

Potentiometer R25 is used to vary the output voltage from 200 to 300 volts.

The tube heaters are run with their a.c. voltage at d.c. reference-voltage potential so as to not exceed the heater-to-cathode voltage ratings of the tubes. T20 should either be a separate filament transformer or a winding on T1 that is isolated from all other windings. It is not advisable to use the same 6.3 volts for V20 and V21 as used for the 6.3-volt a.c. output, as the heaters, and consequently the voltage across them, are floating at 105-volt d.c. In the prototype, the heater voltage for these tubes is obtained from T20, a separate filament transformer. If transformer T1 is chosen with an extra 6.3-volt secondary, T20 will not be needed.

Voltage Divider

Output from the electronic voltage regulator is fed directly into the voltage-divider network. This network is designed so that by selecting the proper tap with S2B and adjusting R25, voltages ranging from 150 volts to 0.1 volt may be obtained for loads from 100 milliamps to 1 milliamp. Output from the divider is not considered a regulated voltage. Potentiometer R37 in this network serves to adjust very low voltage at low loads.

The values given in the parts list are those used in the prototype with a range of acceptable substitutes shown in parentheses. A tube manual should be consulted for the proper tube pin numbers when using other than the tubes listed as they vary from those given on the schematic.

Parts placement is non-critical; however, wire and switches should be "heavy" enough to handle the power requirements. ▲



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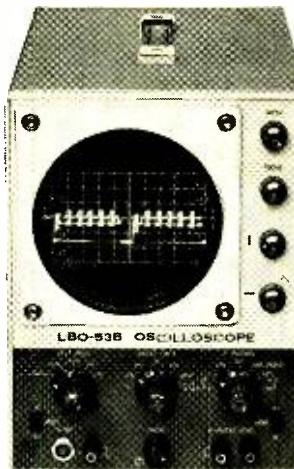
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