

Instructions For Mounting

Once the boards are populated to mount the cap board use 2 of the plastic cap holders, Drill 4 1/8 hole 1 in each corner, make sure they are far enough away from everything so they won't short out. Place one of the cap holders over the caps from the side of the board opposite the traces, flush with the top edge of the board, drill 2 small pilot holes using the holes in the cap holders. Then drill 2 holes in the top of the cap compartment make sure they are either far enough over to the side or far enough back so you don't short out anything or hit one of the caps with the screws. Then drill 2 pilot holes in the cap holders. Use small sheet metal screws with small heads for all screws. Place the other cap holder at the bottom of the board the same way with the openings for the caps facing up secure in the same manner. The screws that secure the bottom cap holder go in from the side, use the same care you used for the ones on the top of the compartment. Make sure you turn the board where the 3 solder pads are facing in the direction of the metering circuit board. The metering circuit board the one with the diodes on it mount the same as the original.

Instructions For Assembling The Boards

The layout diagram shows you where everything goes. On the capacitor board the caps go in for the opposite side of the board from the traces, and the bleeder resistors go in from the trace side of the cap board as in the picture. Same goes for the metering circuit board, all of the components go in from the trace side, except the wires from the zener diode, they go in from the opposite side of the board from the traces. You can use your original zener or make sure you get the wires in the properly polarized direction, look at the arrow and anode line on the diode and the symbol on the board diagram, the little mark in the corner of the symbol shows where the wire from the anode end of the diode, the end the arrow is pointing to goes. The board connection solder pads are labeled the same as the schematic. The little marks in the corner of the 1N5408 diodes show the way they go also the mark is the anode end the end with the line.

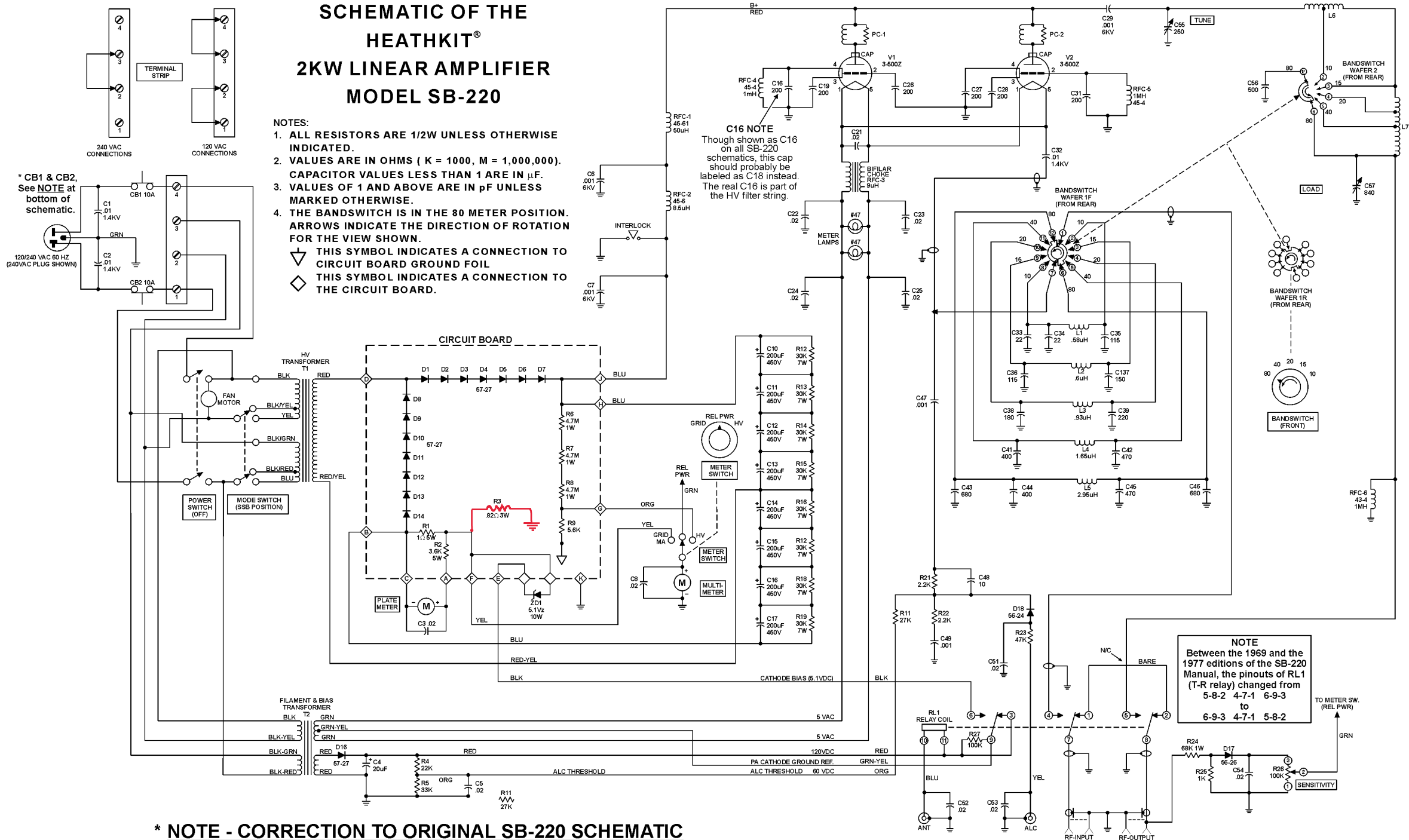
Component	Package	Value	Manuf	Manuf Part No	Distrib	Distrib Part No	Ref Name	Qty

CP5	DSCV	220uf @ 450volts					C10 C11	8
							C12 C13	
							C14 C15	
							C16 C17	
RA	DSC	100K 2watt					R8 R13 R14	8
							R15 R16	
							R17 R18	
							R19	

(CORRECTED)
SCHEMATIC OF THE
HEATHKIT®
2KW LINEAR AMPLIFIER
MODEL SB-220

NOTES:

1. ALL RESISTORS ARE 1/2W UNLESS OTHERWISE INDICATED.
 2. VALUES ARE IN OHMS (K = 1000, M = 1,000,000).
 3. CAPACITOR VALUES LESS THAN 1 ARE IN μ F. VALUES OF 1 AND ABOVE ARE IN pF UNLESS MARKED OTHERWISE.
 4. THE BANDSWITCH IS IN THE 80 METER POSITION. ARROWS INDICATE THE DIRECTION OF ROTATION FOR THE VIEW SHOWN.
- ▽ THIS SYMBOL INDICATES A CONNECTION TO CIRCUIT BOARD GROUND FOIL
 ◇ THIS SYMBOL INDICATES A CONNECTION TO THE CIRCUIT BOARD.



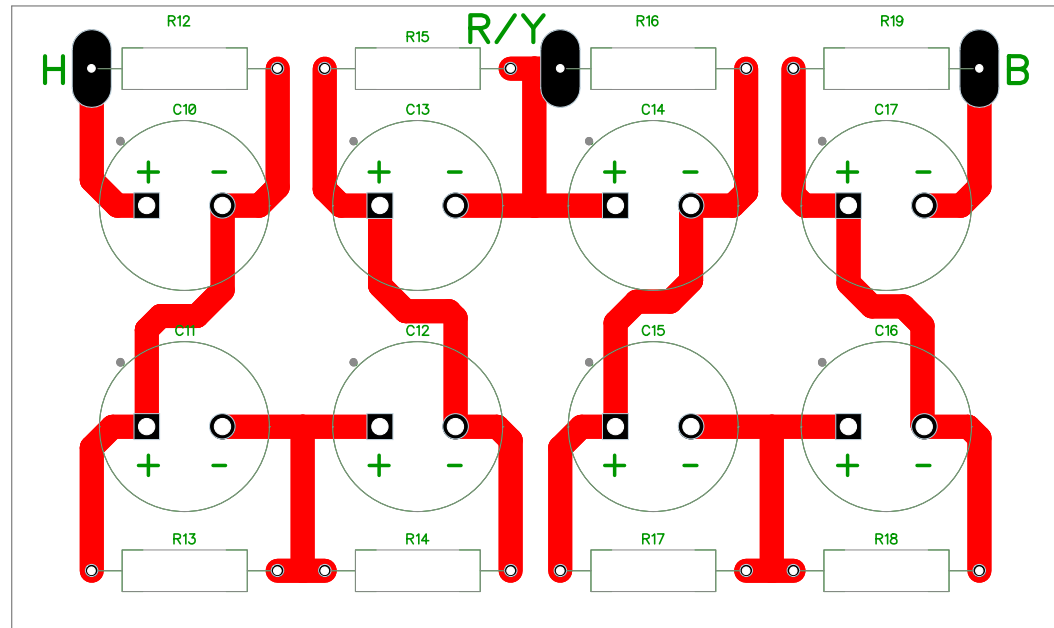
*** NOTE - CORRECTION TO ORIGINAL SB-220 SCHEMATIC**

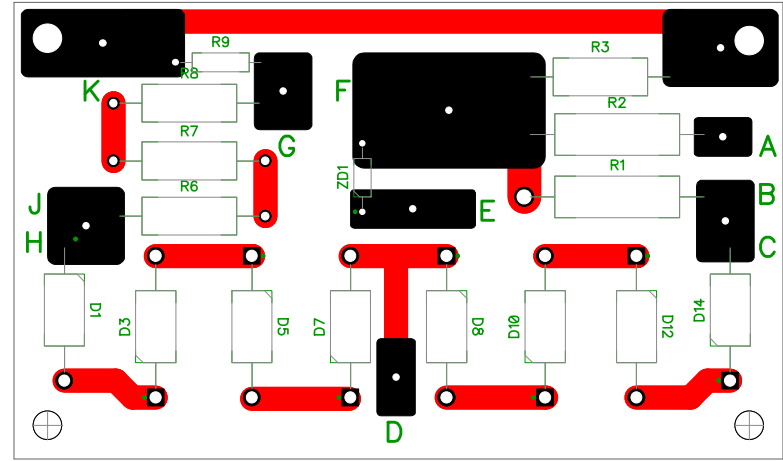
10A circuit breakers, CB1 and CB2, were mis-placed in the original Heathkit schematic. They were shown as installed AFTER the voltage selection block which, if 120VAC wiring was selected, allowed the AC to continue to appear on the transformer winding even though the circuit breaker had opened. The circuit breakers MUST be installed BEFORE the voltage selection block, so they are able to break either of the AC input leads, regardless of whether 120VAC or 240VAC wiring is selected. The actual WIRING instructions in the SB-220 manual (see SB-220 manual pictorial 4-13, and inset, on foldout between pages 49 & 50) instruct you to wire the circuit breakers appropriately. Only the schematic was in error.

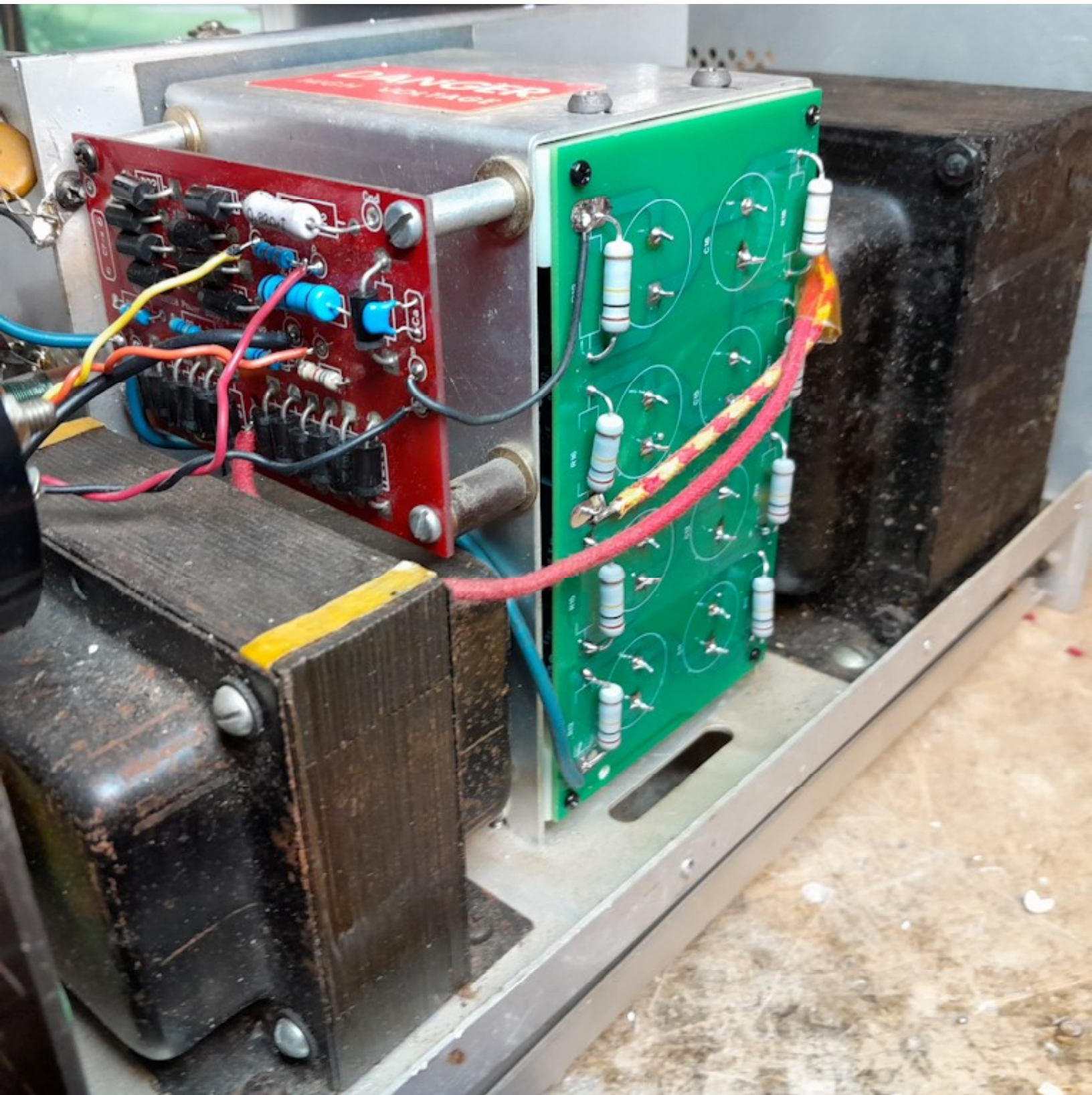
Corrected SB-220 Schematic, redrawn by: Tom Hammond NØSS rev. 1.5 26FEB2011
 Please report errors to <n0ss@arrl.net> so corrections can be made.
 In the e-mail address, above, the '0' is a ZERO, not an 'oh'.

Sheet1

#	RefDes	Value	Quantity
1	D1, D3, D5, D7, D8, D10, D12, D14		8
2	R1	1 Ohm @ 5watts	2
3	R2	3.6K @ 5 watts	1
4	R3	.82 Ohms @ 2watts	4
5	R6, R7, R8	4.7Meg @ 2watts	3
4	R9	5.6K @ 1watt	1
5	ZD1	8.2 volts @ 50 watts	1







The Metering circuit board in the picture is not mine. The photo is just to show how the cap looks and is mounted.