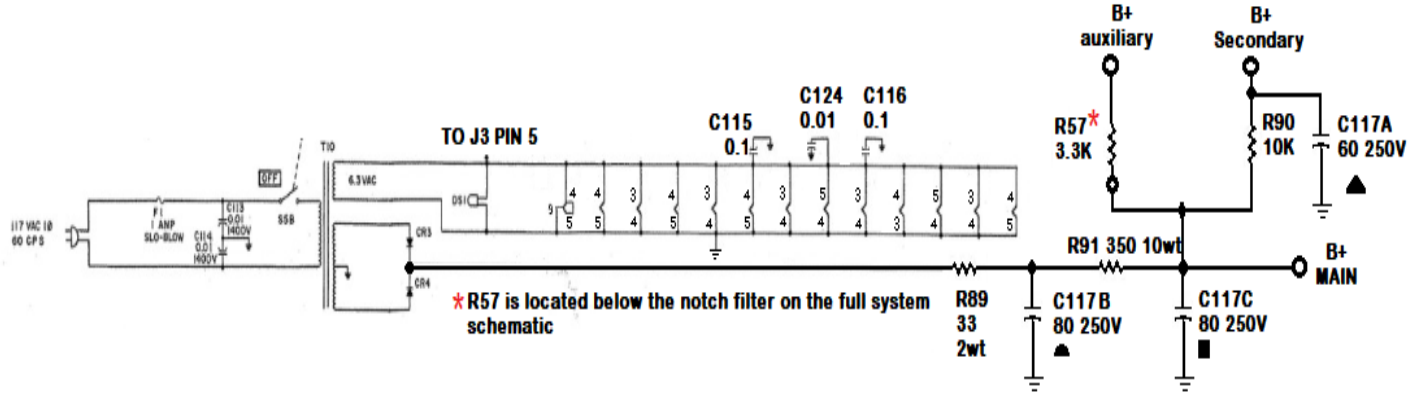
POWER SUPPLY TEST & MEASURMENTS

The power supply for the SX-117 was designed to operate on 105 to 125vac, 50/60Hz.The power consumption at 117vac is projected to be 70 watts. There are two secondary windings on the power transformer, the filament and the B+ windings. The center tapped B+ winding feeds a full wave rectifier that produces a raw 200vdc which is filtered to produce the nominal 168vdc primary B+ supply. Via R90 (10K) a secondary B+ is produced which feeds the audio detectors and audio preamp. A third auxiliary B+ supply Is produced by R-57 that provides the screen voltage for the 3rd IF amp V9 and the B+ for the 100KHz oscillator if installed.

The following chart provides the power supply measurement of an SX-117 that functions properly and meets all specifications. It should be noted that the power supplies in equipment of this era were subject to quite a wide variance in actual operating voltages. Variations of +/- 10% are common. These measurements were recorded with the bench supply running 123.5vac and the equipment was drawing 0.58amps.

DESCRIPTION	TEST POINT	DC COMPONENT	AC RIPPLE
B+ Secondary (Measurements taken using a scope)	Anode CR3 to center tap	///////////////	530vpp
	Anode CR4 to center tap	///////////////	530vpp
Raw rectified power.	JUNCTION OF CR3, CR4 AND R89	230vdc	30vpp
INPUT SIDE OF PI FILTER	JUNCTION OF C117B AND R91	227VDC	10vpp
PRIMARY B+ SUPPLY	JUNCTION OF C117C AND R91	179VDC	0.200vpp
SECONDARY B+ SUPPLY	JUNCTION OF C117A AND R90	153VDC	0.01vpp
AUXILIARY B+ SUPPLY	JUNCTION OF R57 AND T7 PIN3	168VDC CAL osc off 163VDC CAL osc on	0.200vpp



Voltage patten seen on anodes of CR3 and CR4. Pattern should be identical for both anodes.