Table of Contents

CAUTION: THE 1800-V PROFESSIONAL STEREO POWER AMPLIFIER SYSTEM CONTAINS NO USER-SERVICEABLE PARTS. TO PREVENT WARRANTY INFRACTIONS, REFER SERVICING TO WARRANTY SERVICE STATIONS OR FACTORY SERVICE.

SAFETY INFORMATION

1. Parts that have special safety characteristics are identified by the ⚠ symbol on schematics or by special notes on the parts list. Use only replacement parts that have critical characteristics recommended by the manufacturer.

2. Make leakage current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the unit to the customer. Use the following checks to perform these measurements:

A. Leakage Current Hot Check-With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 "Leakage Current for Appliances" and Underwriters Laboratories (UL) 1492 (71). With the unit AC switch first in the ON position and then in OFF position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the unit (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the unit power cord plug in the outlet and repeat test. ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE UNIT TO THE CUSTOMER.

B. **Insulation Resistance Test Cold Check**-(1) Unplug the power supply and connect a jumper wire between the two prongs of the plug. (2) Turn on the power switch of the unit. (3) Measure the resistance with an ohmmeter between the jumpered AC plug and each exposed metallic cabinet part on the unit. When the exposed metallic part has a return path to the chassis, the reading should be between 1 and 5.2 Megohms. When there is no return path to the chassis, the reading must be "infinite". If it is not within the limits specified, there is the possibility of a shock hazard, and the unit must be repaired and rechecked before it is returned to the customer.

SUPPLEMENT OVERVIEW AND PROCEDURES

This supplement provides two additional test procedures, which will assist in the diagnosis and repair of the 1800-V Amplifier.

Use the following procedures to check and adjust the Output Bias and High-voltage Rails.

Channel 1 and 2 Output Bias Adjust:

NOTE: The bias should be set without an input signal or load on the outputs.

The components involved in this procedure are located on the Amplifier PCB, refer to Figure 1 for their location.

To adjust the bias of Channel 1, measure across one of the output emitter resistors (R146, R148, R150, R151 and R153) with a DC meter (the DC meter's -input should be floated). Adjust R124 until the DC meter reads 1 mV. To ensure that the emitter resistors share the bias current equally, its recommended that two or three be measured. Equal bias current sharing is indicated by a 1 mV voltage drop across each emitter resistor.

To adjust the bias of Channel 2, measure across one of the output emitter resistors (R246, R248, R250, R251 and R253) with a DC meter (the DC meter's -input should be floated). Adjust R224 until the DC meter reads 1 mV. To ensure that the emitter resistors share the bias current equally, its recommended that two or three be measured. Equal bias current sharing is indicated by a 1 mV voltage drop across each emitter resistor.

High-voltage Rail Adjust:

NOTE: The rail voltages should be set with the line voltage at its nominal value and without an input signal or output load.

The Test Points TP1, TP2 and TP3 are located on the Power Supply PCB, refer to Figure 2. Potentiometer R36 is located on the Regulator PCB, refer to Figure 3.

To adjust the high-voltage rail use a DC meter to measure across TP1 and TP3. Adjust R36 on the Regulator PCB until the meter reads -106 volts (± 2 VDC). The reading across TP1 and TP2 should be approximately +104 volts.

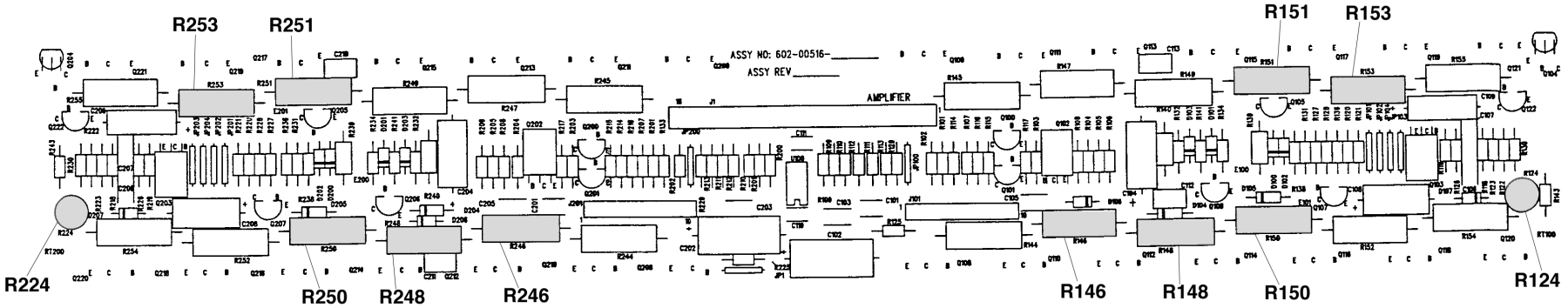

Figure 1. 1800-V Amplifier PCB

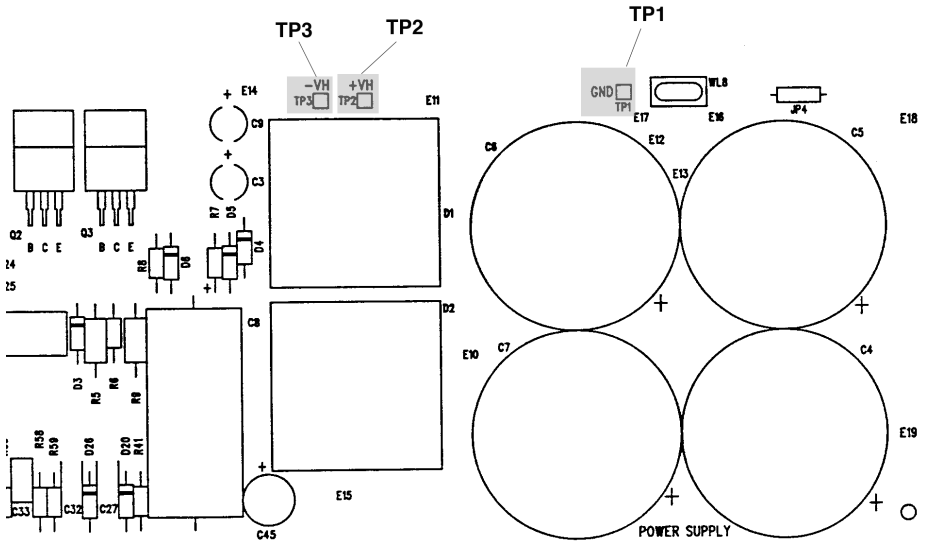

Figure 2. 1800-V Power Supply PCB

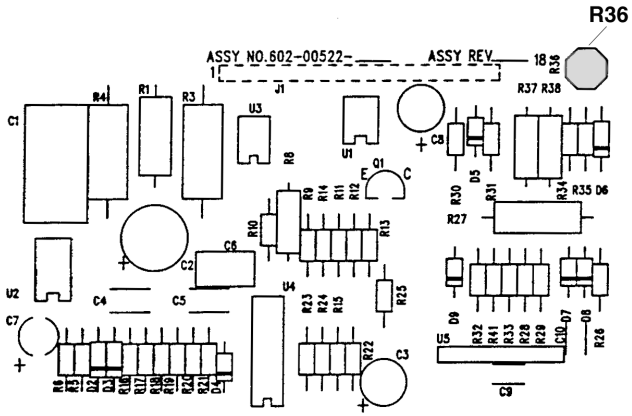

Figure 3. 1800-V Regulator PCB

SPECIFICATIONS AND FEATURES SUBJECT TO CHANGE WITHOUT NOTICE

Bose Corporation
The Mountain
Framingham, Massachusetts USA 01701

P/N 181812-S1 12/95

FOR TECHNICAL ASSISTANCE OR PART ORDERS, CALL 1-800-367-4008