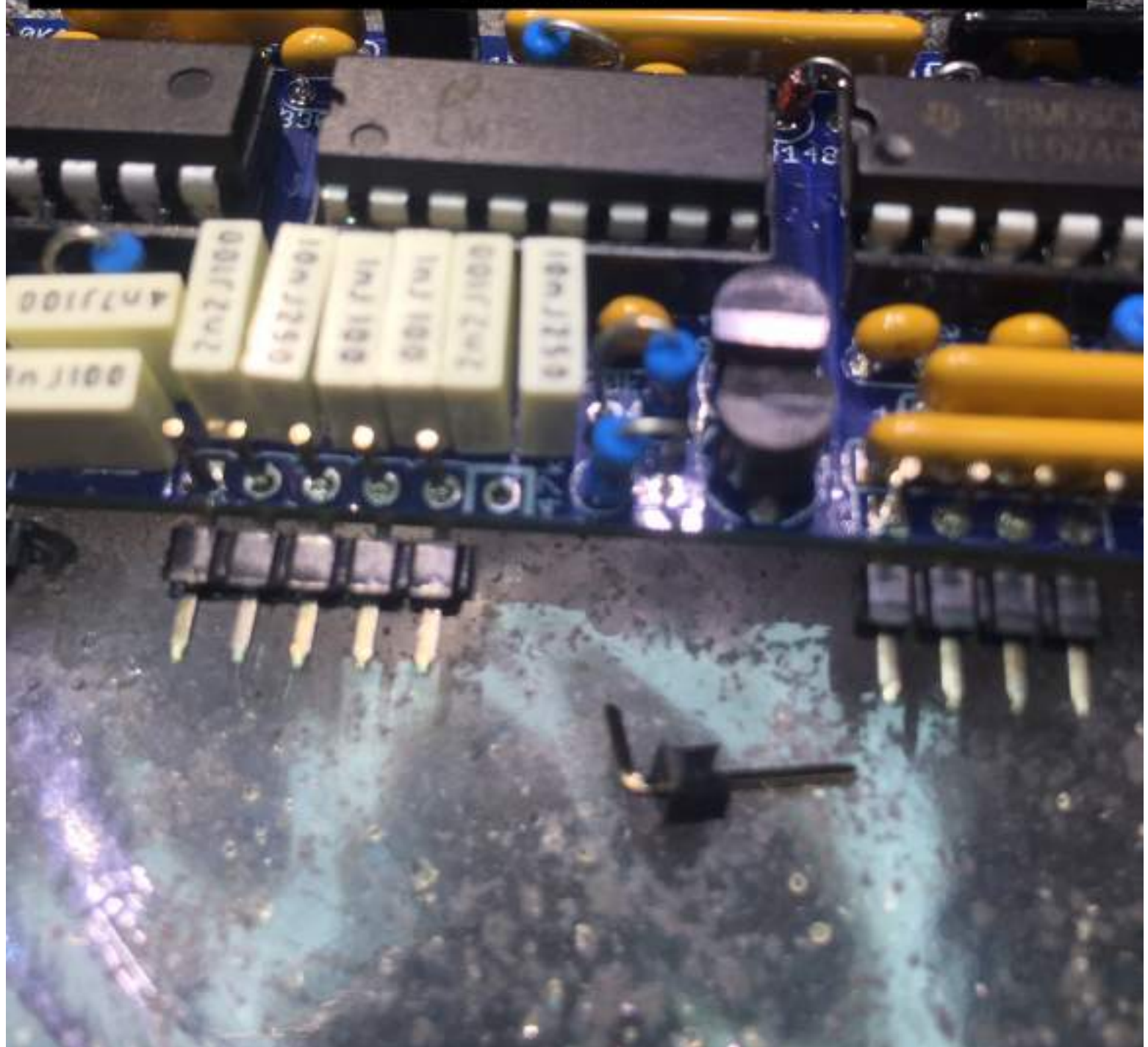
**MAKE SURE ALL LEGS ARE
INSERTED INTO THE SOCKETS.
BE GENTLE WHEN INSERTING THE
LEGS ARE FRAGILE**



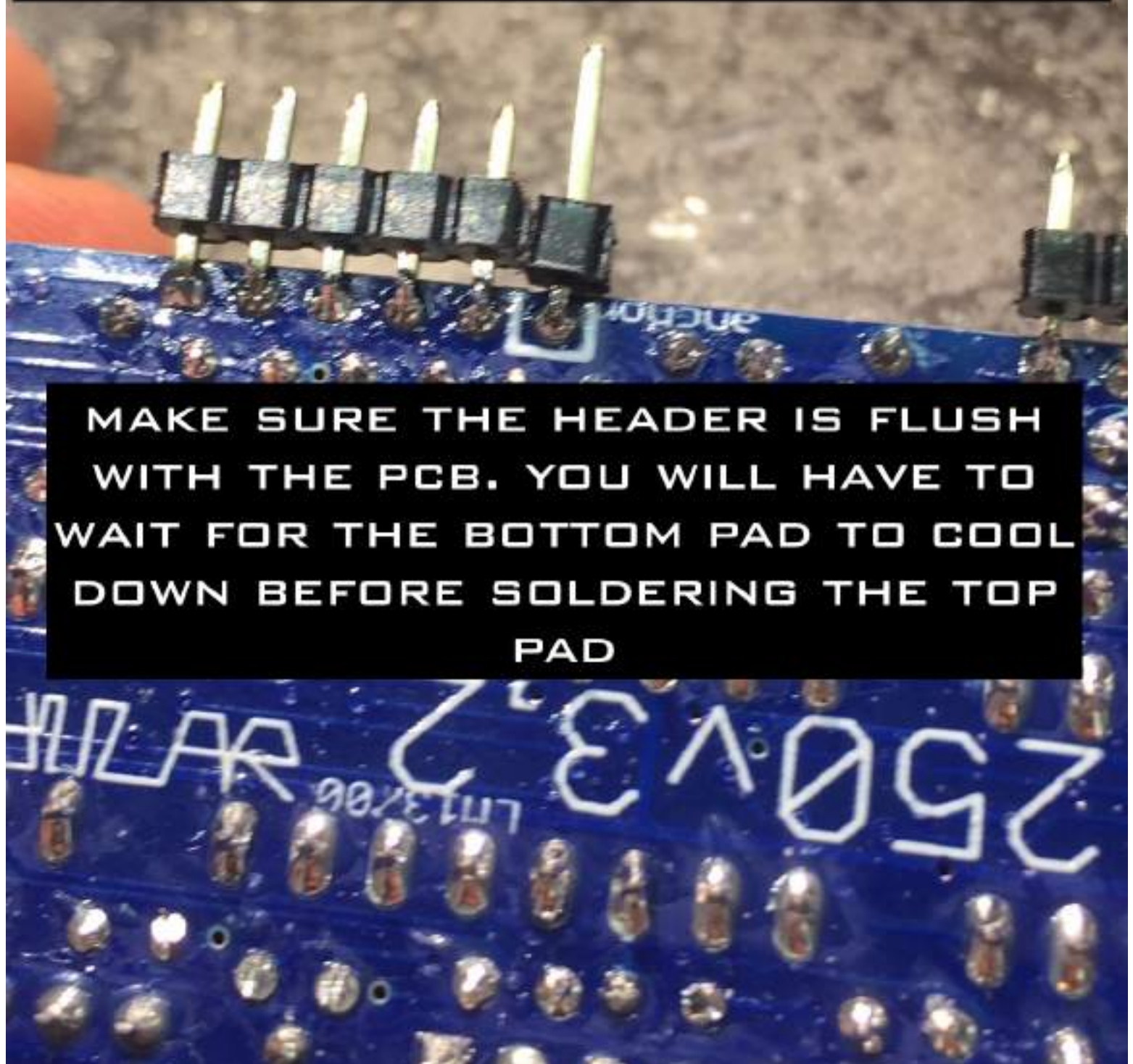
**13700 OTA
NOTCH ON THE LEFT**



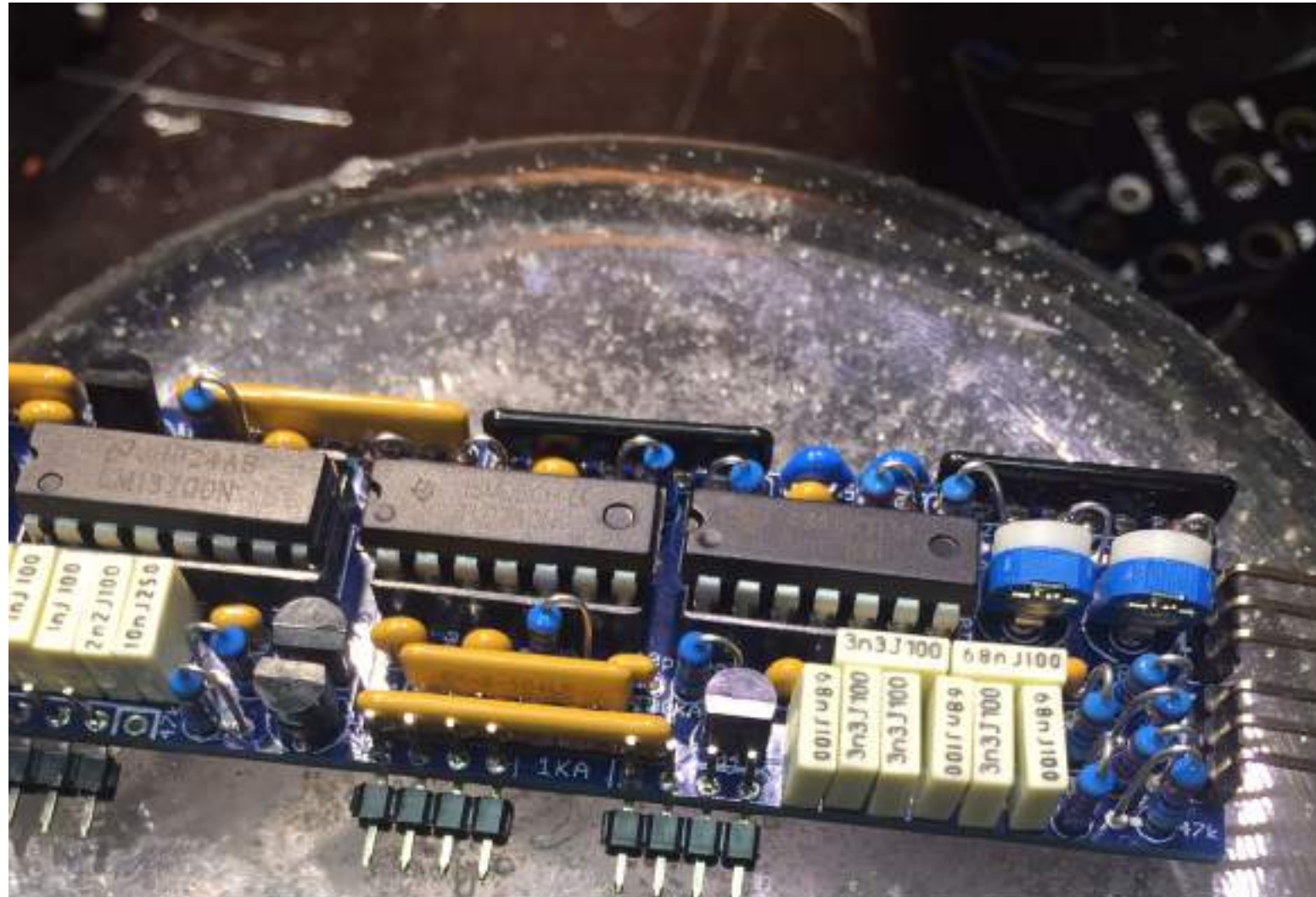
ONE 1 PIN RIGHT ANGLE HEADER
FOR THE ANCHOR. SOMETIMES
CALLED BTYPE. SHORT END
THROUGH BOTTOM OF THE PCB. YOU
MIGHT HAVE TO FILE THE BLACK
PLASTIC PART OF THE HEADER A
LITTLE.



THE HEADER SHOULD BE SOLDERED ON TOP AND BOTTOM PADS. IT'S NOT EASY TO GET THEM TO SIT PERFECTLY FLUSH, ESPECIALLY AFTER SOLDERING. SO YOU CAN GENTLY BEND THE ONE PIN TO ALIGN WITH OTHER HEADERS.



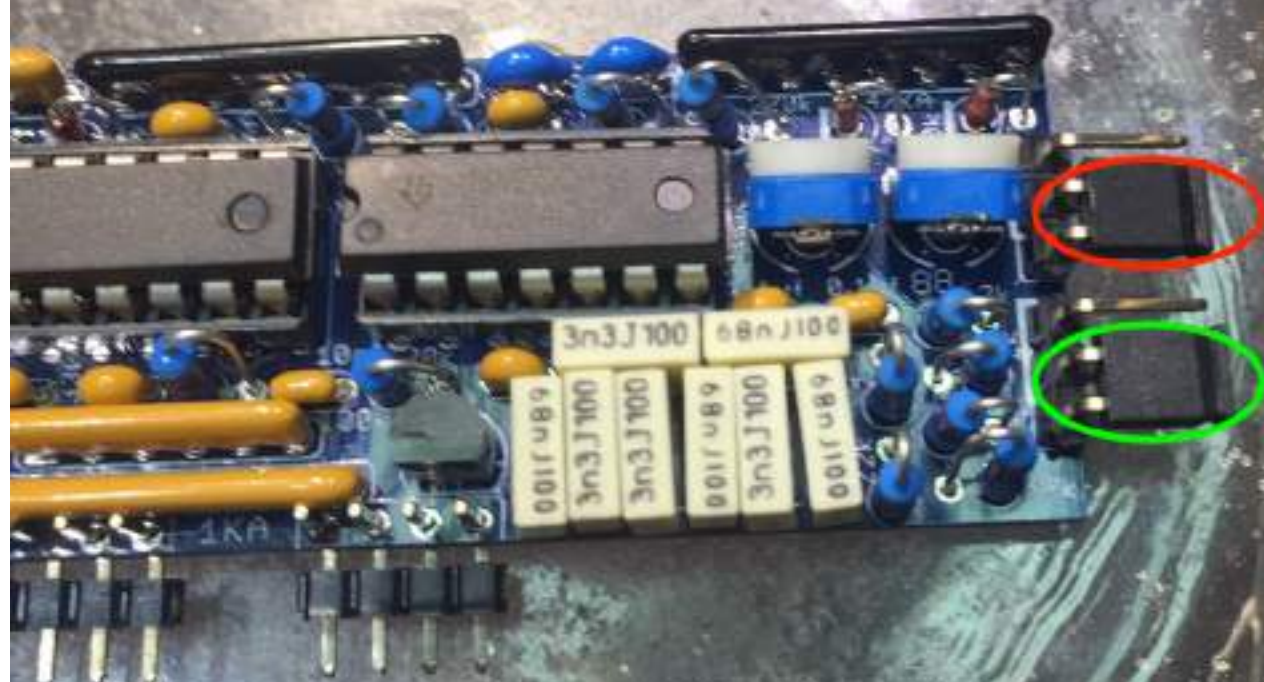
MAKE SURE THE HEADER IS FLUSH WITH THE PCB. YOU WILL HAVE TO WAIT FOR THE BOTTOM PAD TO COOL DOWN BEFORE SOLDERING THE TOP PAD



TWO SHUNTS/MINI JUMPERS



THESE SHUNTS SET THE
WHERE THE ENVELOPE
FOLLOWER IS IN THE
SIGNAL FLOW. JUMPER IN
BOTTOM POSITION COMES
STOCK. WITH ENV FOLL
POST VCA. RED IS FOR 88
GREEN IS FOR 250



WITH JUMPERS IN TOP POSITION
THE ENVELOPE FOLLOWERS ARE
PRE VCA MEANING THEY ARE
TECHNICALLY ALWAYS
ACTIVE(INCLUDING THE SLIDE
LEDS) REGARDLESS OF THE VCA/
SLIDE POT BEING OPEN OR
CLOSED. CONSULT THE SIGNAL
FLOW CHART IF NEEDED.

