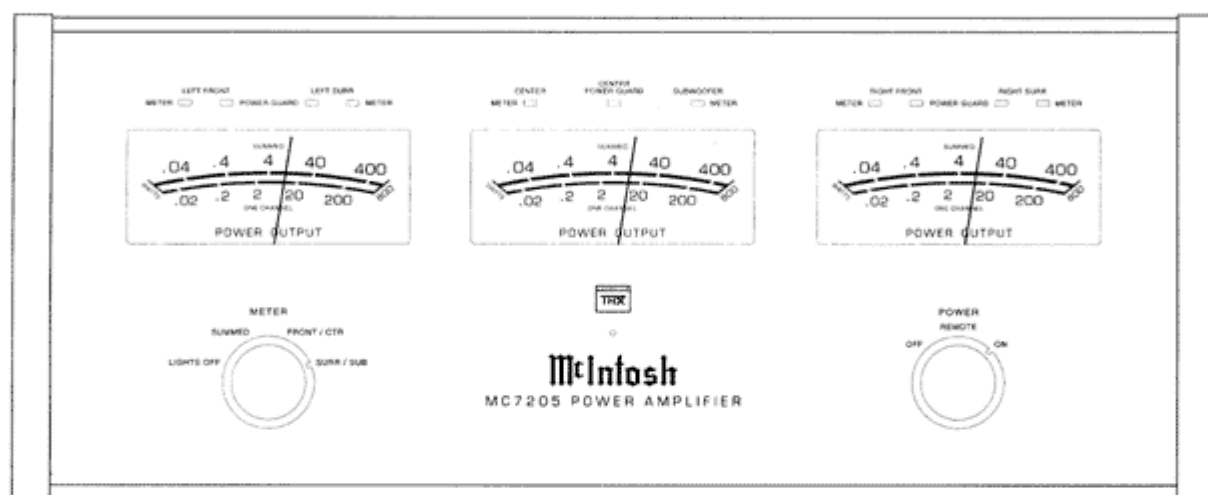


# MC7205

## POWER AMPLIFIER



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# McIntosh

## SERVICE MANUAL

# PERFORMANCE SPECIFICATIONS

## POWER OUTPUT PER CHANNEL

200 watts into 4 ohm loads or 120 watts into 8 ohm loads minimum sine wave continuous average power output per channel, all channels operating.

## OUTPUT LOAD IMPEDANCE

8 or 4 ohms

## RATED POWER BAND

20Hz to 20,000Hz

## DYNAMIC HEADROOM

1.6dB

## FREQUENCY RESPONSE

+0, -0.25dB from 20Hz to 20,000Hz  
+0, -3dB from 10Hz to 100,000Hz

## TOTAL HARMONIC DISTORTION

0.005% maximum at any power level from 250 milliwatt to rated power per channel from 20Hz to 20,000Hz, all channels operating.

## INTERMODULATION DISTORTION

0.005% maximum if instantaneous peak output per channel does not exceed twice the rated output with all channels operating for any combination of frequencies from 20hz to 20,000hz.

## SIGNAL TO NOISE RATIO

113dB below rated output, (A Weighted)

## SENSITIVITY

1 volt (2.0V at level control center detent position)

## INPUT IMPEDANCE

10,000 ohms

## DAMPING FACTOR (WIDE BAND)

200 @ 8 ohms  
100 @ 4 ohms

## POWER SUPPLY ENERGY STORAGE

215 Joules

## POWER REQUIREMENTS

100 Volts, 50/60Hz at 1080 watts  
110 Volts, 50/60Hz at 1080 watts  
120 Volts, 50/60Hz at 1080 watts  
120 Volts, 50/60Hz at 1080 watts  
230 Volts, 50/60Hz at 1080 watts  
240 Volts, 50/60Hz at 1080 watts  
(Refer to rear panel of the MC7205 for the correct voltage)

## DIMENSIONS

Front Panel: 17-1/2 inches (44.5cm) wide, 7-1/16 inches (17.9cm) high. Depth behind front mounting panel is 21 inches (53.3cm) including clearance for connectors. Panel clearance required in front of mounting panel is 1-1/8 inches (2.9cm)

## WEIGHT

53 pounds (24kg) net, 72 pounds (32kg) in shipping carton

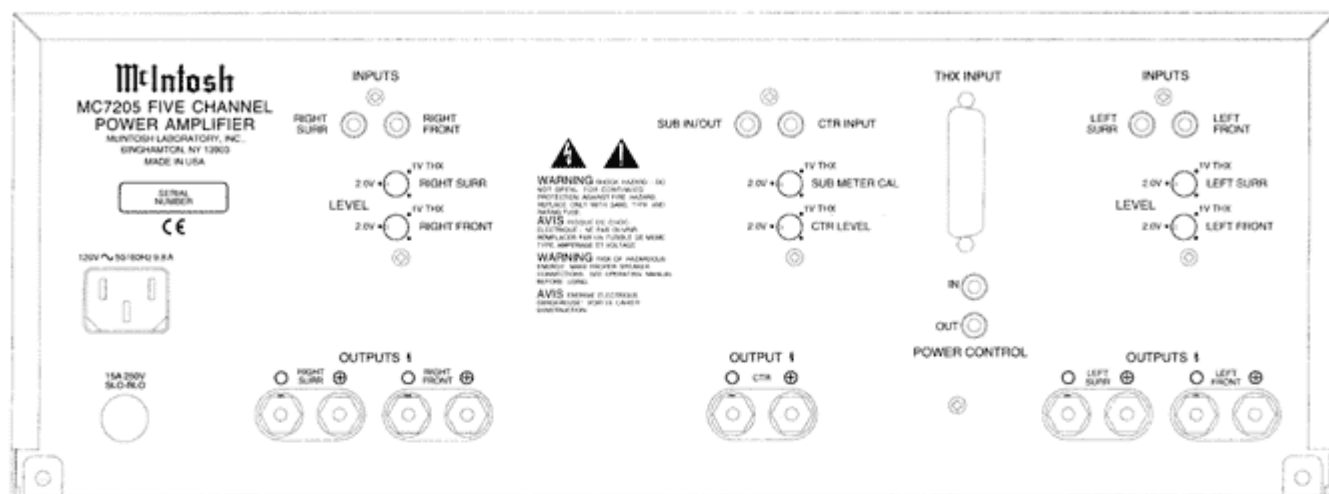
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## NOTES

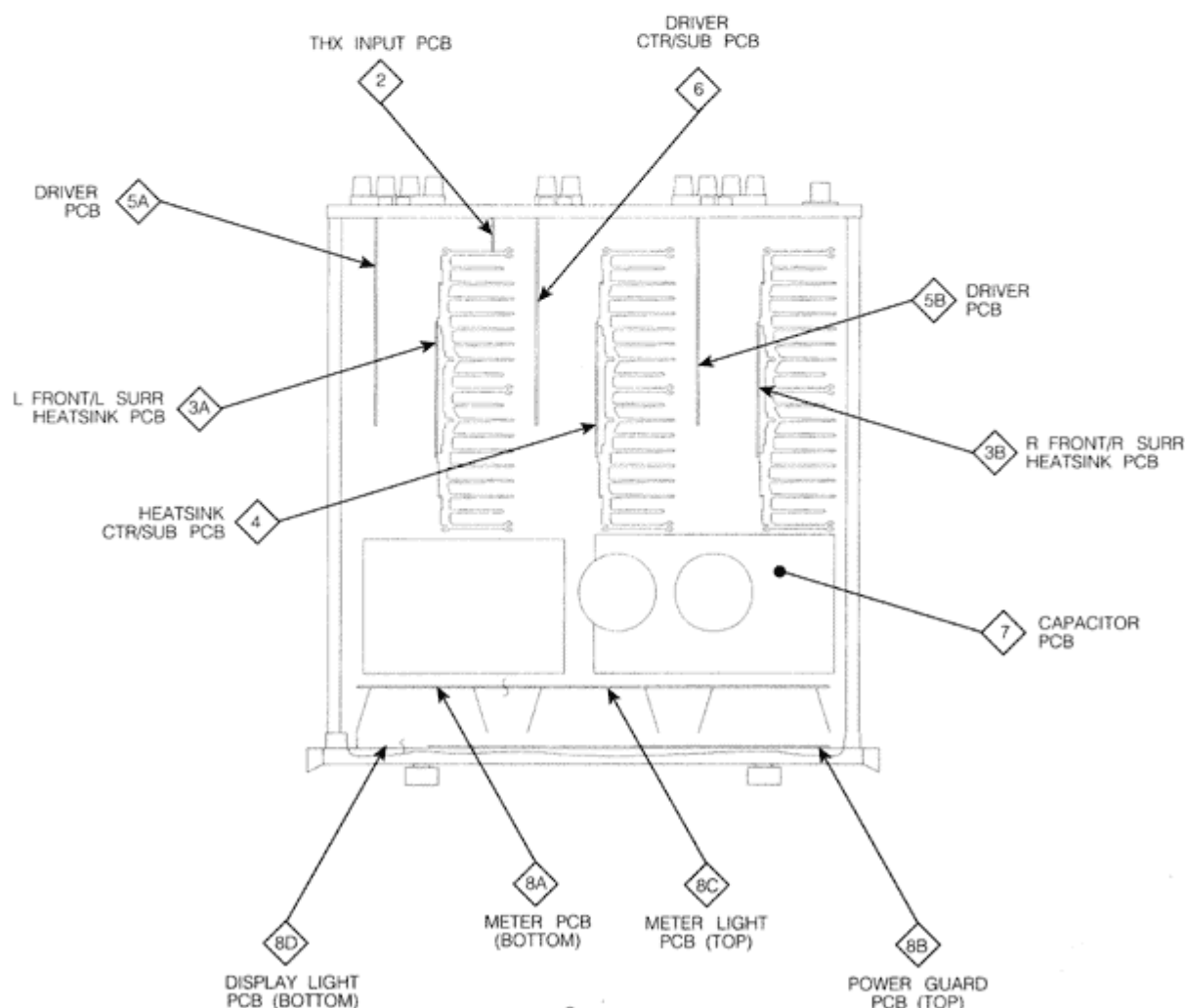
---

1. The heavy lines on the schematics denote the primary signal path.
2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
  - a. AC input at 120 volts, 50/60Hz.
  - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
3. Unless otherwise specified:
  - a. Resistor values are in ohms.
  - b. Capacitor values are in microfarads (uF).
  - c. Inductor values are in microhenries (uH)
4. On PC board drawings, Square pads indicate:
  - a. Polarized Capacitors - Positive
  - b. Diode - Cathode
  - c. Others - Pin
5. **WARNING:**  
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.

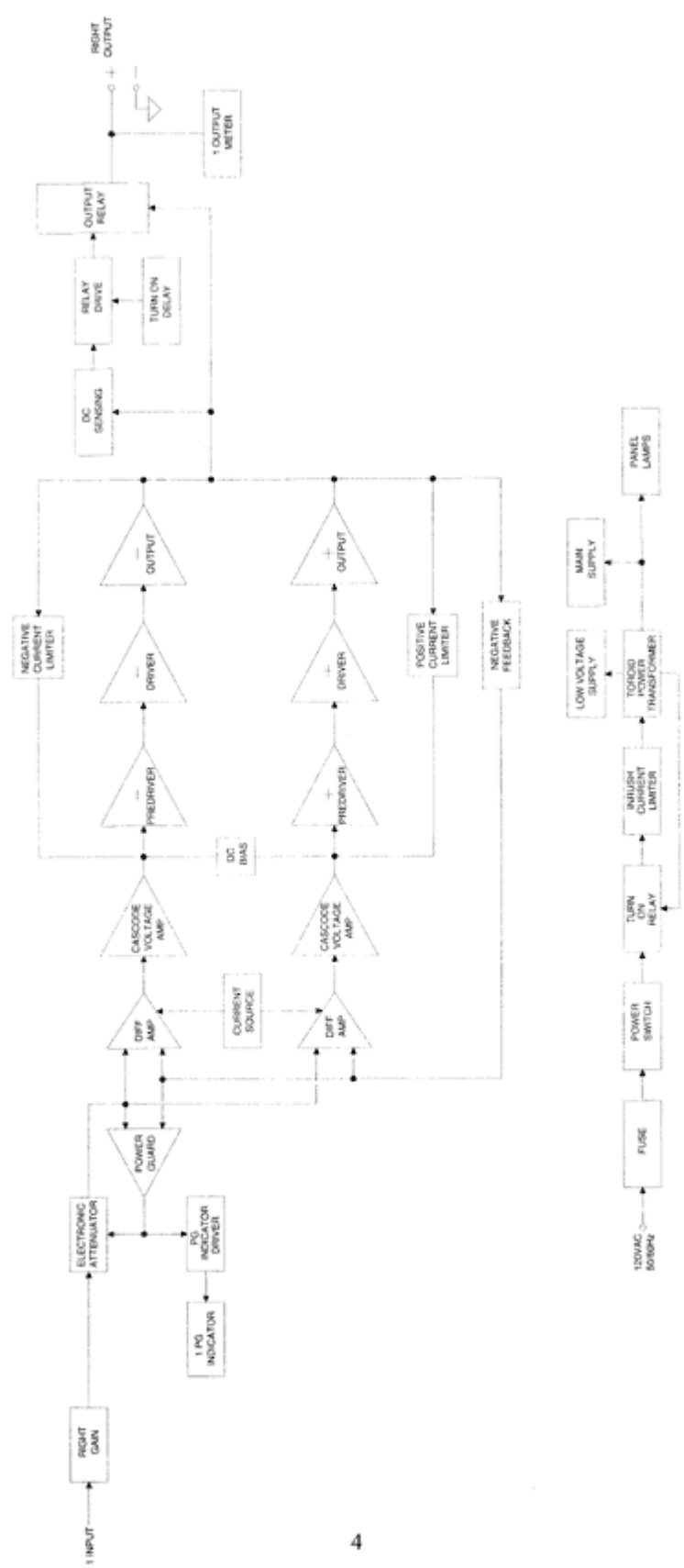
# REAR PANEL



## SECTION LOCATIONS

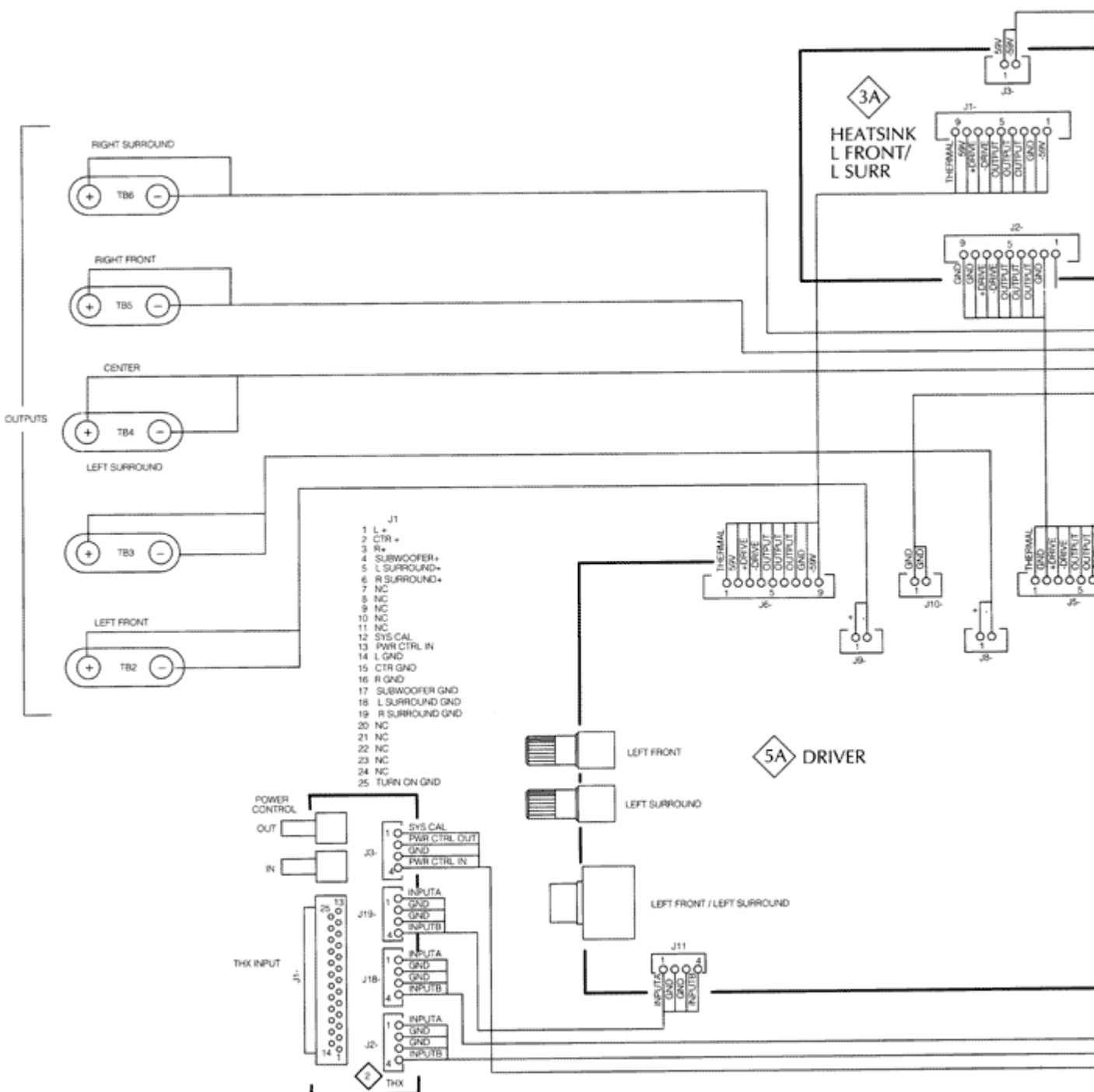


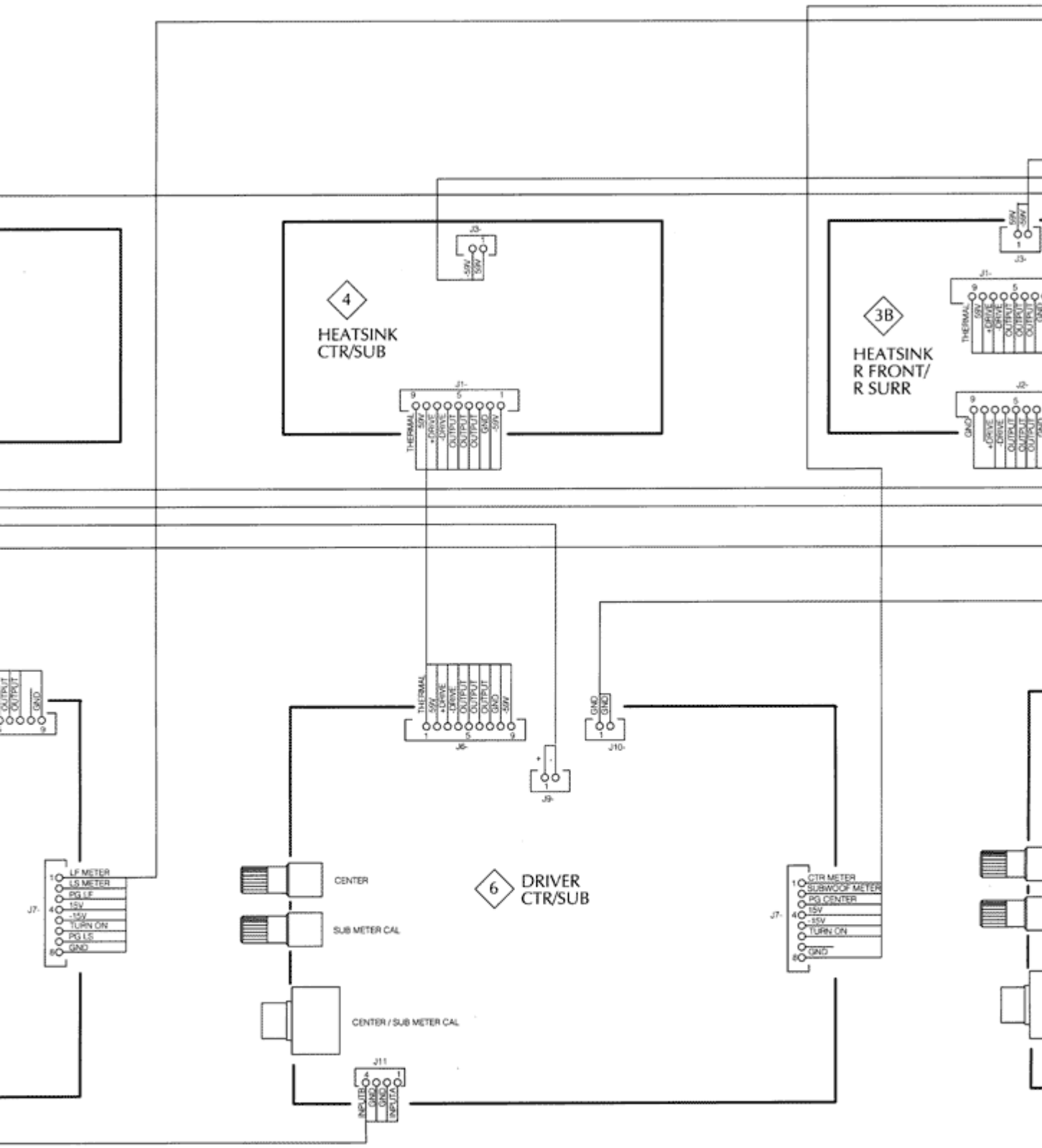
### BLOCK DIAGRAM

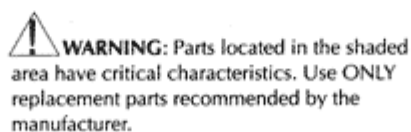


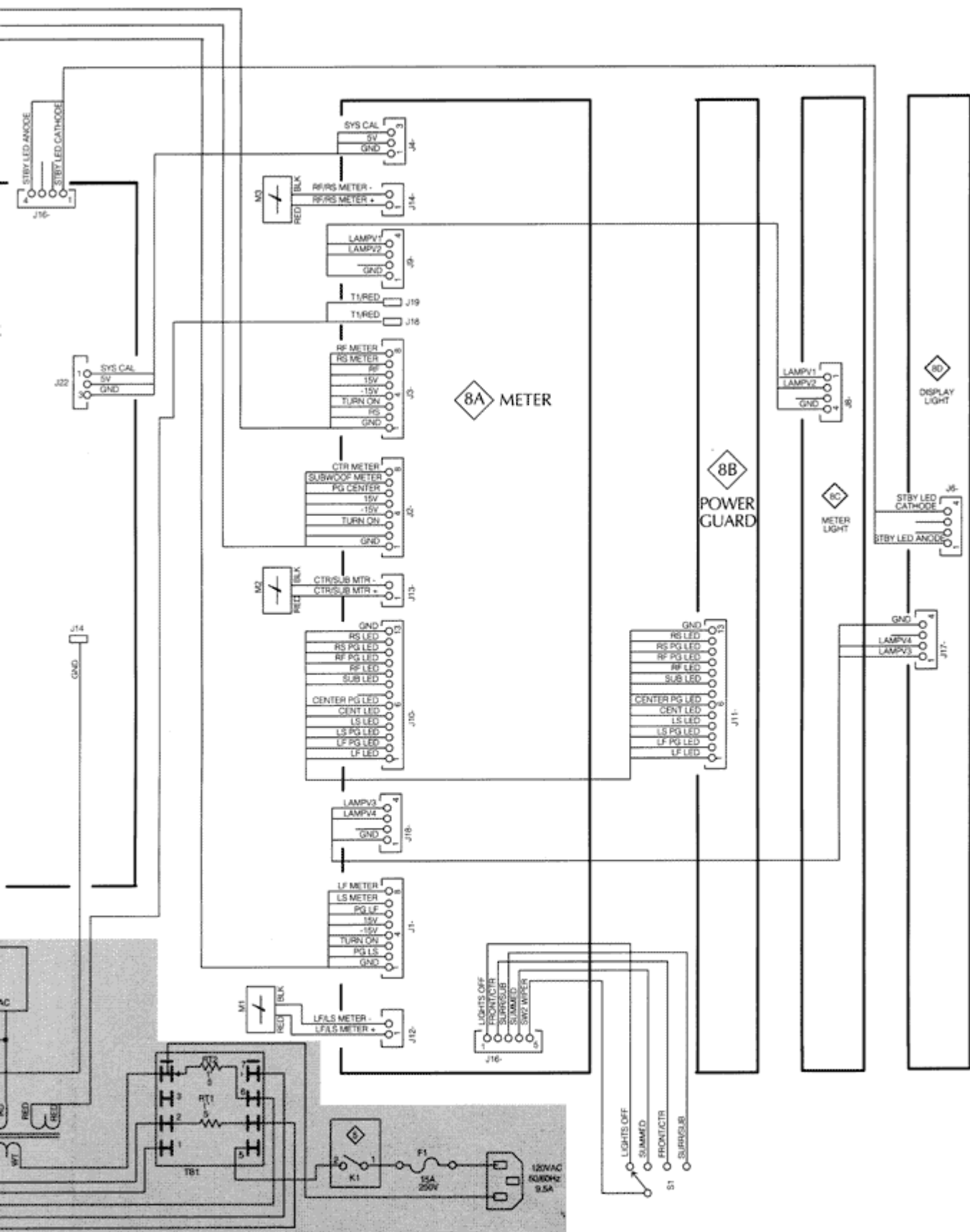
1

## INTERCONNECTION DIAGRAM



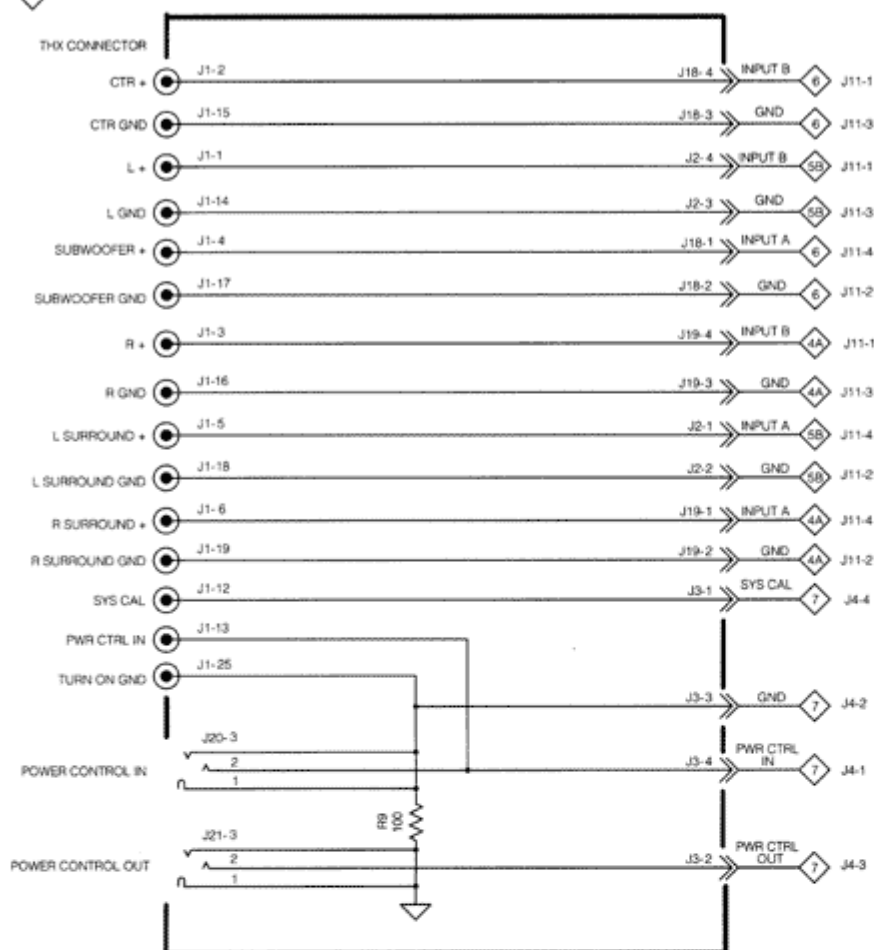






2

THX 048697

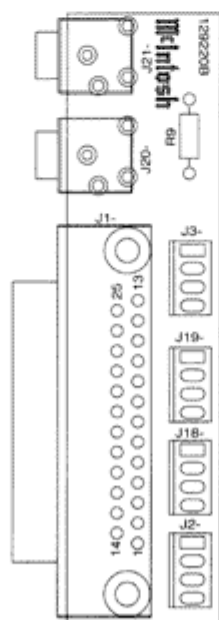


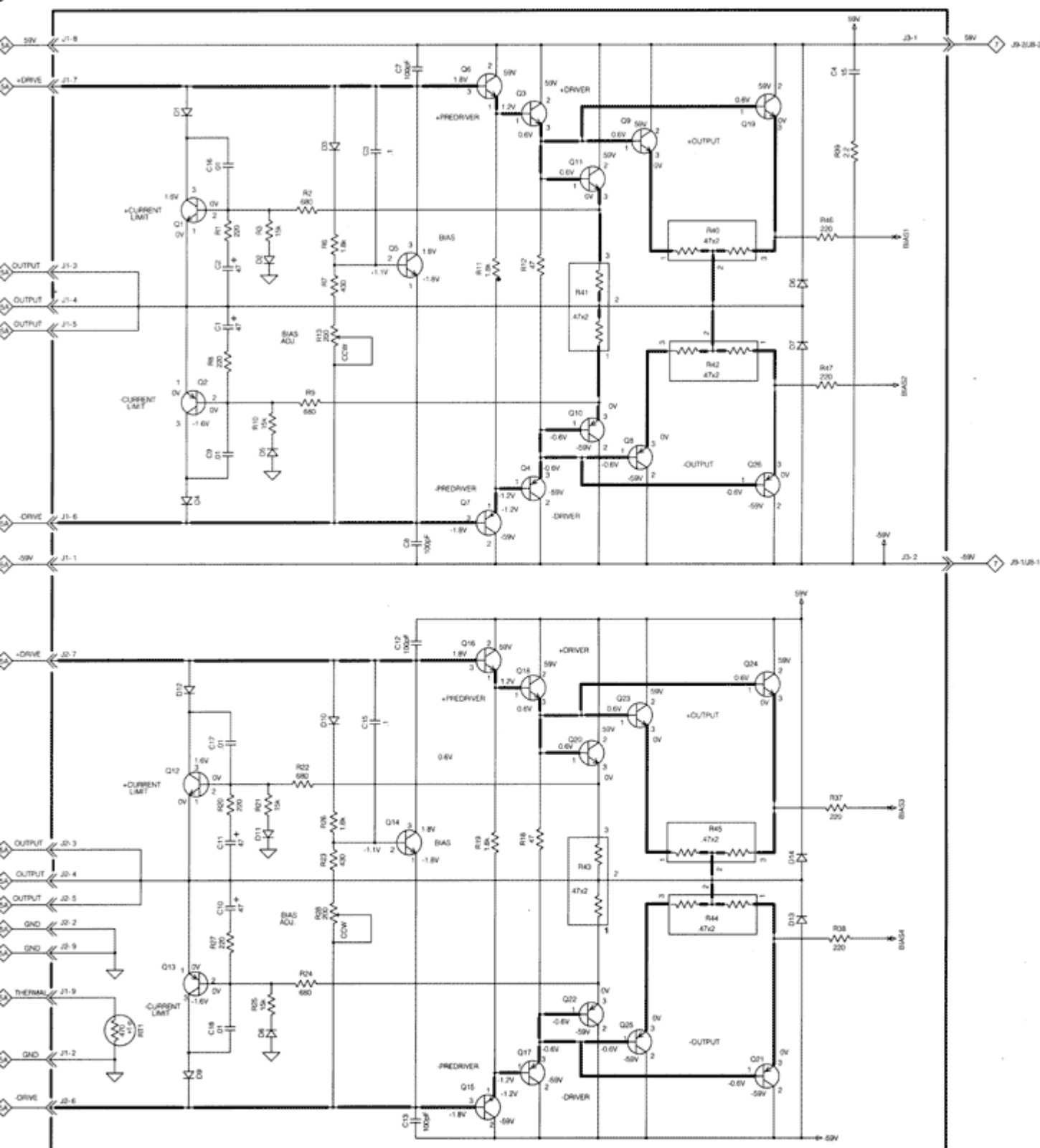
## POWER CONNECTIONS

|     |         |
|-----|---------|
| IC1 | 14 = 5V |
|     | 7 = GND |

2

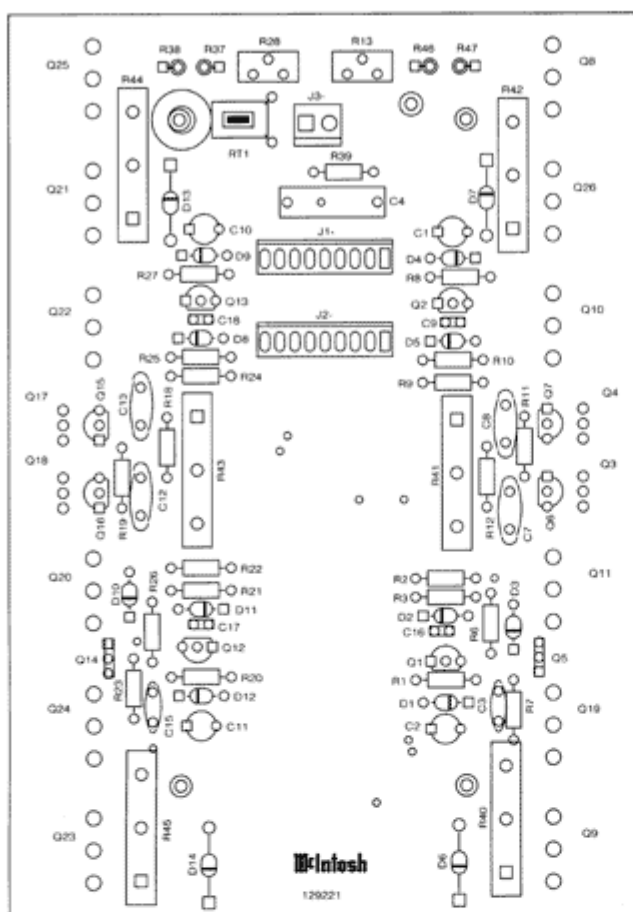
048697





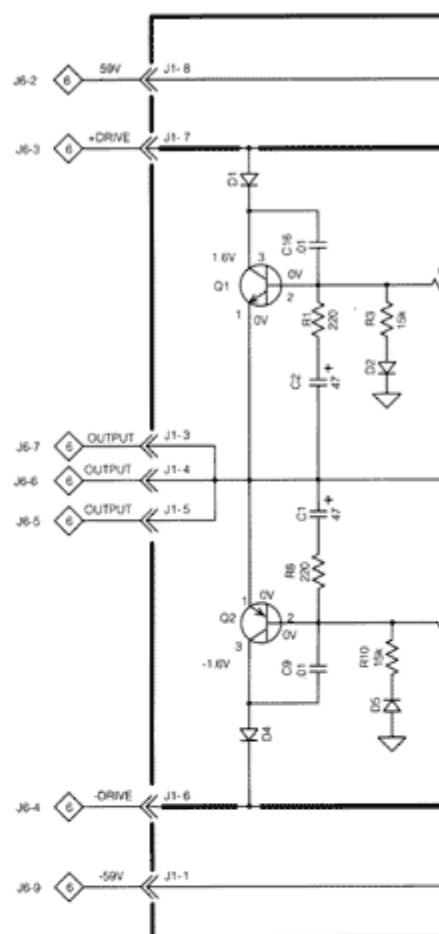
3a/b

048968



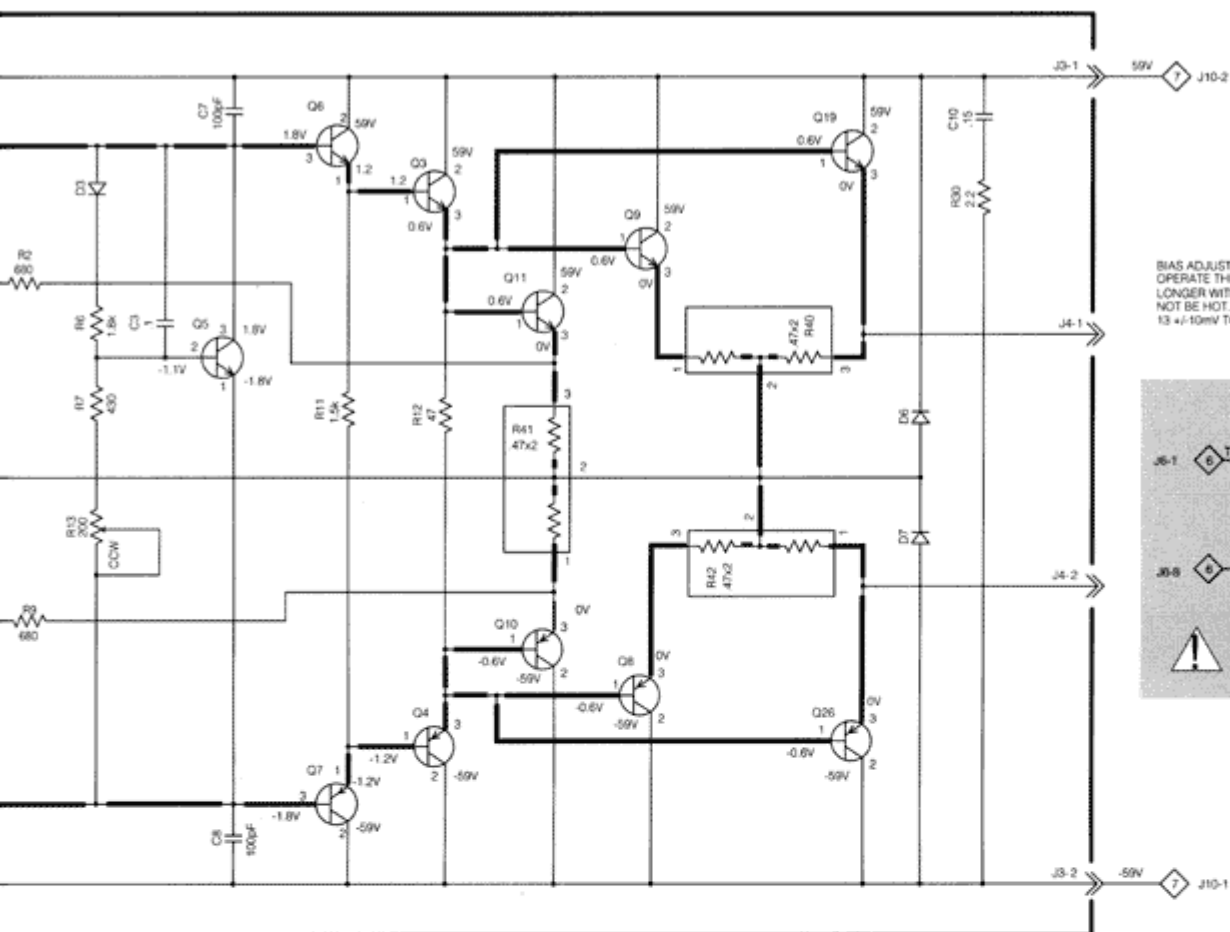
4

HEATSI

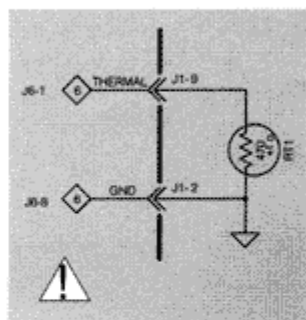


4

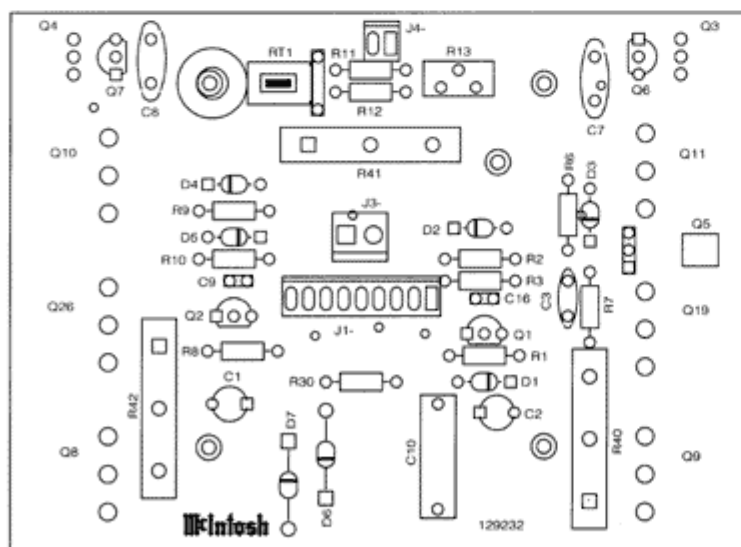
048999



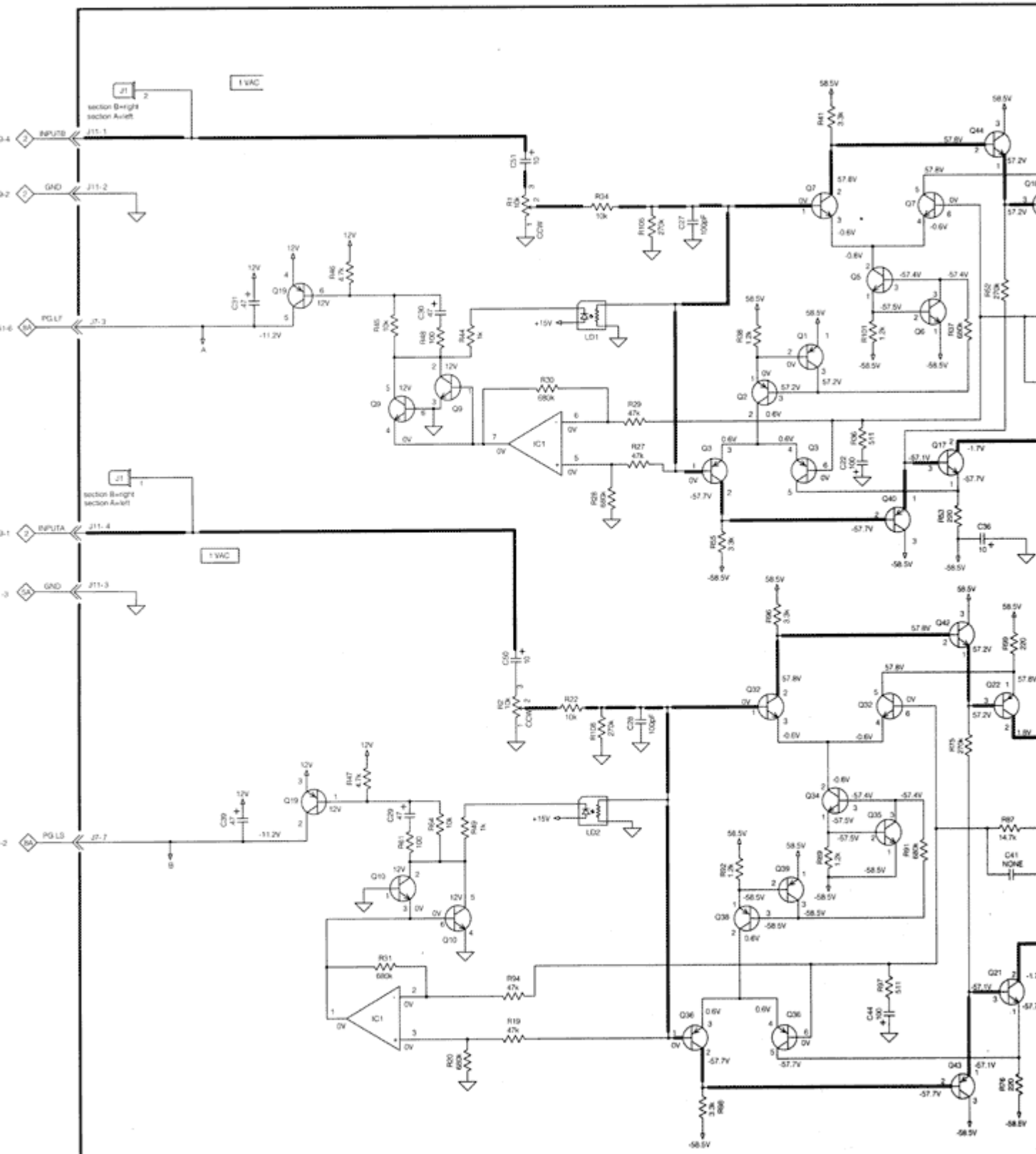
BIAS ADJUSTMENT:  
OPERATE THE AMPLIFIER FOR 2 MINUTES OR  
LONGER WITH NO OUTPUT. HEATSINKS MUST  
NOT BE HOT. MEASURE ACROSS J4-1 AND J4-2  
13  $\pm$  10mV TO  $\pm$  15mV WITH NO LOAD ON.



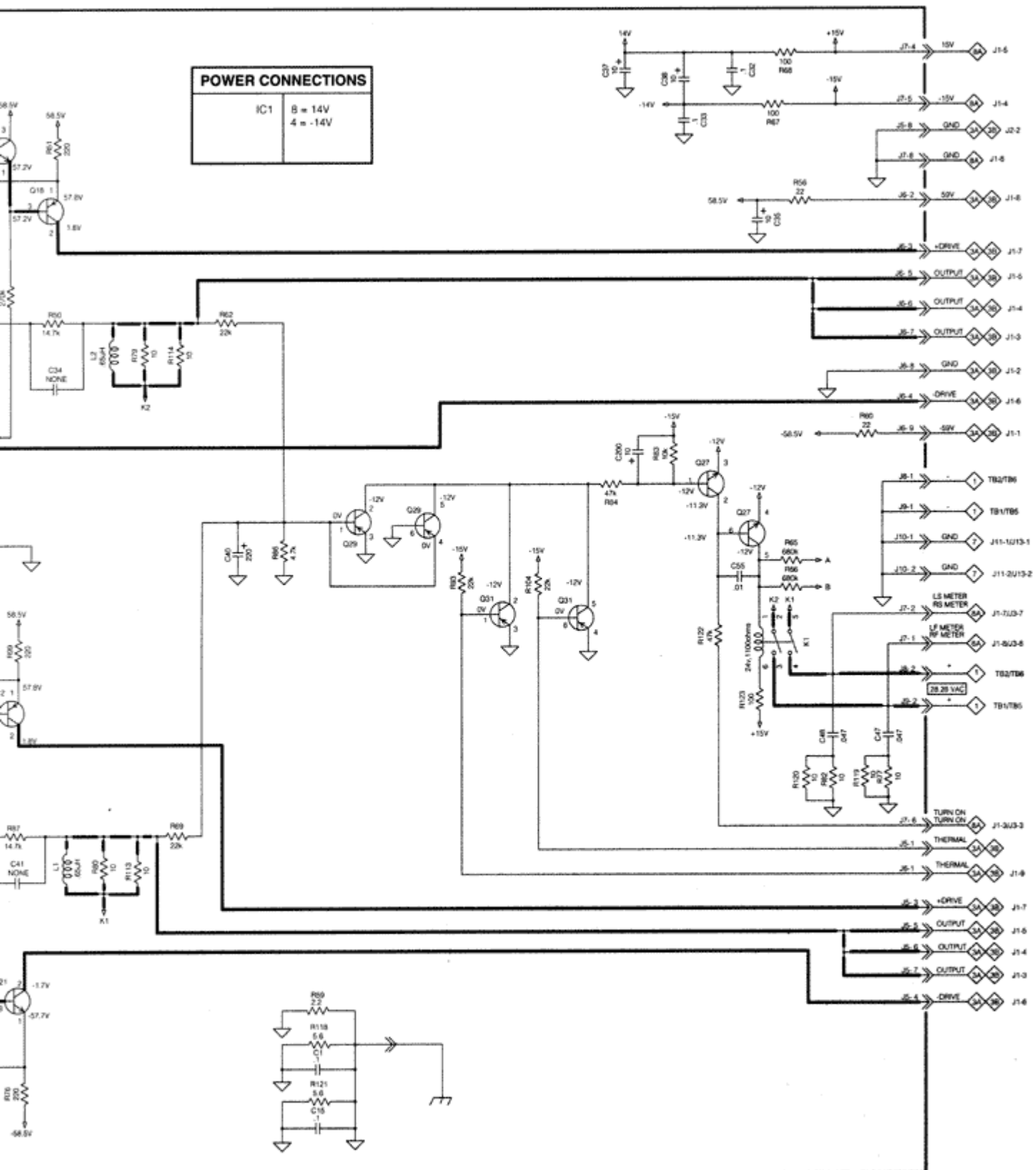
**WARNING:** Parts located in the shaded area have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

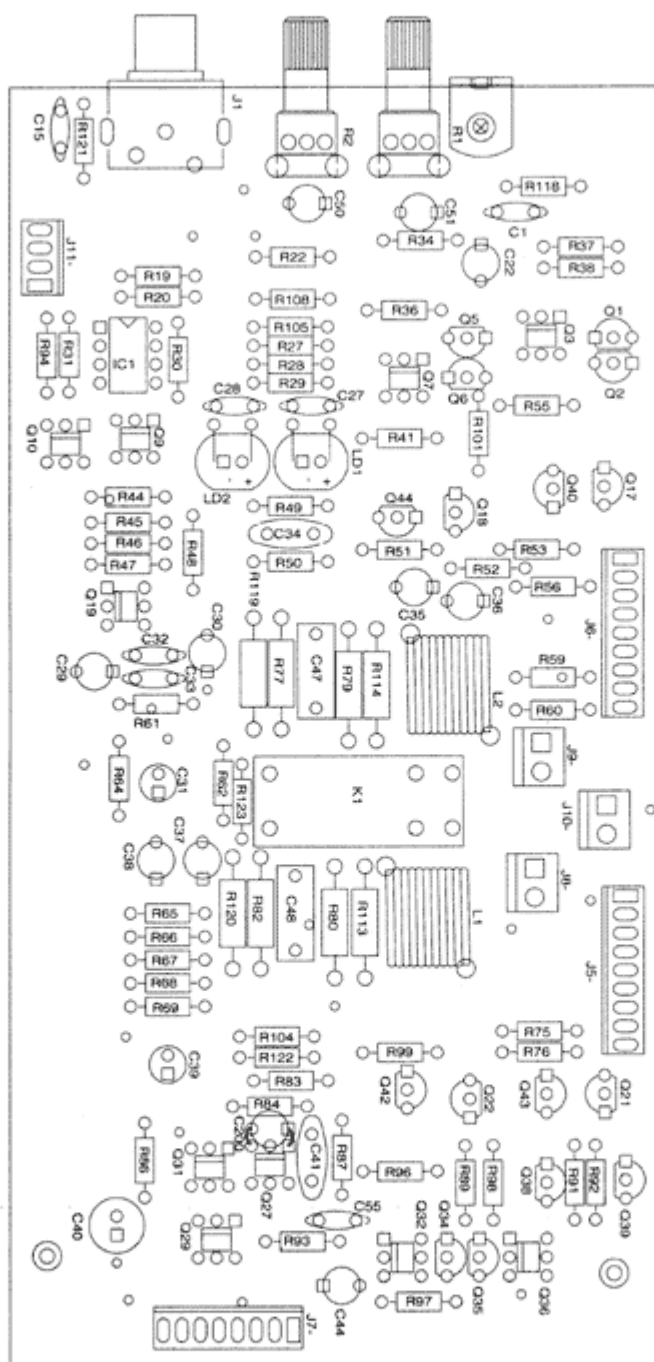


# DRIVER 048969

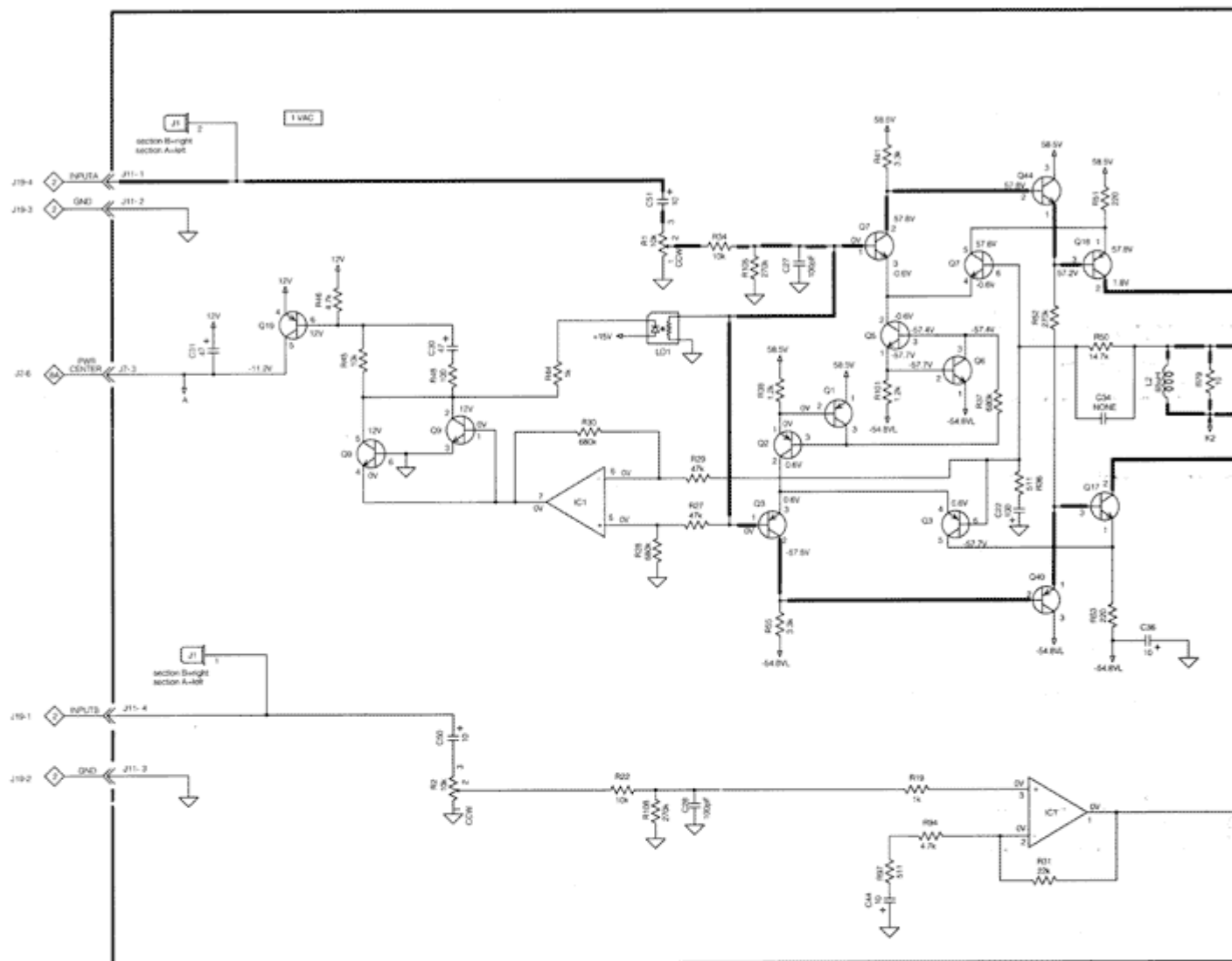


|     |                     |
|-----|---------------------|
| IC1 | B = 14V<br>4 = -14V |
|-----|---------------------|





# DRIVER CTR/SUB 049006

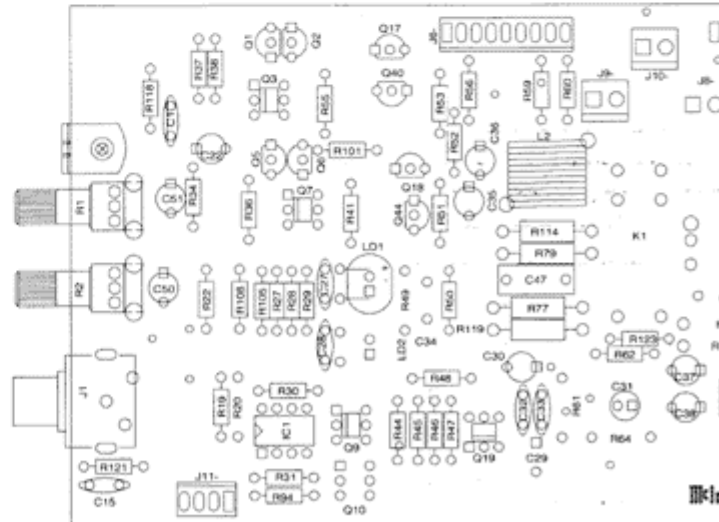


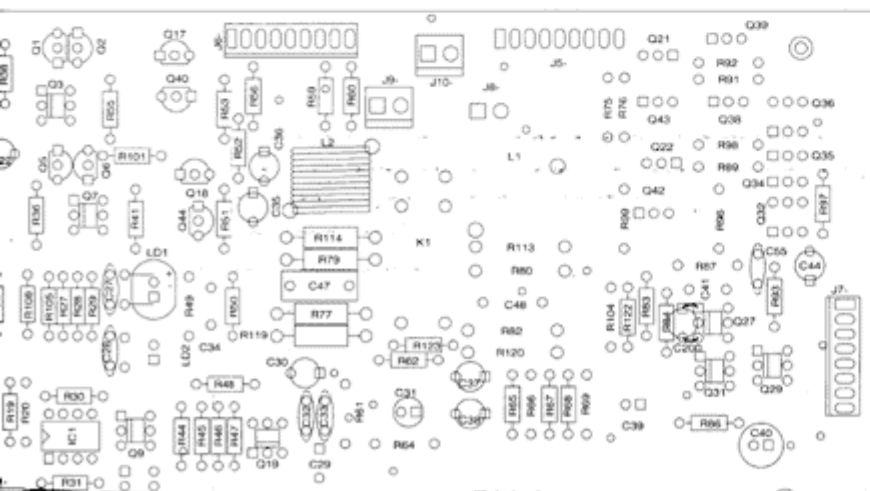
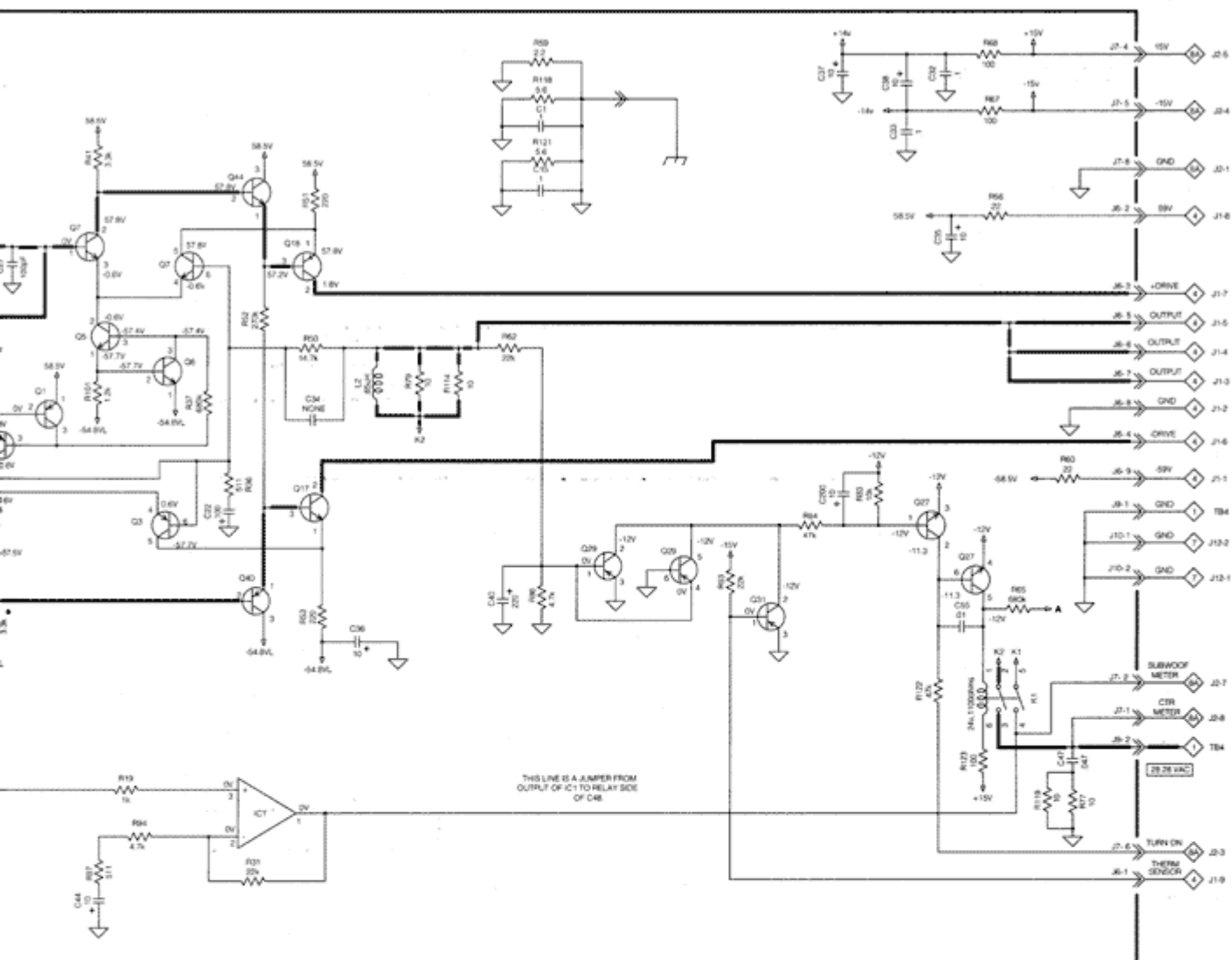
## POWER CONNECTIONS

|     |          |
|-----|----------|
| IC1 | 8 = 14V  |
|     | 4 = -14V |

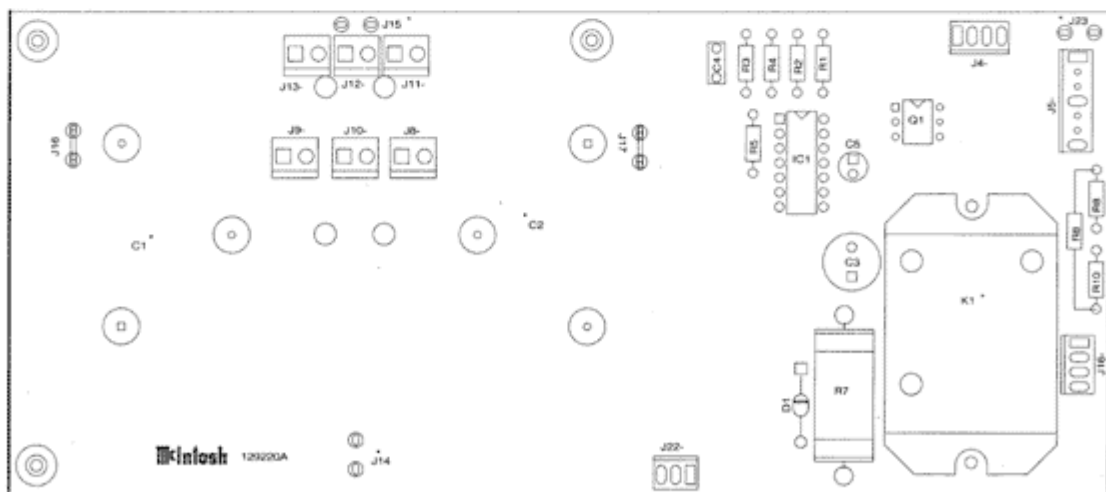
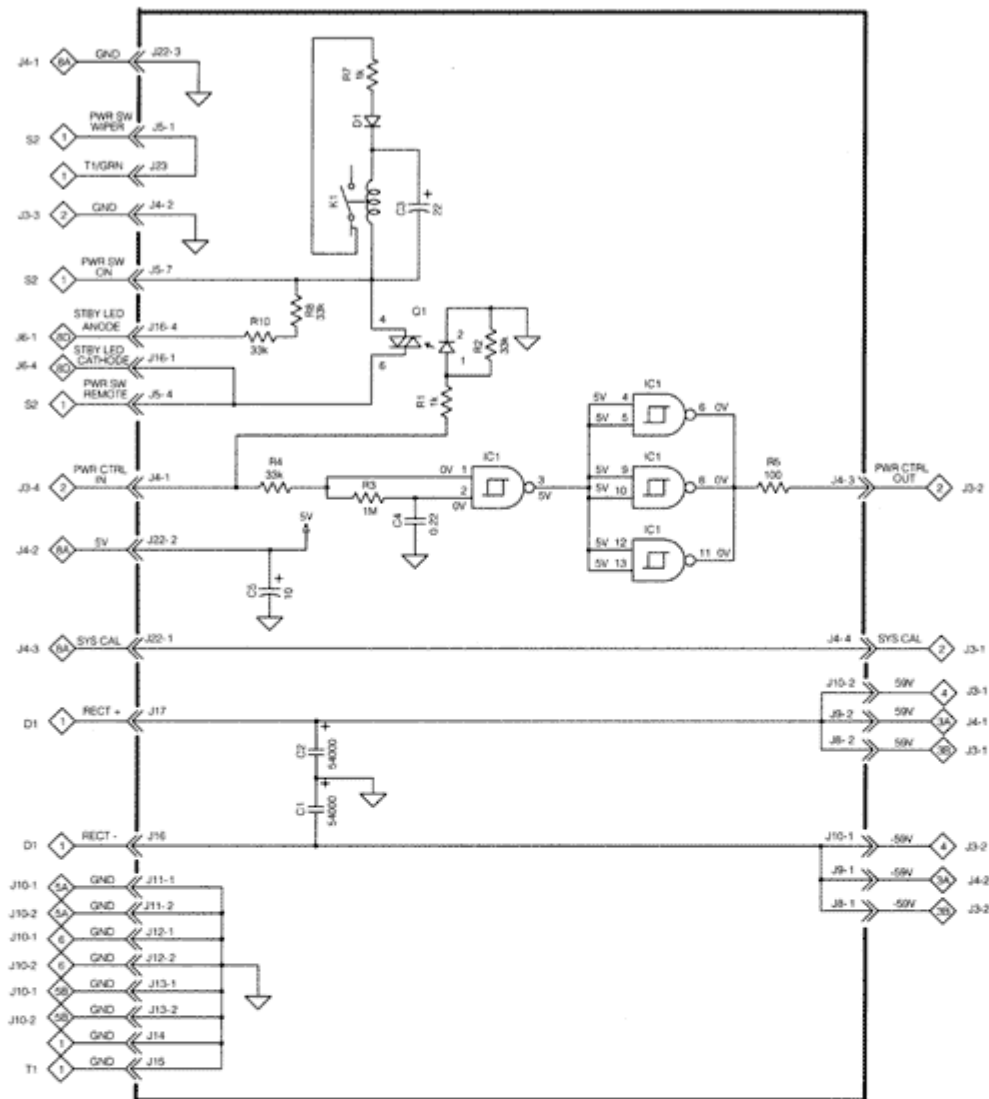
6

049006





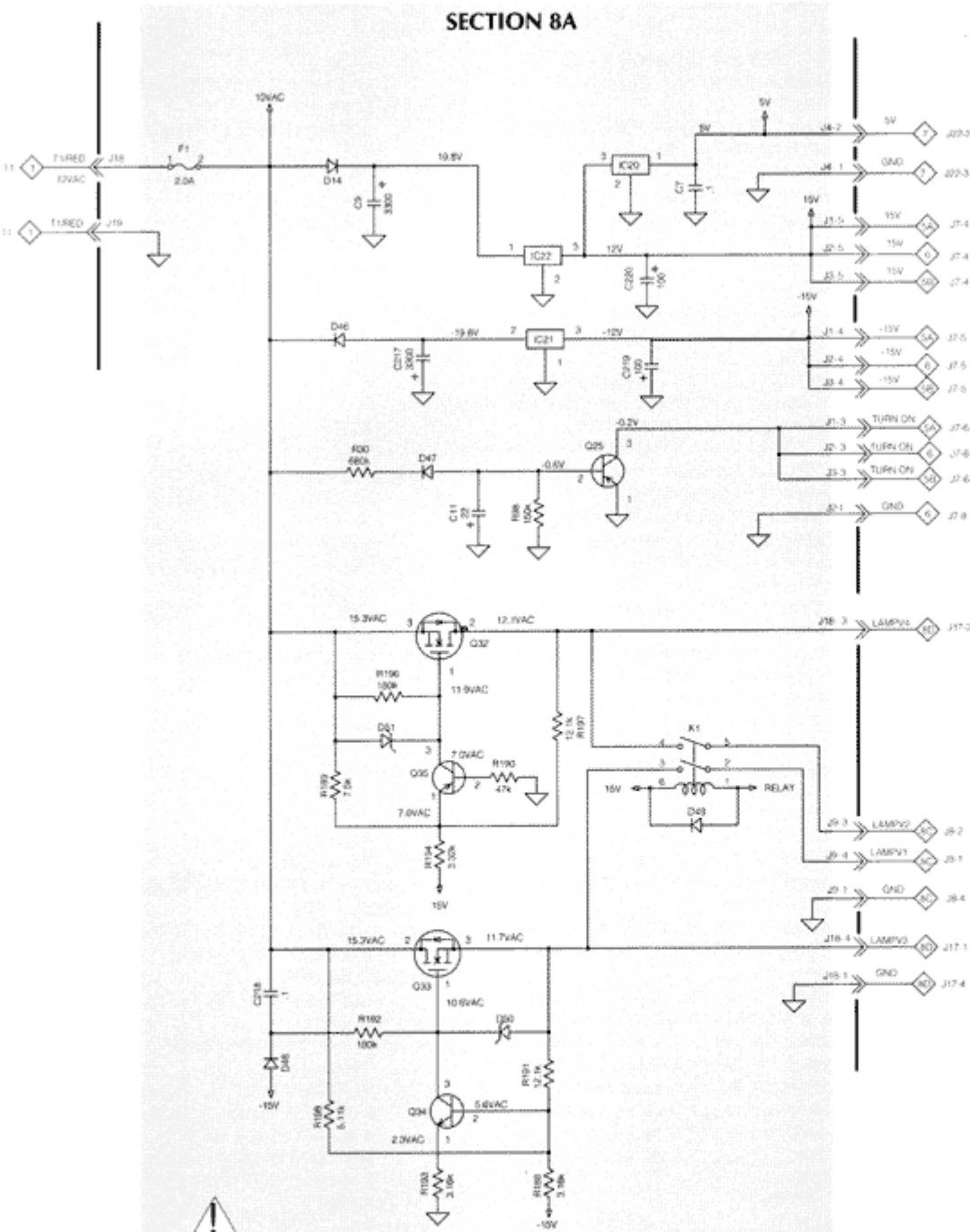
## CAPACITOR 048967



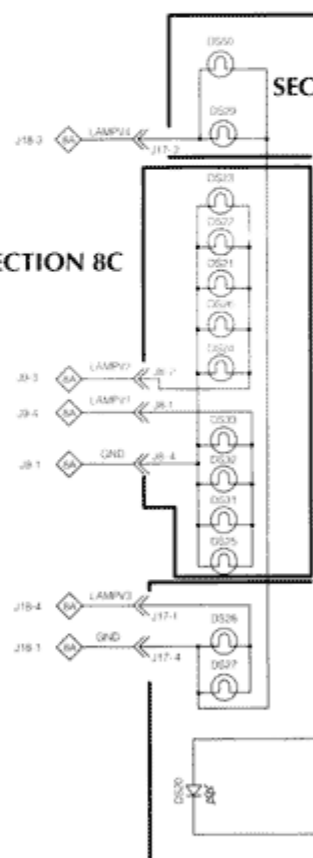
8a/b  
c/d

# METER/POWER GUARD/ METER LIGHT/DISPLAY LIGHT 048970

## SECTION 8A



## SECTION 8C



**WARNING:** Parts located in the shaded area have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

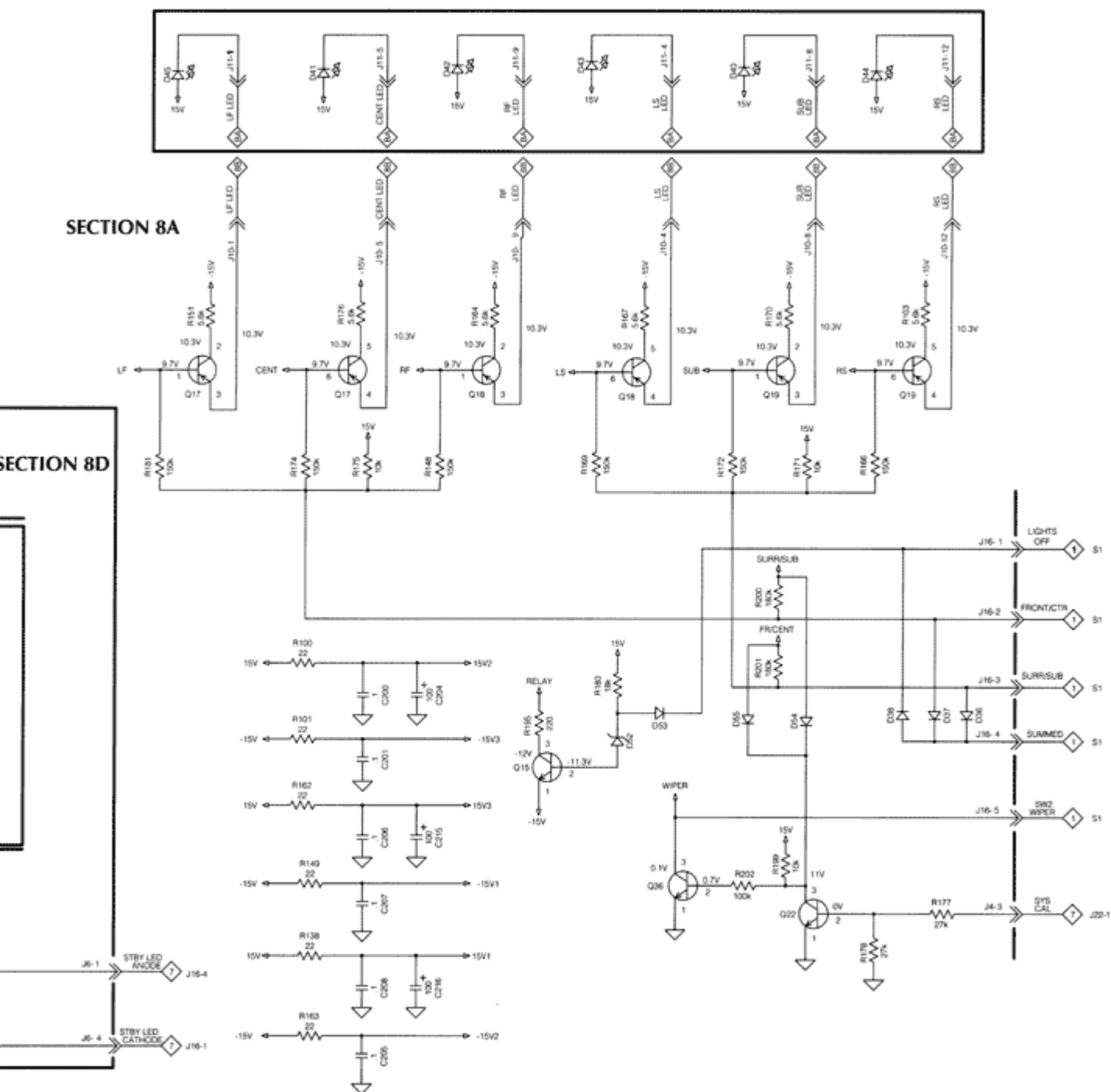
## POWER CONNECTIONS

|               |           |
|---------------|-----------|
| IC1, IC2, IC3 | 4 = 15V   |
|               | 11 = -15V |
| IC4, IC5, IC6 | 14 = 15V  |
|               | 7 = GND   |

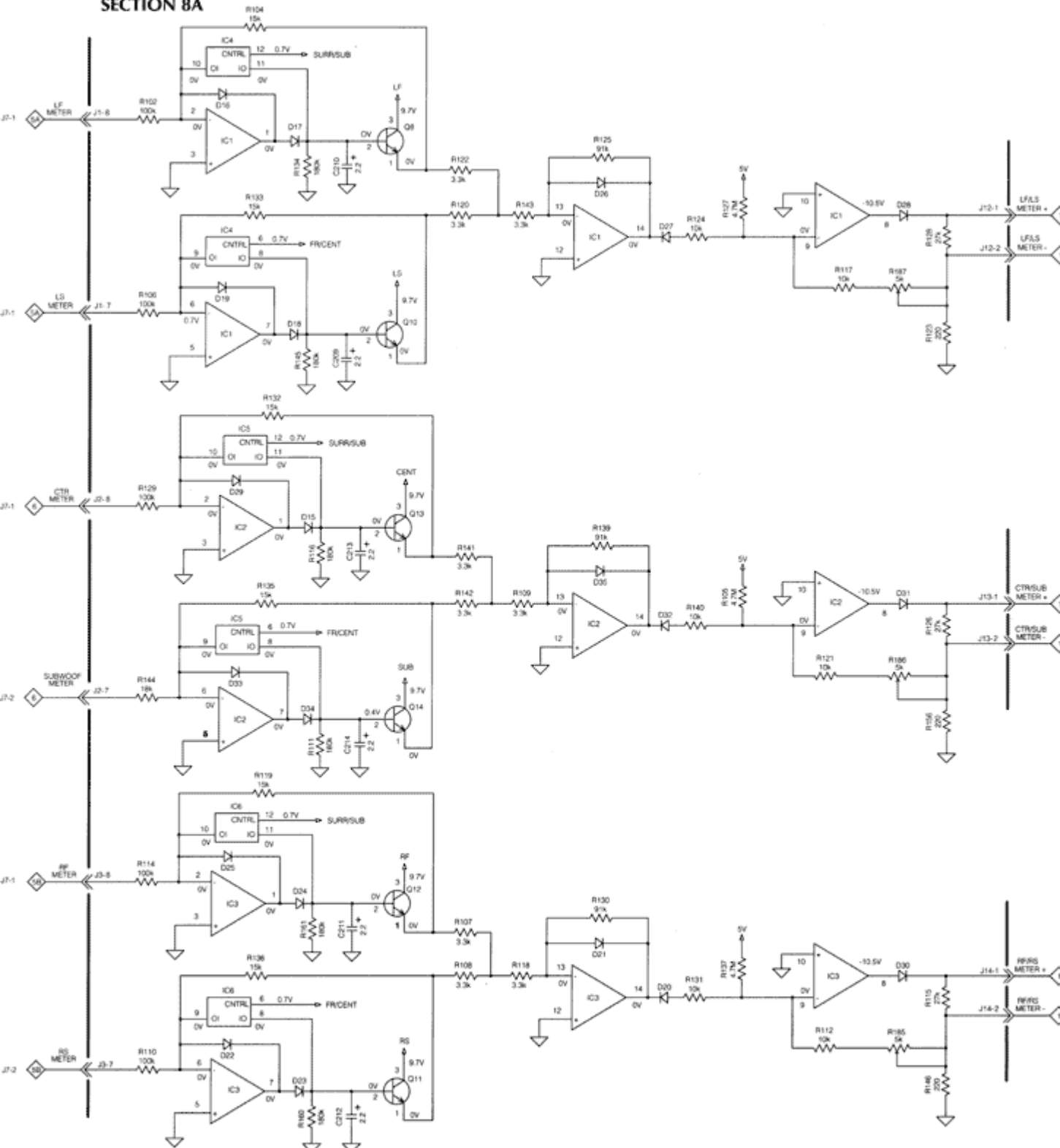
# SECTION 8B

## SECTION 8A

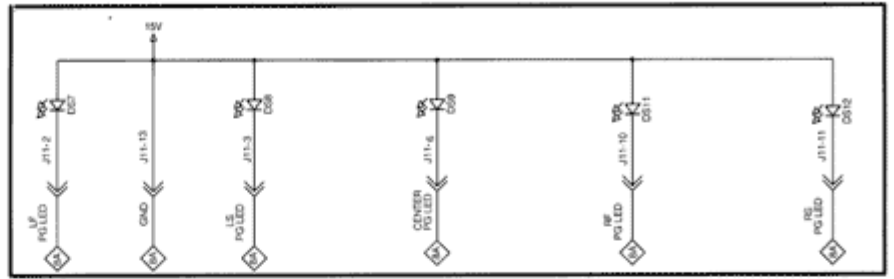
## SECTION 8D



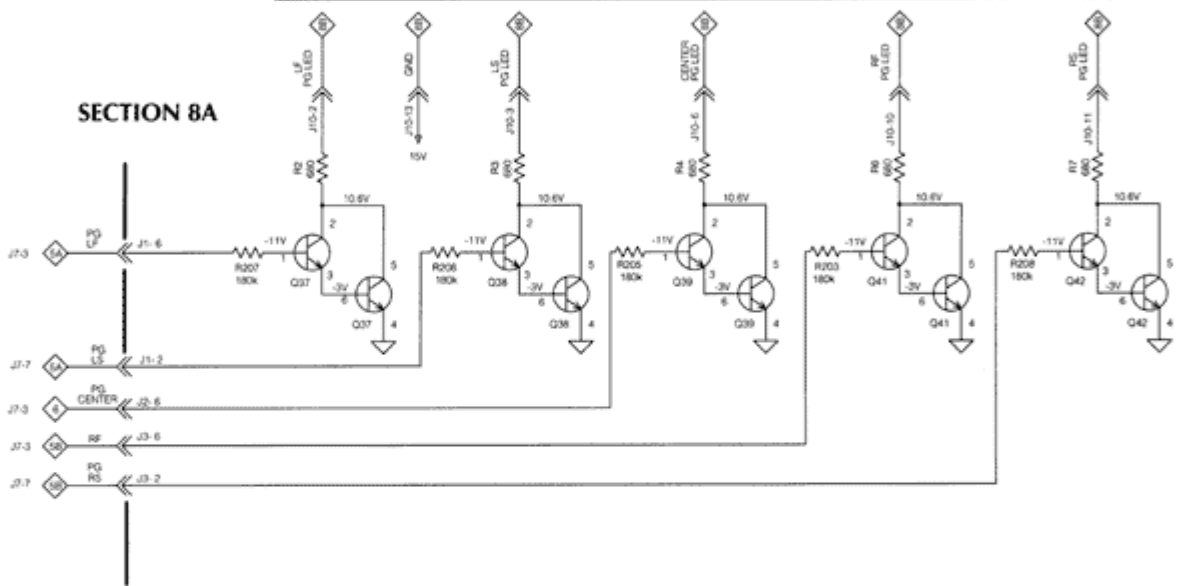
# SECTION 8A



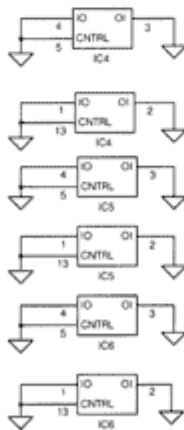
## SECTION 8B



## SECTION 8A



## SECTION 8A



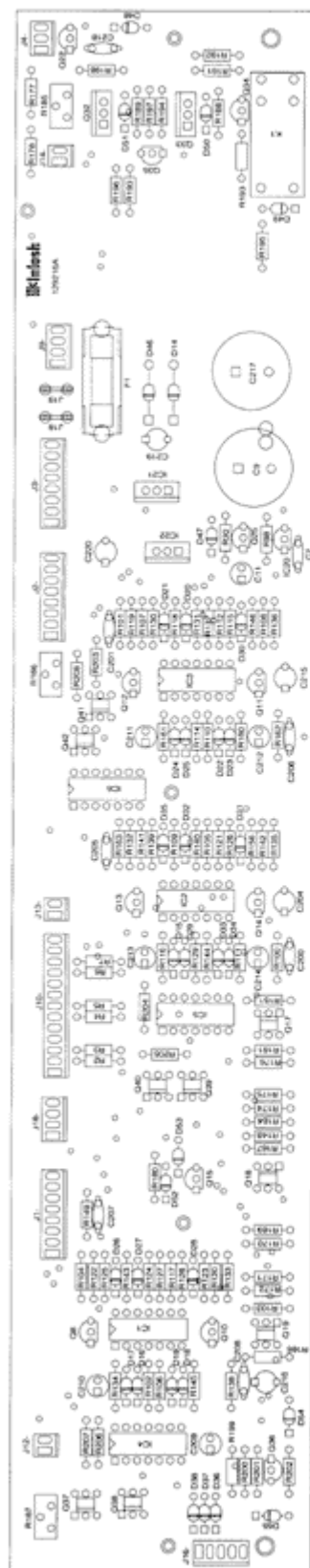
8a

8b

8c

8d

048970



# PARTS LIST

**PART NO. DESCRIPTION**

**REFERENCE NO.**

## INTERCONNECT

|          |                  |            |
|----------|------------------|------------|
| 04898000 | TRANSFORMER      | T1         |
| 05200500 | .22uf CAPACITOR  | C1         |
| 05200800 | THERMISTOR       | RT1, RT2   |
| 07013900 | BRIDGE RECTIFIER | P1         |
| 07409100 | TERMINAL BLOCK   | TB1        |
| 08412400 | SPEAKER TERMINAL | TB2-TB6    |
| 08904200 | 15A 250V FUSE    | F1         |
| 12406400 | PANEL METER      | M1, M2, M3 |
| 14624300 | POWER SWITCH     | S2         |
| 14625000 | METER SWITCH     | S1         |

## 048968

|          |                                 |                                  |
|----------|---------------------------------|----------------------------------|
| 06102300 | DISC CAP 100PF 10% N1500        | C7 C8 C12 C13                    |
| 06115000 | CERAMIC CAP 0.1MF +80 -20% 50V  | C3 C15                           |
| 06115900 | CERAMIC CAP .01MF +80 -20% 50V  | C9 C16 C17 C18                   |
| 06436300 | CERAMIC CAP 0.15MF 250V         | C4                               |
| 06644600 | ELECT CAP 47MF 35V AMMO PACK    | C1 C2 C10 C11                    |
| 07004700 | SILICON DIODE 1N4148 T&R        | D1 D2 D3 D4 D5 D8 D9 D10 D11 D12 |
| 07013100 | DIODE RECTIFIER                 | D6 D7 D13 D14                    |
| 11724400 | FRICTION LK CONN 9 POS MALE     | J1- J2-                          |
| 11740400 | HEADER 2-PIN 0.156              | J3-                              |
| 13222300 | TRANSISTOR NPN MPS4124 2K/REEL  | Q1 Q12                           |
| 13222400 | TRANSISTOR PNP SI MPS4126 2K/R  | Q2 Q13                           |
| 13226100 | TRANSISTOR PNP                  | Q7 Q15                           |
| 13226200 | TRANSISTOR NPN                  | Q6 Q16                           |
| 13439000 | TRIM POT 200 OHM 20% HORIZ AD   | R13 R28                          |
| 13704200 | FLAMEPROOF RES 47 OHM 5% 1/4W   | R12 R18                          |
| 13706500 | FLAMEPROOF RES 430 OHM 5% 1/4W  | R7 R23                           |
| 13707000 | FLAME PROOF RES 680 OHM 5% 1/4W | R2 R9 R22 R24                    |
| 13708000 | FLAMEPROOF RES 1.8K 5% 1/4W     | R6 R11 R19 R26                   |
| 13919900 | WW RES DUAL .47 OHM 5W          | R40 R41 R42 R43 R44 R45          |
| 14100900 | RES CF 2.2 5% 1/4W              | R39                              |
| 14103300 | RES CF 220 5% 1/4W              | R1 R8 R20 R27 R37 R38 R46 R47    |
| 14107600 | RES CF 15K 5% 1/4W T&R          | R3 R10 R21 R25                   |
| 14427900 | THERMISTOR 100 OHM              | RT1                              |

## 048999

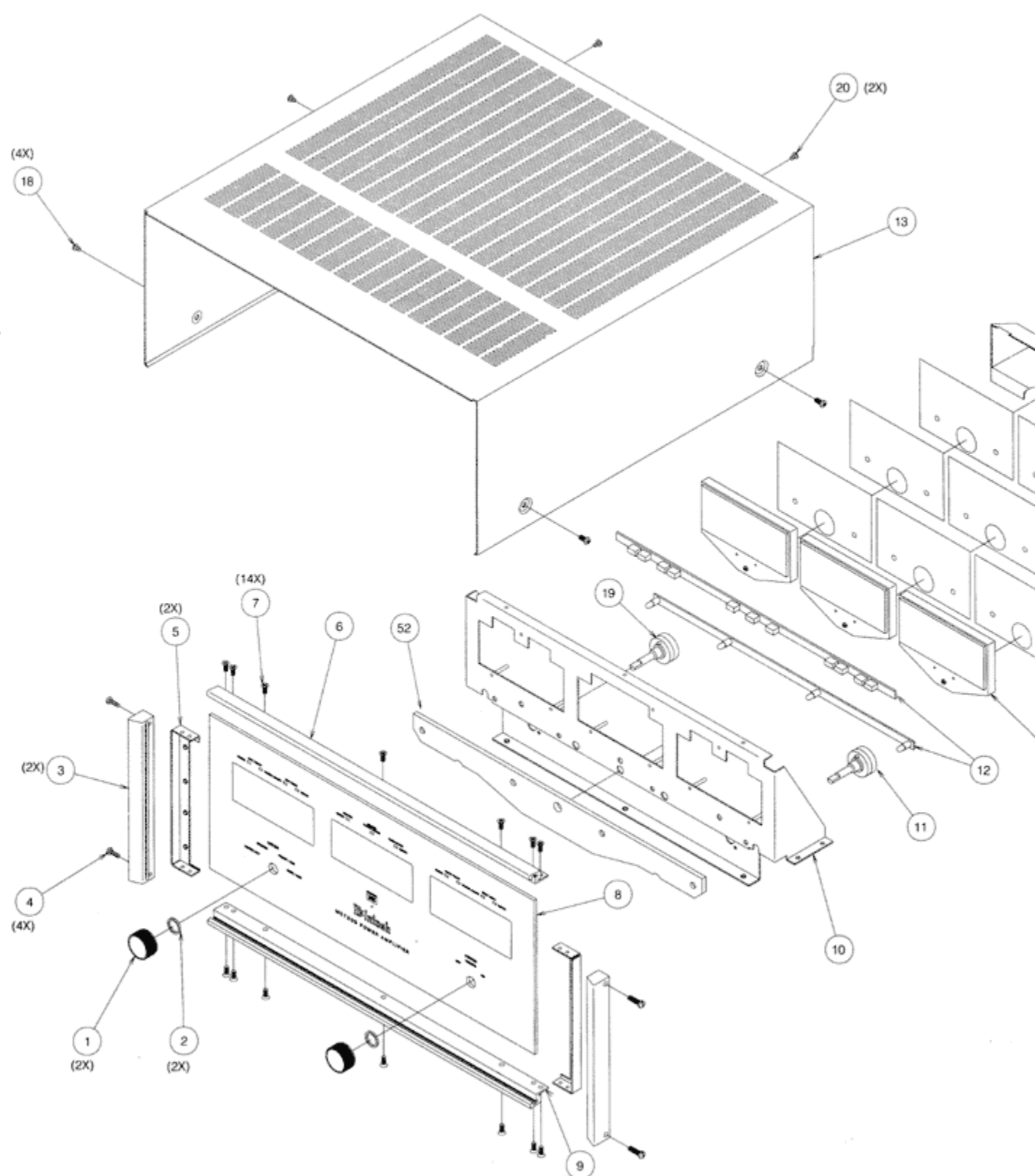
|          |                                |                |
|----------|--------------------------------|----------------|
| 06102300 | DISC CAP 100PF 10% N1500       | C7 C8          |
| 06115000 | CERAMIC CAP 0.1MF +80 -20% 50V | C3             |
| 06115900 | CERAMIC CAP .01MF +80 -20% 50V | C9 C16         |
| 06436300 | POLYPROP CAP 0.15MF 250V       | C10            |
| 06644600 | ELECT CAP 47MF 35V AMMO PACK   | C1 C2          |
| 07004700 | SILICON DIODE 1N4148 T&R       | D1 D2 D3 D4 D5 |
| 07013100 | DIODE RECTIFIER                | D6 D7          |
| 11721300 | 2-PIN MALE CONNECTOR           | J4-            |
| 11724400 | FRICTION LK CONN 9 POS MALE    | J1-            |
| 11740400 | HEADER 2-PIN 0.156             | J3-            |
| 13222300 | TRANSISTOR NPN MPS4124 2K/REEL | Q1             |
| 13222400 | TRANSISTOR PNP SI MPS4126 2K/R | Q2             |
| 13226100 | TRANSISTOR PNP                 | Q7             |
| 13226200 | TRANSISTOR NPN                 | Q6             |
| 13439000 | TRIM POT 200 OHM 20% HORIZ AD  | R13            |
| 13704200 | FLAMEPROOF RES 47 OHM 5% 1/4W  | R12            |
| 13706500 | FLAMEPROOF RES 430 OHM 5% 1/4W | R7             |
| 13707000 | FLAMEPROOF RES 680 OHM 5% 1/4W | R2 R9          |
| 13707800 | FLAMEPROOF 1500 OHMS 5% 1/4W   | R11            |
| 13708000 | FLAMEPROOF RES 1.8K 5% 1/4W    | R6             |
| 13919900 | WW RES DUAL .47 OHM 5W         | R40 R41 R42    |
| 14100900 | RES CF 2.2 5% 1/4W             | R30            |
| 14103300 | RES CF 220 5% 1/4W             | R1 R8          |
| 14107600 | RES CF 15K 5% 1/4W T&R         | R3 R10         |
| 14427900 | THERMISTOR 100 OHM             | RT1            |

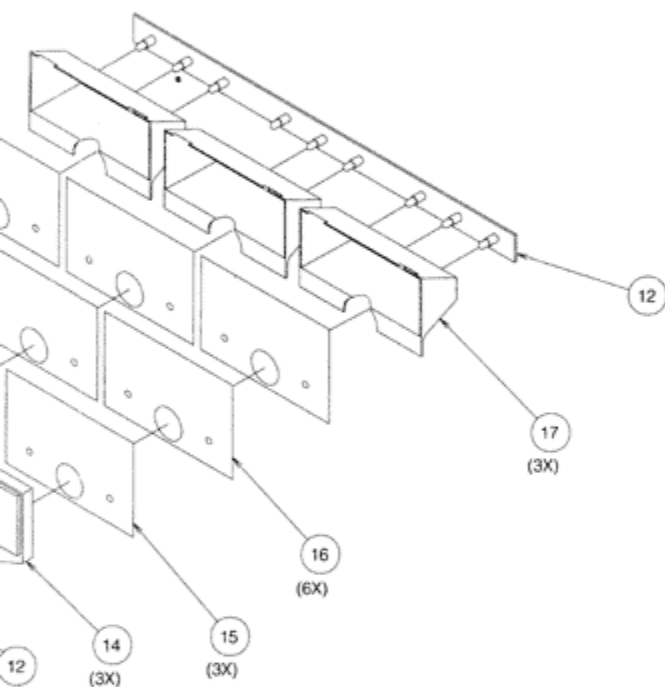
| PART NO.      | DESCRIPTION                       | REFERENCE NO.                   |
|---------------|-----------------------------------|---------------------------------|
| <b>048969</b> |                                   |                                 |
| 06115907      | DISC CAP .01MF                    | C55                             |
| 06119900      | DISC CAP 100PF 10% N1500 50V      | C27 C28                         |
| 06124800      | DISC CAP .1MF 25V Y5T             | C1 C15 C32 C33                  |
| 06436400      | POLYPROP CAP .047MF 250V          | C47 C48                         |
| 06624400      | ELECT CAP 0.47MF 50V ALUM         | C31 C39                         |
| 06633000      | ELECT CAP 220MF 16V SHORT CAN     | C40                             |
| 06644500      | ELECT CAP 10MF                    | C200                            |
| 06644600      | ELECT CAP 47MF 35V AMMO PACK      | C29 C30                         |
| 06644700      | ELECT CAP 100MF 16V AMMO PACK     | C22 C44                         |
| 06646200      | ELECT CAP 10UF 100VDC AMMO        | C35 C36 C37 C38 C50 C51         |
| 08705700      | RELAY                             | K1                              |
| 11721500      | 4-PIN CONNECTOR                   | J11-                            |
| 11724400      | FRICTION LK CONN 9 POS MALE       | J5- J6-                         |
| 11727500      | FRICTION LK CONN 8-POS MALE       | J7                              |
| 11740400      | HEADER 2-PIN 0.156                | J8- J9- J10-                    |
| 11743600      | PJ261G PHONO JACK GOLD            | J1                              |
| 12229700      | CHOKE OUTPUT .65UH                | L1 L2                           |
| 13222300      | TRANSISTOR NPN MPS4124 2K/REEL    | Q6 Q35 Q42 Q44                  |
| 13222400      | TRANSISTOR PNP SI MPS4126 2K/R    | Q1 Q39 Q40 Q43                  |
| 13225000      | TRANSISTOR DUAL NPN 120 OBSOLETE  | Q7 Q32                          |
| 13225100      | TRANSISTOR DUAL PNP 120V OBSOLETE | Q3 Q36                          |
| 13225200      | TRANSISTOR DUAL NPN 50V OBSOLETE  | Q9 Q10 Q27                      |
| 13225300      | TRANSISTOR DUAL PNP 50V OBSOLETE  | Q19 Q29 Q31                     |
| 13225400      | TRANSISTOR NPN                    | Q5 Q34                          |
| 13225500      | TRANSISTOR PNP 2SA1016K           | Q2 Q38                          |
| 13226100      | TRANSISTOR PNP                    | Q18 Q22                         |
| 13226200      | TRANSISTOR NPN                    | Q17 Q21                         |
| 13326000      | DUAL OPERATIONAL AMPLIFIER        | IC1                             |
| 13448600      | GAIN CONTROL 10K OHM              | R1 R2                           |
| 13703300      | FLAMEPROOF RES 22 OHM 1/4W 5%     | R56 R60                         |
| 14100900      | RES CF 2.2 5% 1/4W                | R59                             |
| 14101900      | RES CF 5.6 5% 1/4W T&R            | R118 R121                       |
| 14102500      | RES CF 100 5% 1/4W                | R48 R61 R67 R68 R123            |
| 14103300      | RES CF 220 5% 1/4W                | R51 R53 R76 R99                 |
| 14104900      | RES CF 1.0K 5% 1/4W T&R           | R44 R49                         |
| 14105100      | RES CF 1.2K 5% 1/4W T&R           | R38 R89 R92 R101                |
| 14106000      | RES CF 3.3K 5% 1/4W T&R           | R41 R55 R96 R98                 |
| 14106400      | RES CF 4.7K 5% 1/4W T&R           | R46 R47 R86                     |
| 14107200      | RES CF 10K 5% 1/4W T&R            | R22 R34 R45 R64 R83             |
| 14108000      | RES CF 22K 5% 1/4W T&R            | R62 R69 R93 R104                |
| 14108800      | RES CF 47K 5% 1/4W T&R            | R19 R27 R29 R84 R94 R122        |
| 14110600      | RES CF 270K 5% 1/4W T&R           | R52 R75 R105 R108               |
| 14111600      | RES CF 680K 5% 1/4W T&R           | R20 R28 R30 R31 R37 R65 R66 R91 |
| 14116500      | RES CF 10 5% 1/2W R77             | R79 R80 R82 R113 R114 R119 R120 |
| 14412300      | 511 OHMS 1% 1/4W                  | R36 R97                         |
| 14414900      | METAL FILM RES 14.7K 1% 1/4W      | R50 R87                         |
| 14417900      | RESISTOR LDR VTL5C9               | LD1 LD2                         |
| <b>049006</b> |                                   |                                 |
| 06115907      | DISC CAP .01MF                    | C55                             |
| 06119900      | DISC CAP 100PF 10% N1500 50V      | C27 C28                         |
| 06124800      | DISC CAP .1MF 25V Y5T             | C1 C15 C32 C33                  |
| 06436400      | POLYPROP CAP .047MF 250V          | C47                             |
| 06624400      | ELECT CAP .47MF 50V ALUM          | C31                             |
| 06633000      | ELECT CAP 220MF 16V SHORT CAN     | C40                             |
| 06644500      | ELECT CAP 10MF                    | C200                            |
| 06644600      | ELECT CAP 47MF 35V AMMO PACK      | C30                             |
| 06644700      | ELECT CAP 100MF 16V AMMO PACK     | C22                             |
| 06646200      | ELECT CAP 10UF 100VDC AMMO        | C35 C36 C37 C38 C44 C50 C51     |
| 08705700      | RELAY                             | K1                              |
| 11721500      | 4-PIN CONNECTOR                   | J11-                            |
| 11724400      | FRICTION LK CONN 9 POS MALE       | J6-                             |

| PART NO.      | DESCRIPTION                       | REFERENCE NO.                      |
|---------------|-----------------------------------|------------------------------------|
| 11727500      | FRICTION LK CONN 8-POS MALE       | J7-                                |
| 11740400      | HEADER 2-PIN 0.156                | J9- J10-                           |
| 11743600      | PJ261G PHONO JACK GOLD            | J1                                 |
| 12229700      | CHOKE OUTPUT .65UH                | L2                                 |
| 13222300      | TRANSISTOR NPN MPS4124 2K/REEL    | Q6 Q44                             |
| 13222400      | TRANSISTOR PNP SI MPS4126 2K/R    | Q1 Q40                             |
| 13225000      | TRANSISTOR DUAL NPN 120 OBSOLETE  | Q7                                 |
| 13225100      | TRANSISTOR DUAL PNP 120V OBSOLETE | Q3                                 |
| 13225200      | TRANSISTOR DUAL NPN 50V OBSOLETE  | Q9 Q27                             |
| 13225300      | TRANSISTOR DUAL PNP 50V OBSOLETE  | Q19 Q29 Q31                        |
| 13225400      | TRANSISTOR NPN                    | Q5                                 |
| 13225500      | TRANSISTOR PNP 2SA1016K           | Q2                                 |
| 13226100      | TRANSISTOR PNP                    | Q18                                |
| 13226200      | TRANSISTOR NPN 2SC2705            | Q17                                |
| 13326000      | DUAL OPERATIONAL AMPLIFIER        | IC1                                |
| 13448600      | GAIN CONTROL 10K OHM              | R1 R2                              |
| 13703300      | FLAMEPROOF RES 22 OHM 1/4W 5%     | R56 R60                            |
| 14100900      | RES CF 2.2 5% 1/4W                | R59                                |
| 14101900      | RES CF 5.6 5% 1/4W T&R            | R118 R121                          |
| 14102500      | RES CF 100 5% 1/4W                | R48 R67 R68 R123                   |
| 14103300      | RES CF 220 5% 1/4W                | R51 R53                            |
| 14104900      | RES CF 1.0K 5% 1/4W T&R           | R19 R44                            |
| 14105100      | RES CF 1.2K 5% 1/4W T&R           | R38 R101                           |
| 14106000      | RES CF 3.3K 5% 1/4W T&R           | R41 R55                            |
| 14106400      | RES CF 4.7K 5% 1/4W T&R           | R46 R86 R94                        |
| 14107200      | RES CF 10K 5% 1/4W T&R            | R22 R34 R45 R83                    |
| 14108000      | RES CF 22K 5% 1/4W T&R            | R31 R62 R93                        |
| 14108800      | RES CF 47K 5% 1/4W T&R            | R27 R29 R84 R122                   |
| 14110600      | RES CF 270K 5% 1/4W T&R           | R52 R105 R108                      |
| 14111600      | RES CF 680K 5% 1/4W T&R           | R28 R30 R37 R65                    |
| 14116500      | RES CF 10 5% 1/2W                 | R77 R79 R114 R119                  |
| 14412300      | 511 OHMS 1% 1/4W                  | R36 R97                            |
| 14414900      | METAL FILM RES 14.7K 1% 1/4W      | R50                                |
| 14417900      | RESISTOR LDR VTL5C9               | LD1                                |
| <b>048967</b> |                                   |                                    |
| 06432900      | M POLY CAP 0.22UF 5%              | C4                                 |
| 06622100      | ELECT CAP 10MF 50V SINGLE END     | C5                                 |
| 06639000      | ELECT CAP 22MF 100V 100TWMS22M    | C3                                 |
| 07013100      | DIODE RECTIFIER                   | D1                                 |
| 08704900      | RELAY 48VDC VFB48HU ITT TAKAMI    | K1                                 |
| 11721400      | MALE CONN 3-POS MTS100 NORMAL     | J22-                               |
| 11721500      | 4-PIN CONNECTOR                   | J2- J3- J4- J16- J18- J19-         |
| 11721700      | MALE CONN 7-PIN                   | J5-                                |
| 11734200      | 1/4 IN FASTON BLADE               | J14 J15 J16 J17 J23                |
| 11740400      | HEADER 2-PIN 0.156                | J8- J9- J10- J11- J12- J13-        |
| 11749400      | MINI JACK                         | J20- J21-                          |
| 11750100      | D CONN 25-PIN                     | J1-                                |
| 13102200      | 600V TRIAC DRIVER OPTOCOUPLER     | Q1                                 |
| 13319200      | IC NAND SCHMIT 2IN X 4            | IC1                                |
| 13912100      | WIREWOUND RESISTOR 1K 5W 10%      | R7                                 |
| 14102500      | RES CF 100 5% 1/4W                | R5 R9                              |
| 14104900      | RES CF 1.0K 5% 1/4W T&R           | R1                                 |
| 14108400      | RES CF 33K 5% 1/4W T&R            | R2 R4 R8 R10                       |
| 14112000      | RES CF 1.0M 5% 1/4W               | R3                                 |
| <b>048970</b> |                                   |                                    |
| 01749200      | LED SPACER 3/8 LG                 | DS21 DS22 DS23 DS24 DS25 DS26 DS27 |
| 05812000      | LAMP 14V #7373                    | DS28 DS29 DS31 DS32 DS33 DS50      |
| 05813300      | AMBER LED                         | DS7 DS8 DS9 DS11 DS12              |
| 05813900      | LED BAR RED                       | D40 D41 D42 D43 D44 D45            |

| PART NO. | DESCRIPTION                      | REFERENCE NO.                                                                                                                                   |
|----------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 05814800 | RED LED HIGH EFFICIENCY          | DS20                                                                                                                                            |
| 06124800 | DISC CAP .1MF 25V YST            | C7 C200 C201 C205 C206 C207 C208<br>C218                                                                                                        |
| 06623700 | ELECT CAP 2.2UF 50V ALUM         | C209 C210 C211 C212 C213 C214                                                                                                                   |
| 06634500 | ELECT CAP 22MF 16V               | C11                                                                                                                                             |
| 06637200 | ELECT CAP 3300MF 25V             | C9 C217                                                                                                                                         |
| 06644700 | ELECT CAP 100MF 16V AMMO PACK    | C204 C215 C216 C219 C220                                                                                                                        |
| 07004700 | SILICON DIODE 1N4148 T&R         | D15 D16 D17 D18 D19 D20 D21 D22 D23<br>D24 D25 D26 D27 D28 D29 D30 D31 D32<br>D33 D34 D35 D36<br>D37 D38 D47 D48 D49 D53 D54 D55<br>D50 D51 D52 |
| 07011400 | ZENER DIODE 16V 5% 500MW         | D14 D46                                                                                                                                         |
| 07013100 | DIODE RECTIFIER                  | K1                                                                                                                                              |
| 08705700 | RELAY                            | F1                                                                                                                                              |
| 08908900 | FUSE 2A SLO-BLO 5X20             | J4-                                                                                                                                             |
| 11721400 | MALE CONN 3-POS MTS100 NORMAL    | J6- J8- J9- J17- J18-                                                                                                                           |
| 11721500 | 4-PIN CONNECTOR                  | J16-                                                                                                                                            |
| 11721600 | MALE CONN 5-PIN 0.1 POST ASSY    | J1- J2- J3-                                                                                                                                     |
| 11727500 | FRICTION LK CONN 8-POS MALE      | J10- J11-                                                                                                                                       |
| 11729800 | 13-POS CONNECTOR                 | J18 J19                                                                                                                                         |
| 11734200 | 1/4IN FASTON BLADE               | J12- J13- J14-                                                                                                                                  |
| 11769000 | 2-PIN HEADER .100                | Q8 Q10 Q11 Q12 Q13 Q14 Q15 Q22<br>Q34 Q36                                                                                                       |
| 13222300 | TRANSISTOR NPN MPS4124 2K/REEL   | Q25 Q35<br>Q32 Q33                                                                                                                              |
| 13222400 | TRANSISTOR PNP SI MPS4126 2K/R   | Q37 Q38 Q39 Q41 Q42                                                                                                                             |
| 13224200 | TRANSISTOR POWER N-CHN ENHANCE   | Q17 Q18 Q19                                                                                                                                     |
| 13225200 | TRANSISTOR DUAL NPN 50V OBSOLETE | IC20                                                                                                                                            |
| 13225300 | TRANSISTOR DUAL PNP 50V OBSOLETE | IC4 IC5 IC6                                                                                                                                     |
| 13309300 | IC REGULATOR +5V                 | IC21                                                                                                                                            |
| 13311700 | CD4066 QUAD ANALOG SW            | IC22                                                                                                                                            |
| 13315500 | IC REGULATOR -12V                | IC1 IC2 IC3                                                                                                                                     |
| 13315600 | IC REGULATOR 12V                 | R185 R186 R187                                                                                                                                  |
| 13331200 | IC QUAD OPAMP NJM4741D           | R123 R146 R156 R195                                                                                                                             |
| 13438700 | TRIM POTENTIOMETER 5K OHM 20%    | R2 R3 R4 R6 R7                                                                                                                                  |
| 14103300 | RES CF 220 5% 1/4W               | R107 R108 R109 R118 R120 R122 R141<br>R142 R143                                                                                                 |
| 14104500 | RES CF 680 5% 1/4W               | R103 R151 R164 R167 R170 R176                                                                                                                   |
| 14106000 | RES CF 3.3K 5% 1/4W T&R          | R112 R117 R121 R124 R131 R140 R171<br>R175 R199                                                                                                 |
| 14106600 | RES CF 5.6K 5% 1/4W T&R          | R104 R119 R132 R133 R135 R136                                                                                                                   |
| 14107200 | RES CF 10K 5% 1/4W T&R           | R144 R180                                                                                                                                       |
| 14107600 | RES CF 15K 5% 1/4W T&R           | R115 R126 R128 R177 R178                                                                                                                        |
| 14107800 | RES CF 18K 5% 1/4W T&R           | R190                                                                                                                                            |
| 14108200 | RES CF 27K 5% 1/4W T&R           | R125 R130 R139                                                                                                                                  |
| 14108800 | RES CF 47K 5% 1/4W T&R           | R102 R106 R110 R114 R129 R202                                                                                                                   |
| 14109500 | RES CF 91K 5% 1/4W T&R           | R98 R148 R166 R169 R172 R174 R181                                                                                                               |
| 14109600 | RES CF 100K 5% 1/4W T&R          | R111 R116 R134 R145 R160 R161 R192                                                                                                              |
| 14110000 | RES CF 150K 5% 1/4W              | R196 R200 R201 R203 R205 R206 R207<br>R208                                                                                                      |
| 14110200 | RES CF 180K 5% 1/4W T&R          | R30                                                                                                                                             |
| 14111600 | RES CF 680K 5% 1/4W T&R          | R105 R127 R137                                                                                                                                  |
| 14112800 | RES CF 4.7M 5% 1/4W              | R100 R101 R138 R149 R162 R163                                                                                                                   |
| 14114400 | RES CF 22 5% 1/4W                | R198                                                                                                                                            |
| 14408300 | RES MF 5.11K 1% 1/4W             | R194                                                                                                                                            |
| 14409500 | RES MF 3.32K 1% 1/4W             | R191 R197                                                                                                                                       |
| 14415400 | RES MF 12.1K 1% 1/4W             | R188 R193                                                                                                                                       |
| 14419900 | RES MF 3.16K 1% 1/4W             | R189                                                                                                                                            |
| 14421000 | RES MF 7.5K 1% 1/4W              |                                                                                                                                                 |

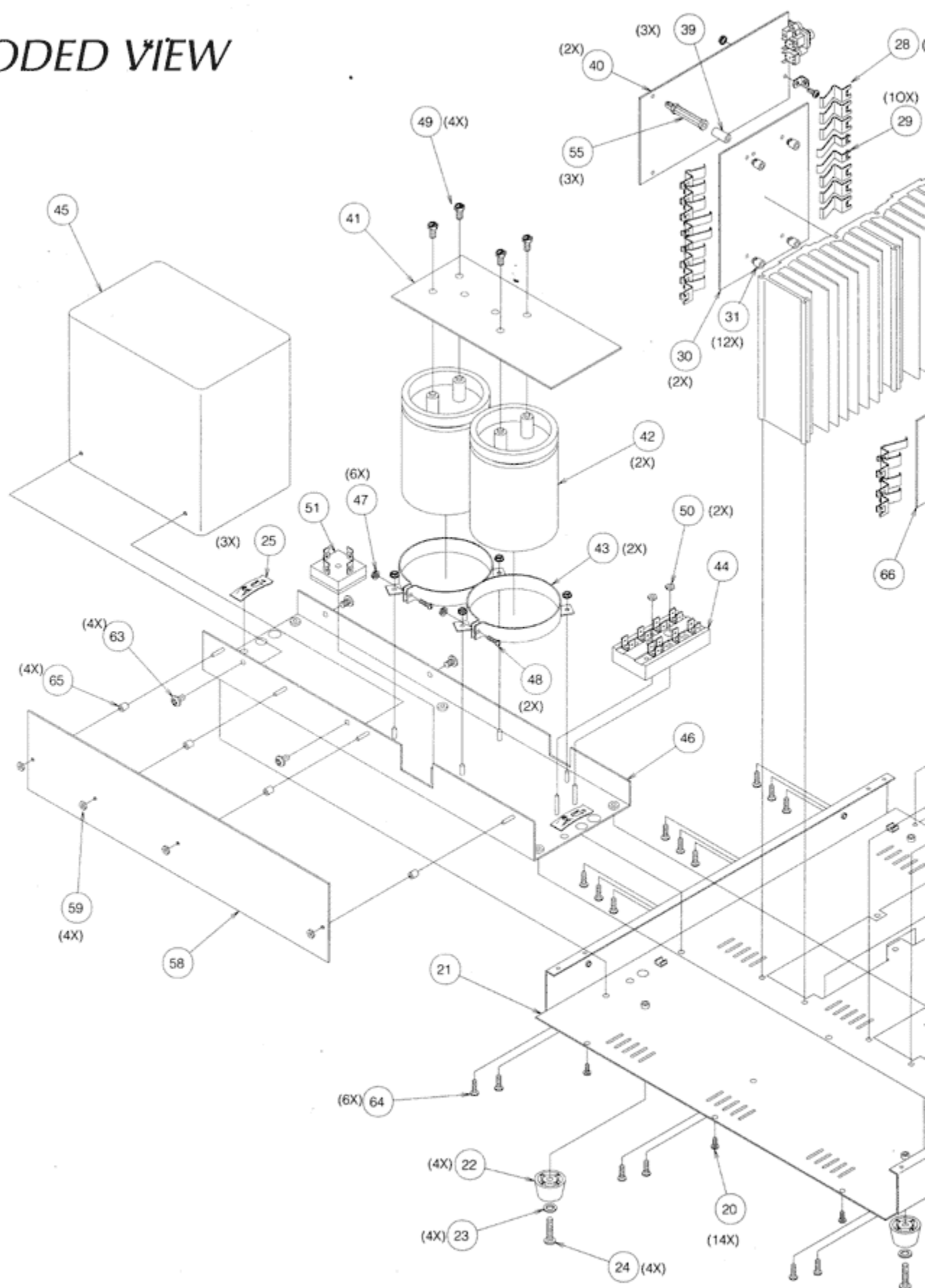
## EXPLODED VIEW

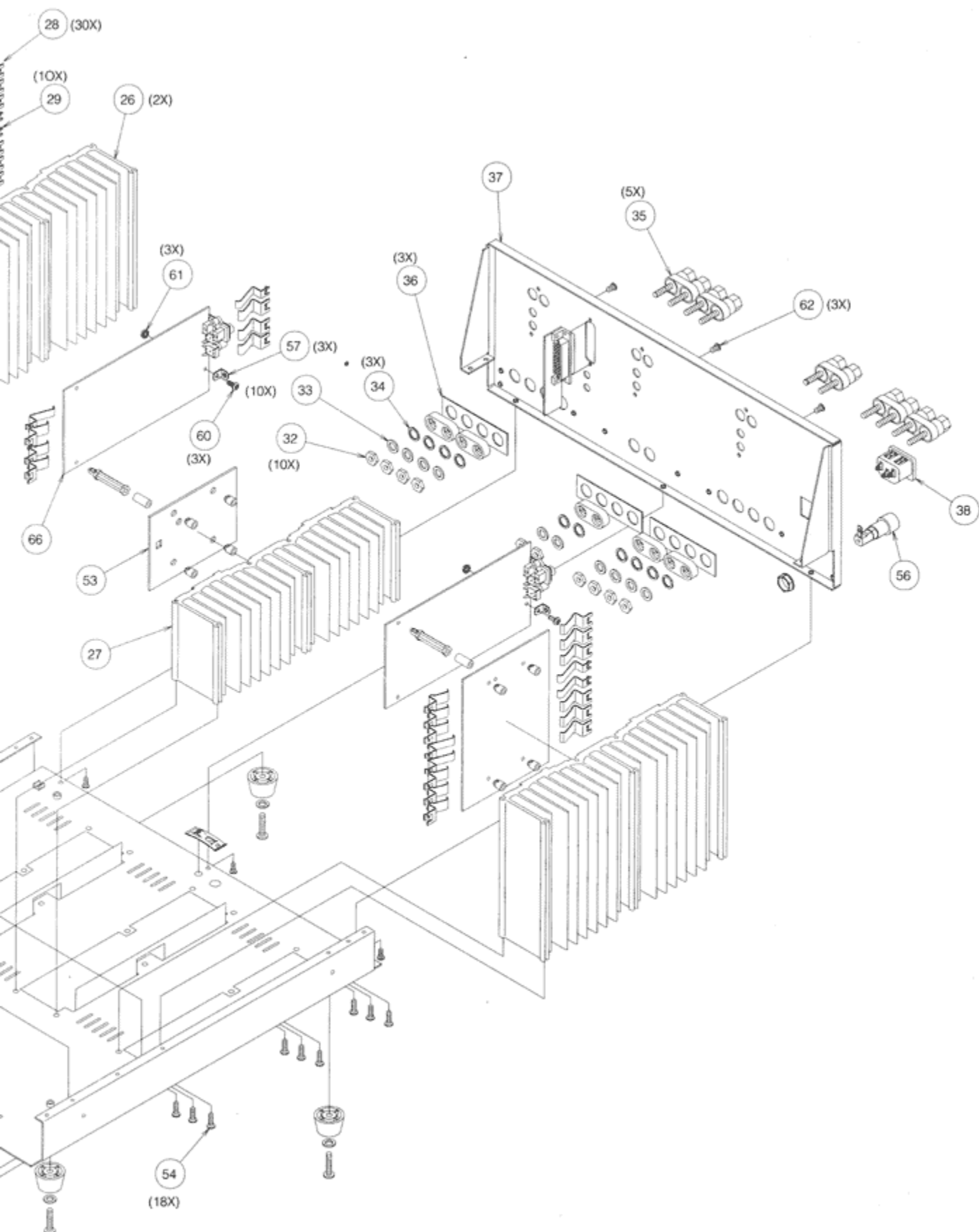




| REF. NO. | PART NO. | DESCRIPTION            |
|----------|----------|------------------------|
| 1        | 090257   | KNOB                   |
| 2        | 104017   | FELT WASHER            |
| 3        | 018612   | END CAP                |
| 4        | 101042   | TAP SCR 4-40X1/2       |
| 5        | 004801   | EXTRUSION BRACKET      |
| 6        | 018587   | TOP EXTRUSION          |
| 7        | 101172   | ST 6-32X1/4            |
| 8        | 016382   | GLASS PANEL            |
| 9        | 018588   | BOTTOM EXTRUSION       |
| 10       | 004790   | SUBPANEL               |
| 11       | 146243   | POWER SWITCH           |
| 12       | 048967   | POWER GUARD/LAMP PCB   |
| 13       | 004798   | TOP COVER              |
| 14       | 124064   | METER                  |
| 15       | 092341   | FILTER AZURE BLUE      |
| 16       | 092342   | FILTER PALE BLUE       |
| 17       | 017447   | PLASTIC LIGHT BOX      |
| 18       | 101078   | 8-32X5/16              |
| 19       | 146250   | METER SWITCH           |
| 20       | 101054   | SELF TAP SCR 10-32X3/4 |
| 21       | 004797   | CHASSIS                |
| 22       | 017218   | PLASTIC FEET           |
| 23       | 104080   | FLAT WASHER #10        |
| 24       | 100159   | MACH SCR 10-32X3/4     |
| 25       | 106007   | SPRING CLIP            |
| 26       | 018583   | HEATSINK               |
| 27       | 018560   | HEATSINK               |
| 28       | 114119   | TRANSISTOR CLIP 214    |
| 29       | 114118   | TRANSISTOR CLIP 218    |
| 30       | 048968   | HEATSINK PCB           |
| 31       | 112087   | PCB SPACER 1/4"        |
| 32       | 110009   | NUT M5X0.8             |
| 33       | 104148   | FLAT WASHER BRASS      |
| 34       | 104130   | LW #10                 |
| 35       | 084124   | DUAL BINDING POST      |
| 36       | 004800   | OUTPUT PLATE           |
| 37       | 004783   | REAR PANEL             |
| 38       | 117487   | A/C RECEPTACLE         |
| 39       | 022185   | SPACER #6X1/2          |
| 40       | 048969   | DRIVER PCB             |
| 41       | 048967   | CAPACITOR PCB          |
| 42       | 066480   | CAPACITOR              |
| 43       | 003855   | CAPACITOR CLAMP        |
| 44       | 074091   | A/C TERMINAL BLOCK     |
| 45       | 048980   | TRANSFORMER POT        |
| 46       | 004791   | TRAY                   |
| 47       | 102045   | KEP NUT 6-32           |
| 48       | 100118   | MS 6-32X1/2            |
| 49       | 100188   | MS 10-32X3/8           |
| 50       | 102022   | MN 4-40                |
| 51       | 070139   | RECTIFIER BRIDGE       |
| 52       | 017705   | DISPLAY PLEXIGLASS     |
| 53       | 048999   | HEATSINK PCB           |
| 54       | 101176   | TCS 6-32X1/2           |
| 55       | 112088   | CIRCUIT BOARD SUPPORT  |
| 56       | 178122   | FUSE HOLDER            |
| 57       | 003611   | CARD MOUNTING BRACKET  |
| 58       | 048970   | METER BOARD            |
| 59       | 102001   | 4-40 MACHINE NUT       |
| 60       | 100186   | MS 6-32X1/4            |
| 61       | 102003   | MACH NUT 6-32 W/LOCK   |
| 62       | 100271   | SEMS 6-32X1/4          |
| 63       | 101163   | ST 8-32X1/4            |
| 64       | 100120   | MS 10-32X1/4           |
| 65       | 021094   | SPACER                 |
| 66       | 049005   | DRIVER PCB             |

# EXPLODED VIEW





# REPACKING INSTRUCTIONS

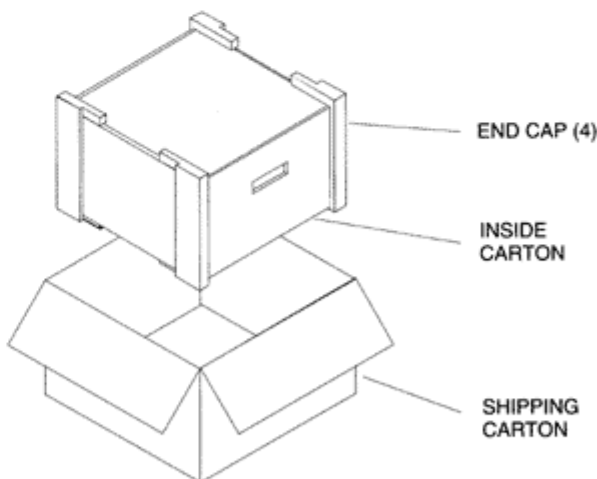
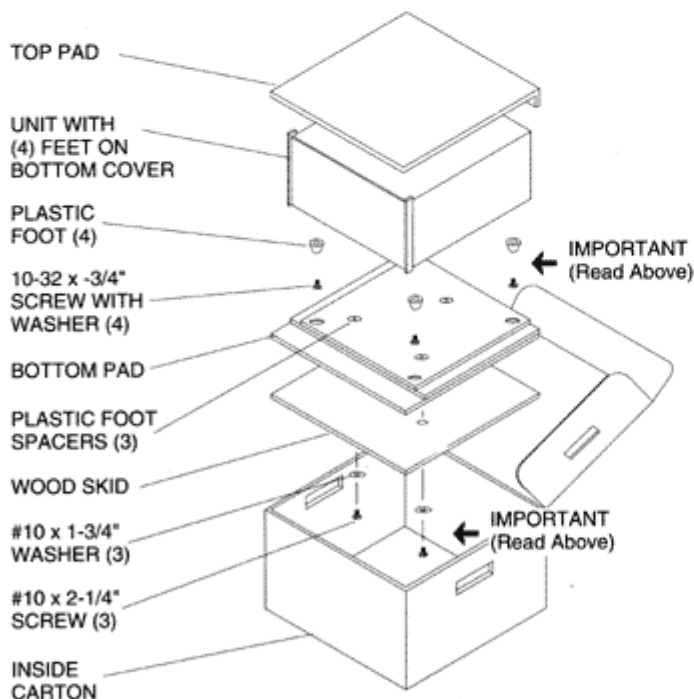
In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

**IMPORTANT** - The four plastic feet must be attached to the bottom of the unit so they will locate in the four holes of the bottom pad. Three #10 x 2-1/4" screws and washers must be used to fasten the unit securely to the bottom pad and wood skid. Failure to do this will result in shipping damage.

If a shipping carton or any of the interior parts is needed, please call or write the Customer Service Department of McIntosh Laboratory. Order parts from the accompanying list by part number.

Use the original shipping carton and interior parts only if they are in good serviceable condition.

| Qty. | Part No. | Description                 |
|------|----------|-----------------------------|
| 1    | 033888   | Shipping carton only        |
| 4    | 033887   | End cap (Foam pad)          |
| 1    | 033697   | Inside carton only          |
| 1    | 033725   | Toppad                      |
| 1    | 034008   | Bottom pad                  |
| 3    | 017218   | Plastic foot (spacer)       |
| 1    | 033699   | Woodskid                    |
| 3    | 101169   | #10 x 2-1/4" Wood screw     |
| 3    | 104033   | #10 x 1-3/4" Flat washer    |
| 4    | 017218   | Plastic foot                |
| 4    | 100159   | #10-32 x 3/4" Machine screw |
| 4    | 104083   | #10 x 7/16" Flat washer     |
| 1    | 049299   | Packaging complete          |



# MC7205

## POWER AMPLIFIER

## SERVICE MANUAL

The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.

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