Subject: Re: Some questions on Power supplies
Posted by Damir on Sun, 27 Nov 2005 20:01:56 GMT
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I suppose that B+=365V is for output stage, CRC filter, from 60µF cap, and second RC filter (5k6/20µF) is for phase splitter.Output DC voltage (365V) from L-input rectifier is 0,9*Utr, minus losses in transformer windings and diodes. In another words, you`d need Utr = 365/0,9 = 405,5V + Ulosses. To find out exact Utr, the esiest solutions is to use PS simulator, Duncan PSU II. You can choose various PS "blocks", and rectifiers. The first step is to measure (with Ohm-meter) primary and secondary resistances of your transformer(s). With full-wave (say 450-0-450V) secondary, measure the resistance of half of the secondary, from 0-450V, rs. Let`s say it`s 50 Ohms. Then measure rp of the primary (0-120V), let`s say it`s 8 Ohms. Then find the turns ratio N=Usec/Upr = 450/120 = 3,75 in this example. Compute the resistance of the transformer, Rtr = rs + N^2 * rp, in this exampleRtr = 50 + 3,75^2 * 8 = 162,5 Ohms.The program needs Utr and Rtr. Put a resonable choke, say 10H/100 Ohms and C~100µF after tube rectifier of your choice, loads (constant-current, say 70mA for output stage) and you can see various numbers - currents and voltages, and graphs.See, for example my 300B "story" , part 3...