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Subject: Anyone use 6S45P with 12B4A concertina for PP 7591A or 6L6?

Posted by [Norris Wilson](#) on Tue, 28 Feb 2006 18:20:00 GMT

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Does anyone here have any experience with this front end for a PP amplifier? I have copied and pasted a few posts by Scott Scholl from another forum about his experience with this front end combination as he has progressed so far. I hope he will not mind borrowing this as an example. "I built a front end using two of my favorite tubes. A 6C45 with 68 ohm cathode and 10K plate resistor and about 400V B+ 125ohm grid stopper. A 12B4A is direct coupled with 6800 ohm cathode and plate resistors 425 B+, 5K maybe better but I didn't have any. The output tubes are EH 7591 run UL on an Eico HF20 chassis. Cap coupled with .1uf tinfoil and 120K grid resistors. Without NFB the cathode driven grid has perfect square wave, the plate driven grid has some light ringing. Adding NFB of a 2500 Ohm resistor from the 8 Ohm tap to the top of the 68 ohm 6C45 cathode resistor causes a sharp overshoot the square wave and increases ringing. Either the output transformer absorbs the overshoot or CMRR cancels it out because it doesn't show on the output. With or without NFB balance is excellent at low frequencies and slowly but slightly deteriorates as frequency increases and starts to get a small phase issue at 50Khz but holds out to over 100Khz. Total bandwidth of the amp is... a visibly clear signal at 25 hz, deteriorating below that, to over 50Khz but holds out well to over 100Khz. The concertina drive is 90Vp-p, this is for pentodes only. The 7591s are biased at 22V. I've not listened to the amp yet." "The power supply is the stock HF20 power transformer with 5U4G and 4 ASC 50uf poly in oil caps in various locations. One for the power tubes, one for the driver after a 6H choke 150 ohm (I know I know) then a 500 ohm decoupling resistor and the other two caps for the driver. I may rewire them later." "I'm drawing about 25ma at both stages and I'm expecting a little more if/when going to 5K maybe 30ma. I won't know until I try. "The parts came in yesterday. I replaced the 6800 ohm resistors in one amp and get 31ma but Vp-k is only 100v or so. The bias on the 6C45 maybe adjusted to get more voltage. I'm still working on it." This front looks as if it may be an excellent combination. I would appreciate any comments about this tube combination for possible use with 7591A, 6L6, and PPP 6V6? Thanks Norris Wilson