

MAINTENANCE MANUAL

VOLUME CONTROLLER BOX

P29/5050008000

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DESCRIPTION

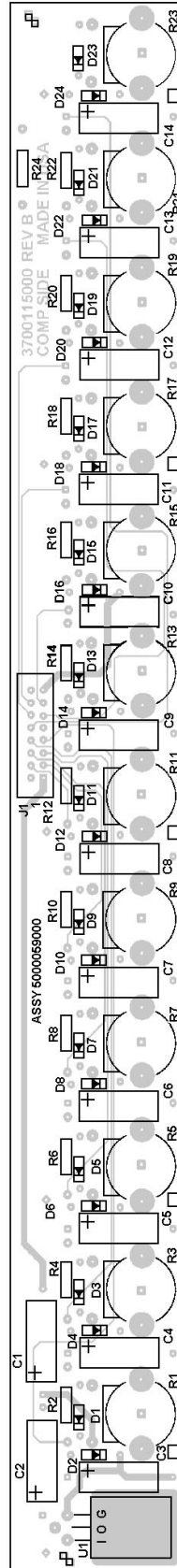
The Volume Controller Board resides in the remote Volume Controller Box (VCB) and contains the circuitry to control the volume of the speakers connected to the PA Board. The VCB contains the circuitry required to drive up to 12 volume circuits. However, only 4 are supported at this time.

control circuits on the PA Board. Fifteen volts DC is input from the PA Board via the DB15 cable. The 15 volts powers a 12-volt DC regulator which drives all 12 of the connected circuits. Each circuit consists of a 1k pot terminated by 2 diodes. This design provides a minimum potential of 1.4 volts DC (± 0.1). The wiper of the pot is connected to a limiting resistor to go back to the PA Board. The output DC is further filtered by a moderately large capacitor to remove any wiper noise.

CIRCUIT ANALYSIS

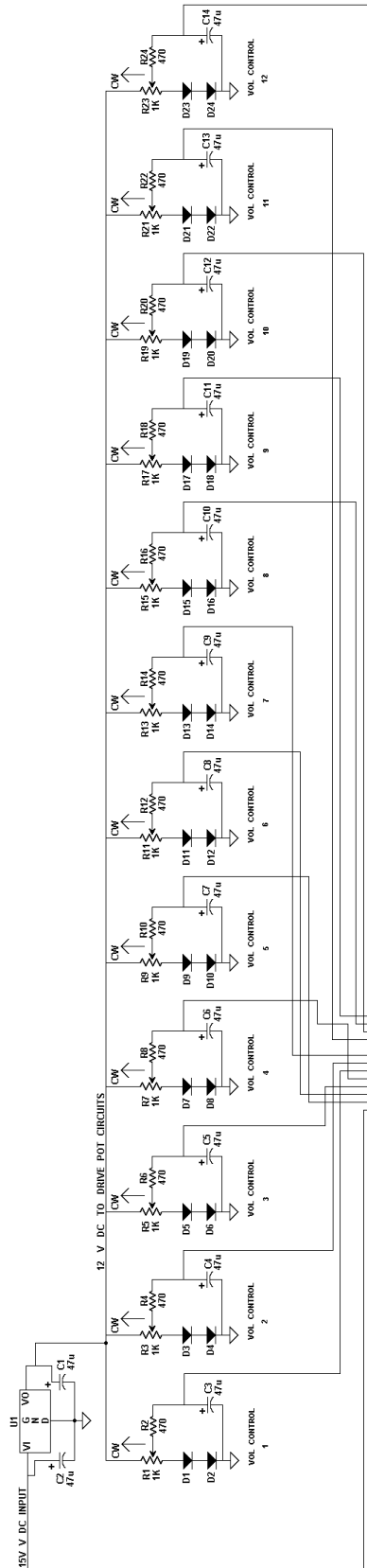
The Volume Control Board resides in the remote Volume Controller Box (VCB). The board contains the circuitry to receive a DC voltage from the DB15 cable and supply in return DC voltages to drive the various volume

All 12 of the circuits specified in the design are on the board. The pots are of the type that allow a push-in shaft and knob to be inserted. This design facilitates easy future addition of more volume circuits. The purpose of the circuit is to provide a DC voltage back to the transconductance amplifiers on the PA Board. The level of the voltage provided by the circuit is proportional to the desired audio level.



VOLUME CONTROLLER BOARD

(P29/3700115000, Rev. 1)
(P29/3700115000, Component Side, Rev. B)



NOTE:

DB15 PIN

FUNCTION

- | | |
|----|------------------------------------|
| 1 | GND |
| 2 | VOL CONTROL 5 |
| 3 | VOL CONTROL 3 |
| 4 | VOL CONTROL 1 |
| 5 | VOL CONTROL 7 |
| 6 | VOL CONTROL 11 |
| 7 | VOL CONTROL 8 |
| 8 | GND |
| 9 | 15 VDC POWER (FROM SPREADER BOARD) |
| 10 | VOL CONTROL 6 |
| 11 | VOL CONTROL 4 |
| 12 | VOL CONTROL 2 |
| 13 | VOL CONTROL 12 |
| 14 | VOL CONTROL 10 |
| 15 | VOL CONTROL 9 |

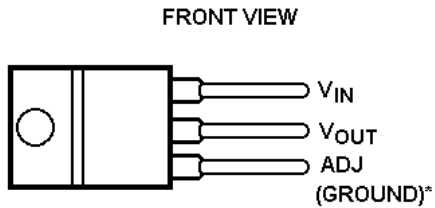
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

FEMALE

PLUG INTO DB15 PIN

TO SPREADER BOARD

**REGULATOR U1
LM7812**

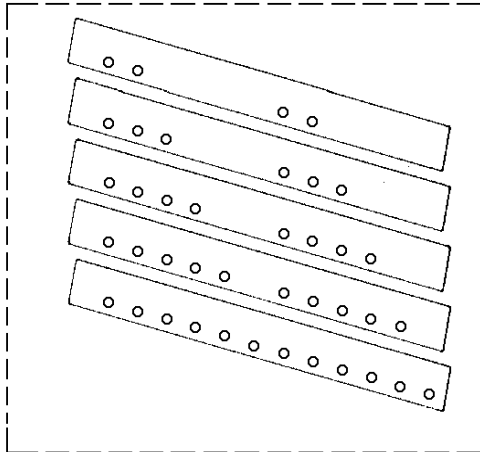
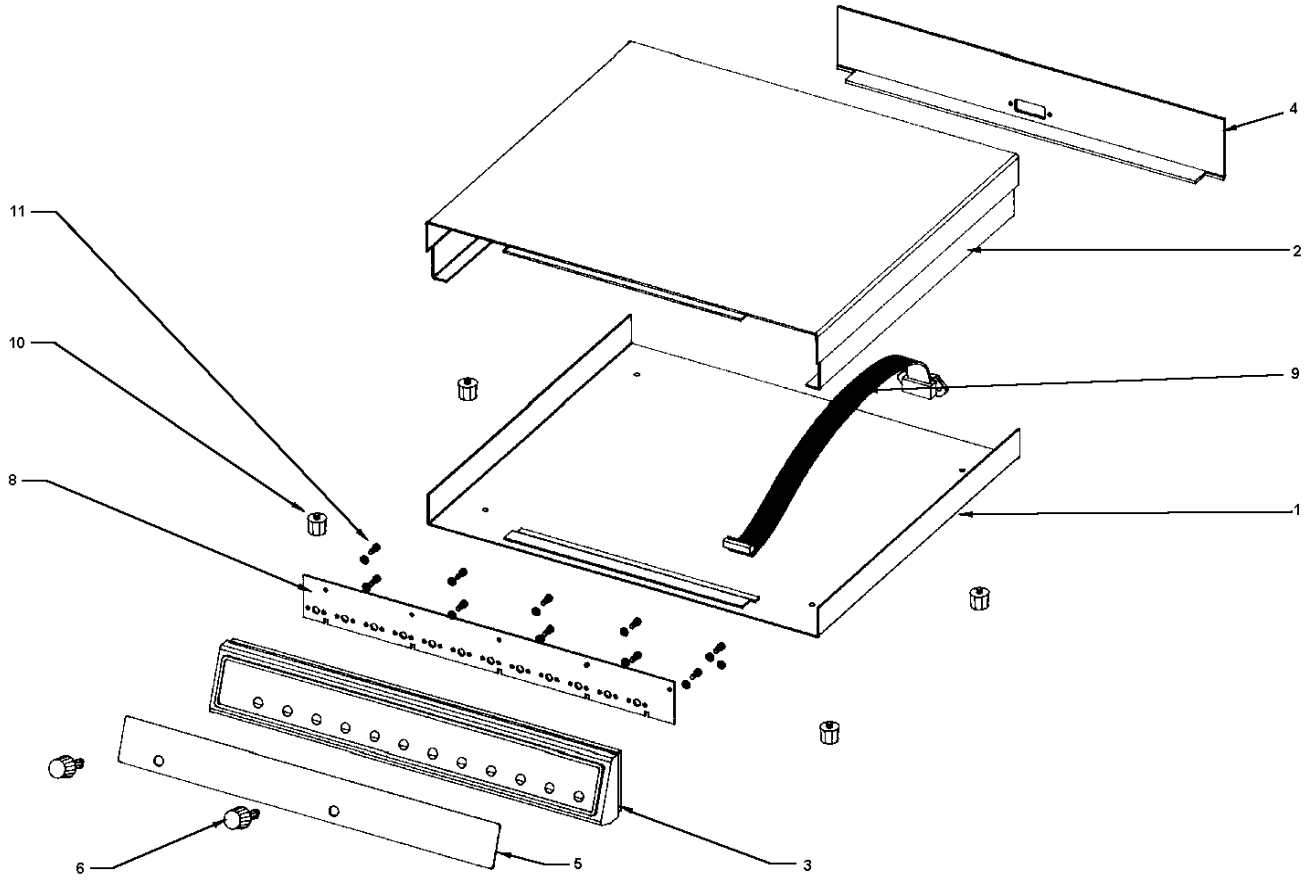


**VOLUME CONTROLLER
P29/5050008000**

Revised: June 18, 1991
Revision: 1.0

ITEM	QUANTITY	REFERENCE	PART
1	1	U1	LM7812
2	14	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14	47u 35V
3	12	R1,R3,R5,R7,R9,R11,R13,R15,R17,R19,R21,R23	1K POT AUDIO TAPER
4	12	R2,R4,R6,R8,R10,R12,R14,R16,R18,R20,R22,R24	470
5	24	D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13, D14,D15,D16,D17,D18,D19,D20,D21,D22,D23,D24	1N4148 DIODE
6	1	P1	CONNECTOR DB15
7	1	CABLED	B15 (MALE) TO DB15 (MALE) 10 FT SHIELDED CABLE

ALL RESISTORS ARE 1/4 WATT 10% CARBON.



OVERLAY KIT FOR CHANNEL EXPANSION

13	CHANNEL EXPANSION OVERLAY KIT		1
12	#4 NYLON WASHER	208014000	10
11	4.40 X 1/4" SS PAN PHIL SCREW	2010116000	17
10	FOOT	6110013000	4
9	CABLE	1030051000	1
8	PC BOARD ASSEMBLY	5000059000	1
7	SHAFT	310079000	2
6	KNOB	6130018000	2
5	OVERLAY	6140097000	1
4	BACKPLATE	6090238000	1
3	FACE MOLDING	6090241000	1
2	UPPER ENCLOSURE	6090239000	1
1	LOWER ENCLOSURE	6090240000	1
ITEM	DESCRIPTION	PART NUMBER	QTY

VOLUME CONTROL BOX

(P29/9030006000, Rev. 1)

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Lynchburg, Virginia 24502
1-800-528-7711 (Outside USA, 804-528-7711)

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