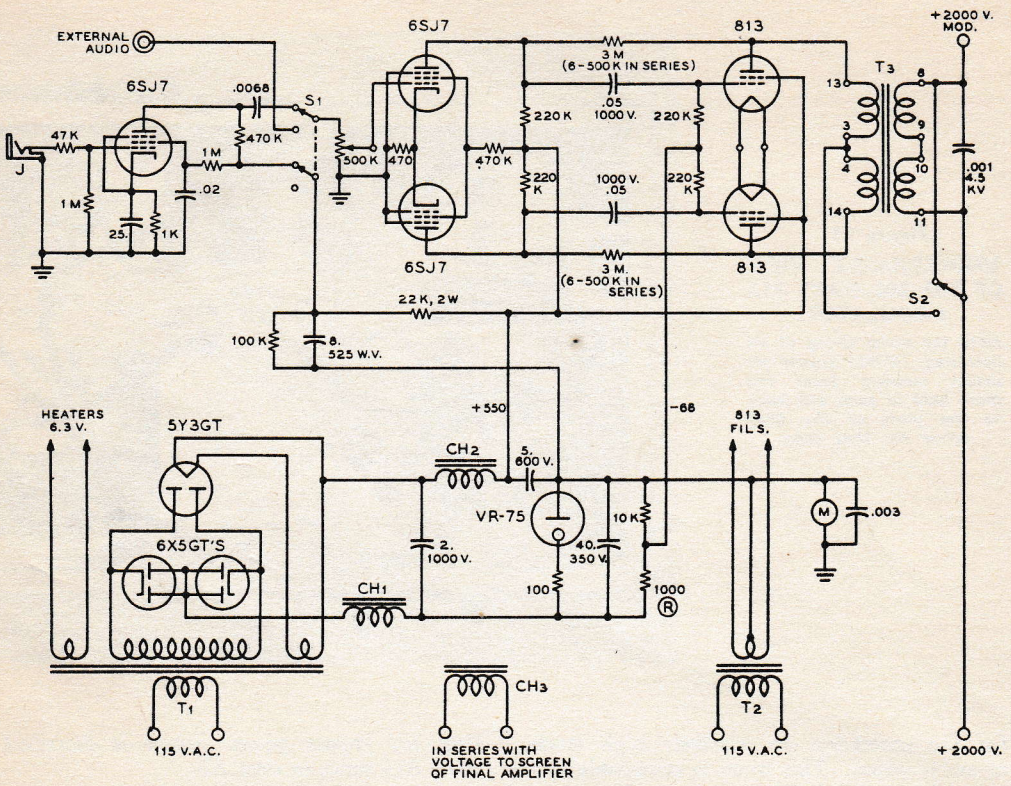

Figure 26.
SCHEMATIC OF THE 200-WATT 813 MODULATOR.

CH_1—3.5-hy. 50-ma. choke (Stancor C-1080)
CH_2—16-hy. 50-ma. choke (Stancor C-1003)
CH_3—13-hy. 65-ma. choke (Stancor C-1708)
(R)—Portion of bias voltage divider. See text.
M—0-250 d-c milliammeter (Marion 53SN)
T_1—600 v. c.t., 55 ma.; 5 v. 2 a., 6.3 v. 2.7 a. Stancor P-6119)
T_2—10 v. c.t., 10 a. (UTC S-62)
T_3—300-watt modulation transformer (UTC CVM-4)
J—Microphone jack, shorting type.

phase inverter to feed the grids of the two 813's. This type of phase inverter is quite convenient for an application of this type where additional gain is not needed between the phase inverter and the stage which is driven by it. The stage gives phase inverting action by virtue of the fact that both the cathode resistor and the series screen resistor are unby-passed. The only assymmetry about the stage is that the grid of one tube is grounded while the input signal is fed to the grid of the other tube. The plates of the phase-inverter tubes are capacitively coupled to the grids of the 813's.

Since the 813 output stage is operating class AB_1 and requires no driving power, the 6SJ7 tubes provide ample signal to excite the 813 grids. In fact, effective limiting action on the input signal takes place at the point on the signal cycle where the peak positive voltage on each 813 grid equals the operating bias on the tubes. This limiting action gives the same net result as the clipper sometimes installed in one of the earlier stages of a speech amplifier. Note also that shunt feedback is employed from the plates of the 813's back to the plates of the 6SJ7 drivers. Six 500,000-ohm 1-watt resistors connected in series on each side go to make up the 3-megohm feedback resistors. The addition of the feedback network improves the linearity of the 813 stage with a consequent reduction in harmonic distortion.

The power supply system for the screens