

MULTIPLE TONE CABINET INSTALLATIONS AND USE OF LESLIE TYPE 2 ADAPTER

General

On multiple speaker installations which include Leslie-Vibratones above Serial 5200 and cabinets other than this type, Type 2 Adapters or their equivalent will be necessary at each tone cabinet that is not a Leslie above 5200. Since the tube operated tremolo control circuit places a D.C. voltage on the signal line, this D.C. voltage must be removed before it reaches the grids of amplifiers not designed to operate with the relay control tube. The Type 2 Adapter consists of necessary wiring and parts to place a 1.0 mfd. condenser in series with each grid lead plus one 50 K Ohm resistor from each grid lead to ground, forming a D.C. path for the grids. In lieu of the adapter, these parts may be placed directly in the amplifier. By using the values of condensers and resistors stated, there would be no loss in amplifier performance. It should be noted that when the Type 2 Adapter is used, the five-contact socket on the adapter case should be used for the next speaker instead of the extra socket in the amplifier. This procedure should be followed because the extra socket in the amplifier becomes a semi-high impedance line due to the series condensers in the adapter and hum will be experienced if this socket is used instead of the one on the adapter case. If condensers and resistors are installed in amplifiers to eliminate the adapter, be sure these parts are only in the tube grid connections and are not in series with the wires to the extra speaker socket. The installation of resistors and condensers in the amplifiers will not interfere with any use of the cabinet, and need not be removed for any purpose.

Installations Involving All Leslie-Vibratones Above Serial 5200

No Type 2 Adapters are necessary at any cabinet, and five-wire cable may be used from speaker to speaker. All tremolos in any number of cabinets will be controlled from the one console tremolo switch.

Installations Not Involving Leslie-Vibratones Above Serial 5200

Since the Type 2 Tremolo Control will not be used, there will be no tremolo control voltage on the signal line; therefore, no adapters will be necessary at any cabinet.

Installations Involving Both Leslie-Vibratones Above Serial 5200 And Other Cabinets

If the Type 2 Tremolo Control is installed to operate the tremolo in Leslie-Vibratones above Serial 5200, there will be a control voltage on the signal line which must be eliminated in Leslie cabinets below Serial 5200 or other make cabinets. A Type 2 Adapter or equivalent as mentioned under "General" is used for this purpose. Use one adapter at each extra cabinet unless it is a Leslie above 5200. The sequence of cables from console to speaker, and from speaker to speaker, is unimportant, since the tube operated tremolo control will operate regardless of how the cables are arranged.

If the installation includes Leslie Models 31A or 31H below 5200 along with Leslies above 5200, the tremolos in the two types can be controlled independently by proper wiring. In this case, both the Leslie Type 2 Tremolo Control is installed as well as the previous Part. 228 tremolo control. The brown wire from the Type 2 Tremolo Control should be connected to the red wire from the previous tremolo control. If it is desirable to control all tremulants from one switch instead of mounting both switch cases, one of the spare pairs of contacts on the first switch may be used instead of mounting the extra switch. In an installation of this type, the Leslie cabinets below Serial 5200 must be placed first in line from the console cable (six-wire only) and six-wire jumper cables used between each speaker of this type. Also Type 2 Adapters must be used at each Leslie below 5200. Leslie cabinets above 5200 are then connected by jumper cables (five-wire) and, if the installation is made in this manner, all relay circuits will operate.

Echo Controls

NOTE: If echo controls other than Leslie are used, they must be of the ungrounded type, since grounds in the echo switch wiring will interfere with the proper operation of the tube operated tremolo control circuit. Most echo controls are the ungrounded type, however those containing grounded circuits may be easily converted to the ungrounded type.

Installations Involving Type 3H Echo Controls and Leslie-Vibratones Above Serial 5200

No adapters are necessary, however, it should be noted that when the Type 2 Tremolo Switch is installed, the speaker cable wires are left on the Leslie Type II Echo Control terminal box. The red and black wires from the echo terminal box are removed from the G-G terminals on the pre-amplifier and moved to the screw terminals on the tremolo control terminal box.

The red and black wires from the tremolo control terminal box are then connected to the G-G terminals on the pre-amplifier. The tremolo switch will then control tremolos in both echo and main tone cabinet (only one Type 2 Tremolo Control need be installed to control both cabinets).

If it is desired to control tremulants in Main and Echo speakers from separate tremolo switches, this may be done by installing two Type 2 Tremolo Controls. Both yellow wires are grounded, and both brown wires are connected to the B+ supply. On Series "2" Consoles, only one tube adapter is used since both brown wires may be connected to the screw terminal on one adapter. Both red wires are connected, to one of the "G" terminals on the pre-amplifier and both black wires to the other "G" terminal.

The Leslie Echo Control Type 3H is then modified as follows: Remove bottom plate and disconnect one pair of the 820 ohm resistors that lead to the screw terminals marked "Echo". Leave the ends of the resistors connected at the screw terminals, but disconnect or cut off the other end near the soldering lugs. Attach another pair of wires to the free ends of these resistors and insulate the connections. Push the wires through the same hole with the black and red wires. Connect one pair of these wires to the screw terminals on one Tremolo Control terminal box, and the other pair (new wires added to Echo Control) to the other Tremolo Control terminal box.

Installations Involving Leslie 3H Echo Control, Leslie Above Serial 5200, And Leslie Below Serial 5200

Both tremolo controls originally furnished with each cabinet may be installed and each will control their respective cabinets. Attach brown wire from the Type 2 Tremolo Control case to the terminal on end of red wire from other tremolo filter box instead of at B+ terminal on pre-amplifier. A Type 2 Adapter must be used on the Leslie below Serial 5200.