


REVISIONS			
REV	DESCRIPTION	ENGINEER	DATE
00	INITIAL RELEASE	BOB SMITH	04/09
01	ADDED NEW FINDINGS FROM EDC	JIM SLOWEY	10/22
02	ADDED NEW FINDINGS FROM EDC	JIM SLOWEY	06/23

SIGNATURES REQUIRED	PRINT NAME	SIGNATURE
TSG REPRESENTATIVE	JIM SLOWEY	

TSG SPECIALIST JIM SLOWEY	DATE 06/2023	 FRAMINGHAM, MA 01701-9168		
APPLICIAL DOCUMENTS:  SERVICE MANUAL 296133-SM		DESCRIPTION  L1 Model II System TROUBLESHOOTING TIPS		
	SIZE A		DWG NO. TT296133	REV 02

## 1. Troubleshooting Tips

Symptom	Check	Action
No bass output	CN301 and J301	Verify that connectors CN301 / J301 are fully seated on the amplifier PCB.
Red indicator light turns on.	C38	SMD ceramic filter capacitor short. Replace cap.
	Q5	No PWM output on IC1. Short between pin 1 and pin 2 of Q5.
	L202	L202 not soldered properly. Resolder
	CN300L2	Verify that all the pins in connector CN300L2 are fully seated.
Red indicator light turns on after 5 seconds	Q5	No PWM output on IC1 after unit has been on for a period. Q5 unstable as unit warms. Cooling Q5 causes unit to function again. Replace Q5.
	IC200	Check IC200 on the amplifier board related to the failure. IC200 is the half bridge driver IC for the amplifier section.
No audio, no signal LED's lit.	U108	Check A/D converter U108 located on the I/O PCB. Bose part # 271836.
No Audio, no other errors	C15	Check for broken etch under C15. A leaking C15 could cause corrosion
L1 does not power up the T1	RJ45 connector	Ethernet cable may not be making contact with J103 (RJ45 connector on the power stand).
No input signal available.	Input / Output board.	Check the output of op-amp U100B at pin 7. If the signal is good there, verify that CODEC U108B and associated circuitry is working by checking the outputs to the amplifier PCB's at connectors J301L and J301B. If the outputs are good, check the amplifier board for the affected channel. If the outputs are bad, troubleshoot the I/O board to the component level. If something other than the DSP IC is bad, replace the part. If the DSP IC (U110) is failed, replace the board. U110 is a BGA part and cannot be easily replaced.
- System does not mute and then unmute while passing an audio signal and connecting or disconnecting a B1 bass module. Audio may or may not sound incorrect as well.	Input / Output / DSP PCB bass sensing circuit.	Check that resistors R311 and R312 are not open or damaged and that they are soldered properly. Check that the pins of the J102 connector are properly soldered to the board. Check IC's U111A, U108A and associated circuitry. Refer to sheet 1 of the DSP/IO PCB schematic diagram.
Fan noise  A customer may complain that the fan comes on sporadically while using the system	Power stand firmware.	Connect a T1 ToneMatch Audio Engine to the L1 Model II power stand. Turn on the T1 and the L1. Rotate the selector knob on the T1 to PREFS. Press down on the knob located on the far left under the display to get to the Menu. Rotate the knob to scroll down to POWER STAND. Press the knob again to select Power Stand. Press the knob located under the right side of the display to select VERSIONS. You will see the firmware versions listed for the L1 Model II power stand. If firmware version 1.0 is shown, you will need to update the power stand firmware.  You can also read the power stand firmware and voicing revisions by connecting the power stand as above and connecting the T1 to a computer using a USB cable. Once connected, open the L1 Updater Tool (refer to Section 4 of this repair package). On the Updater Tool screen you will see the firmware versions for the T1 and the power stand listed after the name of the file, i.e. Bose MM1 Firmware: 1.0.

		Update the power stand firmware as needed using the update procedure located later in the repair package or on page 54 of the service manual.
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