



**VINTAGE VIBE
WURLITZER 140B
POWER SUPPLY REBUILD KIT
INSTALLATION INSTRUCTIONS**



We highly recommend reading through the installation instructions in their entirety before beginning an install. This will provide an overview of what is involved and perhaps offer some tips / ideas that you may find helpful.

You may notice some variation between your unit and that pictured in the installation instructions. Wherever a difference may be relevant we have done our best to make note of it within the text.

If, after reviewing the material, you are not confident in your ability to successfully perform the installation, we recommend that you contact Vintage Vibe to discuss having us perform the service for you or a technician that you deem to be qualified.

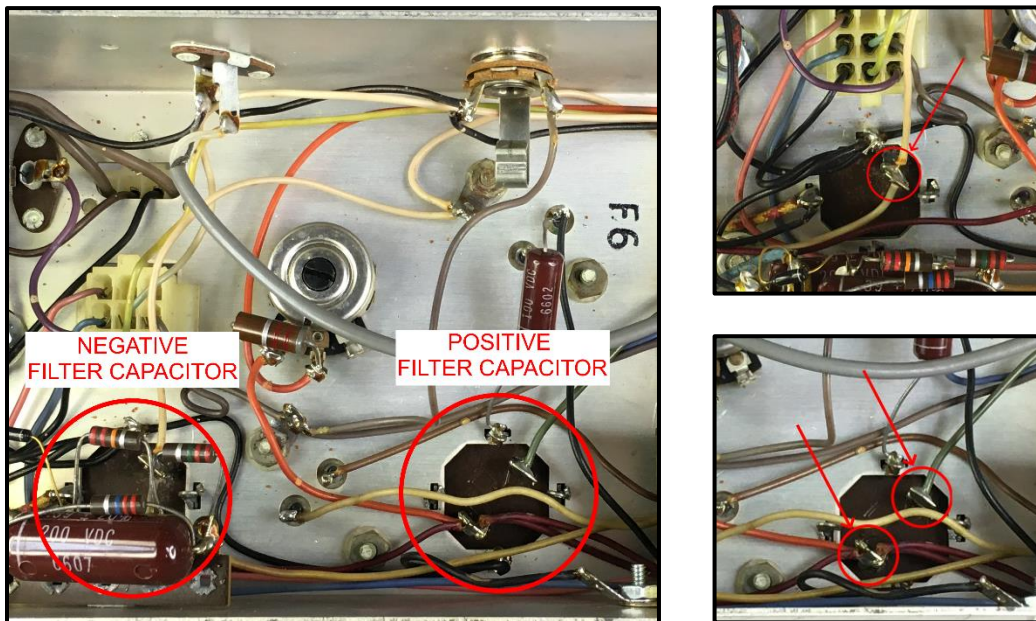
Note:

Improper installation or use will void any and all warranty. Installation of this product is performed at your own risk. Working on electronic equipment poses an inherent risk to oneself, others and personal property. Vintage Vibe assumes no liability for the consequences of the attempted installation of this product.

INSTALLATION INSTRUCTIONS

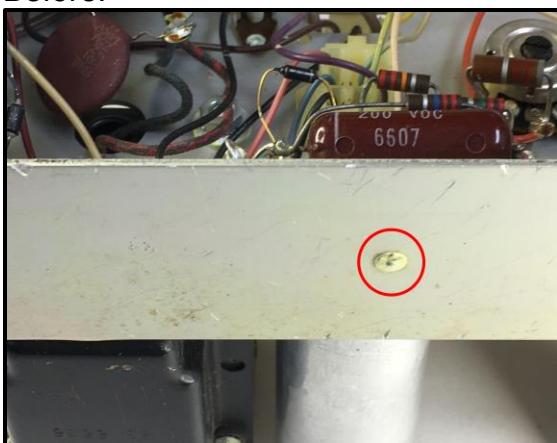
1. Ensure that the power supply is drained of all stored voltage.
Measure the main filter capacitor terminals with a DC voltmeter referenced to chassis. Confirm the readings are 0VDC.

The positive filter can capacitor has two terminals and the negative filter can capacitor has one.

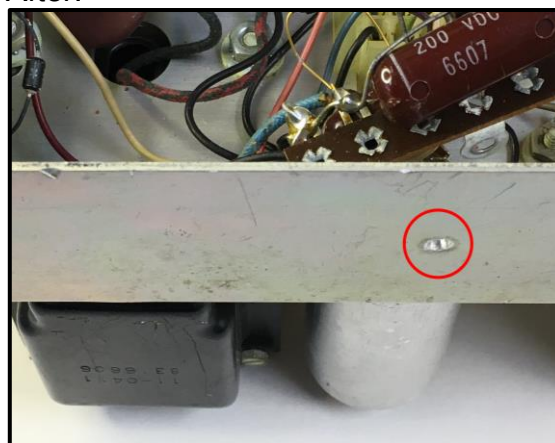


2. With an 1/8" drill bit, drill-out the rivet securing the reed-bar power supply terminal strip to the chassis.

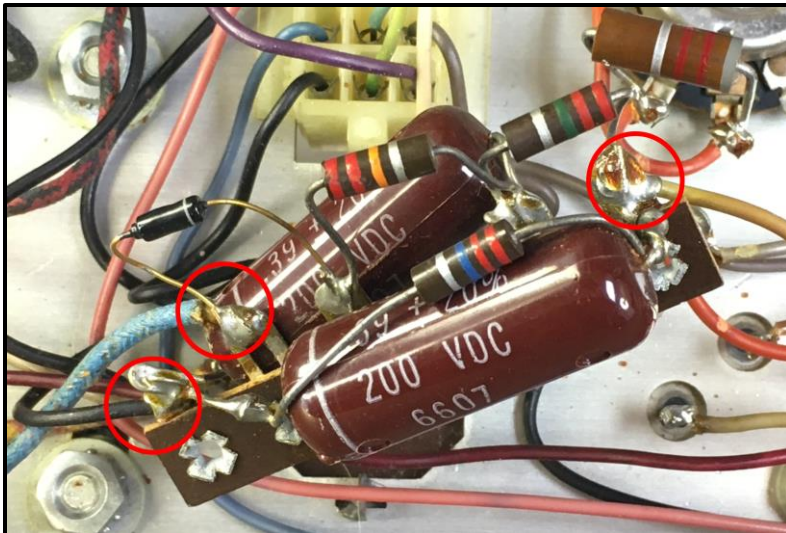
Before:



After:

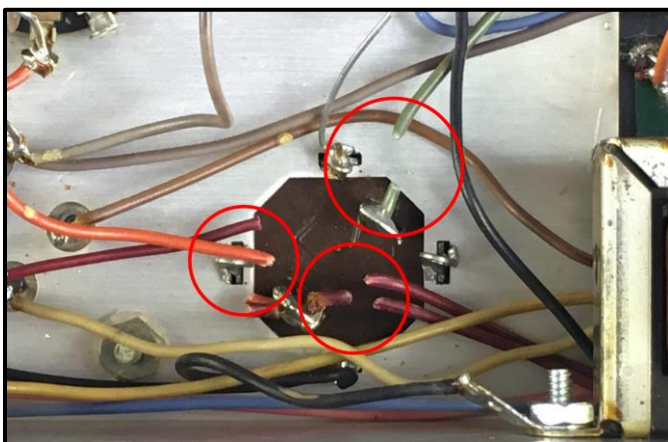


- Clip the three wires from the terminal strip.
AC input = Blue
Ground = Black
DC Output = Green (in this case, the wire color may be different in your unit)



Remove and dispose of the terminal strip assembly.

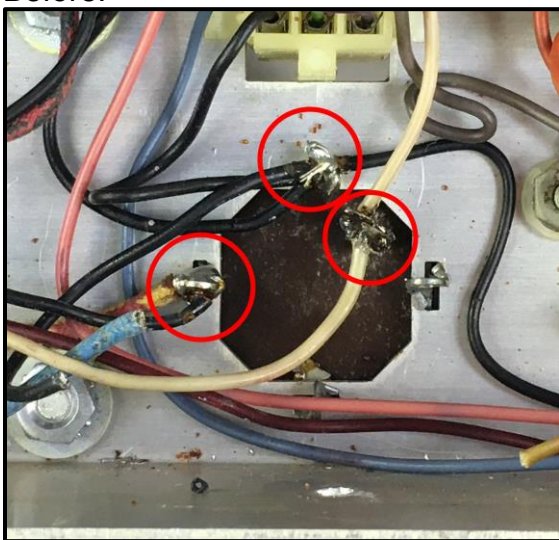
- Clip the wires from the positive filter can capacitor.
Two wires at the 2000uF terminal and one wire at the 500uF terminal.



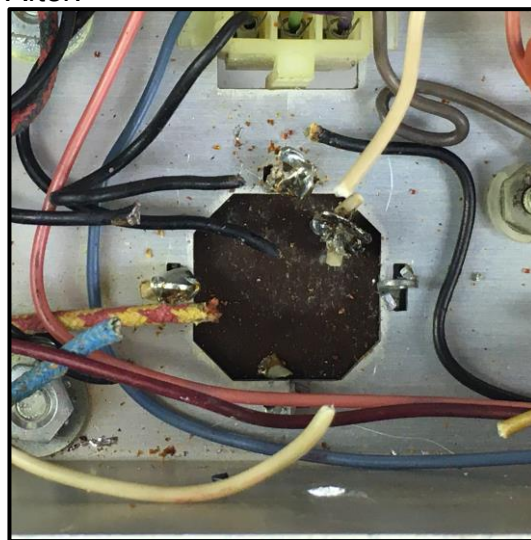
5. Clip the wires from the negative filter can capacitor.
In this instance there are two wires at the 2000uF terminal, four ground wires at one grounding tab and the center tap and one ground wire at another grounding tab.

*Clip the center tap and all ground wires as close to the grounding tabs as possible to preserve their length.

Before:



After:

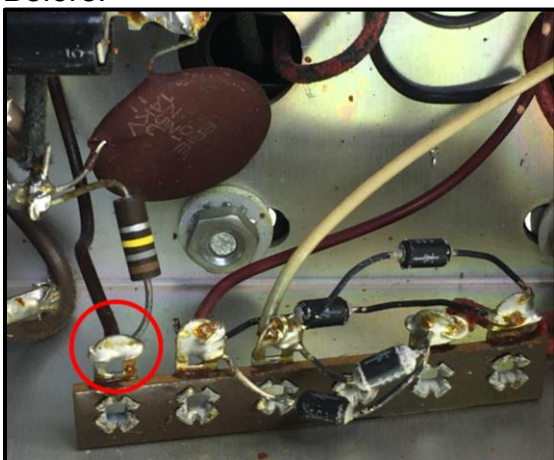


There will now be one loose wire that can be disposed of.

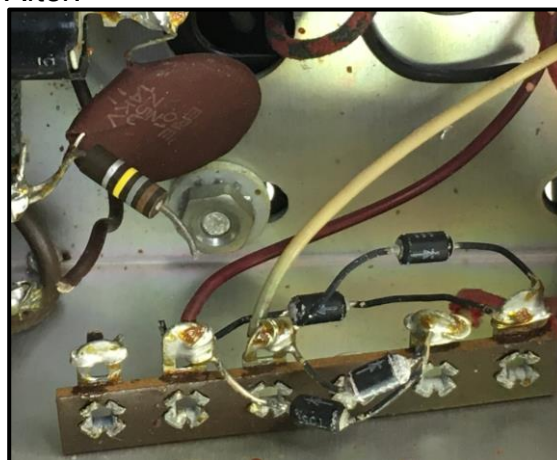
6. Clip the 18K resistor and wire from the 1st lug of the main rectifier terminal strip.

*Clip these as close to the lug as possible to preserve their length.

Before:



After:



7. With an 1/8" drill bit, drill-out the rivet securing the main rectifier terminal strip to the chassis.

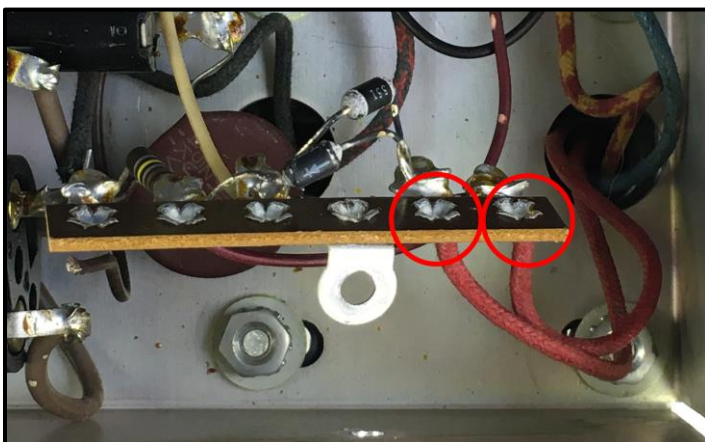
Before:



After:



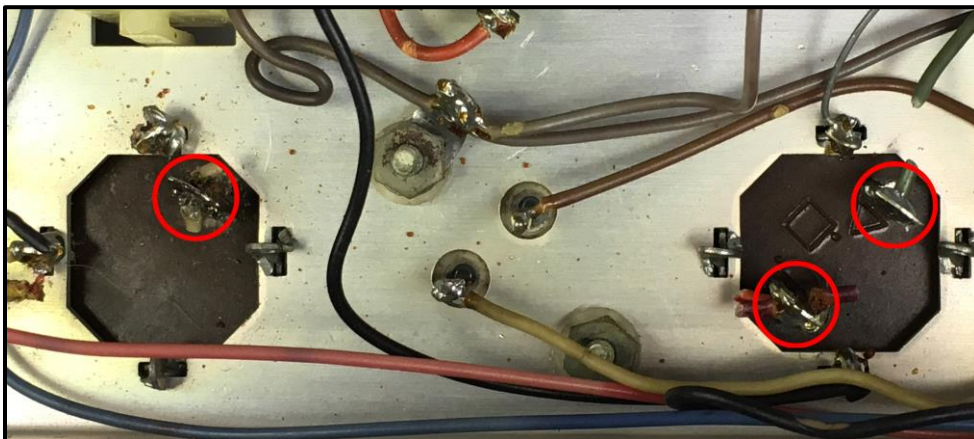
8. Clip the the two red transformer secondary wires from the terminal strip.



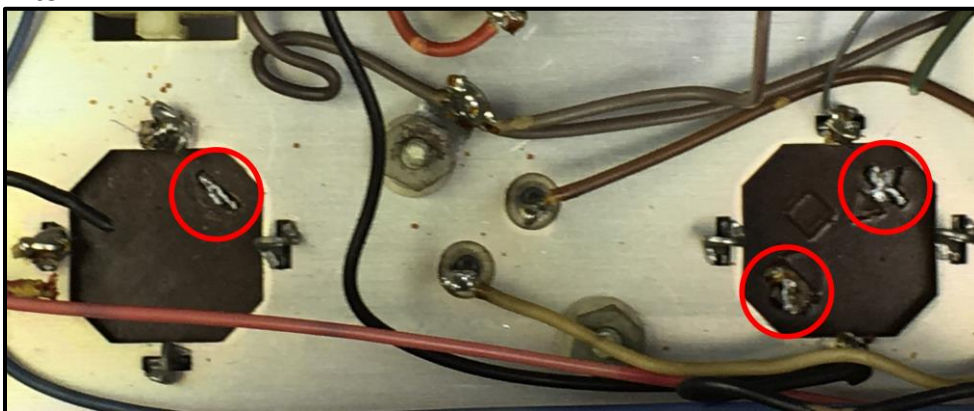
Remove and dispose of the terminal strip assembly.

9. Remove the, now unterminated, terminals from the filter can capacitors. This can be easily achieved by grabbing a terminal at its base with a pliers and twisting.

Before:



After:



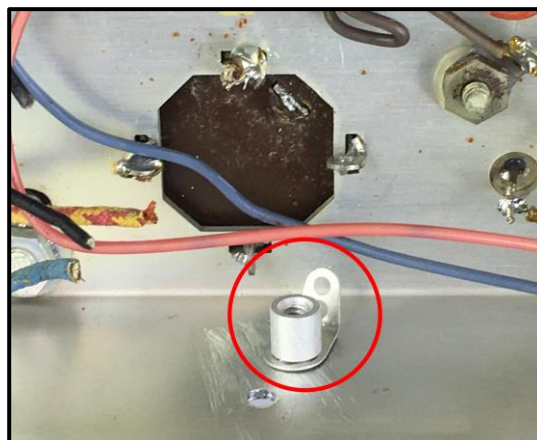
10. Cut-out drilling guide. Place at upper left edge of chassis panel as shown. Square the sheet along the top edge. Use an awl to mark the centers of the two diameters.



11. Drill-out the marked locations with a 5/32" bit. Deburr the inside and outside of each hole to ensure the chassis is flush.

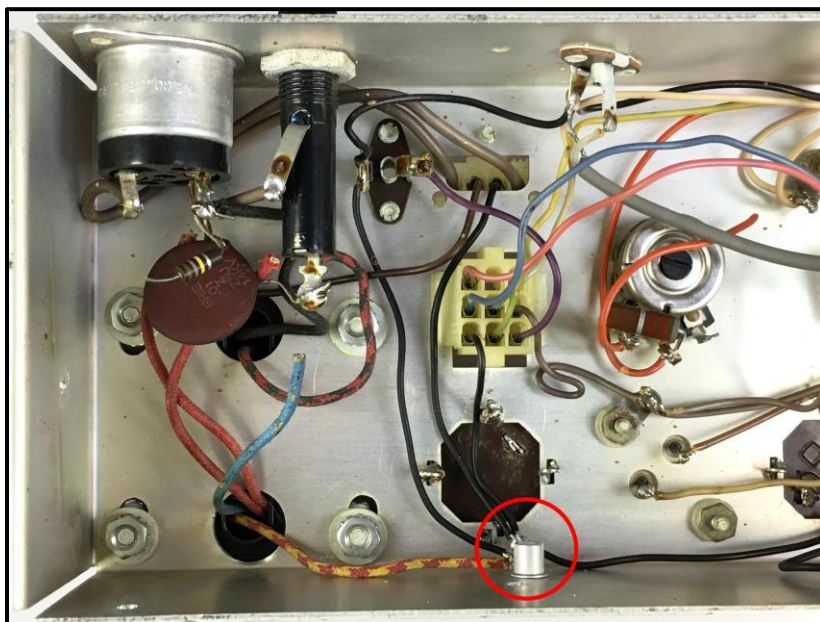


12. Insert a #6-32 screw into the lower right hole you just made. On the inside, secure the screw in place with the solder lug terminal and one of the standoffs. Orient the solder lug so it is facing down toward the chassis; however, the tip of the solder lug should not touch the bottom of the chassis.



13. You will now dress the wires clipped from the can capacitor ground tab at step 5 to terminate at the new solder lug terminal: Transformer center-tap, console speaker RCA ground, pin 3 of the 4-pin Molex socket, pin 1 of the 9-pin Molex socket, jumper to interstage transformer housing.

*Route the wires against the bottom of the enclosure and allow adequate strain relief. If you find a wire to be too short, replace it with a new wire (we would recommend using 20AWG).



14. Solder all five wires to the solder lug terminal.

Before:



After:



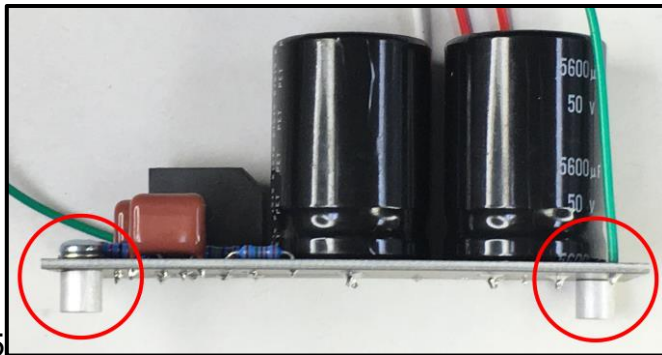
15. Temporarily dress the transformer secondary wires (2X Red, Blue) toward the AC inlet and fuse holder.

16. Remove the standoff and screw that are securing the solder lug terminal in place.

17. Remove the standoff and #6-32 screw and set safely aside.
18. Install #6 lockwashers onto each of the two 3/16" long #6-32 screws and insert the screws through the two mounting holes on the face of the new power supply PCB.

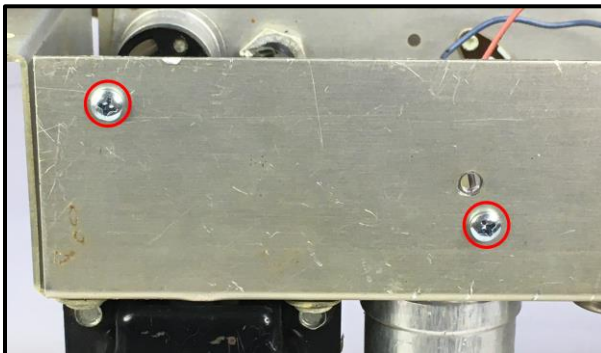


Thread the two standoffs onto the screws at the bottom side of the PCB.



Adjust the screws and standoffs as necessary until they are as centered as possible in their respective holes and tighten down.

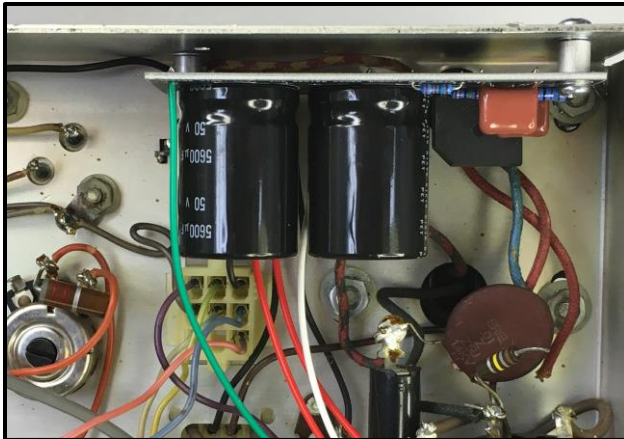
19. Insert the 1/4" long 6-32 screws into the two holes that were drilled into the chassis.



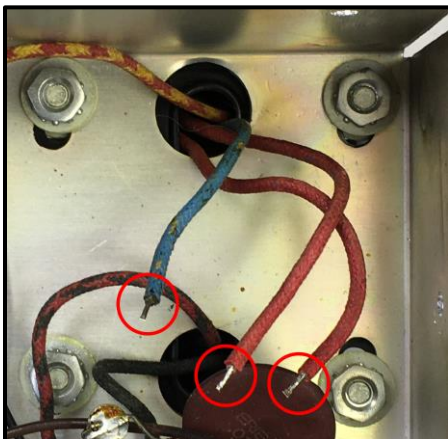
Install the solder lug terminal onto the lower screw and install a #6 lockwasher onto the upper screw.



20. Slide the power supply PCB into place, with the red and white wires toward the bottom of the chassis. Gently secure each chassis screw to the standoff. This is only to test the fit. If there is interference when trying to install the PCB, go back to step 18 and adjust the location of the standoffs accordingly. Otherwise, remove the PCB.



21. Strip and tin the transformer secondary wires (2x red and blue).

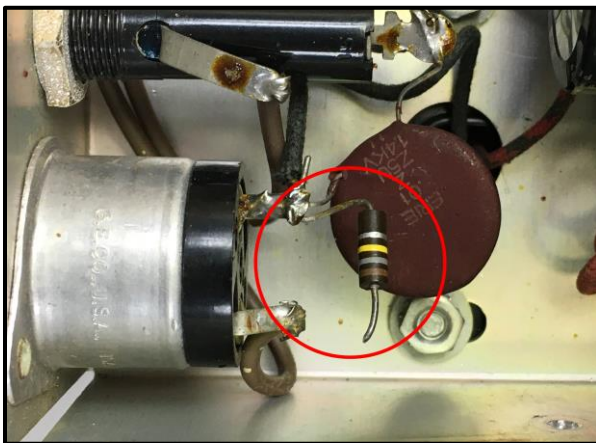


22. Insert the transformer secondary wires through the top side of the PCB and solder.



23. **IF you have previously, or are converting your wiring harness indicator bulb from neon to LED, perform step 23. Otherwise, skip ahead to step 24.*

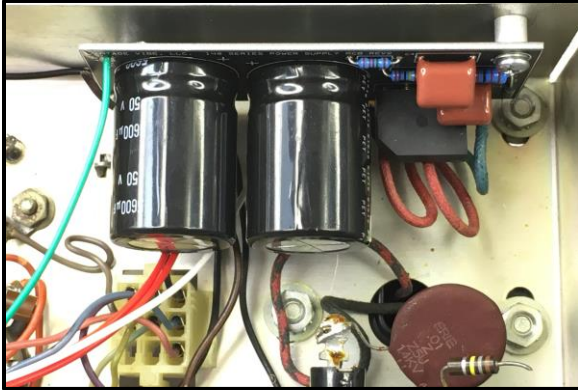
Clip out the 18K resistor from the AC inlet.



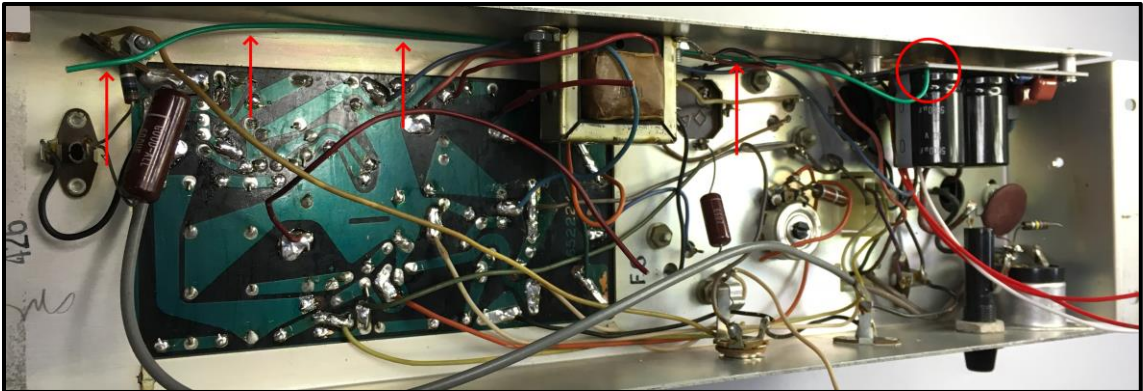
Install and solder the wire from pin 2 of the 4-pin Molex socket (clipped free from the main rectifier terminal strip at step 6) to the pad marked "LED" on the new power supply PCB. This will provide the full B- voltage to the wiring harness. You will, of course, need to modify a stock wiring harness and bezel as well as provide the LED with an appropriate current limiting resistor. Otherwise, skip this step.

**If you perform the above step and apply power to the unit without first appropriately modifying the wiring harness, damage can be caused to the unit which will not be covered by any warranty.*

24. Reposition the power supply PCB into place making sure to dress the newly installed transformer secondary wires with adequate strain relief. Reinstall the hardware to secure the PCB to the chassis. This time tighten them snugly.



25. Route the green wire from the power supply PCB along the bottom of the chassis, under the interstage transformer and up to the terminal strip adjacent to the reedbar input RCA.



26. There will be a loose wire soldered to the terminal strip (this was clipped from the reed bar power supply terminal strip at step 3). Desolder and dispose of this wire; install and solder the green wire from the power supply PCB in its place.

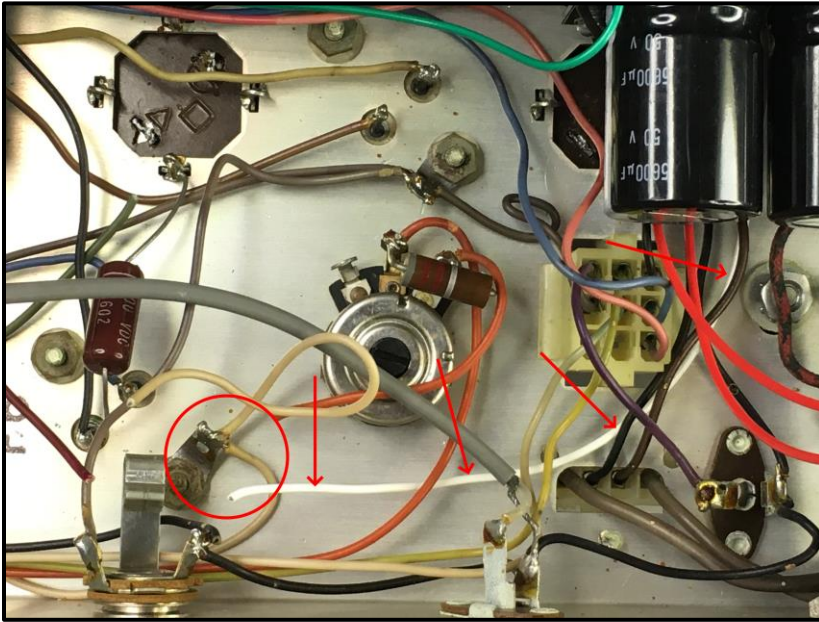
Before:



After:



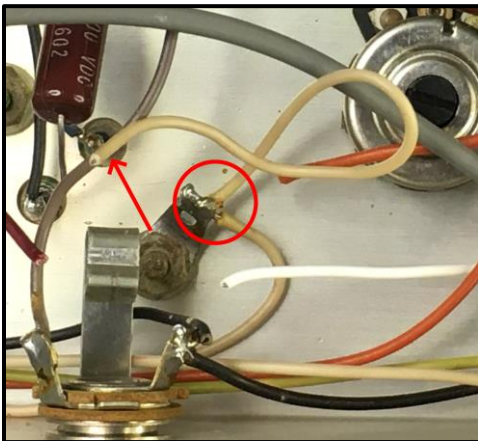
27. Route the white wire from the power supply PCB, against the bottom of the enclosure, to the solder lug terminal at the collector of TR6/72**



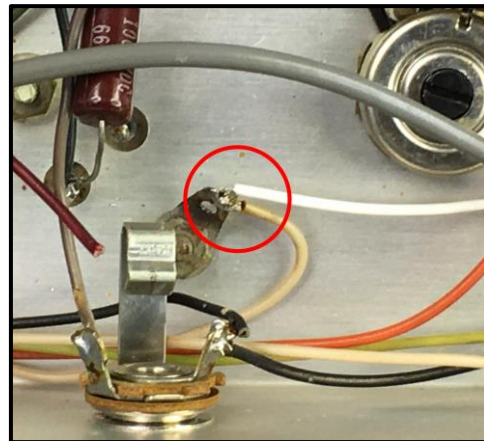
**The first component designator number corresponds with the March 1965 schematic beginning with serial number 27501. The second component designator corresponds with the June 1966 schematic beginning with serial number 29091.

28. There will be a loose wire soldered to the terminal lug (this was clipped from the negative filter can capacitor at step 5). Desolder and dispose of this wire; install and solder the white wire from the power supply PCB in its place.

Before:

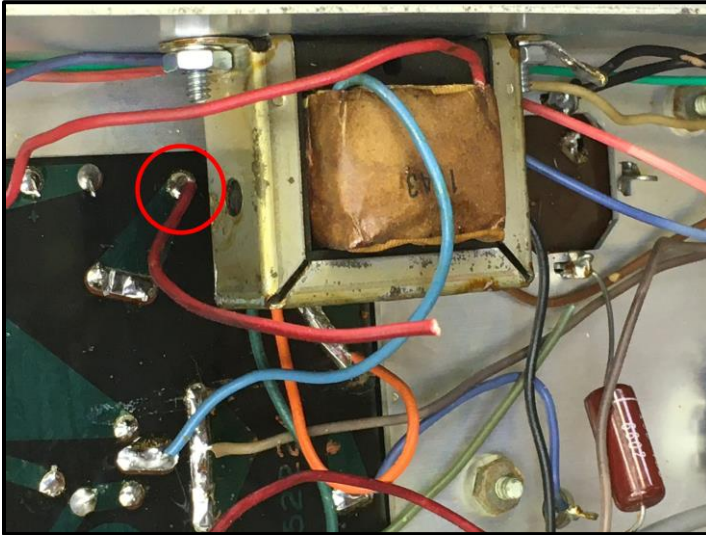


After:



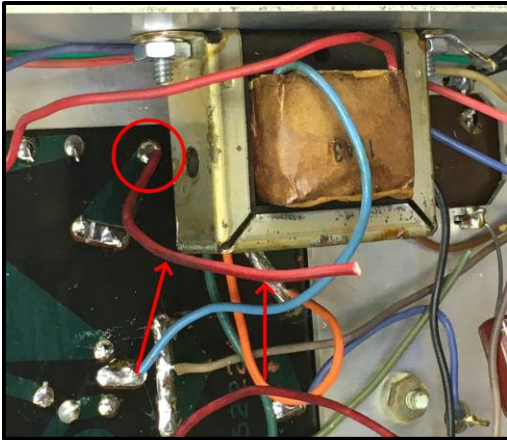
*The collector of the transistor must be isolated from ground. Ensure that you do not bend the terminal so that it touches the chassis and that no solder bridge to the chassis is made.

29. Route the shorter of the two red wires from the power supply PCB along the bottom of the chassis to the PCB solder pad underneath the interstage transformer shown below.

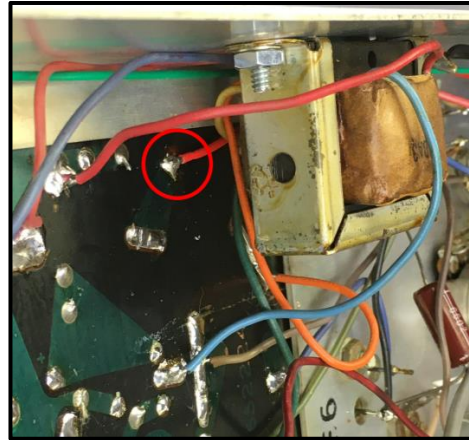


30. There will be a loose wire soldered to the pad (this was clipped from the positive filter can capacitor at step 4). Desolder and dispose of this wire; install and solder the red wire from the power supply PCB in its place.

Before:



After:



31. Installation of the remaining red wire from the power supply PCB varies depending on the version of the amplifier unit. The easiest way to determine which version amplifier unit you have is to determine whether or not your unit has a trimmer potentiometer installed to the chassis.

Trimmer Potentiometer: Starting at S/N 29091 (Schematic dated 1 June 1966)

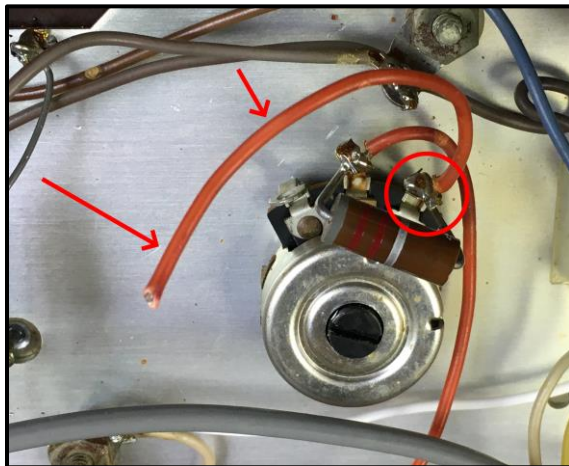


No Trimmer Potentiometer: S/N 27501 – 29090 (Schematic dated 1 March 1965)

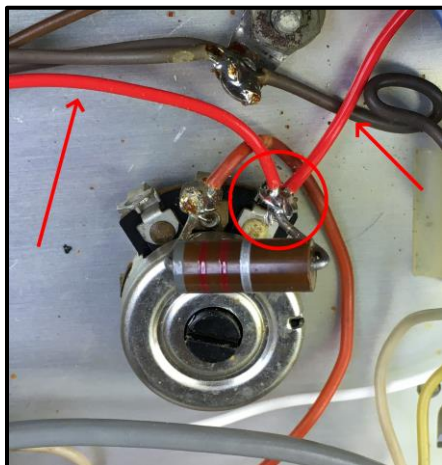


A) If your unit has the trimmer potentiometer.

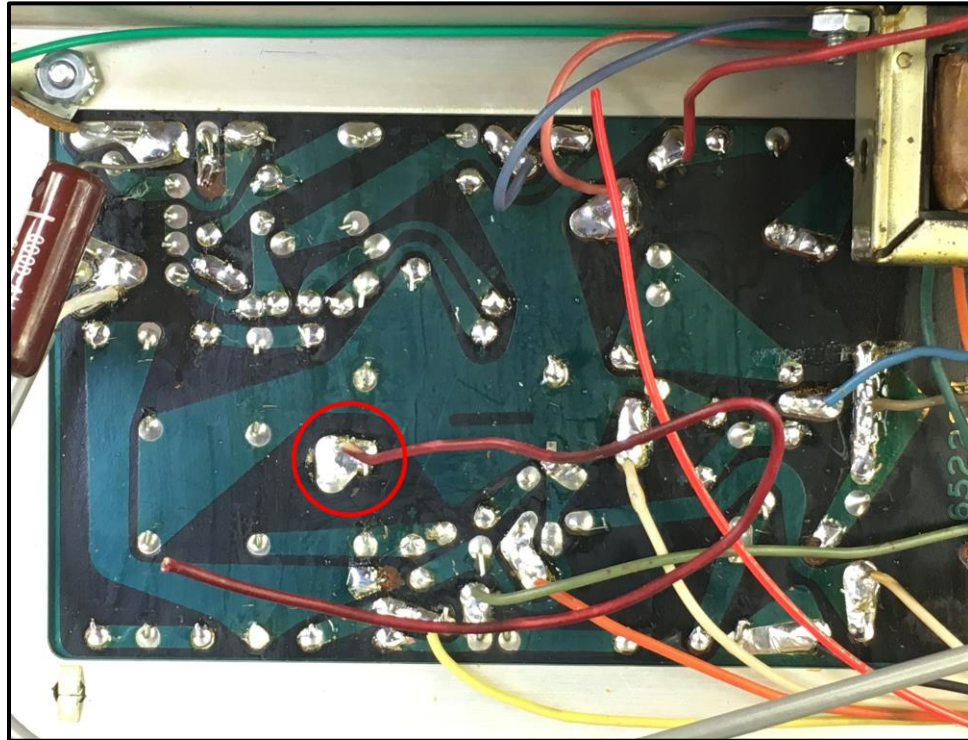
1. There will be a loose wire at lug 3 of the trimmer potentiometer (this was clipped from the positive filter can capacitor at step 4). Desolder and dispose of this wire. Do not remove the resistor lead that is also soldered to the lug.



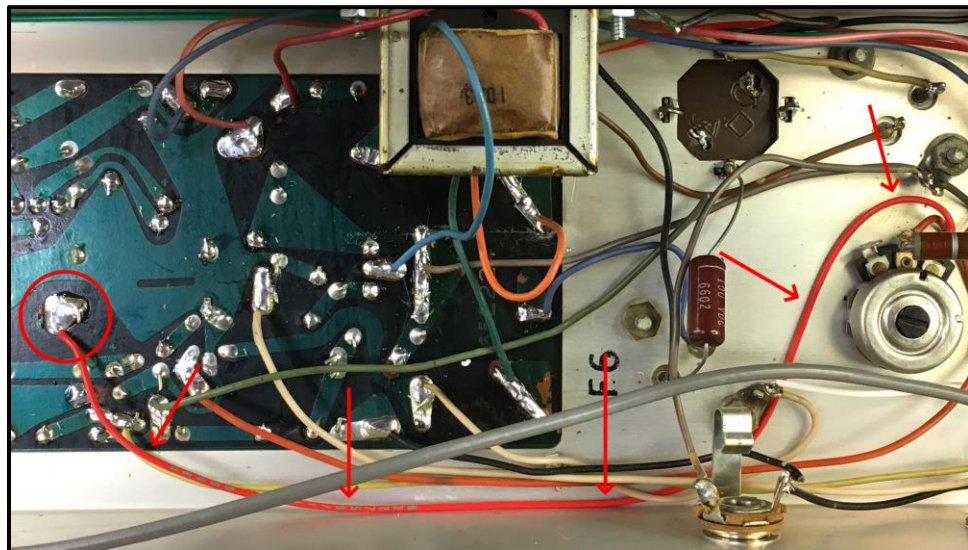
2. Route the remaining red wire from the power supply PCB against the bottom of the chassis to lug 3 of the trimmer potentiometer. Trim the red wire at an appropriate length to install to the potentiometer lug, whilst maintaining appropriate strain relief. Install the wire through the solder lug. Do NOT solder it yet.
3. Strip one end of the just clipped off section of red wire and install it into lug 3 of the trimmer potentiometer (If the wire cannot be inserted through the hole in the lug, wrap it once around the terminal. Ensure that the wires do not touch the lug, the body of the potentiometer, nor the chassis). Solder the wires to the solder lug.



4. Route the free end of the section of red wire against the bottom of the chassis, up along the back corner to the PCB solder pad shown below.

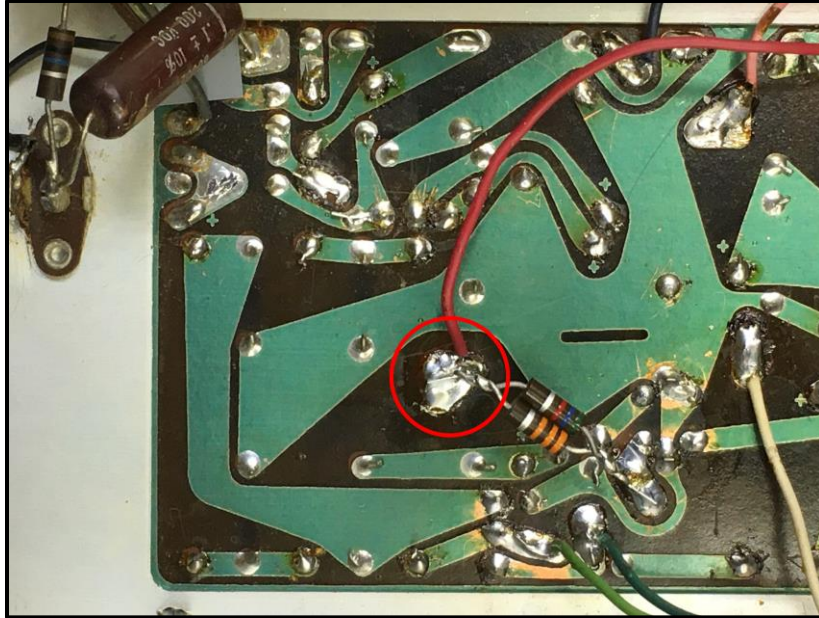


5. There will be a loose wire at the solder pad (this was clipped from the positive filter can capacitor at step 4). Desolder and dispose of this wire; install and solder the red wire from lug 3 of the trimmer potentiometer in its place.

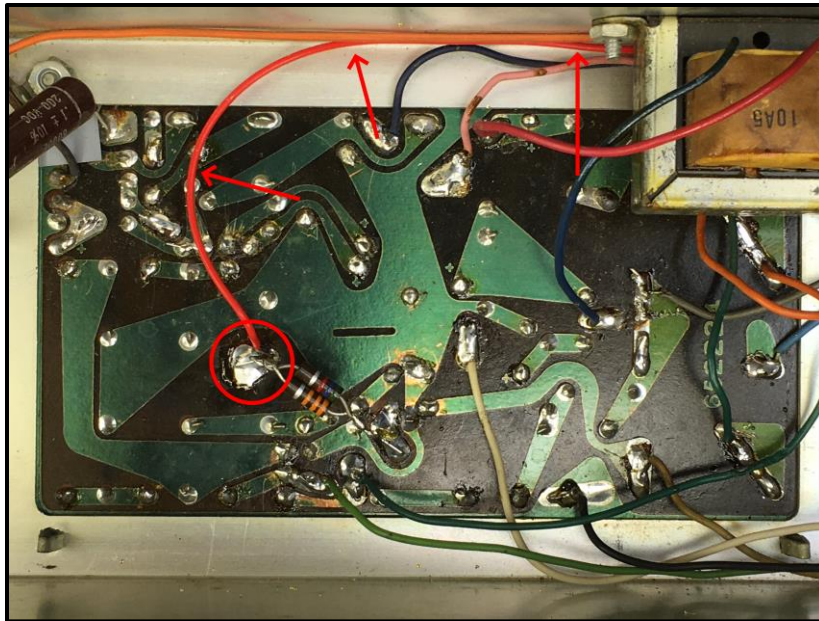


B) If your unit does not have the trimmer potentiometer.

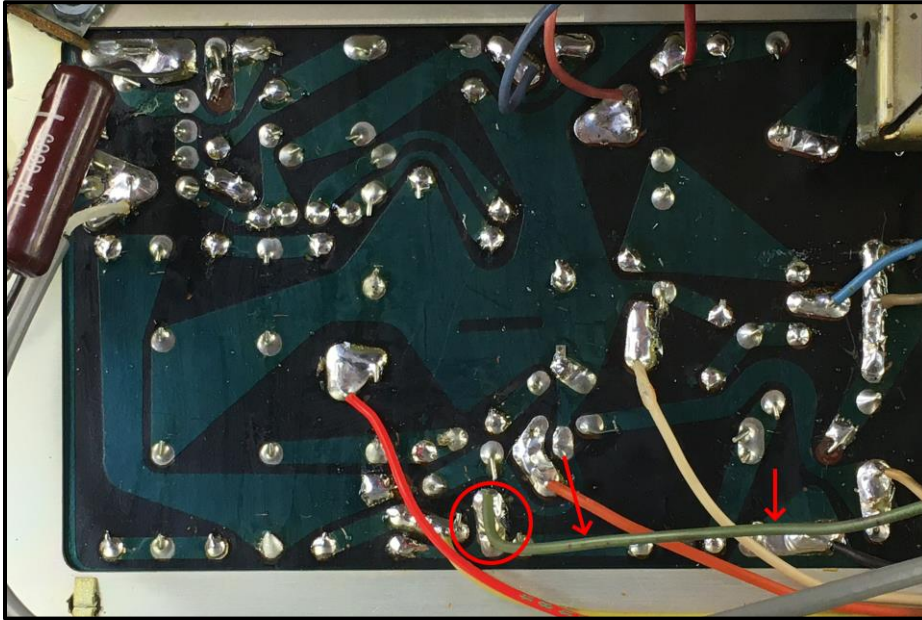
1. Route the red wire from the power supply PCB against the bottom of the chassis, up along the back corner, to the solder pad shown below.



2. There will be a loose wire at the solder pad (this was clipped from the positive filter can capacitor at step 4). Desolder and dispose of this wire; install and solder the red wire from the power supply PCB in its place.



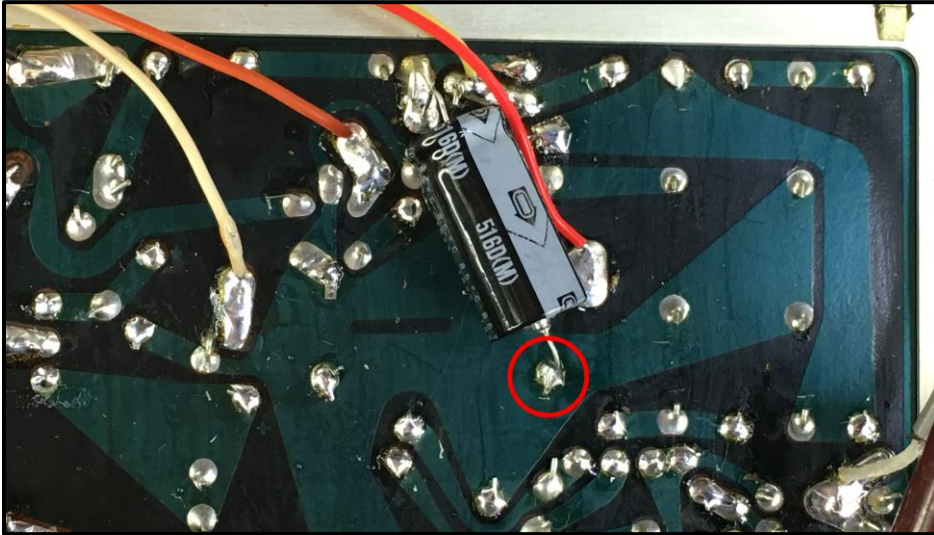
32. Locate the solder pad shown in the photograph below. There will be a loose wire soldered to it (this was clipped from the positive can capacitor at step 4). Desolder and dispose of this wire.



33. Solder the anode (+) lead of the 470uF electrolytic capacitor to this pad. Form and trim the lead so that there is roughly 1/4" of space between the bottom of the capacitor and the PCB surface.



34. Solder the cathode (-) lead of the 470uF electrolytic capacitor to the ground pad shown below. Form and trim the lead to maintain the same 1/4" spacing as above.



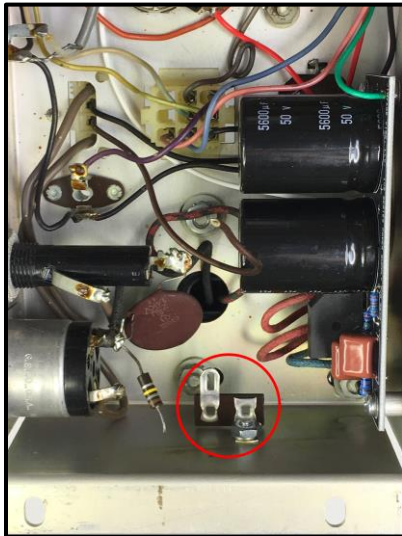
*Ensure that neither lead is bridged to any other solder pad or component lead.

35. **IF you have previously, or are converting your wiring harness indicator bulb from neon to LED and have performed step 23, skip ahead to step 36.*

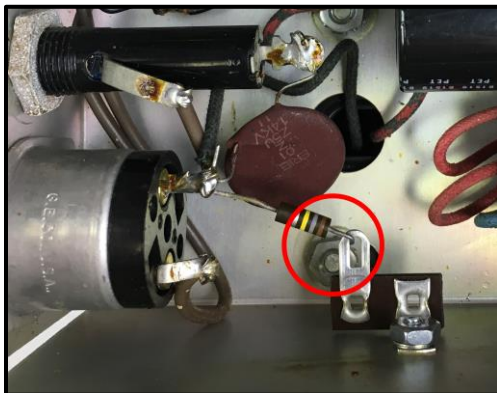
- A) Insert a 1/4" length #6-32 machine screw into the previous mounting hole for the original main rectifier terminal strip.



- B) Install the included terminal strip as shown securing it in place with a lock washer and nut.

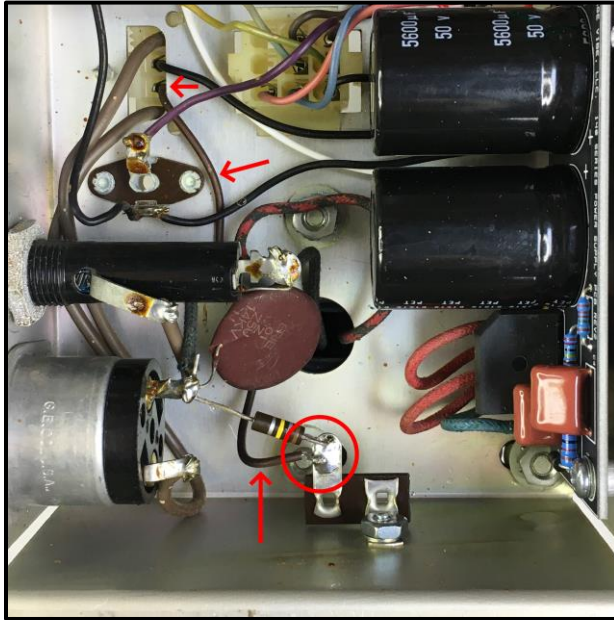


- C) Install the free lead of the 18K resistor that was clipped at step 6 into the terminal. Do not solder it yet.



*If the resistor lead does not have adequate length to reach the terminal, replace the resistor with the one included in the kit.

- D) Install the free end of the wire from pin 2 of the 4-pin Molex socket (clipped free from the main rectifier terminal strip at step 6) to the solder terminal with the 18K resistor. Solder the terminal.



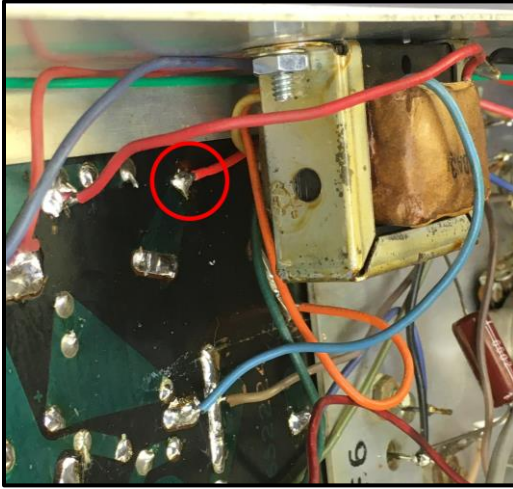
36. Double check that the line fuse is correct and not faulty.
 120VAC = 1A Slow Blow
 240VAC = 1/2A Slow Blow

37. Plug both of the control harness plugs into the amplifier unit. Plug the amplifier unit into the wall outlet and power it on*. Measure the power supply voltages at all directly connected points to ensure the voltages are correct +/- 10%.

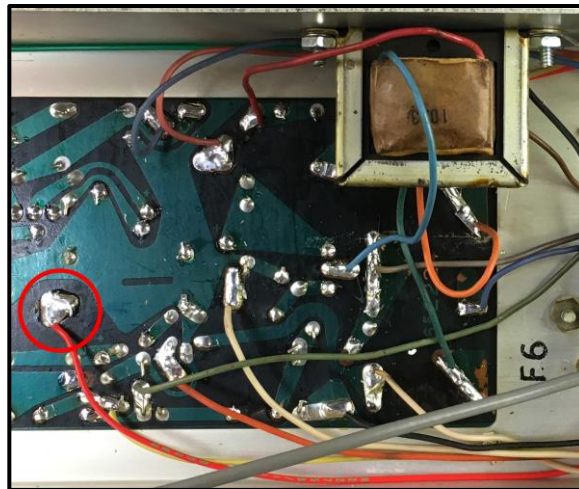
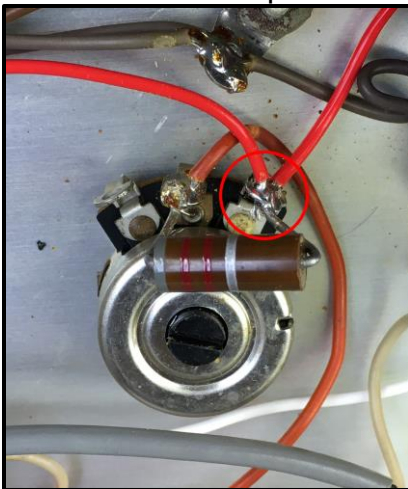
*It is recommended that the initial power-up be done with a variac while monitoring the AC current draw. The idle current consumption for an unloaded and properly operating unit will be approximately .020A for 120VAC units and .010A for 240VAC units.

B+ (30VDC) Measurement points:

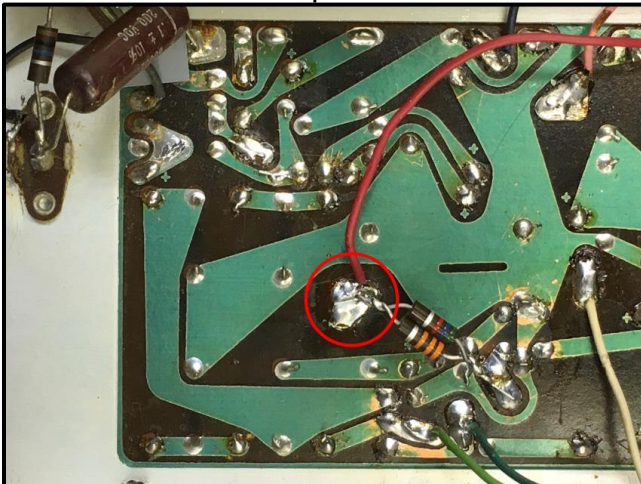
All units:

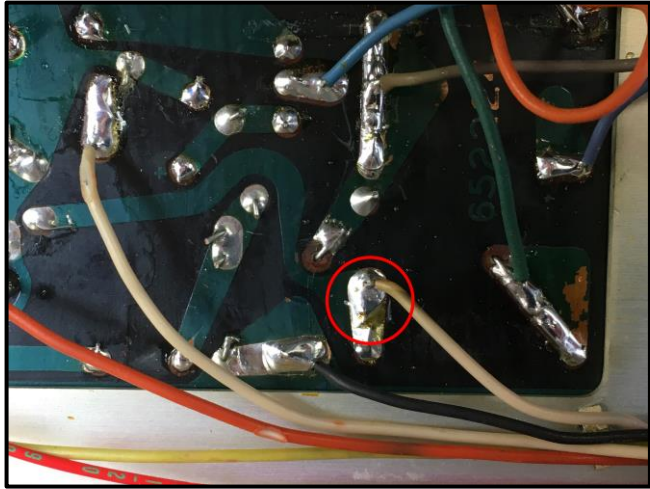
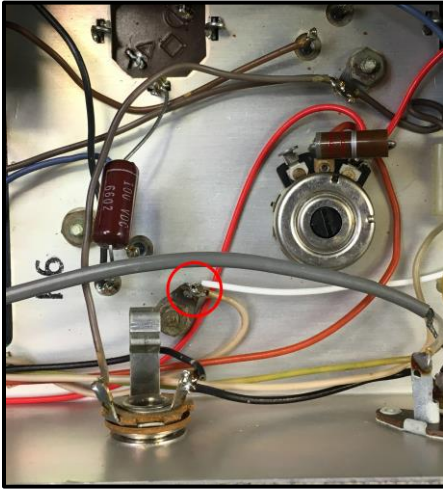
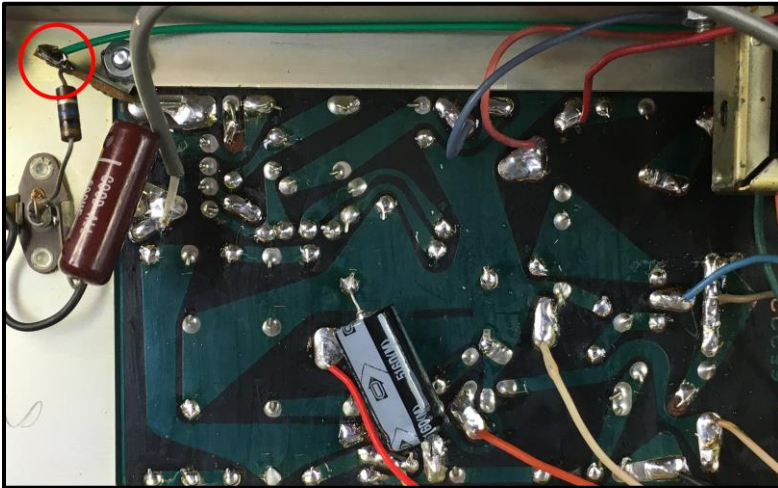


Units with trimmer potentiometers:



Units without trimmer potentiometers:



B- (-30VDC) Measurement Points:**Reed Bar Supply (150VDC) Measurement Point:**

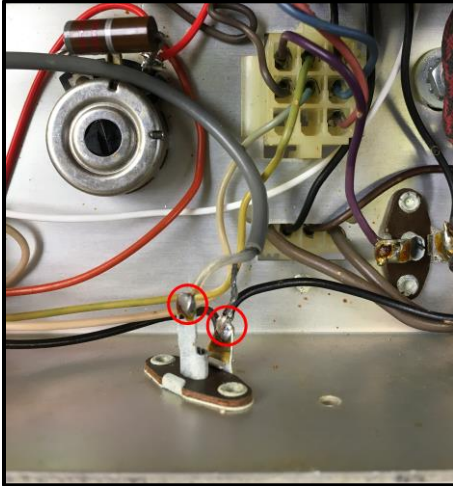
*The multimeter impedance will likely load down the reed bar supply and therefore the reading will decrease the longer the probe is connected to the test point. Take note of the initial meter reading.

Bonus Tip:

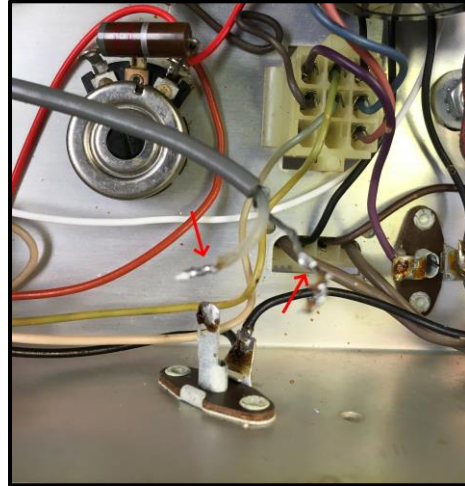
Disable the phono input circuit! It would be extremely rare if this input were to be utilized and the rest of the time it serves as the source of a great deal of noise for 140B amplifiers.

1. Desolder the coaxial cable from the Phono input RCA socket.

Before:

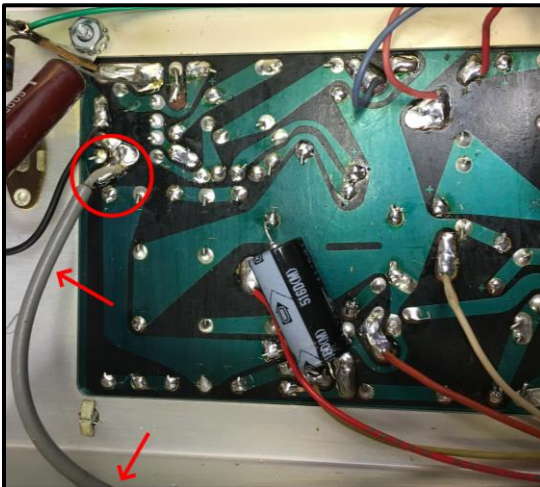


After:

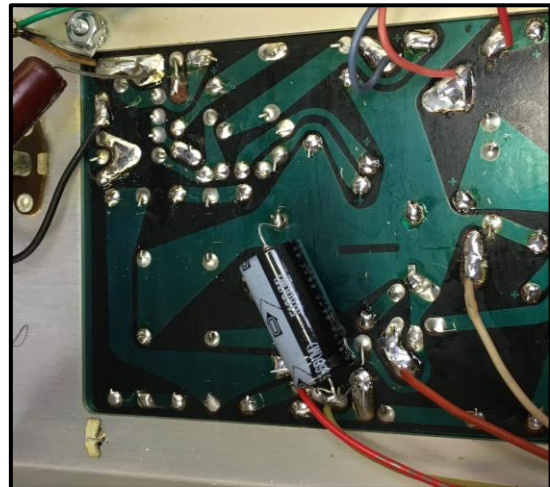


2. Desolder the coaxial cable from the solder pad on the PCB and dispose of the cable.

Before:



After:



VINTAGE VIBE: Wurlitzer 140B Power Supply Rebuild Kit - Drilling Template

1. Print pdf at 1:1 scale.
2. Measure 2" length to the right to ensure the template is printed to the correct scale.
3. Cut out template along outer lines.
4. Position template against chassis panel as shown in the installation instructions.
5. With an awl, mark the location of the small center-marked circle as shown in the installation instructions.
6. Drill-out the marked location to 5/32" diameter.
7. Remove any burrs/swarf.

