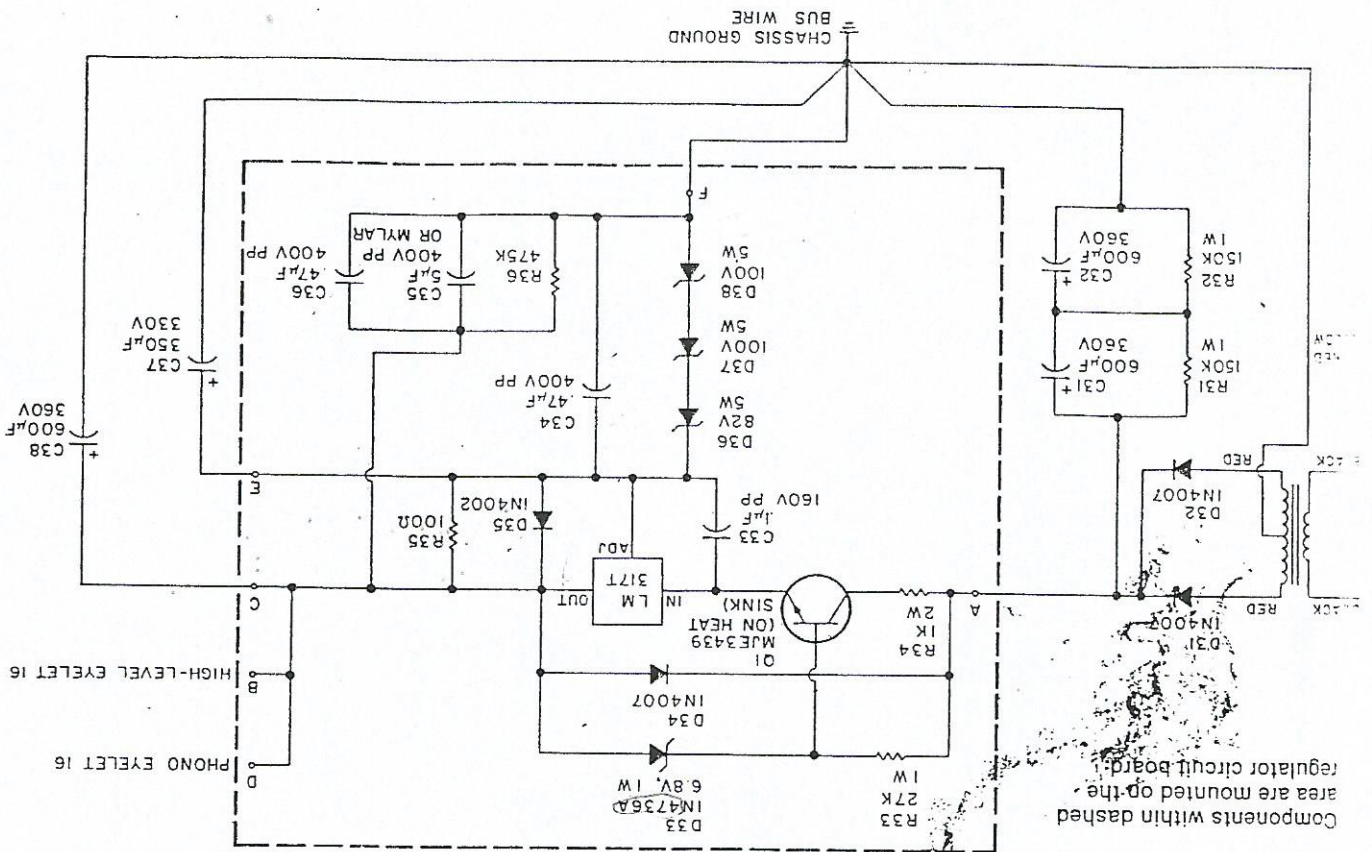


RE 6: The schematic for the new B + power supply is completely different and adds a regulator mounted on a new, frame board.



The combination of the regulator and the specified output filter cap provides a very low output impedance. To take full advantage of the circuit's performance, each amplifier is connected directly to the regulator, using high purity wire, and a polypropylene (PP) bypass cap at the B + tap on each amplifier board.

200 μ F to 400 μ F range should do nicely. The zener filter cap causes the regulator output to climb slowly before reaching its full voltage. The 350 μ F cap causes a delay of several seconds before reaching full voltage. A larger value increases the delay time, but an unusually long delay time could stress Q₁. The photoflash caps specified for both the zeners and the output (C₃₇ and C₃₈) have extremely low ESR. Substitutions, especially for the output cap, should be avoided unless you have the facilities to

and the regulator, not on the regulator board itself. Three zener diodes (D_{36} , D_{37} and D_{38}) determine the output voltage. The schematic calls for two 100V, 5W units and one 82V, 5W unit. Other voltages can be used provided that the sum is close to 280V. The zeners generally should be identical in value, or very nearly so. Q_1 must be mounted on a heat sink. You can use either a commercial device or a piece of scrap aluminum cut to size (approximately 2" by 1 1/8") and painted black. The actual values of the photoflash caps are not critical. The 600 μ F cap is readily available on the surplus market and should not be hard to find. The 350 μ F cap, however, which is used across the zeners, seems to be less common. Any value in the

The filtered B + (about 350V) then goes to the B + regulator, which is nearly identical to the "POOGE-1," modification of the Marantz 7 preamp (TAA 1/81), except that the output is set at 285V. The regulator circuit is wired on a new circuit board mounted next to the phono board. *Figure 7* shows the layout and *Fig. 8* shows the component locations. Note that the large filter caps for the regulator are attached to the front subpanel between the phono board

used a 12X4 tube rectifier and four stages of capacitive filtering. The tap for the high level board was roughly 330V, and for the phono board 210V. The modified B + supply retains the Dyna transformer (type PA-211), but there the resemblance ends. The complete schematic is shown in Fig. 6. The tube rectifier is replaced by a pair of silicon diodes. Dyna's quad cap is also replaced, primarily because of its age and the likelihood of some leakage. The first stage filter now consists of two 600 μ F photoflash caps in series, which are attached to the front subpanel above the power switch. The two 150k resistors across these caps serve not only to equalize the voltage drops but also to discharge all of the caps in the power supply when the

The new circuit is phase-inverting. If that concerns you, simply reverse the polarity of both speaker leads and everything will be back to normal. You should also reverse the leads when conducting A/B listening tests with a non-inverting preamp.