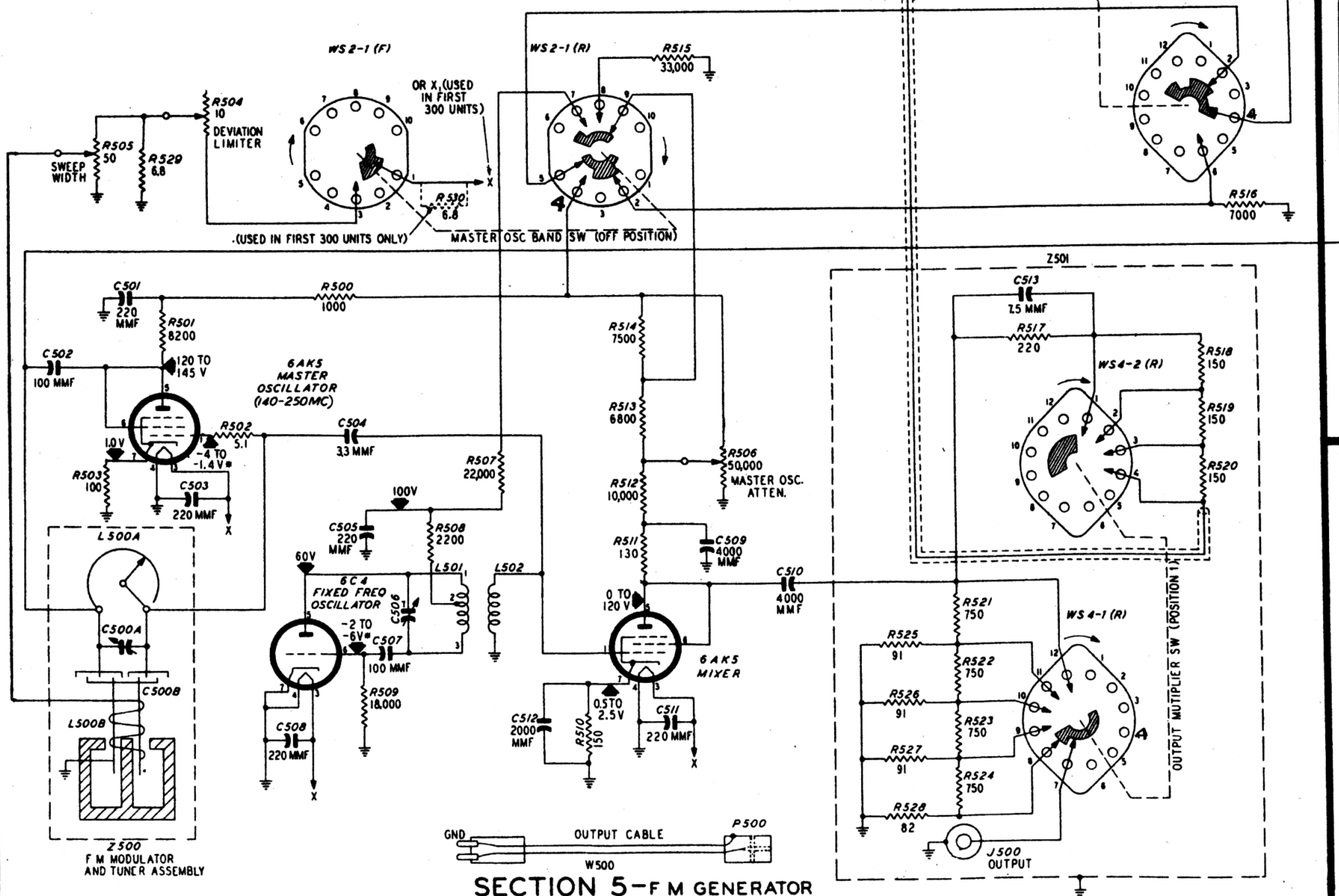


## SECTION 4 - RF GENERATOR

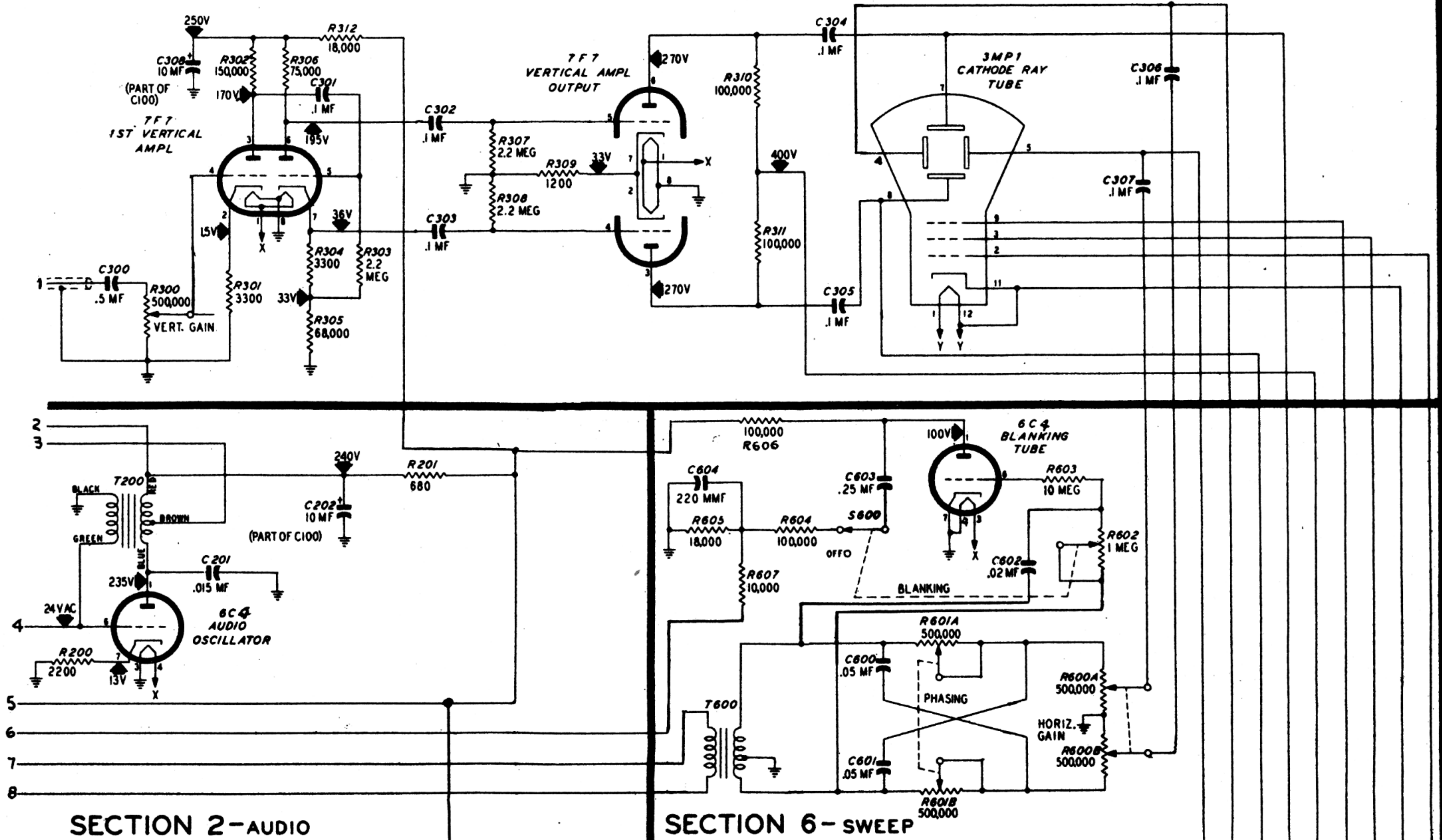


*Courtesy Philco Corp.*



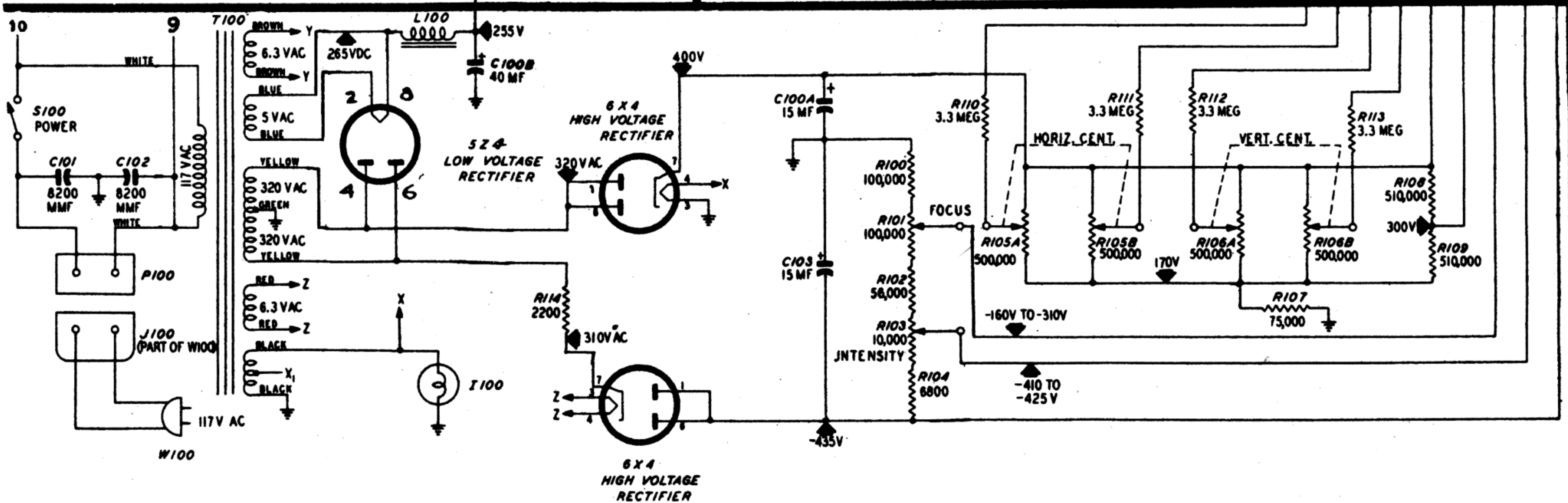
# COMMERCIAL OSCILLOSCOPES AND RELATED EQUIPMENT

## SECTION 3—VERTICAL AMPLIFIER



## SECTION 2—AUDIO

## SECTION 6—SWEEP



## SECTION 1—POWER SUPPLY

### PHILCO MODEL 7008 (VISUAL ALIGNMENT GENERATOR)

#### FREQUENCY RESPONSE

Sweep Circuit 60 cps, Sine Wave

LINE RATING 110-120 volts, 60 cps

The schematic circuit diagram, including the tube complement and its functions, is shown in Fig. 22-44. This is not a conventional cathode-ray oscilloscope, but one designed primarily for use as an alignment indicator in f-m and television alignment work. A 60-cps internal sweep is used instead of the adjustable sweep found in the usual oscilloscope.

#### Blanking Circuit

The blanking circuit establishes a reference base line on the cathode-ray-tube screen, together with the response curve of the unit under test. It can be used only with the f-m-master oscillator generator. The baseline is produced by periodically removing the sweep signal applied to the output of the 7008 and allowing the horizontal sweep to trace a line across the screen during the absence of vertical deflection. This cycle of

events occurs at a 60-cps rate, thus making it appear as if the response curve and baseline were produced simultaneously.

A 60-cps sine-wave voltage is applied to the grid of a 6C4 tube from the phasing transformer through a phase-shifting network consisting of a .02- $\mu$ f capacitor (C602) and a 1-megohm blanking control (R602). The flow of grid current through R603, a 10-megohm grid-current limiting resistor produces practically cut-off bias, so that no effect is obtained on the negative half-cycles. However, on the positive half-cycles, plate-current flow is increased, creating a negative swinging-gate effect in the plate circuit. This negative gate signal is applied through the on-off switch attached to the BLANKING control, and through a filter-and voltage-divider R-C network, to the grid of the 6AK5 master-oscillator tube.

When the negative gate signal appears at the grid of the 6AK5 oscillator tube, it prevents the tube from operating. Thus, the trace on the oscilloscope collapses to a straight line during the gating period. The alternate straight line and response-curve presentations appear as a response curve with a reference baseline on the cathode-ray-tube screen.