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SV811-10

TECHNICAL BULLETIN

A Single-ended SV811-10 Amplifier with Transformer Coupling

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The SV811-10 amplifier by Eric Barbour (published in Vacuum Tube Valley magazine, issue 5) is a good SE amplifier circuit. After building a pair and auditioning them for a period, I decided to try another driver circuit topology. Eric's article mentioned that an interstage transformer can offer even better performance, so the existing amplifiers were modified. I found the Electra-Print 3634-2 was reasonably priced and high quality.



Instead of using the 6EM7/GL7's low-mu triode as a cathode follower, I put the Electra-Print transformer on the triode's plate, and use it to directly drive the grid of the SV811-10. The 1k cathode-bias resistor of the driver stage should be 10 watts or larger in rating. As before, the SV811-10 operates in zero bias.

In the original circuit of the DC filament supply, a diode was used for dropping the voltage by 0.6 volts. This diode was replaced with a special 12 mH, 4 amp choke (Electra-Print 5516), which is designed to filter the DC filament supply for SV811s. This further reduces the hum appearing in the amp's output.

The interstage transformer is very sensitive to hum pickup. It must be installed as far as possible from the power chokes and output transformer. (Electra-Print can

pot this transformer in a steel can at extra cost, to help shield it from AC magnetic fields.) The B+ voltage must be very well-filtered to minimize hum.

The photo shows the prototype, which have the interstage transformers mounted on the side of each chassis to keep them away from the other magnetic components. The One Electron UBT-2 is the output transformer in these amplifiers.

The result is very good. Speakers used are my own design, with Focal drivers. Their 4-ohm impedance may cause "mushy" bass reproduction with some tube amplifiers. This amplifier provides better bass control, plus higher sensitivity due to the second 6EM7 gain stage. The midrange is also slightly clearer compared to the original version.

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