

# The “Peri - 50” Power Amplifier

*Details on a unique printed-circuit unit which is offered in kit form.*

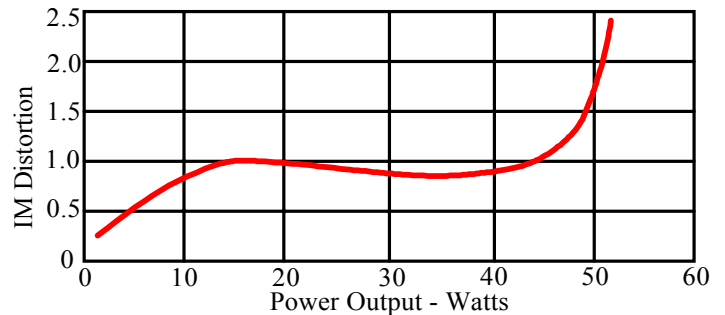
Not only are kits becoming easier to assemble but one manufacturer even supplies the required pencil-type soldering iron. The only tools needed to put such kits together are a screwdriver, long-nose pliers, and cutters, in addition to the soldering iron.

This is true of the new "Peri-50" power amplifier being offered in kit form by Printed Electronic Research Inc., 4212 Lankershim Blvd., North Hollywood, Calif. The new amplifier is built on a printed circuit board. All components and lead connections are so clearly identifiable by markings on the printed board that it could be assembled by a novice without reference to any printed instructions.

The circuit uses four tubes. The output stage is a conventional Milliard design using EL34/6CA7's.

A 6AN8 is used as a phase inverter and driver, with 5U4 as a power rectifier. Basically, in many respects, the design is somewhat similar to the "Dynakit." In fact, the same Dyna output transformer, the A-430, is used in both amplifiers.

The only difference between these two units is that the "Peri-50" uses a capacity-coupled phase inverter instead of being direct coupled. It has a somewhat more conservatively rated power transformer, being designed for 250 ma. instead of 200 ma.



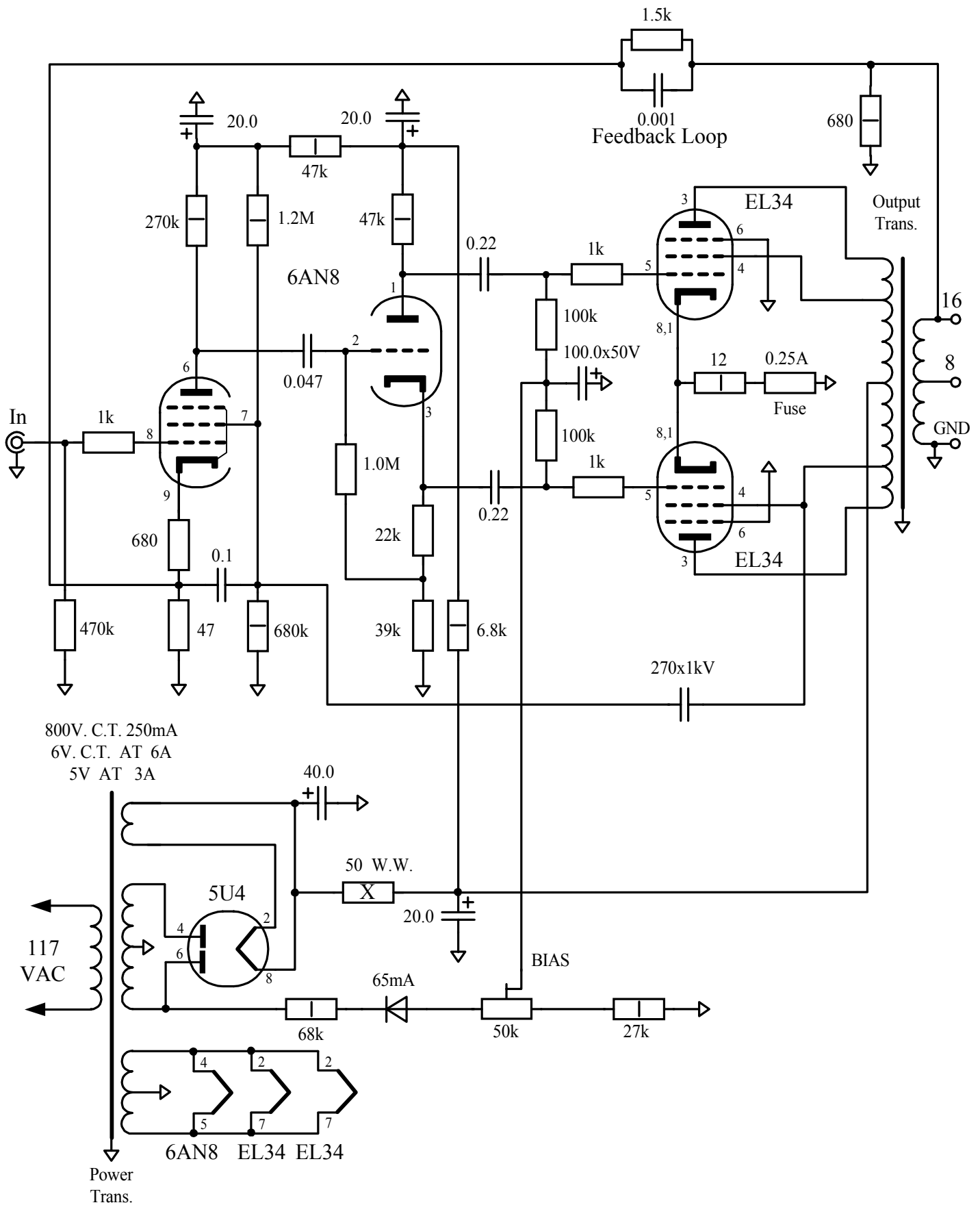
IM distortion as measured with a Heath audio analyzer. (60-7000 cps; 4:1 ratio, equivalent sine-wave power indicated).

There are several other minor differences—none of them of too much significance.

Performance characteristics, as measured on one of the kits, were as follows: frequency response within  $\pm 0.5$  db from 20 to 20,000 cps (limit of audio oscillator used). The company claims that this response is available up to 30,000 cps at any level between 1 mw. and 50 watts.

Hum and noise, with an open grid, was down 92 db from full output.

For 50 watt output, an input of 1.05 volts is required. Damping factor at 1000 cps was 25.



Over-all schematic diagram of the 50-Watt Peri power amplifier.