CLASS	DWG NO.
FM	199747-TT

REVISIONS

REV	DESCRIPTION	ENG	DATE
00	INITIAL RELEASE	BOB SMITH	5/09

SIGNATURES REQUIRED		PRINT NAME	SIGNATURE
TSG REPRESENTATIVE		BOB SMITH	
CELL LEAD			
REPAIR SUPERVISOR		KEVIN KING	
OTHER(_____)			

TSG TECHNICIAN	**DATE**	BOSE®
Bob Smith	5/09	FRAMINGHAM, MA 01701-9168

APPLICABLE DOCUMENTS:

SERVICE MANUAL: 199747

DESCRIPTION

Model 1800V and 1600/1800 VI Amplifiers

SIZE	FSCM	CLASS	DWG NO.	REV
A	**32108**	**FM**	199747-TT	**00**

Troubleshooting Tips
Model 1800V and 1600/1800 VI Amplifiers

Refer to the Model 1800V or 1600/1800 VI Amplifier service manual, reference number 181812 (1800 V) or 199747 (1600/1800 VI) for schematics, PCB layouts and parts lists located on the Pro Products page of the Bose Service web site at http://intranet.bose.com/tsg or http://serviceops.bose.com.

Preventative Repair Measures
Note: Perform the following on all units returned for repair.

Product	Check	Action
1800V 1600/1800 VI		There are no preventative measures to perform on these amplifiers.

Troubleshooting Tips

Product	Symptom	Check	Action
1800V 1600/1800 VI	Dead unit	Fuse	1. Verify that fuse F1 located on the front panel is good. Verify that it is the correct value for the AC line voltage version of the product. 2. Check for +/-15VDC on the power supply PCB. Check R6, R7, R8, Q2, Q3, D3, D6.
1800V 1600/1800 VI	Blows main fuse F1 at turn-on.	Output power transistors	Check that the output transistors are not shorted internally or shorted to the heatsink.
1800V 1600/1800 VI	Dead unit	Fuse	1. Verify that fuse F1 located on the front panel is good. Verify that it is the correct value for the AC line voltage version of the product. 2. Check for +/-15VDC on the power supply PCB. Check R6, R7, R8, Q2, Q3, D3, D6.
1800V 1600/1800 VI	- Dead unit - No Sound - No front panel LEDs lit. - Unit drawing too much current at turn-on.	Power supply MOSFETs.	1. Check that the output transistors are not shorted internally or shorted to the heatsink. 2. Check Q9, Q14, D13, D19, Q20 and Q25. 3. Check for the low voltage rail +/-53V at the outputs of D13 and D19, and the high voltage rail +/-106V at Q14 Source and Q25 Source.
1800V 1600/1800 VI	No audio output from one or both channels.	Output relays.	1. Check output relays K100, K200 and associated circuitry. Check for VLF+ voltage at pin 6 of the relays (+24V). 2. Check U1 on the Input/Output PCB.
1800V 1600/1800 VI	Audio cuts out, intermittent.	Input level controls	Check potentiometers R101 and R102 for proper operation. Clean or replace as needed.
1800V 1600/1800 VI	Unit keeps going into protect mode.	- Input module PCB diodes. - Power supply board 15V regulator parts.	1. Check the diodes tied to the +/-15V lines on the input module PCB; D7, D8, D9, D10, D15, D16, D17, D18, D20 and D21. 2. Check the transistors, diodes and resistors for the +/-15V on the power supply board, R5, R6, D3, Q2, R8, R9, D6 and Q3.

Product	Symptom	Check	Action
1800V 1600/1800 VI	Amplifier Sequence function not working.	Input Module PCB.	Check the input module PCB's remote power-up circuitry. The input comes into the amp at J3 pins 1 and 2 and goes through Q1, Q2, Q3 and the associated components. Check for shorted or open parts.
1800V 1600/1800 VI	All	-	Perform the steps in the 1600/1800 amplifier Troubleshooting Guide, 199747-TG1 located on the Bose Service web site.