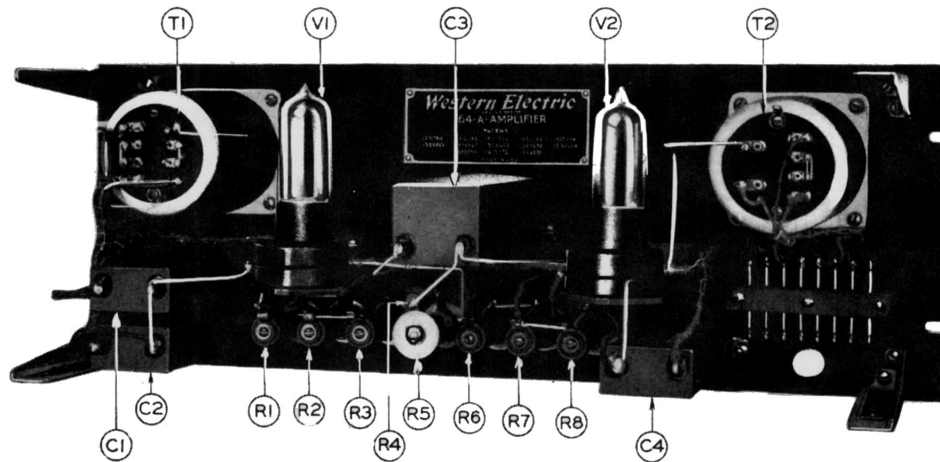


No.64-A AMPLIFIER



A M P L I F I E R

No. 64-A

Instructions for Use

The No. 64A Amplifier is a two - stage, fixed gain, resistance - capacity coupled amplifier using Western Electric No. 264A Vacuum Tubes. It has approximately 28 db gain and is designed for use in Western Electric Speech Input Equipments to provide additional gain when required by special operating conditions. It is usually inserted between the common output of the mixing potentiometers and the input of the artificial line. It is arranged to operate between circuits of 200 ohms impedance.

This amplifier, with cover removed, is shown above and its circuit diagram is shown in Figure 1.

DESCRIPTION

This amplifier is assembled on a steel panel approximately 19 inches wide by 6-31/32 inches high arranged for relay rack mounting. All of the apparatus is mounted on the front of the panel. A hole for the external wiring is provided in the panel adjacent to the terminal strip.

A filament potential of 5.5 volts DC, with the positive side grounded, and a plate potential of 200 volts DC, with the negative side grounded, are required at the terminals of the amplifier.

Negative grid potential for both vacuum tubes is obtained from the voltage drop in a resistance in the negative lead to the filament of the first vacuum tube.

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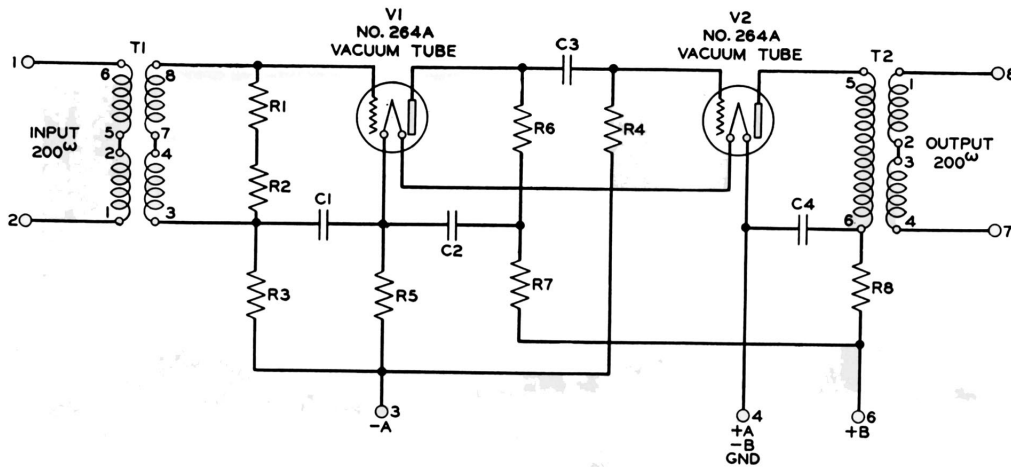


Fig. 1—Schematic Diagram of No. 64A Amplifier

No apparatus is contained within this amplifier for controlling or measuring the filament and plate currents of the vacuum tubes. These controls are provided in the No. 224A Panel, and in the panels of the No. 7A Speech Input Equipment, in both of which this amplifier is incorporated. The No. 217A Control Panel also provides a suitable unit for the control of this amplifier. Each of the two control circuits in the No. 217A Panel contains a jack and switch associated with the plate supply circuit, and a jack, switch, rheostat, relay and indicating lamp in the filament supply circuit.

When the amplifier is not used with any of the above equipments, a switch for opening or closing the plate circuit and a milliammeter for measuring the plate current drawn by the two vacuum tubes should be included in the positive plate supply lead external to the amplifier. In the negative lead of the filament supply there should be a switch, a $\frac{1}{2}$ -ampere fuse (Western Electric No. 35F Fuse), an ammeter for measuring the filament current, and a rheostat or other suitable resistance for adjusting the filament current.

To prepare this amplifier for operation connect terminals No. 1 and No. 2 to the input circuit and terminals No. 7 and No. 8 to the output circuit. Terminal No. 3 should then be connected to the negative side of the $5\frac{1}{2}$ -volt source and terminal No. 6 connected to the positive side of the 200-volt source. Terminal No. 4 provides the common point of connection for the positive side of the $5\frac{1}{2}$ -volt source, the negative side of the 200-volt source, and ground. The 264A Tubes may then be inserted in their sockets, the filament power turned on, and the filament current adjusted to the normal value of 0.300 ampere. Following this, the plate power should be turned on and the plate current checked. If it is approximately 2.3 milliamperes the amplifier is then ready for operation.