

# MAINTENANCE MANUAL

## BACKPLANE BOARD

### P29/7720029000 (344A3927P35)

### AND

## SPREADER BOARD

### P29/5000064000 (344A3927P21)

#### TABLE OF CONTENTS

	<u>Page</u>
<b>DESCRIPTION .....</b>	<b>1</b>
<b>BACKPLANE BOARD .....</b>	<b>1</b>
<b>SPREADER BOARD .....</b>	<b>2</b>
<b>OUTLINE AND SCHEMATIC DIAGRAMS</b>	
<b>BACKPLANE BOARD .....</b>	<b>4</b>
<b>SPREADER BOARD .....</b>	<b>3</b>
<b>PARTS LISTS.....</b>	<b>8</b>

### DESCRIPTION

Backplane Board P29/7720029000 and Spreader Board P29/5000064000 are installed within the C3 Maestro console's Audio Tower. The Backplane mounts on rails near the Audio Tower's front-end and the Spreader Board mounts on the rear panel.

### BACKPLANE BOARD

The Backplane Board provides signal interconnections between the slide-in boards installed in the Audio Tower. These boards include the Audio Matrix Board, the Audio PA Board(s) and the I/O Board. The Backplane also furnishes 15 Vdc interconnections from the Power Supply to these boards. Table 1 summarizes Backplane connector utilization.

**TABLE 1 – BACKPLANE BOARD CONNECTORS**

CONNECTOR	TYPE	NO. OF POSITIONS	USE
J1 / J1BP	dual-row header	50	mates with I/O Board
J2 / J2BP	dual-row header	70	mates with Audio Matrix Board
J3 / J3BP	dual-row header	50	mates with first Audio PA Board (#1)
J4 / J4BP	dual-row header	50	mates with second Audio PA Board (#2)
J5 / J5BP	socket	2	power connection from Power Supply
J6 / J6BP	socket	2	power connection to Spreader Board
J7 / J7BP	single-row header	2	power connection to LED Indicator
J8 / J8BP	single-row header	2	same as J7 (normally not used)

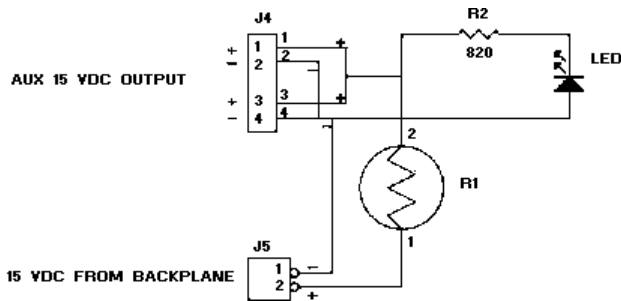
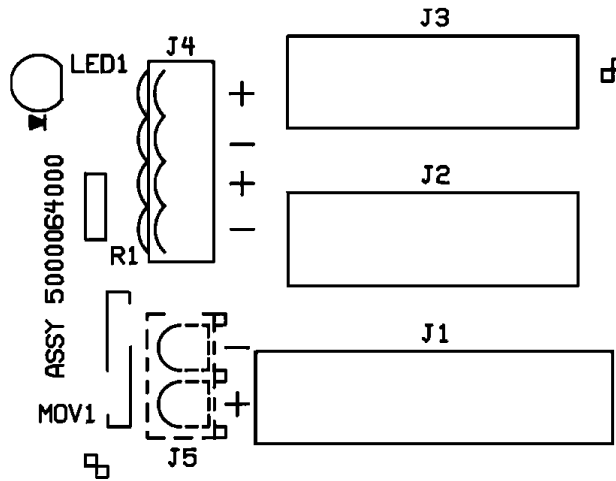
## **SPREADER BOARD**

In a C3 Maestro console system equipped with multiple unselect speakers, two (2) Audio PA Boards are required. Essentially, the Spreader Board's earns its name in a console system of this type because it expands or "spreads" volume control wiper connections from the Volume Controller Box to both Audio PA Boards within the Audio Tower. Basically, it is a "Y" cable adapter.

The Spreader Board also has an LED ac power indicator and current-limited auxiliary 15 Vdc connections for external equipment. These connections are available at the plug-in screw-terminal type terminal block. This terminal block is located on the rear panel adjacent to the ac on/off power switch.



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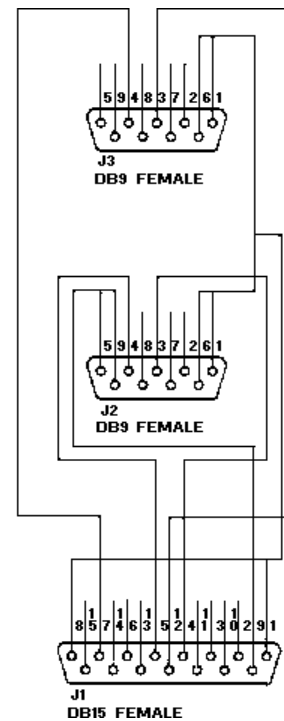
NOTE:

J3 CONNECTS VIA A 9 PIN CABLE TO PA BOARD 2.  
J2 CONNECTS VIA A 9 PIN CABLE TO PA BOARD 1.  
J1 CONNECTS VIA A 15 PIN CABLE TO THE REMOTE VOLUME CONTROLLER.  
J4 IS A REMOVABLE SCREW TERMINAL.  
J4 SUPPLIES 15 VDC TO POWER EXTERNAL EQUIPMENT.  
J5 IS THE 15 VDC FROM THE BACKPLANE TO SUPPLY J4.

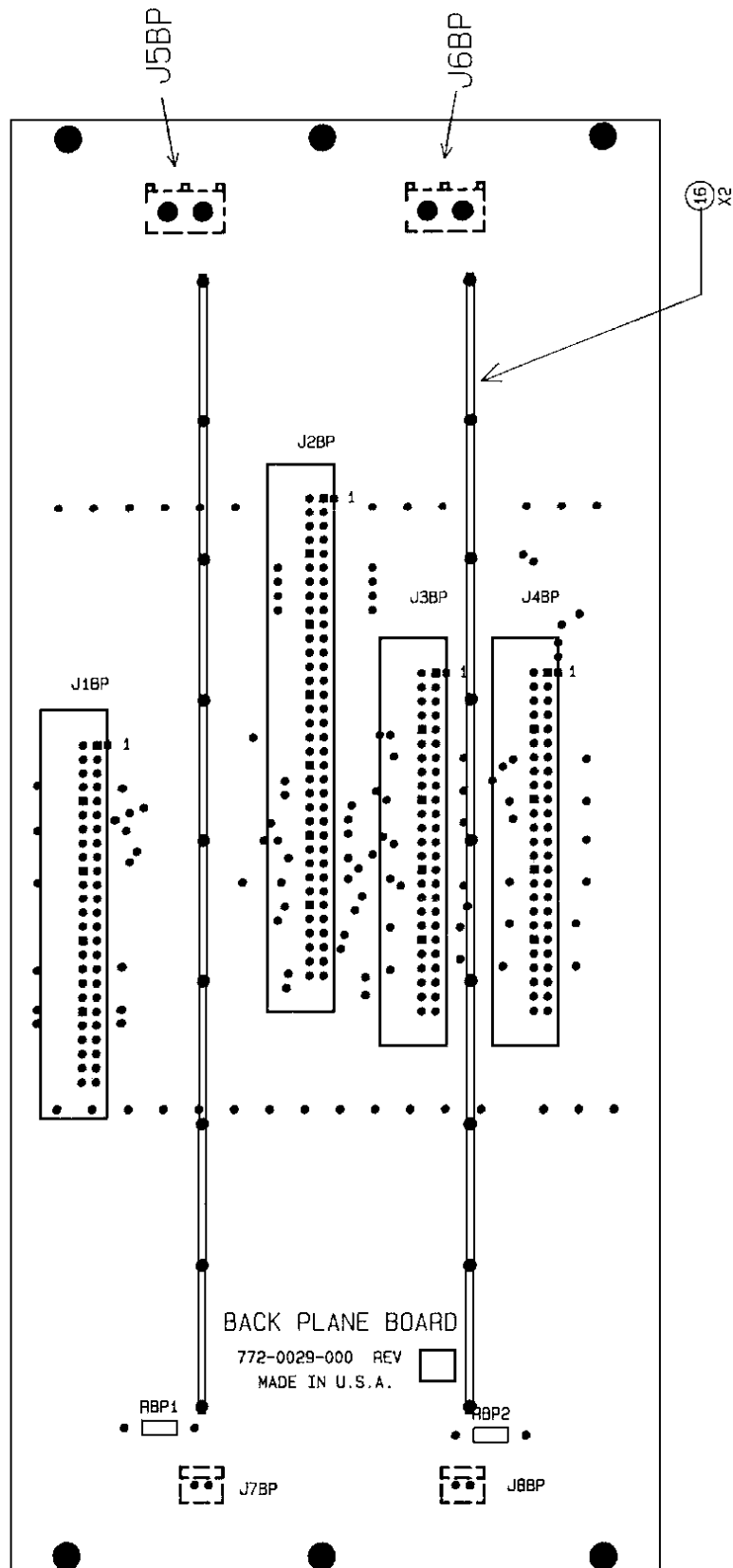
R1 IS A 5 OHM THERMAL FUSE. IT HEATS UP ON OVERLOAD AND INCREASES ITS RESISTANCE, SHUTTING DOWN THE OVERLOAD. WHEN THE OVERLOAD IS CORRECTED IT WILL COOL AND REDUCE ITS RESISTANCE TO 5 OHMS. THIS WILL EFFECTIVELY RESET THE FUSE.

DB15 PIN	FUNCTION	DB15 PIN	FUNCTION
1	GND	9	15 VDC POWER
2	VOL CONTROL 5	10	VOL CONTROL 6
3	VOL CONTROL 3	11	VOL CONTROL 4
4	VOL CONTROL 1	12	VOL CONTROL 2
5	VOL CONTROL 7	13	VOL CONTROL 12
6	VOL CONTROL 11	14	VOL CONTROL 10
7	VOL CONTROL 8	15	VOL CONTROL 9
8	GND		

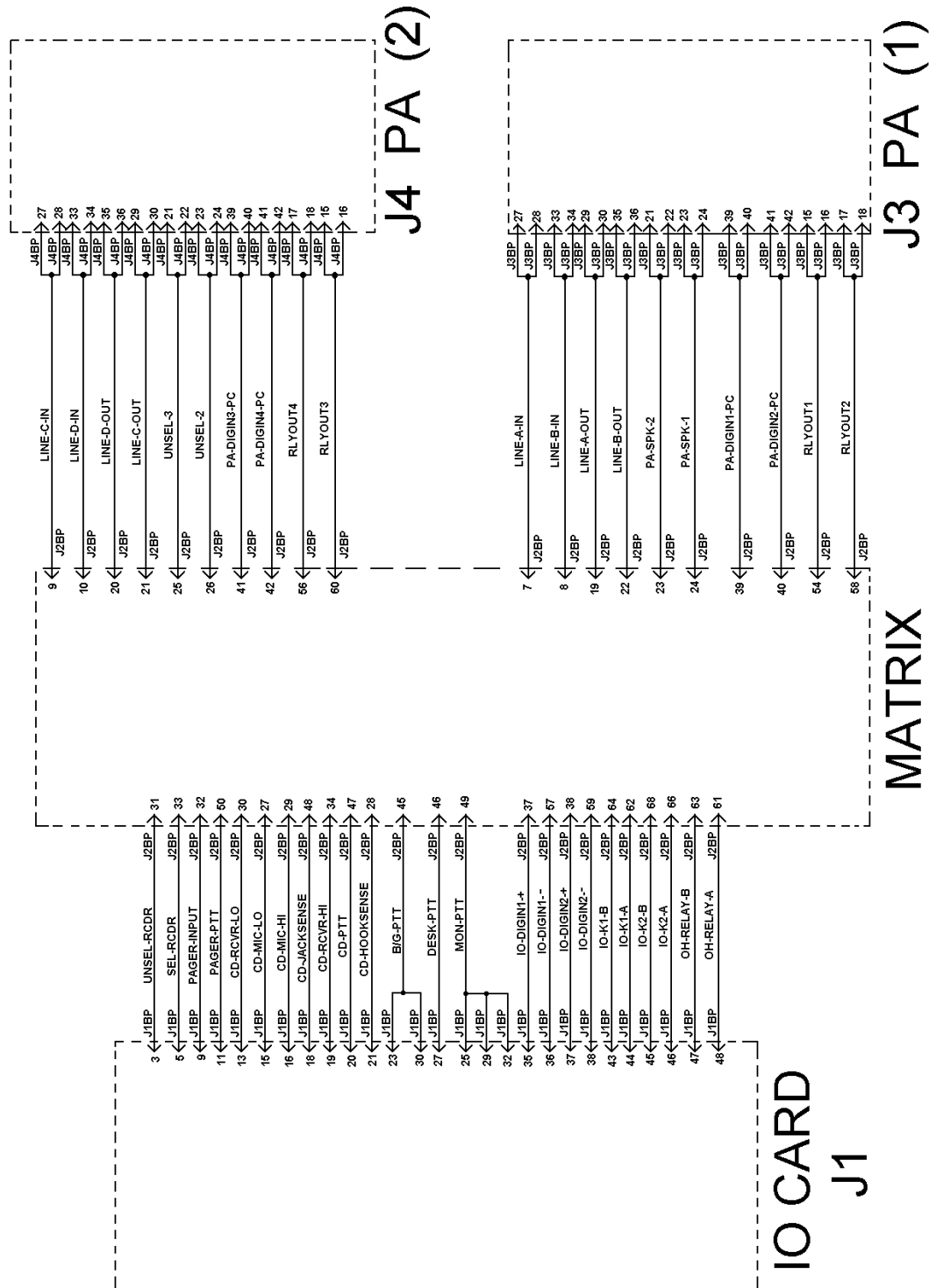
ONLY VOLUME CONTROL CIRCUITS 1, 2, 3, AND 4 ARE ENABLED IN THIS CHASSIS



SPREADER BOARD  
P29/5000064000



**BACKPLANE BOARD**  
**P29/7720029000**



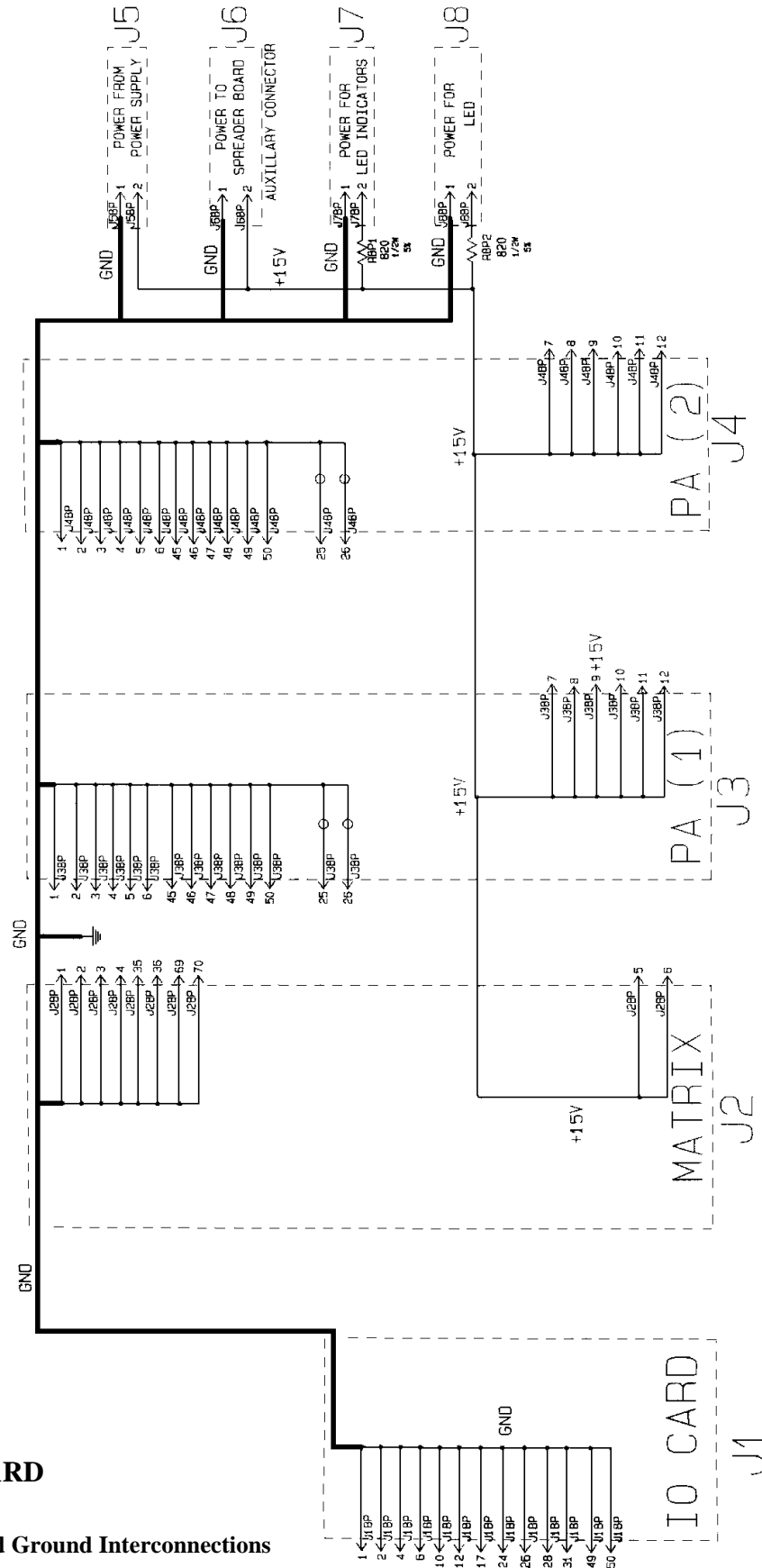
## NOTES

1. RESISTANCE VALUES IN OHMS UNLESS OTHERWISE STATED
2. RESISTORS 1/4 WATT 1% UNLESS OTHERWISE STATED

**BACKPLANE BOARD**  
**P29/7720029000**

Sheet 1 of 3 - Signal Interconnections

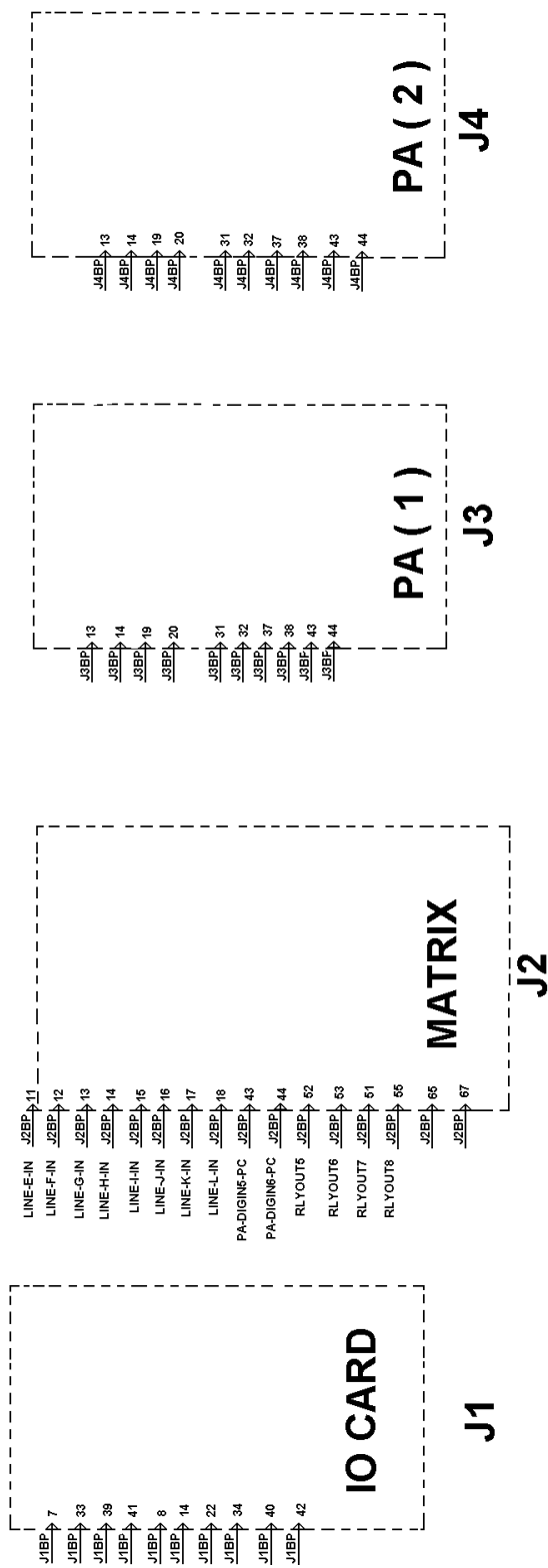
(772-0029-XXX-EC, Sh. 1, Rev. A)



## BACKPLANE BOARD P29/7720029000

Sheet 2 of 3 - Power And Ground Interconnections

(772-0029-XXX-EC, Sh. 2, Rev. A)



**BACKPLANE BOARD**  
**P29/7720029000 (344A3927P35), Rev. A**

**ISSUE 1**

SYMBOL	PART NUMBER	DESCRIPTION
		-----JACKS-----
J1BP	P29/3800419000	Connector: 50-position header.
J2BP	P29/3800445000	Connector: 70-position.
J3BP and J4BP	P29/3800419000	Connector: 50-position header.
J5BP and J6BP	P29/3800154000	Connector: 2-position socket.
J7BP and J8BP	P29/3800002000	Connector: 2-position header.
		----- PLUGS -----
P5 and P6	P29/3800133000	Connector: 2-position.
		----- RESISTORS -----
R1 and R2	P29/3060014000	820 ohms $\pm 5\%$ , 1/2 w.
		----- MISCELLANEOUS -----
16	P29/2140030000	Support: PC board stiffener (Qty = 2).

**SPREADER BOARD**  
**P29/5000064000 (344A3927P21), Rev. B**

**ISSUE 2**

SYMBOL	PART NUMBER	DESCRIPTION
		-----JACKS-----
J1		Connector: DB-15 female
J2 and J3		Connector DB-9 female
J4	P29/3800371000	Connector: Weidmuller SL4 12349-6.
J5		Connector: 2-position; AMP 641964-1
		----- LIGHT EMITTING DIODE -----
LED1		Green.
		----- RESISTORS -----
R1	P29/3130002000	Thermistor, PTC: 5 ohms, 50 V; Digi-Key KC005R-ND.
R2	P29/3060014000	820 ohms $\pm 5\%$ , 1/2 w.
		----- MISCELLANEOUS -----
	P29/3800370000	Terminal block; screw terminals: Weidmuller BL4 12593-6. (Mates with J4).

**PRODUCTION CHANGES**

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter" which is stamped after the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for the descriptions of parts affected by these revisions.

**Rev. A – BACKPLANE BOARD P29/7720029000**

Initial production release.

**Rev. A – SPREADER BOARD P29/5000064000**

Initial production release.

**Rev. B – SPREADER BOARD P29/5000064000**

Added spacers to LED indicator and changed thermistor R1.