

MC 2500

Stereo Power Amplifier

Schematics

039396

Sheet 1 of 2

McIntosh

This sheet includes sections

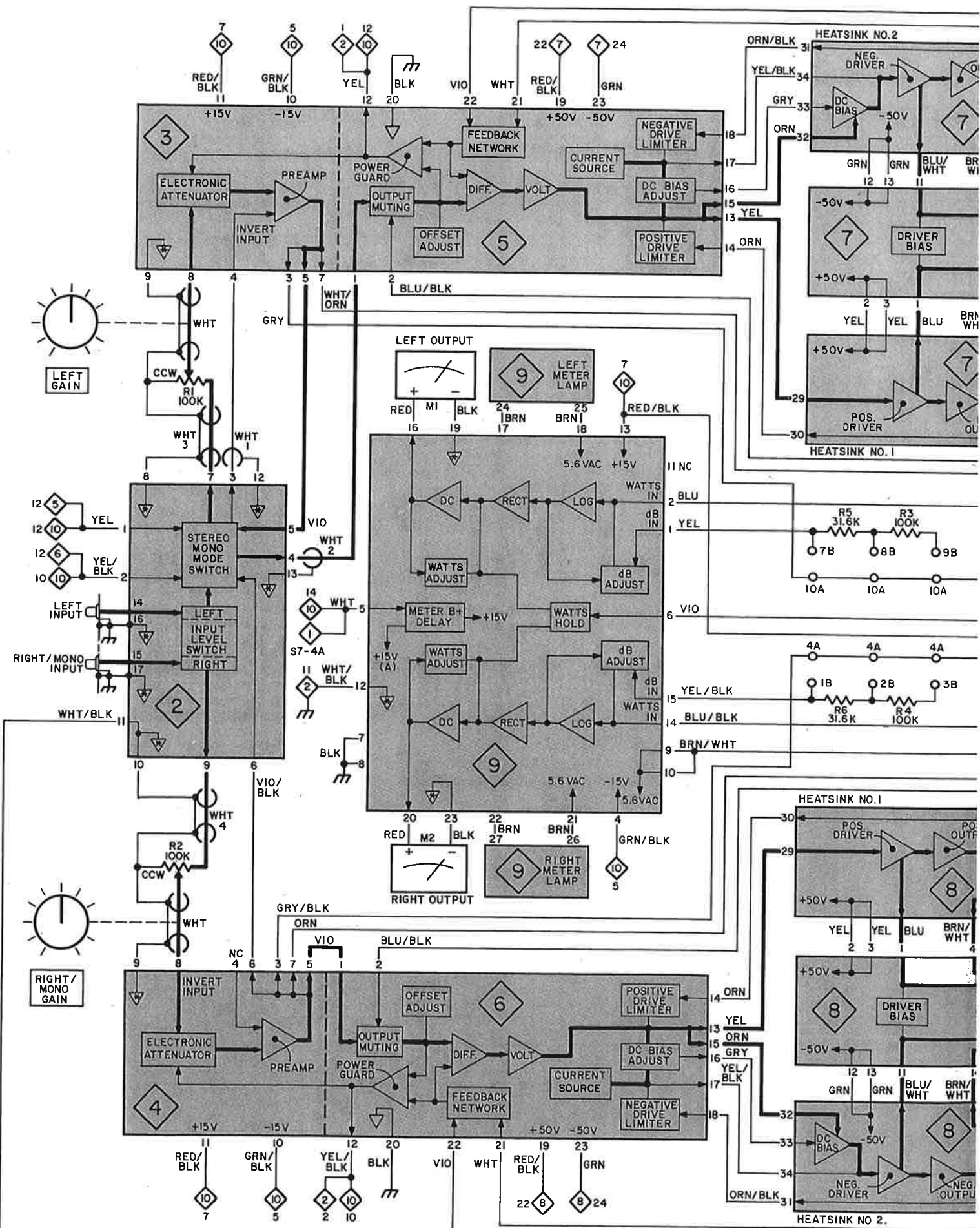
- ① INTERCONNECTION DIAGRAM
- ③ PREAMP INPUT and HEADPHONE OUTPUT
(LEFT CHANNEL)
- ④ PREAMP INPUT and HEADPHONE OUTPUT
(RIGHT CHANNEL)
- ⑨ METER DRIVE and ILLUMINATION
- ⑩ POWER SUPPLY and POWER GUARD DISPLAY DRIVE

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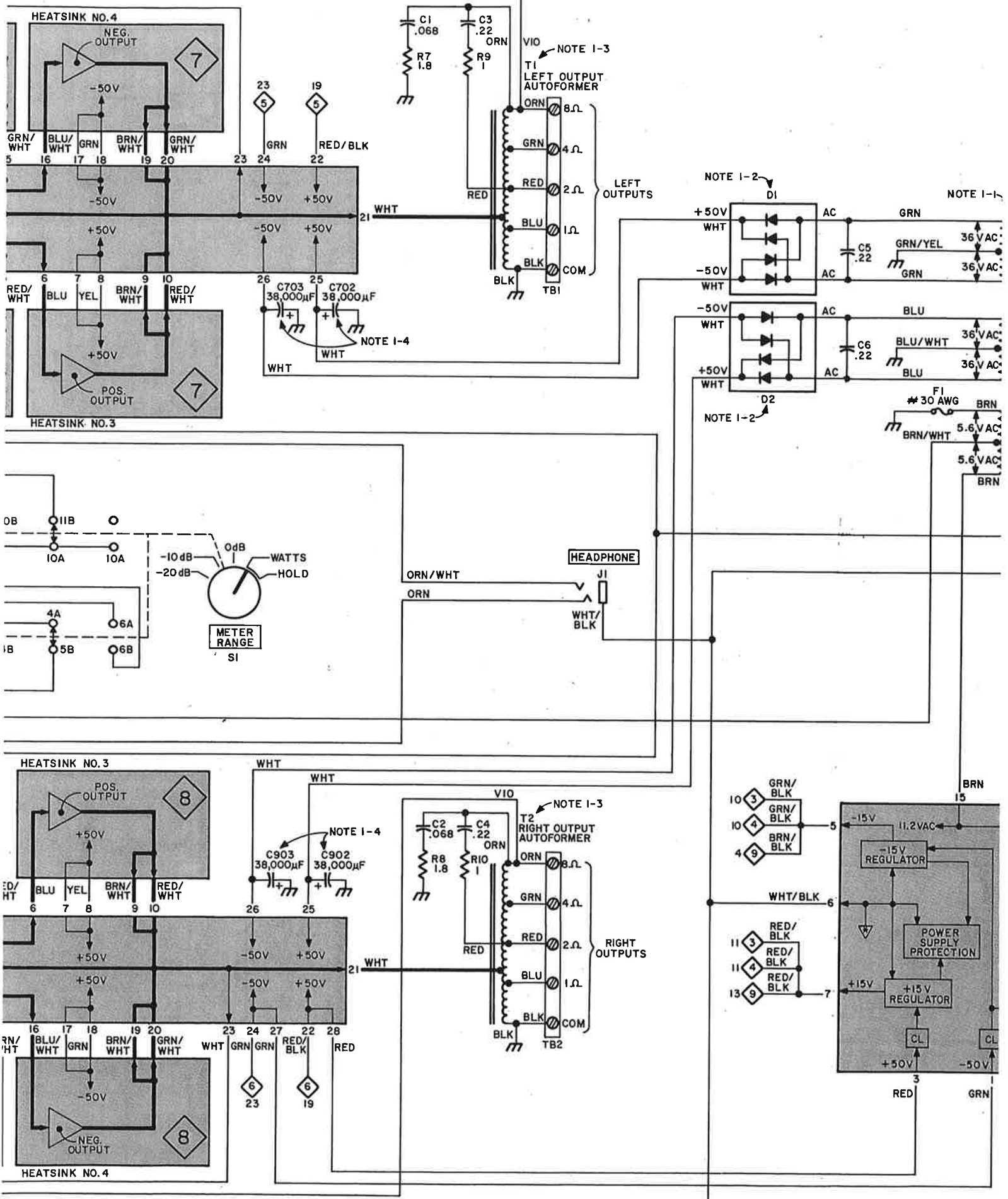
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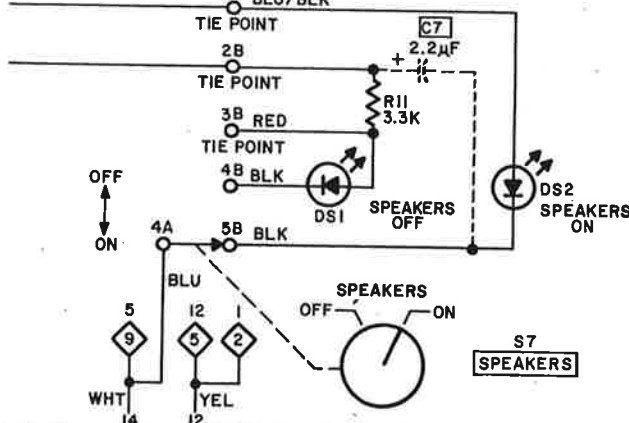
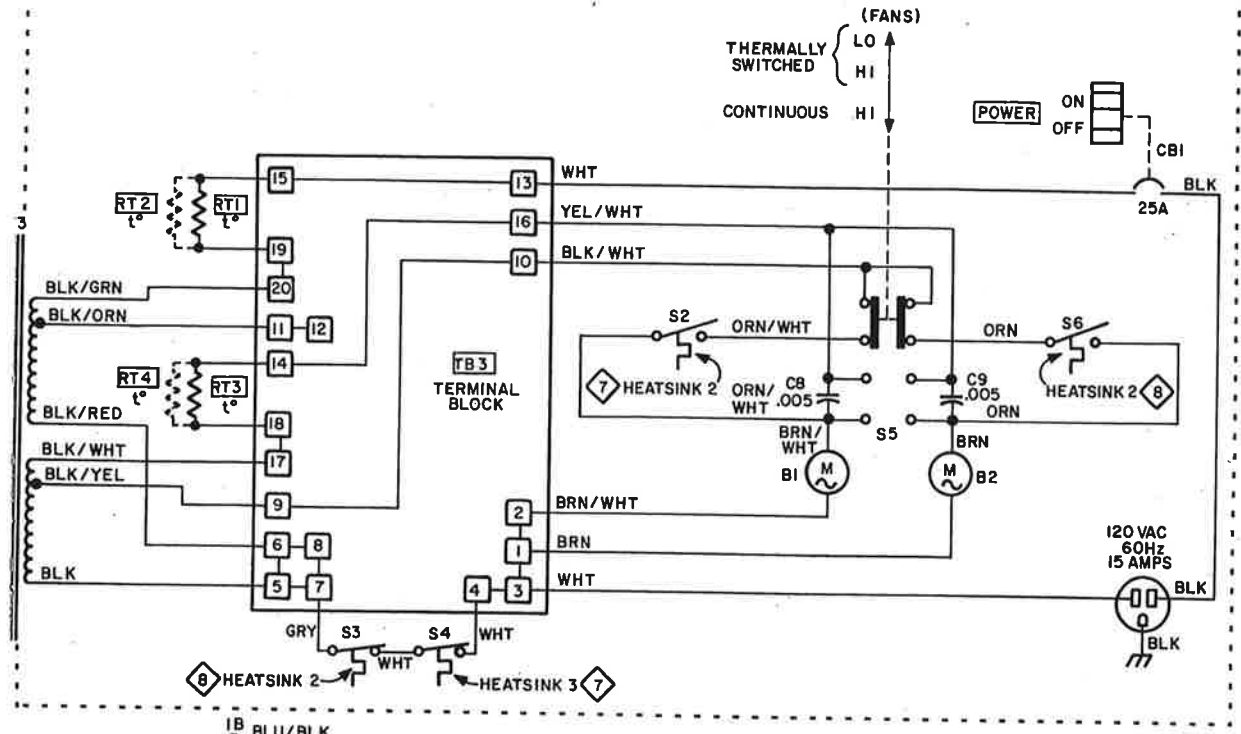
Schematic No. 156041A



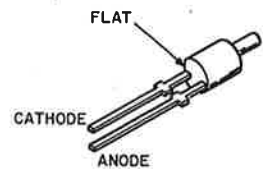
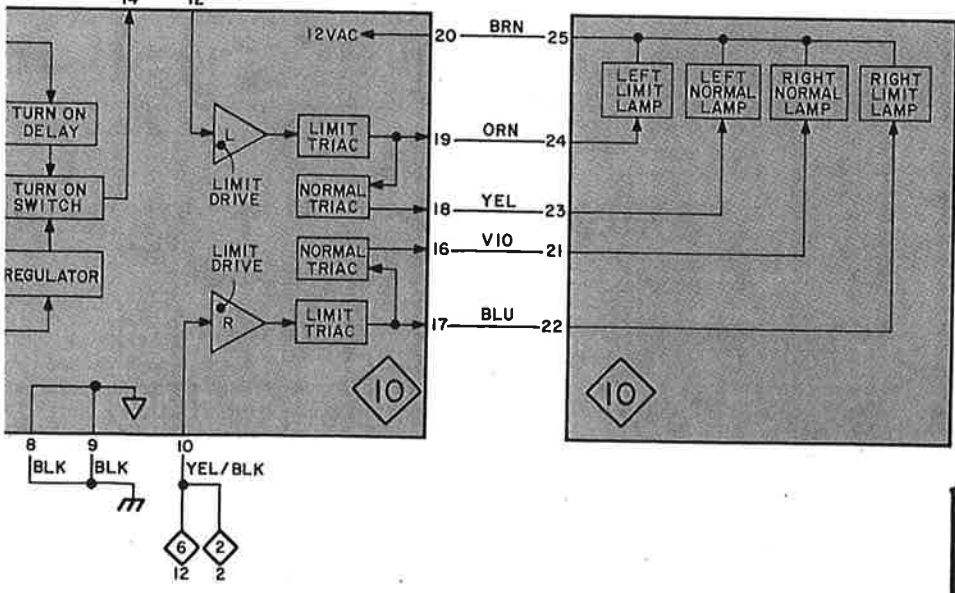
PARTS LIST

Symbol No.	Part No.	Des
CAPACITORS (CD = Ceramic Disc, MPE = Metalized Poly)		
C1	064268	MPE, .068μF
C2	064268	MPE, .068μF
C3	064267	MPE, .22μF
C4	064267	MPE, .22μF
C5	064267	MPE, .22μF
C6	064267	MPE, .22μF
C7	066237	S/N CS1001 2.2μF, 50V..
C8	061175	CD, .005μF, UL/CSA
C9	061175	CD, .005μF, UL/CSA
CIRCUIT BREAKERS (CB = Circuit Breaker)		
*CB1	088011	CB, 25A, (ON)
DIODES (BRID = Bridge, RECT = Rectifier)		
*D1	070092	BRID, RECT,
*D2	070092	BRID, RECT,
LIGHTING DEVICES (LED = Light Emitting Diode)		
*DS1	058078	LED, Red, SL
*DS2	058077	LED, Green, SL
METERS		
*M1, M2	124033	S/N CS1001 front cover, a 017281 and n rear color filter 092286 and (092295....(69
	124035	S/N CS1237 front cover, su 092290, assem 017290 and n 003203, rear blue 092286 a 092295....(69
RESISTORS (CF = Carbon Film, MF = Metal Film, POT = Potentiometer, WW = Wire Wound)		
*R1	134385	POT, Gain Control
*R2	134385	POT, Gain Control
*R3	144113	MF, 100kΩ, 1/2W
*R4	144113	MF, 100kΩ, 1/2W
*R5	144148	MF, 31.6kΩ, 1/2W
*R6	144148	MF, 31.6kΩ, 1/2W
*R7	139077	WW, 1.8Ω, 10%
*R8	139077	WW, 1.8Ω, 10%
R9	139035	WW, 1Ω, 10%
R10	139035	WW, 1Ω, 10%
R11	141060	CF, 3.3kΩ, 5%
THERMISTOR		
*RT1	144151	S/N CS1001 t 5Ω....(6930)
	144152	S/N CS1606 a 1.2Ω....(6930)
*RT2	144151	S/N CS1001 t 5Ω....(6930)
*RT3	144151	S/N CS1001 t 5Ω....(6930)
	144152	S/N CS1606 a 1.2Ω....(6930)
*RT4	144151	S/N CS1001 t 5Ω....(6930)

S/N CS1507 and ABOVE. (S/N CS1001 TO CS1506 REFER TO FIG. I)



IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.



SECTION <

r:ription
 LECT = Electrolytic,
 ster)
 . 400V
 . 400V
 400V
 400V
 400V
 to CS2006: ELECT,
 (7358)
 +.80 - 20%, 150V,
 +.80 - 20%, 150V,
 eaker)
 -OFF Switch)
 tifier)
 35A, 200V, MDA3502
 35A, 200V, MDA3502
 lting Diode)
 P144B
 LP244B

o CS1236: Meter, blue
 semble with bezel
 ounting tee 103035,
 s are (2) pale blue
 l) azure blue
 86)
 ind above: Meter, clear
 arate front blue filter
 nble with bezel
 ounting clamp
 olor filters are (2) pale
 blue (1) azure blue
 86)
 = Metal Film,
 V = Wirewound)
 trol
 trol
 % 1/4W
 % 1/4W
 % 1/4W
 % 1/4W
 % 1/4W
 % 2W
 % 2W
 . 5W
 . 5W
 % 1/4W

CS1605: Thermistor,
 nd above: Thermistor,
 CS1605: Thermistor,
 CS1605: Thermistor,
 nd above: Thermistor,
 CS1605: Thermistor,

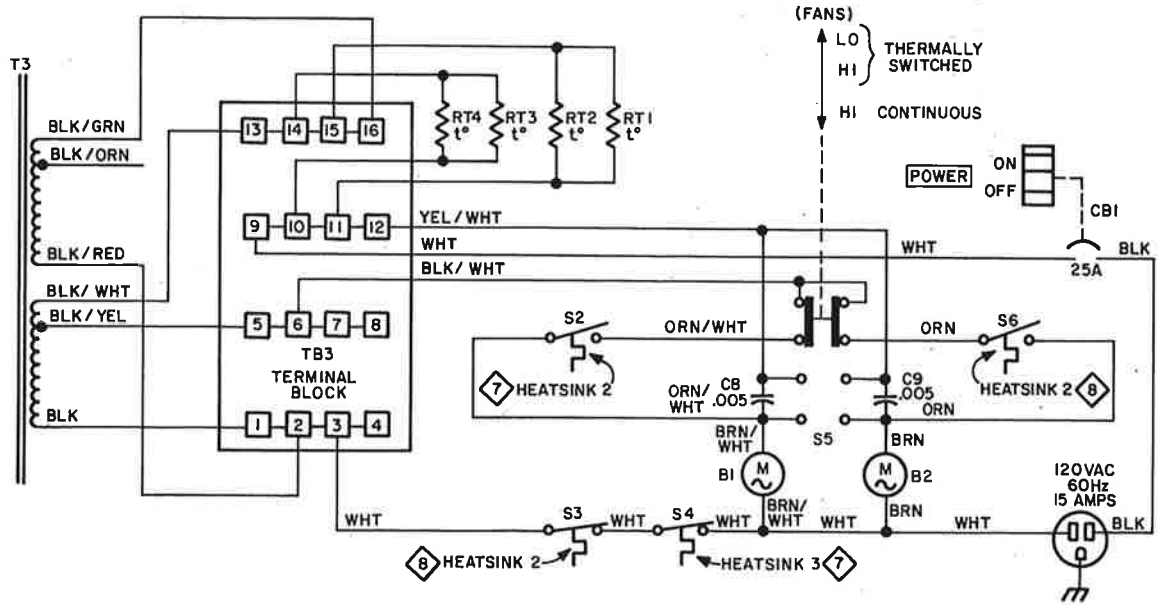


Fig. 1-1. BACKDATING INFORMATION - Terminal block and connections used from S/N CS1001 to CS1506.

SWITCHES

- *S1 146211 Meter Range Switch
- *S2 153013 Thermal Switch
- *S3 153015 Thermal Switch
- *S4 153015 Thermal Switch
- *S5 148026 Fan Switch
- *S6 153013 Thermal Switch
- *S7 146212 Speaker Switch

TRANSFORMERS

- *T1 045648 Output Transformer
- *T2 045648 Output Transformer
- *T3 045649 Power Transformer

MISCELLANEOUS

- *TB1 074054 Output Terminal Strip
- *TB2 074054 Output Terminal Strip
- *TB3 074061 S/N CS1001 to CS1505: AC Terminal Strip....(6941 & 7357)
- 074066 S/N CS1506 and above: AC Terminal Strip....(6941 & 7357)
- * 127028 AC Receptacle
- *B1 081001 Fan
- *B2 081001 Fan
- * 125291 Fan Decal
- *J1 117088 Headphone Jack, 3/8"
- *F1 174188 #30 Solid Copper Wire, (Fusible Link)

* Parts marked with an asterisk (*) are replacement parts stocked by our Service Department and must be ordered from McIntosh. These parts must be ordered by part number. Parts not marked may be obtained from electronic parts suppliers.

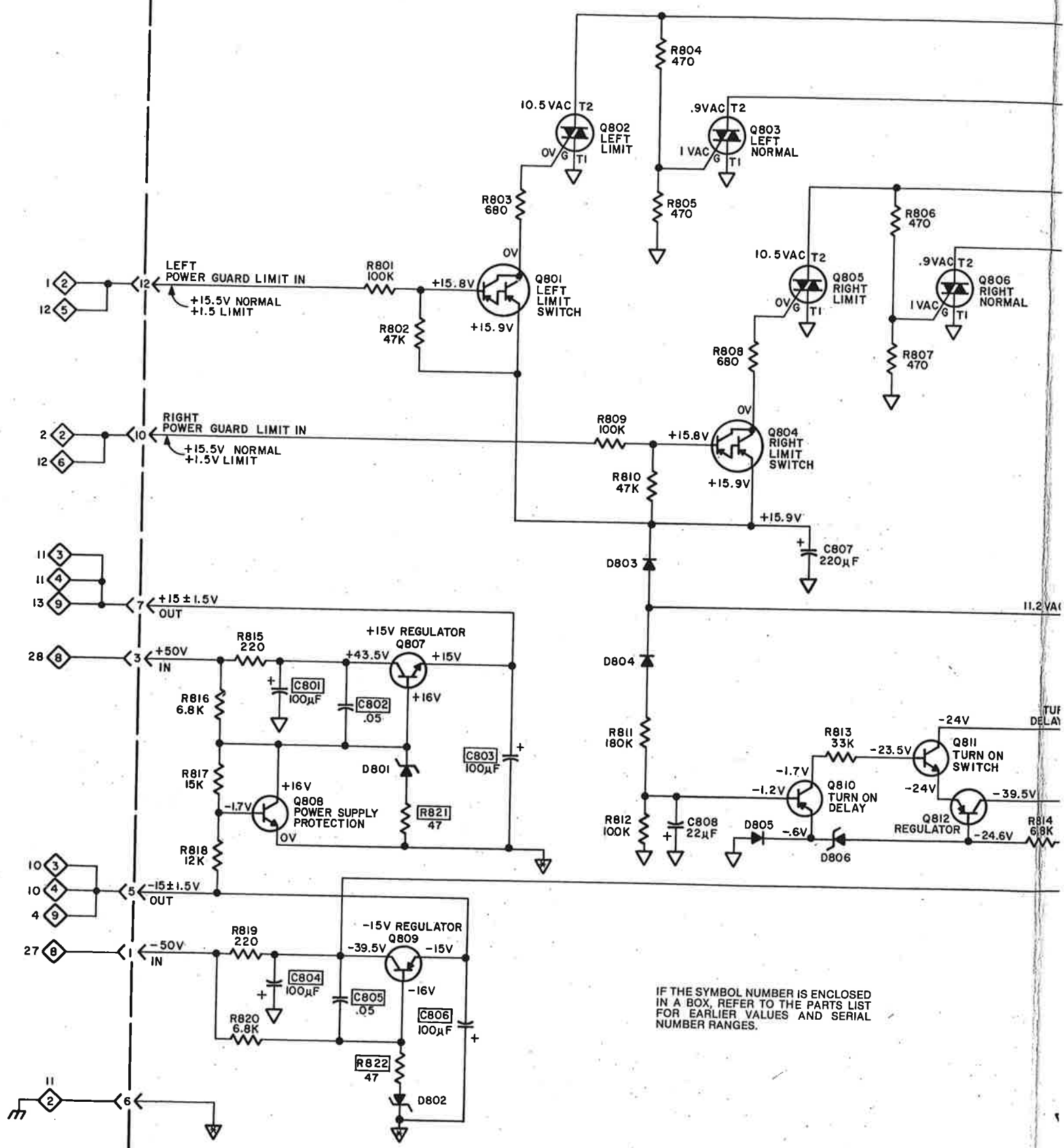
NOTES

- 1-1. If the power transformer is suspected of a malfunction, the DC resistance of the windings must be checked before replacement. The measurements are made with the primary windings disconnected. Actual DC resistance measurements can vary by $\pm 20\%$.

GRN to GRN/YEL	0.05 Ω
BLU to BRN/WHT	0.05 Ω
BRN to BRN/WHT	0.08 Ω
BLK/GRN to BLK/ORN	0.03 Ω
BLK/ORN to BLK/RED	0.14 Ω
BLK/WHT to BLK/YEL	0.03 Ω
BLK/YEL to BLK	0.13 Ω
- 1-2. When replacing bridge rectifier D1 or D2 make sure to apply a layer of heatsink compound (Dow Corning 340 or equivalent) to the metal bottom of the rectifier before installing on the heatsink.
- 1-3. If the autotransformer is suspected of a malfunction, the DC resistance of the windings must be checked before replacement. The measurements are made with all windings disconnected. Actual DC resistance measurements can vary by $\pm 20\%$.

ORN to GRN	0.14 Ω
GRN to RED	0.08 Ω
RED to BLU	0.08 Ω
BLU to BLK	0.08 Ω
BLK to WHT	0.07 Ω
WHT to RED	0.07 Ω
- 1-4. WARNING! Filter capacitors C702, 703, 902 and 903 have high energy storage capacity. Before servicing, disconnect amplifier from AC line voltage and discharge both capacitors to chassis ground through a resistor.

10 PC BOARDS 045621 and 045743



IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

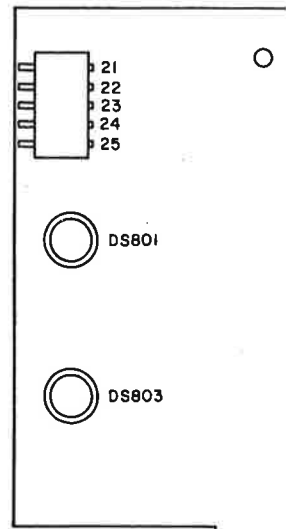
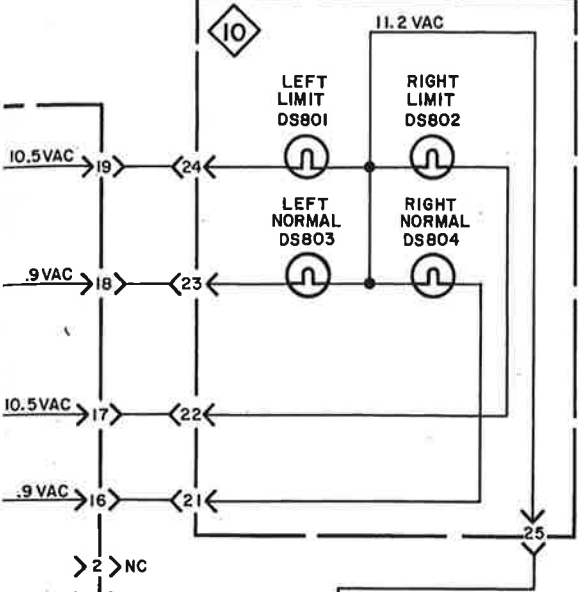


Fig. 10-1. PARTS LOCATIO

PARTS LIST

Symbol No.	Part No.	Description
CAPACITORS (CD = Ceramic Dis)		
C801	066329	S/N CS1 100μF, 3
	066353	S/N CS2 100μF, 5
C802	061043	S/N CS1 + 80 -
	061048	S/N CS1 + 80 -
C803	066329	S/N CS1 100μF, 3
	066353	S/N CS2 100μF, 5
C804	066329	S/N CS1 100μF, 3
	066353	S/N CS2 100μF, 5
C805	061043	S/N CS1 + 80 -
	061048	S/N CS1 + 80 -
C806	066329	S/N CS1 100μF, 3
	066353	S/N CS2 100μF, 5
C807	066330	ELECT, 2
C808	066214	ELECT, 2
DIODES (RECT = Rectifier, SIG = Zener, Si = Silicon)		
*D801	070114	Si, ZN, 1
*D802	070114	Si, ZN, 1
*D803	070031	Si, RECT
*D804	070047	Si, SIG,
*D805	070047	Si, SIG,
*D806	070091	Si, ZN, 2
LIGHTING DEVICES (INC = Inca		
*DS801	058061	INC, 14V
*DS802	058061	INC, 14V
*DS803	058061	INC, 14V
*DS804	058061	INC, 14V

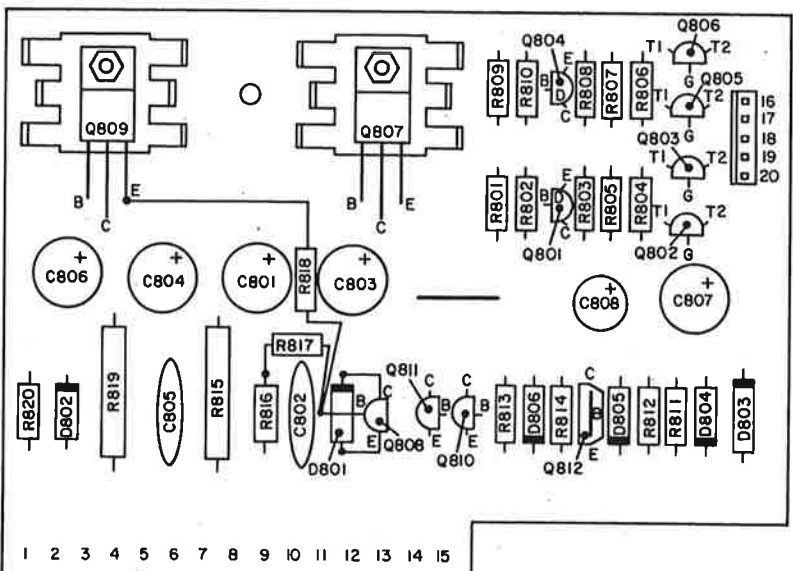
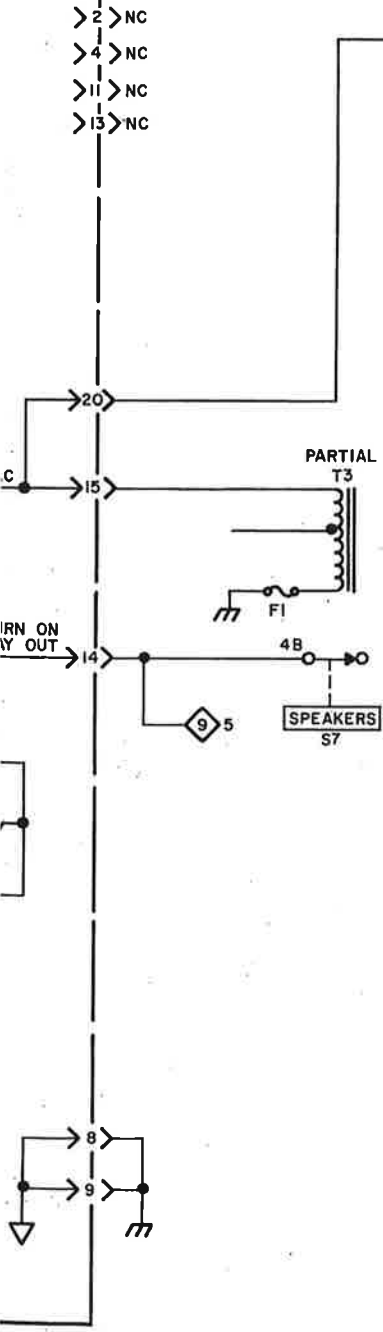


Fig. 10-2. PARTS LOCATION - PC board 045621 used in units CS1001 to CS1501.

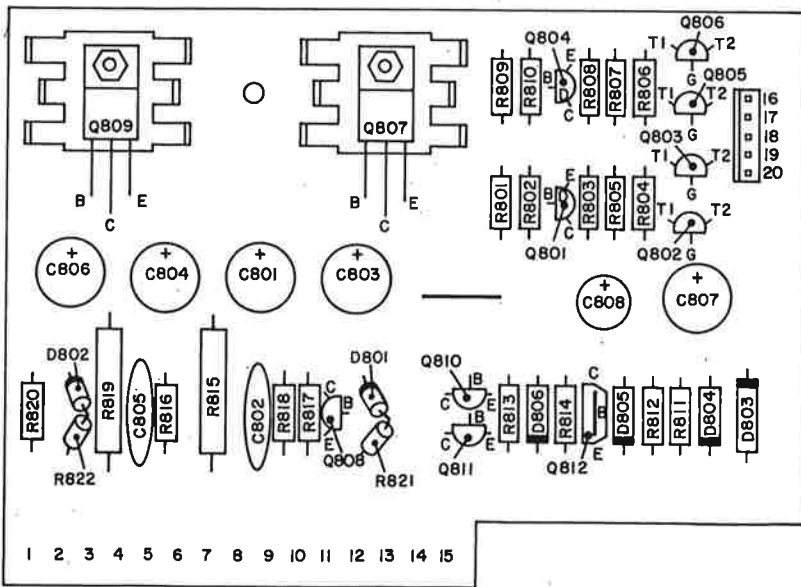
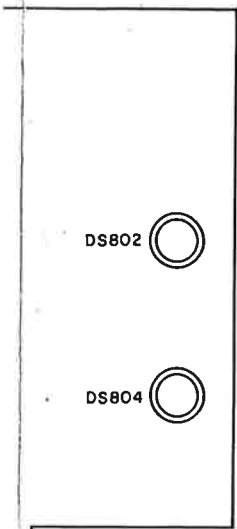


Fig. 10-3. PARTS LOCATION - PC board 045743 used in units CS1502 and above.

id POWER GUARD DISPLAY DRIVE



PC board 045622.

Description
 sc, ELECT = Electrolytic)
 1001 to CS2699: ELECT,
 35V....(7482)
 2700 and above: ELECT,
 50V....(7482)
 1001 to CS1596: CD, .01μF,
 20%....(7172)
 1597 and above: CD, .05μF,
 20%, 100V, Z5V....(7172)
 1001 to CS2699: ELECT,
 35V....(7482)
 2700 and above: ELECT,
 50V....(7482)
 1001 to CS1596: CD, .01μF,
 20%....(7172)
 1597 and above: CD, .05μF,
 20%, 100V, Z5V....(7172)
 1001 to CS2699: ELECT,
 35V....(7482)
 2700 and above: ELECT,
 50V....(7482)
 220μF, 16V
 22μF, 35V
 = Signal,
 16V, 5%, 500mW
 16V, 5%, 500mW
 1400 PIV, 1.5A
 75V, 10mA, IN4148
 75V, 10mA, IN4148
 24V, 5%, 0.5W
 andescent)
 /, 80mA, JKL7382
 /, 80mA, JKL7382
 /, 80mA, JKL7382
 /, 80mA, JKL7382

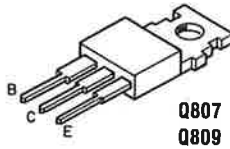
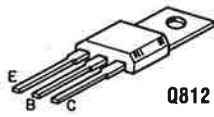
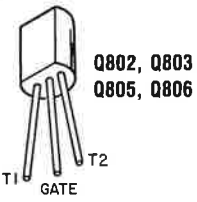
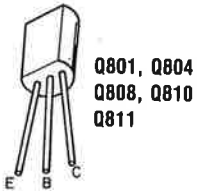
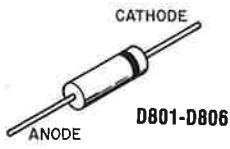
TRANSISTORS (DAR = Darlington, Si = Silicon)

- *Q801 132182 Si, PNP, DAR, MPS-A64
- *Q802 131011 Si, Triac, IB200-1
- *Q803 131011 Si, Triac, IB200-1
- *Q804 132182 Si, PNP, DAR, MPS-A64
- *Q805 131011 Si, Triac, IB200-1
- *Q806 131011 Si, Triac, IB200-1
- *Q807 132174 Si, NPN, FT3055
- *Q808 132143 Si, NPN, MPS-D05
- *Q809 132173 Si, PNP, FT2955
- *Q810 132147 Si, PNP, MPS-A93
- *Q811 132143 Si, NPN, MPS-D05
- *Q812 132148 Si, PNP, MPS-U57

RESISTORS (CF = Carbon Film, FP = Flameproof)

- R801 141096 CF, 100kΩ, 5%, 1/4W
- R802 141088 CF, 47kΩ, 5%, 1/4W
- R803 141045 CF, 680Ω, 5%, 1/4W
- R804 141041 CF, 470Ω, 5%, 1/4W
- R805 141041 CF, 470Ω, 5%, 1/4W
- R806 141041 CF, 470Ω, 5%, 1/4W
- R807 141041 CF, 470Ω, 5%, 1/4W
- R808 141045 CF, 680Ω, 5%, 1/4W
- R809 141096 CF, 100kΩ, 5%, 1/4W
- R810 141088 CF, 47kΩ, 5%, 1/4W
- R811 141102 CF, 180kΩ, 5%, 1/4W
- R812 141096 CF, 100kΩ, 5%, 1/4W
- R813 141084 CF, 33kΩ, 5%, 1/4W
- R814 141068 CF, 6.8kΩ, 5%, 1/4W
- *R815 139158 FP, 220Ω, 10%, 2W
- R816 141068 CF, 6.8kΩ, 5%, 1/4W
- R817 141076 CF, 15kΩ, 5%, 1/4W
- R818 141074 CF, 12kΩ, 5%, 1/4W
- *R819 139158 FP, 220Ω, 10%, 2W
- R820 141068 CF, 6.8kΩ, 5%, 1/4W
- R821 141152 S/N CS1386 and above: CF, 47Ω,
5%, 1/4W....(7083)
- R822 141152 S/N CS1386 and above: CF, 47Ω,
5%, 1/4W....(7083)

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INSTALLATION HARDWARE

Part No.	Description
*017098	Bumper Feet, Secure w/100062 Screws
*170132	AC Power Cord

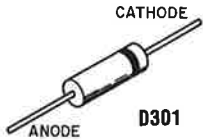
FRONT PANEL and TRIM

Part No.	Description
*003173	Front Panel (Metal Only)
*017280	Output Terminal Cover
*018208	Side Rail
*018187	S/N CS1001 to CS1148: Handle, 7/16" wide....(6914)
*018209	S/N CS1149 and above: Handle, 3/4" wide....(6914)
*074054	Output Terminal Block
*090106	Knob
*100061	Machine Screw, 10-32x1/2, Phillips, Blk.
*100131	Machine Screw, 10-32x1/2, Phillips, Gold
*101078	Tapping Screw, 8-32x5/16, Phillips, Blk.
*101088	Tapping Screw, 8-32x1/2, Phillips, Blk.
*104079	Washer, #8, Black
*104080	Washer, #10, Gold
*104083	Washer, #10, Black

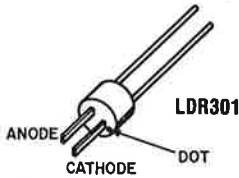
SHIPPING CARTON

Part No.	Description
*033293	Shipping Carton only
*033090	Shipping Skid
101036	1/4"-20x2" Screw (3 required for mounting skid)
104058	1/4x1 1/2" Flat Washer (3 used with 101036 screws)
*033095	2'x8' Aircap Pad (2 required)
*045737	Shipping Carton, Complete

4 PC BOARDS 045618, 045741, 045900 and 045928



D301



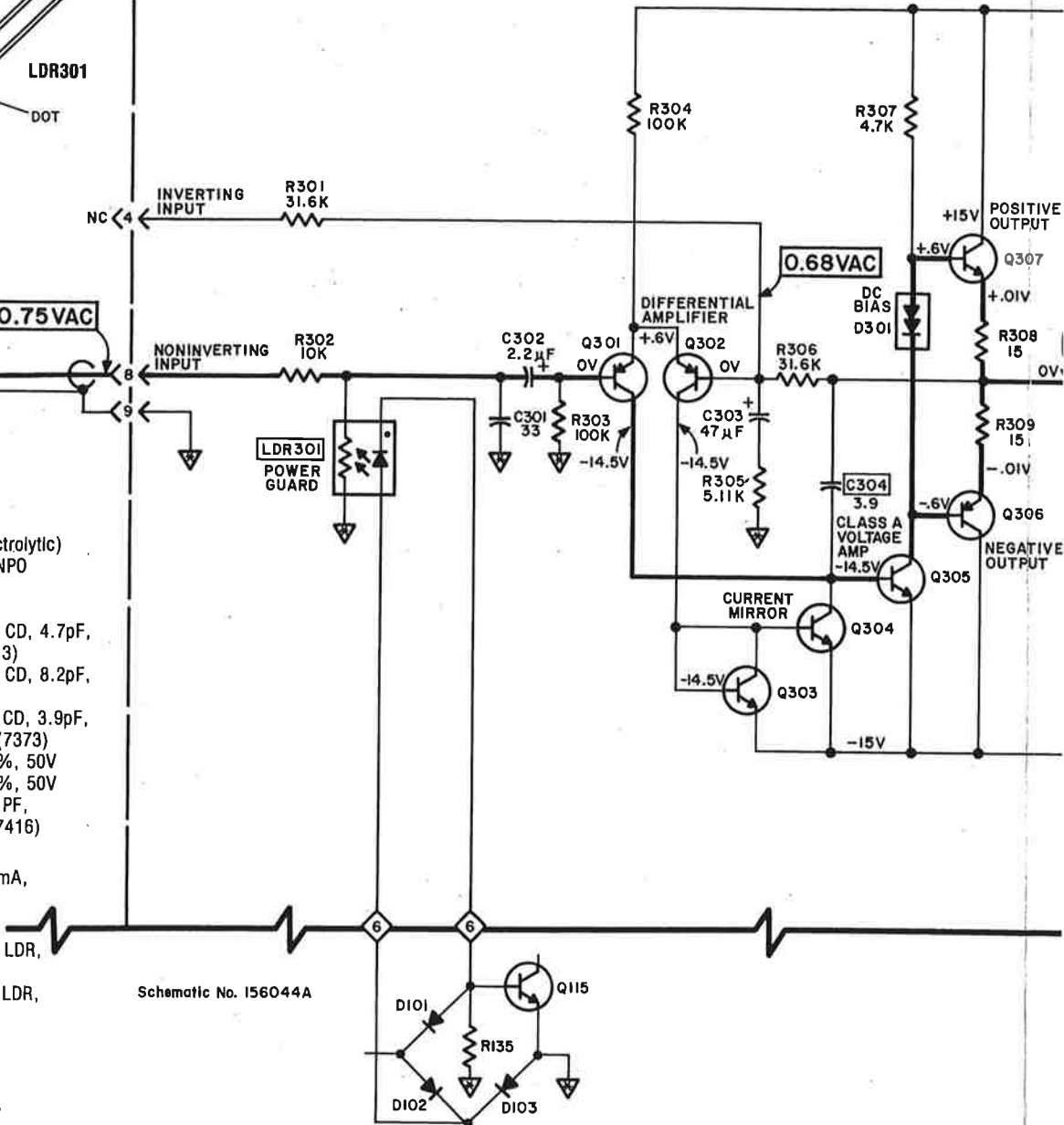
LDR301



Q301-Q307

PARTS LIST

Symbol No.	Part No.	Description
CAPACITORS (CD = Ceramic Disc, ELECT = Electrolytic)		
C301	061016	CD, 33pF, 10%, 500V, NPO
C302	066237	ELECT, 2.2μF, 50V
C303	066313	ELECT, 47μF, 80V, DC
C304	061004	S/N CS1001 to CS2219: CD, 4.7pF, 20%, 500V, NPO....(7213)
	061130	S/N CS2220 to CS2303: CD, 8.2pF, 10%, NPO....(7213)
*	061140	S/N CS2304 and above: CD, 3.9pF, ±.25pF, 100V, NPO....(7373)
C305	061161	CD, .047μF, +80 - 20%, 50V
C306	061161	CD, .047μF, +80 - 20%, 50V
C307	064172	S/N CS2850 and above: PF, .0082μF, 5%, 100V....(7416)
DIODES (Si = Silicon, STAB = Stabistor)		
*D301	070046	Si, STAB, 1.3V, 2%, 10mA, Selected MZ236
LIGHT DEPENDENT RESISTORS		
*LDR301	144070	S/N CS1001 to CS2849: LDR, CLM6000....(7416)
	144159	S/N CS2850 and above: LDR, CLM6500....(7416)
TRANSISTORS (Si = Silicon)		
*Q301	132056	Si, PNP, 2N5087
*Q302	132056	Si, PNP, 2N5087
*Q303	132195	Si, NPN, 40V, Low Noise
*Q304	132195	Si, NPN, 40V, Low Noise
*Q305	132195	Si, NPN, 40V, Low Noise
*Q306	132172	Si, PNP, MPS-A55
*Q307	132171	Si, NPN, MPS-A05
RESISTORS (CF = Carbon Film, MF = Metal Film)		
*R301	144148	MF, 31.6kΩ, 1%, 1/4W
R302	141072	CF, 10kΩ, 5%, 1/4W
R303	141096	CF, 100kΩ, 5%, 1/4W
R304	141096	CF, 100kΩ, 5%, 1/4W
*R305	144083	MF, 5.11kΩ, 2%, 1/4W
*R306	144148	MF, 31.6kΩ, 1%, 1/4W
R307	141064	CF, 4.7kΩ, 5%, 1/4W
R308	141140	CF, 15Ω, 5%, 1/4W
R309	141140	CF, 15Ω, 5%, 1/4W
R310	141029	CF, 15Ω, 5%, 1/4W
R311	141150	S/N CS1001 to CS2303: CF, 39Ω, 5%, 1/4W....(7373)
	141029	S/N CS2304 and above: CF, 150Ω, 5%, 1/4W....(7373)



Schematic No. 156044A

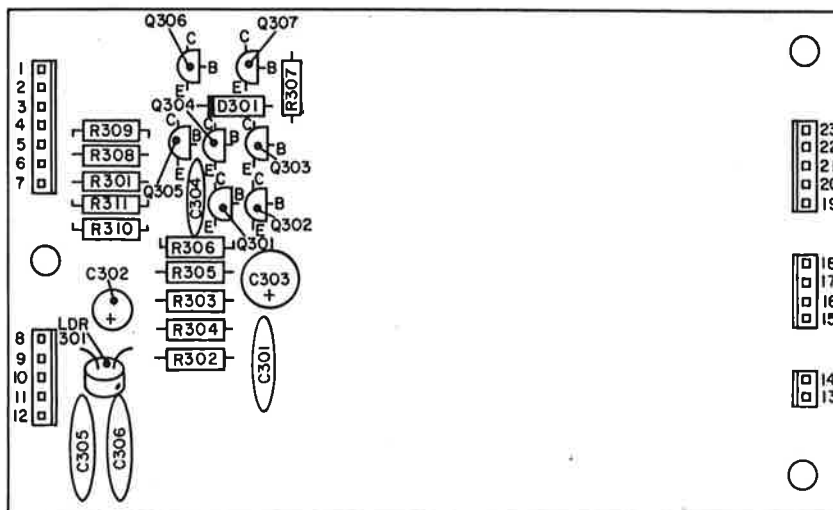
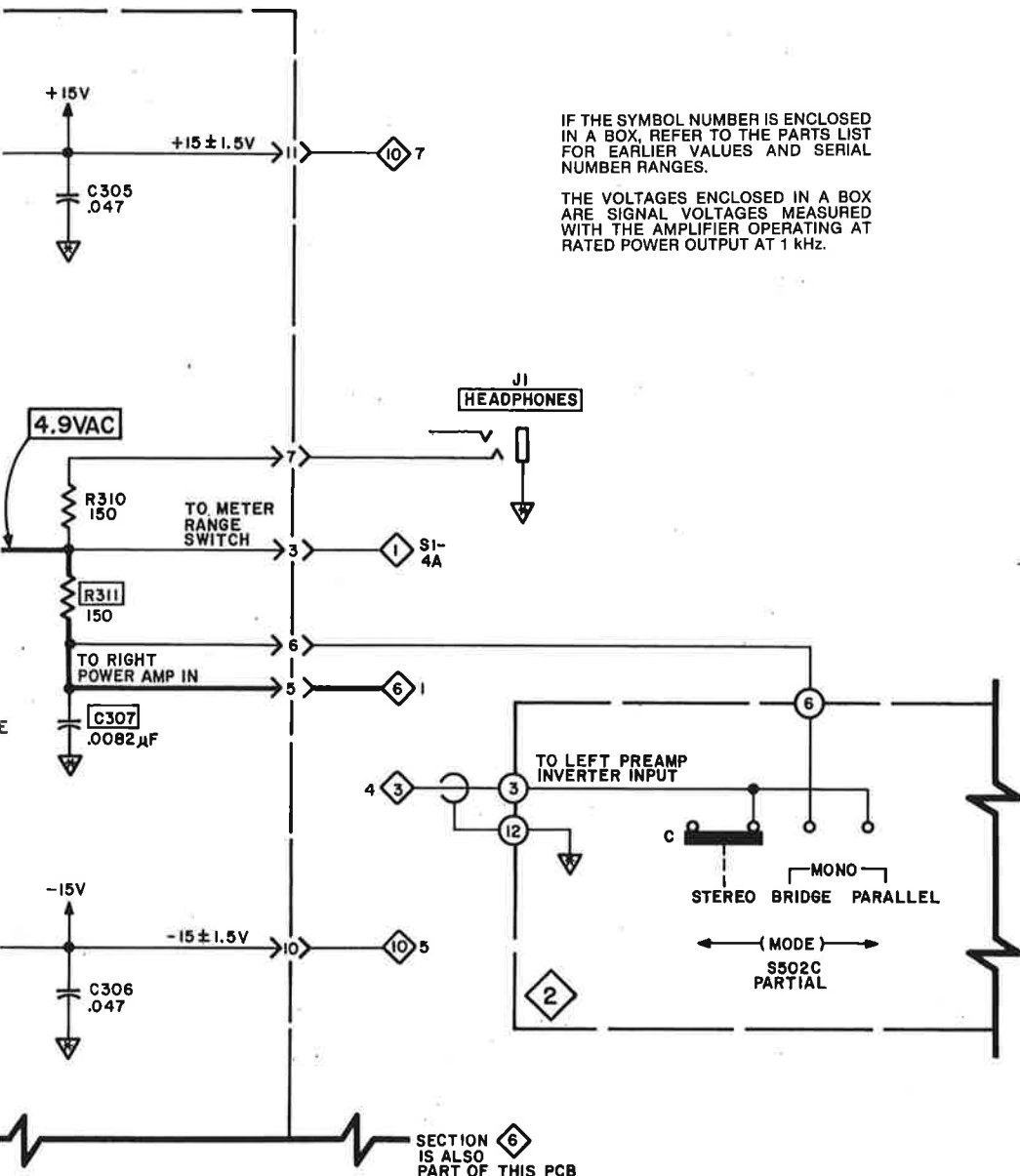


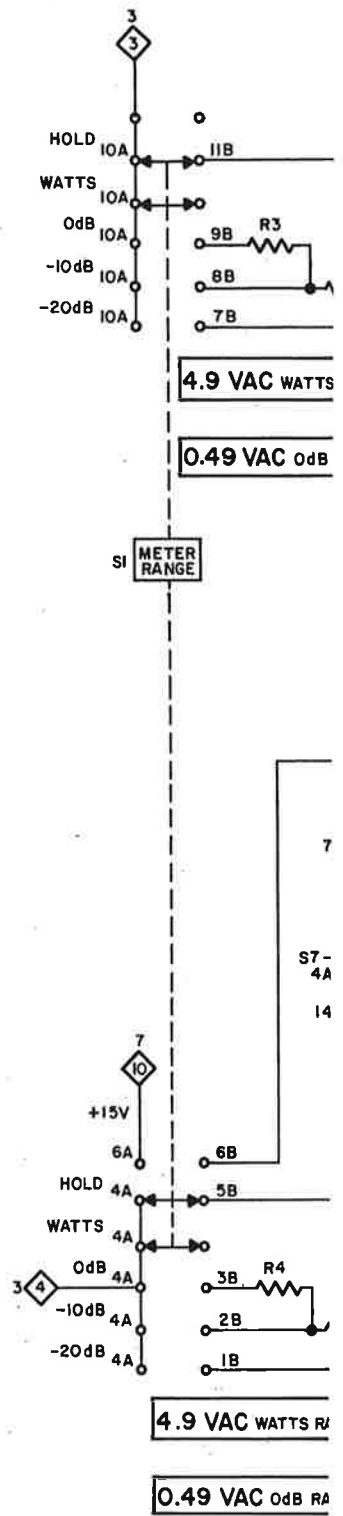
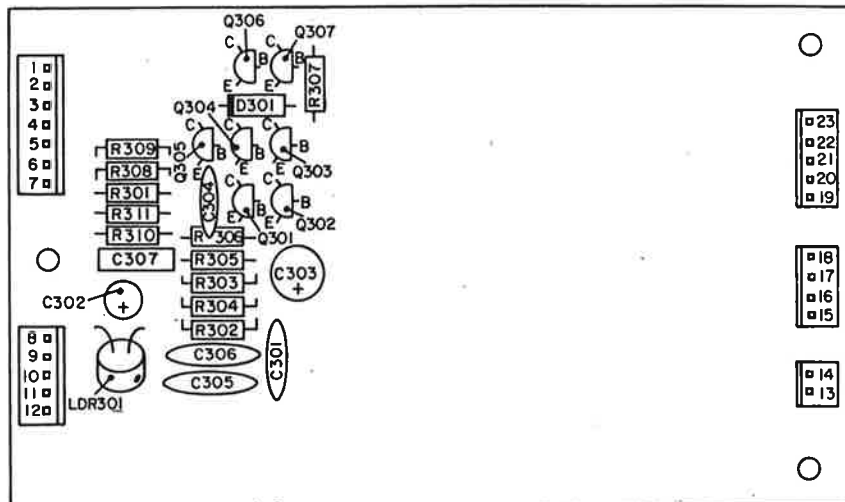
FIG. 14 PARTS LOCATION FOR 156044A (SEE FIG. 15 FOR BOARD LAYOUT)

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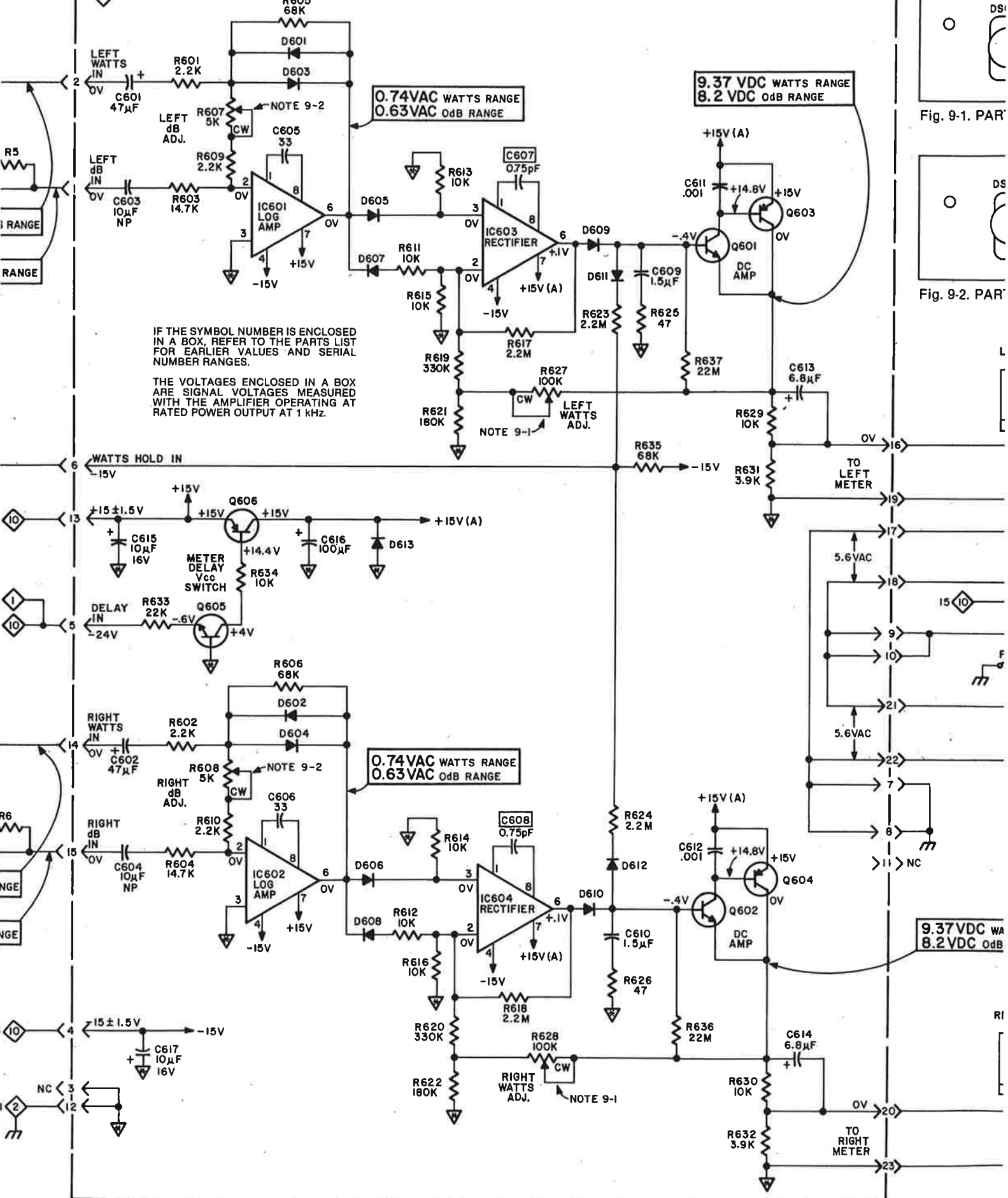
THE VOLTAGES ENCLOSED IN A BOX ARE SIGNAL VOLTAGES MEASURED WITH THE AMPLIFIER OPERATING AT RATED POWER OUTPUT AT 1 kHz.



NOTES

- 9-1. WATTS ADJUSTMENT - At rated output (8 Ω load), adjust R627 (left) and R628 (right) so that each meter indicates 500 watts with the meter range switch in watts position.
- 9-2. dB ADJUSTMENT - Adjust the watts scale first (note 9-1). At rated output (8 Ω), adjust R607 (left) and R608 (right) so

9 PC BOARD 045619



IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

THE VOLTAGES ENCLOSED IN A BOX ARE SIGNAL VOLTAGES MEASURED WITH THE AMPLIFIER OPERATING AT RATED POWER OUTPUT AT 1 KHz.

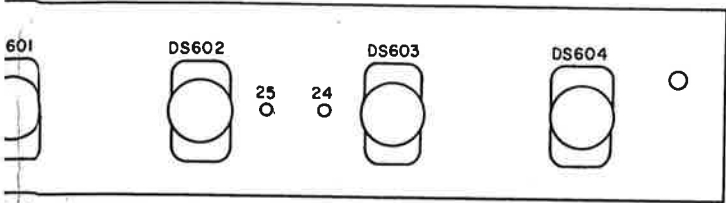
0.74 VAC WATTS RANGE
0.63 VAC OdB RANGE

9.37 VDC WATTS RANGE
8.2 VDC OdB RANGE

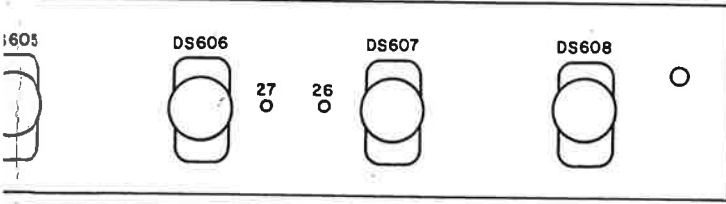
0.74 VAC WATTS RANGE
0.63 VAC OdB RANGE

Fig. 9-1. PAR

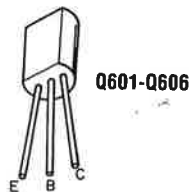
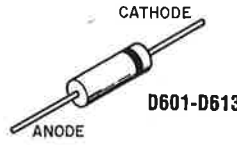
Fig. 9-2. PAR



TS LOCATION - PC board 045627, left channel.



TS LOCATION - PC board 045627, right channel.



- DIODES** (SIG = Signal, Si = Silicon)
- *D601 070047 Si, SIG, 75V, 10mA, IN4148
 - *D602 070047 Si, SIG, 75V, 10mA, IN4148
 - *D603 070047 Si, SIG, 75V, 10mA, IN4148
 - *D604 070047 Si, SIG, 75V, 10mA, IN4148
 - *D605 070047 Si, SIG, 75V, 10mA, IN4148
 - *D606 070047 Si, SIG, 75V, 10mA, IN4148
 - *D607 070047 Si, SIG, 75V, 10mA, IN4148
 - *D608 070047 Si, SIG, 75V, 10mA, IN4148
 - *D609 070047 Si, SIG, 75V, 10mA, IN4148
 - *D610 070047 Si, SIG, 75V, 10mA, IN4148
 - *D611 070047 Si, SIG, 75V, 10mA, IN4148
 - *D612 070047 Si, SIG, 75V, 10mA, IN4148
 - *D613 070047 Si, SIG, 75V, 10mA, IN4148

- LIGHTING DEVICES** (INC = Incandescent)
- *DS601 058055 INC, 6.3V, 250mA, GE259
 - *DS602 058055 INC, 6.3V, 250mA, GE259
 - *DS603 058055 INC, 6.3V, 250mA, GE259
 - *DS604 058055 INC, 6.3V, 250mA, GE259
 - *DS605 058055 INC, 6.3V, 250mA, GE259
 - *DS606 058055 INC, 6.3V, 250mA, GE259
 - *DS607 058055 INC, 6.3V, 250mA, GE259
 - *DS608 058055 INC, 6.3V, 250mA, GE259

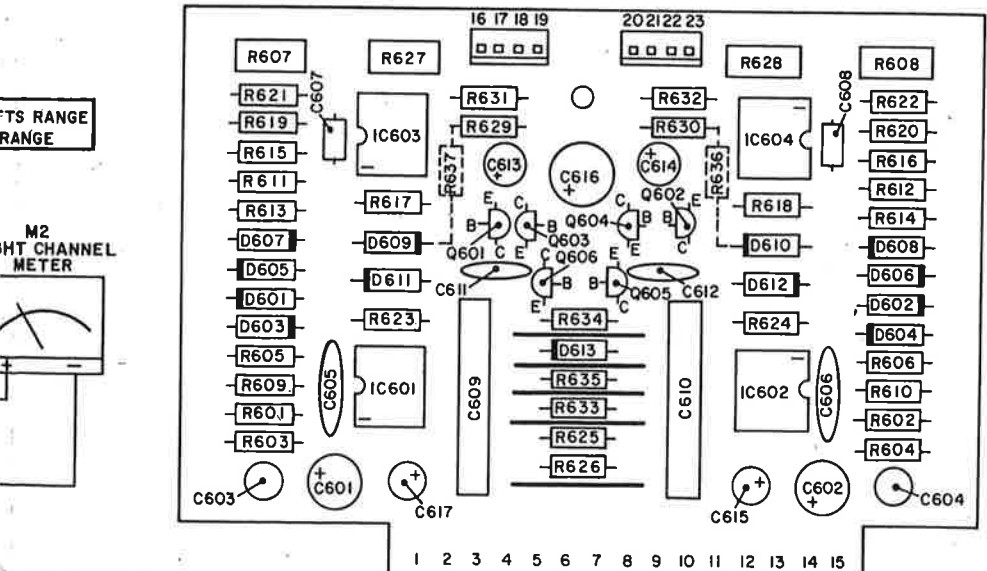
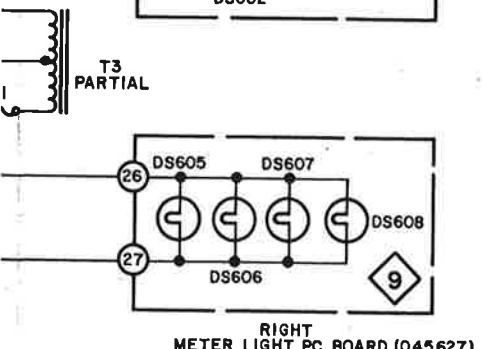
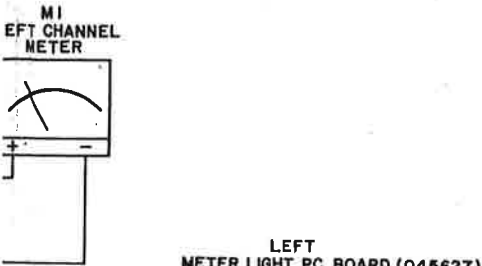
- INTEGRATED CIRCUITS** (AN = Analog, BP = Bipolar)
- *IC601 133068 AN, BP, Operation Amp, LM201A
 - *IC602 133068 AN, BP, Operation Amp, LM201A
 - *IC603 133068 AN, BP, Operation Amp, LM201A
 - *IC604 133068 AN, BP, Operation Amp, LM201A

- TRANSISTORS** (Si = Silicon)
- *Q601 132195 Si, NPN, 40V, Low Noise
 - *Q602 132195 Si, NPN, 40V, Low Noise
 - *Q603 132056 Si, PNP, 2N5087
 - *Q604 132056 Si, PNP, 2N5087
 - *Q605 132143 Si, NPN, MPS-D05
 - *Q606 132172 Si, PNP, MPS-A55....(7451)

- RESISTORS** (CC = Carbon Composition, CF = Carbon Film, MF = Metal Film, POT = Potentiometer)
- R601 141057 CF, 2.2kΩ, 5%, 1/4W
 - R602 141057 CF, 2.2kΩ, 5%, 1/4W
 - *R603 144149 MF, 14.7kΩ, 1%, 1/4W
 - *R604 144149 MF, 14.7kΩ, 1%, 1/4W
 - R605 141092 CF, 68kΩ, 5%, 1/4W
 - R606 141092 CF, 68kΩ, 5%, 1/4W
 - *R607 134387 POT, 5kΩ, 20%
 - *R608 134387 POT, 5kΩ, 20%
 - R609 141057 CF, 2.2kΩ, 5%, 1/4W
 - R610 141057 CF, 2.2kΩ, 5%, 1/4W
 - R611 141072 CF, 10kΩ, 5%, 1/4W
 - R612 141072 CF, 10kΩ, 5%, 1/4W
 - R613 141072 CF, 10kΩ, 5%, 1/4W
 - R614 141072 CF, 10kΩ, 5%, 1/4W
 - R615 141072 CF, 10kΩ, 5%, 1/4W
 - R616 141072 CF, 10kΩ, 5%, 1/4W
 - R617 141124 CF, 2.2MΩ, 5%, 1/4W
 - R618 141124 CF, 2.2MΩ, 5%, 1/4W
 - R619 141108 CF, 330kΩ, 5%, 1/4W
 - R620 141108 CF, 330kΩ, 5%, 1/4W
 - R621 141102 CF, 180kΩ, 5%, 1/4W
 - R622 141102 CF, 180kΩ, 5%, 1/4W
 - R623 141124 CF, 2.2MΩ, 5%, 1/4W
 - R624 141124 CF, 2.2MΩ, 5%, 1/4W
 - R625 141152 CF, 47Ω, 5%, 1/4W
 - R626 141152 CF, 47Ω, 5%, 1/4W
 - *R627 134383 POT, 100kΩ, 20%
 - *R628 134383 POT, 100kΩ, 20%
 - R629 141072 CF, 10kΩ, 5%, 1/4W
 - R630 141072 CF, 10kΩ, 5%, 1/4W
 - R631 141062 CF, 3.9kΩ, 5%, 1/4W
 - R632 141062 CF, 3.9kΩ, 5%, 1/4W
 - R633 141080 CF, 22kΩ, 5%, 1/4W
 - R634 141072 CF, 10kΩ, 5%, 1/4W
 - R635 141092 CF, 68kΩ, 5%, 1/4W
 - R636 136477 CC, 22MΩ, 10%, 1/4W
 - R637 136477 CC, 22MΩ, 10%, 1/4W

PARTS LIST

Symbol No.	Part No.	Description
CAPACITORS (CD = Ceramic Disc, FC = Fixed Composition, ELECT = Electrolytic, MPE = Metallized Polyester)		
C601	066215	ELECT, 47μF, 16V
C602	066215	ELECT, 47μF, 16V
*C603	066316	ELECT, 10μF, 25V, NP
*C604	066316	ELECT, 10μF, 25V, NP
C605	061016	CD, 33pF, 10%, 500V, NPO
C606	061016	CD, 33pF, 10%, 500V, NPO
*C607	061002	S/N CS1001 to CS1393: CD, 1.8pF, ±.25pF, NPO....(6933)
	069015	S/N CS1394 and above: FC, 0.75pF, 10%....(6933)
*C608	061002	S/N CS1001 to CS1393: CD, 1.8pF, ±.25pF, NPO....(6933)
	069015	S/N CS1394 and above: FC, 0.75pF, 10%....(6933)
C609	064143	MPE, 1.5μF, 100V
C610	064143	MPE, 1.5μF, 100V
C611	061035	CD, .001μF, 20%, 500V, Z5U
C612	061035	CD, .001μF, 20%, 500V, Z5U
C613	066290	ELECT, 6.8μF, 10%, 25V
C614	066290	ELECT, 6.8μF, 10%, 25V
C615	066211	ELECT, 10μF, 16V
C616	066226	ELECT, 100μF, 16V
C617	066211	ELECT, 10μF, 16V



* Parts marked with an asterisk (*) are replacement parts stocked by our Service Department and must be ordered from McIntosh. These parts must be ordered by part number. Parts not marked may be obtained from electronic parts suppliers.

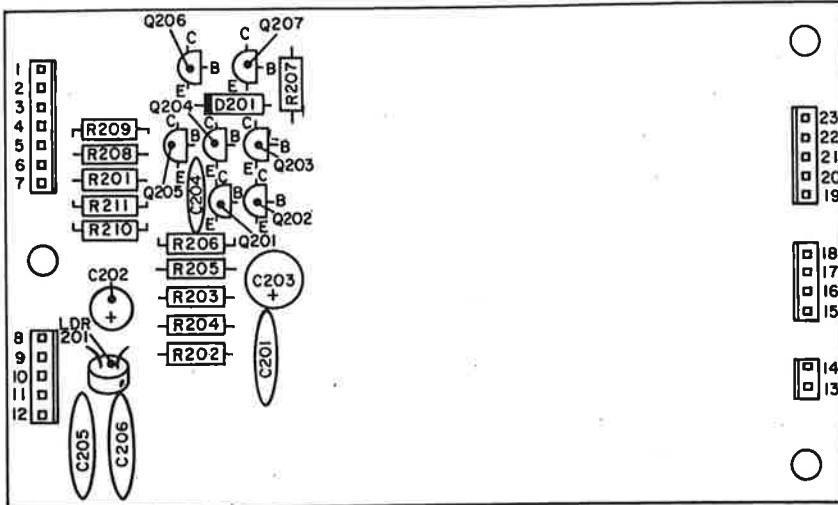


Fig. 3-1. PARTS LOCATION - PC board 045618 used in units S/N CS1001 to CS1487.

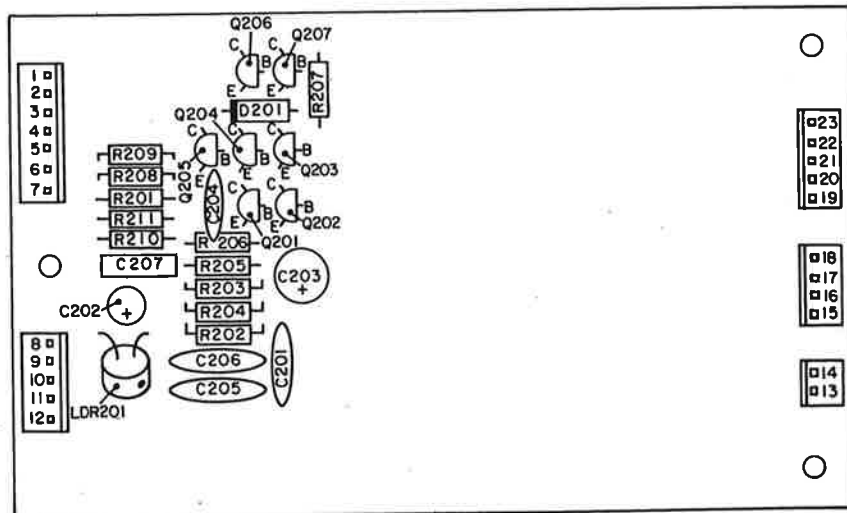


Fig. 3-2. PARTS LOCATION - PC board 045741, 045900 and 045928 used in units CS1488 and above.

PARTS LIST

Symbol No.	Part No.	Description
CAPACITORS (CD = Ceramic Disc, ELECT = Electrolytic)		
C201	061016	CD, 33pF, 10%, 500V, NPO
C202	066237	ELECT, 2.2 μ F, 50V
C203	066313	ELECT, 47 μ F, 80V, DC
C204	061004	S/N CS1001 to CS2219: CD, 4.7pF, 20%, 500V, NPO....(7213)
	061130	S/N CS2220 to CS2303: CD, 8.2pF, 10%, NPO....(7213)
	* 061140	S/N CS2304 and above: CD, 3.9pF, \pm .25pF, 100V, NPO...(7373)
C205	061161	CD, .047 μ F, +80 -20%, 50V
C206	061161	CD, .047 μ F, +80 -20%, 50V
*C207	064172	S/N CS2850 and above: PF, .0082 μ F, 5%, 100V....(7416)

DIODES (Si = Silicon, STAB = Stabistor)
 *D201 070046 Si, STAB, 1.3V, 2%, 10mA, Selected MZ236

LIGHT DEPENDENT RESISTORS
 *LDR201 144070 S/N CS1001 to CS2849: LDR, CLM6000....(7416)
 144159 S/N CS2850 and above: LDR, CLM6500....(7416)

TRANSISTORS (Si = Silicon)
 *Q201 132056 Si, PNP, 2N5087
 *Q202 132056 Si, PNP, 2N5087
 *Q203 132195 Si, NPN, 40V, Low Noise
 *Q204 132195 Si, NPN, 40V, Low Noise
 *Q205 132195 Si, NPN, 40V, Low Noise
 *Q206 132172 Si, PNP, MPS-A55
 *Q207 132171 Si, NPN, MPS-A05

RESISTORS (CF = Carbon Film, MF = Metal Film)
 *R201 144148 MF, 31.6k Ω , 1%, 1/4W
 R202 141072 CF, 10k Ω , 5%, 1/4W
 R203 141096 CF, 100k Ω , 5%, 1/4W
 R204 141096 CF, 100k Ω , 5%, 1/4W
 *R205 144083 MF, 5.11k Ω , 2%, 1/4W
 *R206 144148 MF, 31.6k Ω , 1%, 1/4W
 R207 141064 CF, 4.7k Ω , 5%, 1/4W
 R208 141140 CF, 15 Ω , 5%, 1/4W
 R209 141140 CF, 15 Ω , 5%, 1/4W
 R210 141029 CF, 150, 5%, 1/4W
 R211 141150 S/N CS1001 to CS2303: CF, 39 Ω , 5%, 1/4W....(7373)
 141029 S/N CS2304 and above: CF, 150 Ω , 5%, 1/4W....(7373)

* Parts marked with an asterisk (*) are replacement parts stocked by our Service Department and must be ordered from McIntosh. These parts must be ordered by part number. Parts not marked may be obtained from electronic parts suppliers.

OUTPUT (RIGHT CHANNEL)

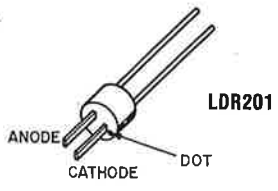
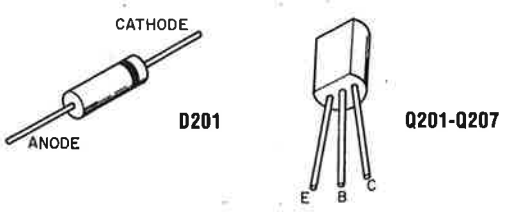
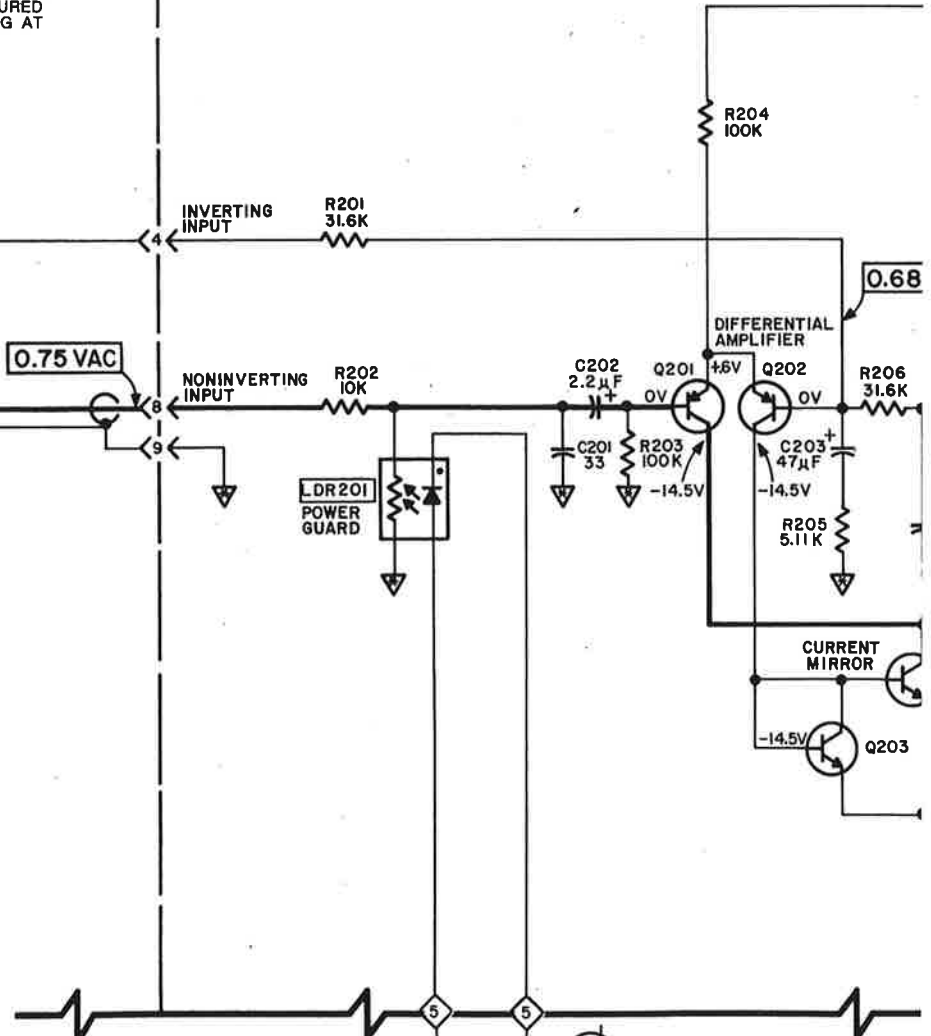
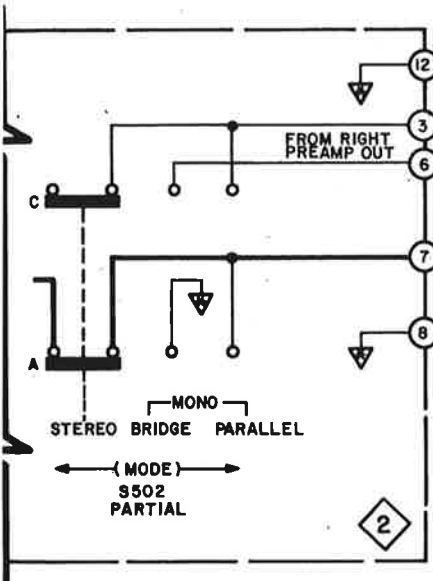
3

PREAMP INPUT and HEADPHONE OUTPUT (LEFT CHANNEL)

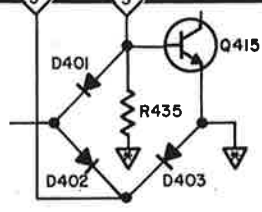
IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

THE VOLTAGES ENCLOSED IN A BOX ARE SIGNAL VOLTAGES MEASURED WITH THE AMPLIFIER OPERATING AT RATED POWER OUTPUT AT 1 KHZ.

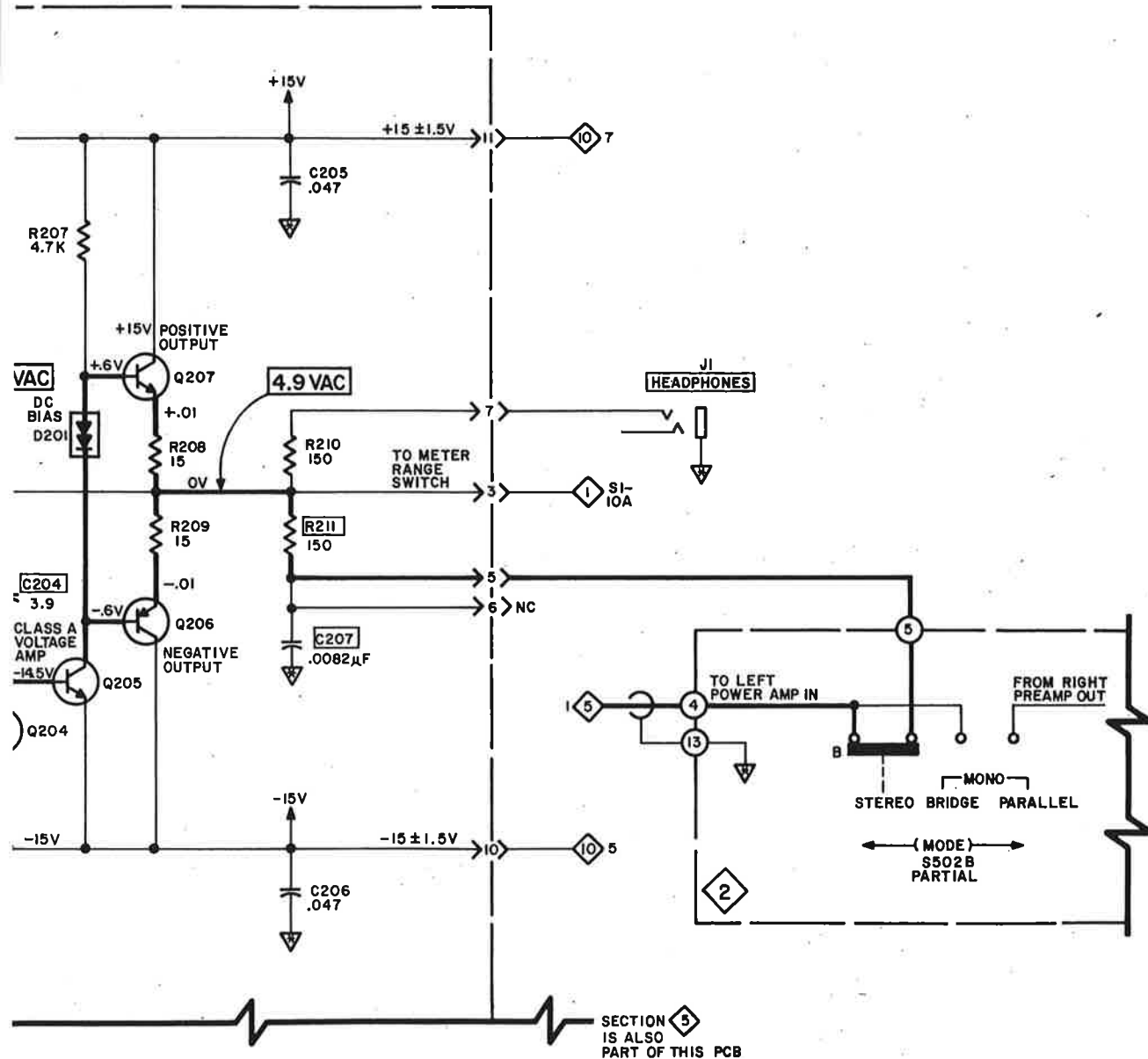
3 PC BOARDS 045618, 045741, 045900 and 045928



Schematic No. 156043A

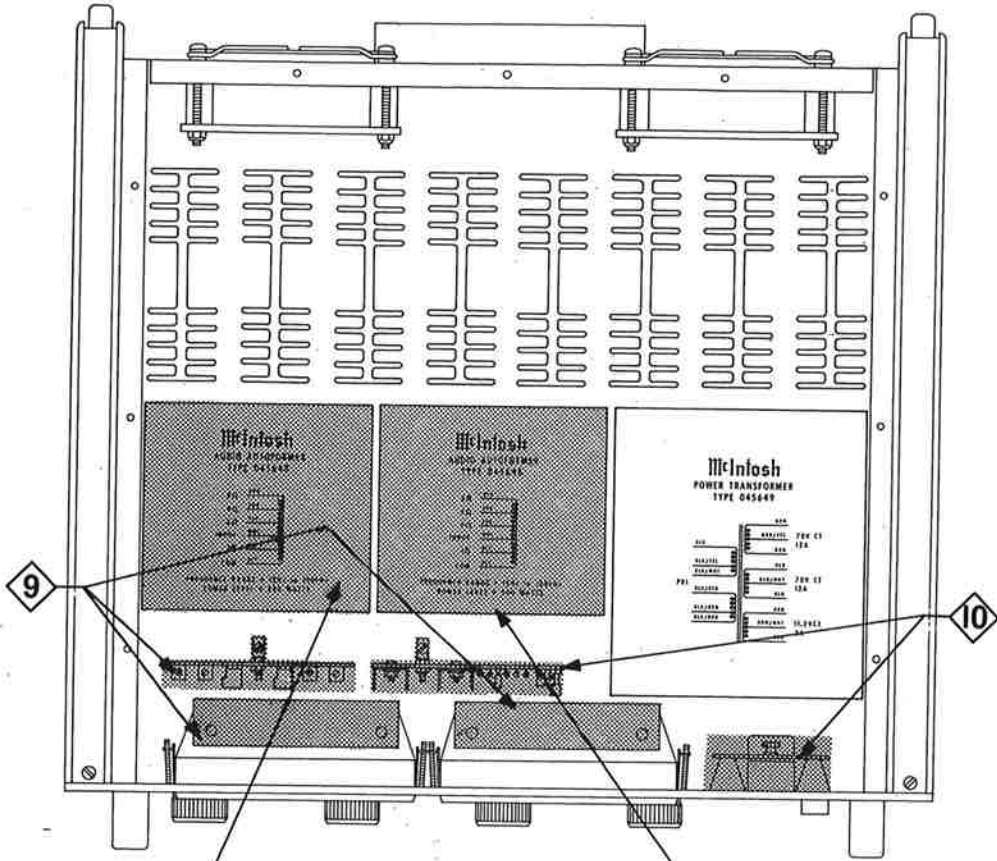


L)

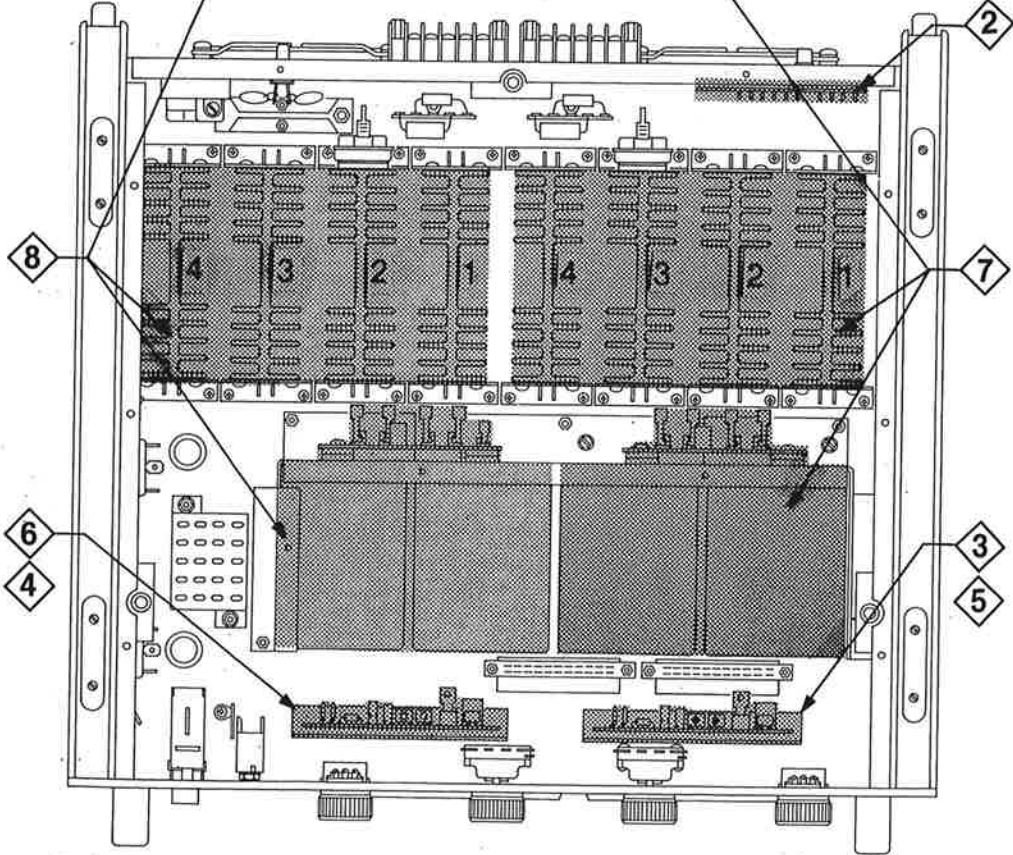


SECTION LOCATION

Top View



Bottom View



MC 2500

Stereo Power Amplifier

Schematics

039397

Sheet **2** of **2**

McIntosh

This sheet includes sections:

- ② INPUT LEVEL and MODE SELECTION

- ⑤ POWER OUTPUT DRIVE and POWER GUARD
(LEFT CHANNEL)

- ⑥ POWER OUTPUT DRIVE and POWER GUARD
(RIGHT CHANNEL)

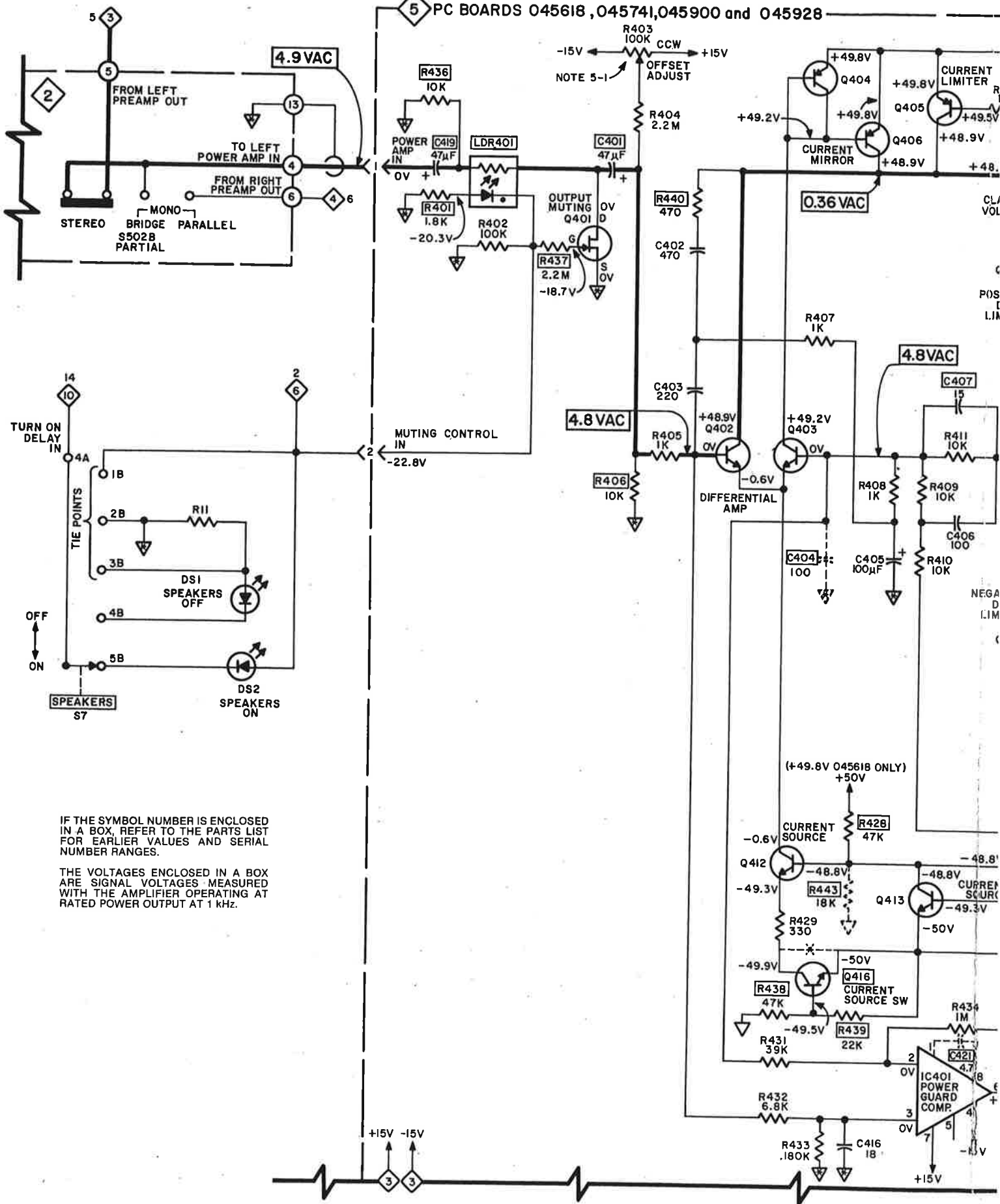
- ⑦ POWER OUTPUT (LEFT CHANNEL)

- ⑧ POWER OUTPUT (RIGHT CHANNEL)

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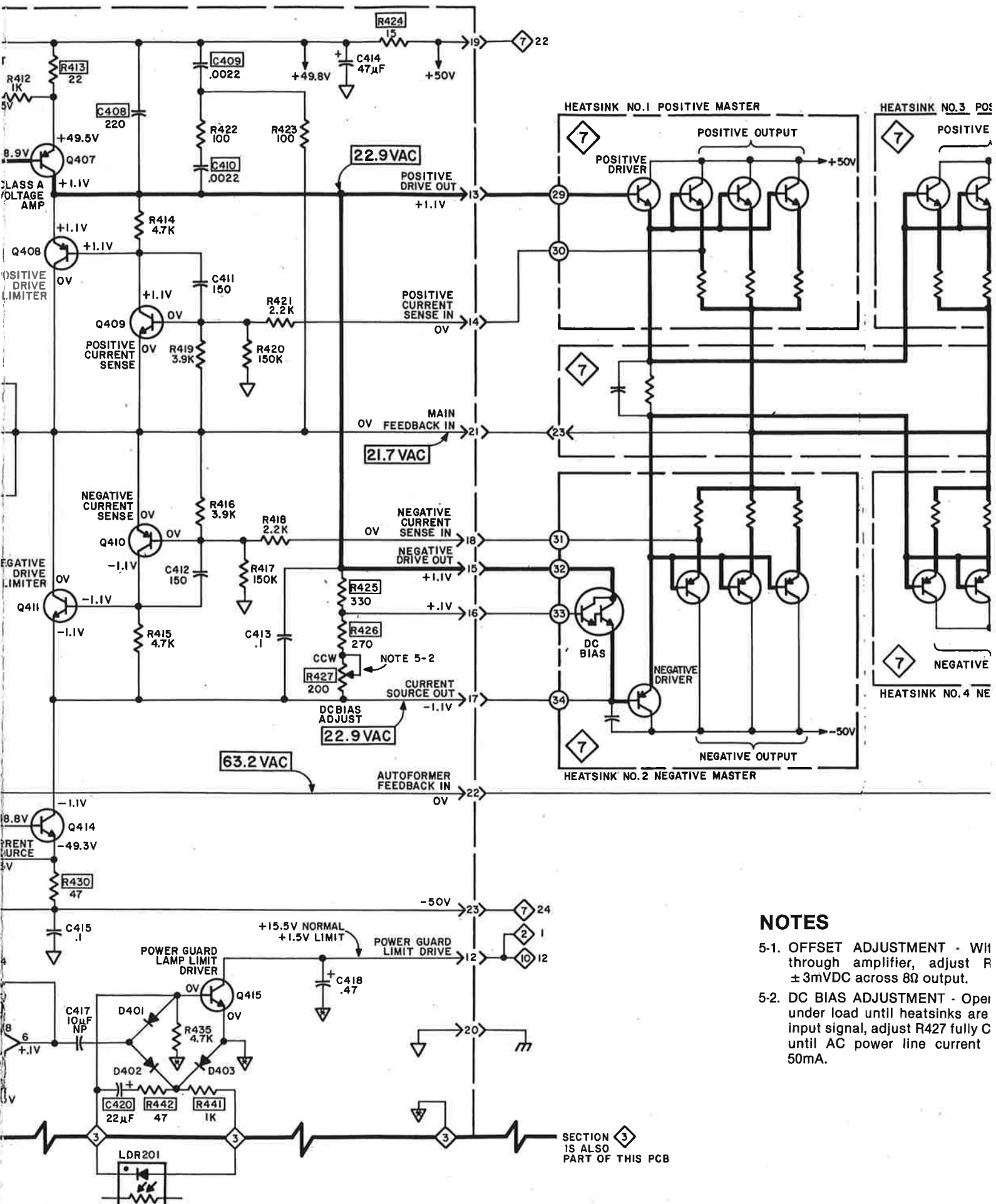
5 PC BOARDS 045618, 045741, 045900 and 045928



IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

THE VOLTAGES ENCLOSED IN A BOX ARE SIGNAL VOLTAGES MEASURED WITH THE AMPLIFIER OPERATING AT RATED POWER OUTPUT AT 1 kHz.

Schematic No. 145045A



NOTES

- 5-1. OFFSET ADJUSTMENT - With input signal, adjust R421 until AC power line current is $\pm 3\text{mVDC}$ across 8Ω output.
- 5-2. DC BIAS ADJUSTMENT - Operate under load until heatsinks are at input signal, adjust R427 fully CCW until AC power line current is 50mA.

SECTION 3
IS ALSO
PART OF THIS PCB

- ≥1552 and above: CF, 1.8kΩ, 1/4W....(7096)
- 0kΩ, 5%, 1/4W
- 00kΩ, 20%
- 2MΩ, 5%, 1/4W
- Ω, 5%, 1/4W
- ≥1001 to CS1551: CF, 6.8kΩ, 1/4W....(7096)
- ≥1552 and above: CF, 10kΩ, 1/4W....(7096)
- Ω, 5%, 1/4W
- Ω, 1%, 1/4W
- 1kΩ, 1%, 1/4W
- 1kΩ, 1%, 1/4W
- 1kΩ, 1%, 1/4W
- Ω, 5%, 1/4W
- ≥1001 to CS2308: FP, 15Ω, 1/4W....(7381)
- ≥2309 and above: FP, 22Ω, 1/4W....(7381)
- 7kΩ, 5%, 1/4W
- 7kΩ, 5%, 1/4W
- 3kΩ, 5%, 1/4W
- 0kΩ, 5%, 1/4W
- 2kΩ, 5%, 1/4W
- 3kΩ, 5%, 1/4W
- 0kΩ, 5%, 1/4W
- 2kΩ, 5%, 1/4W
- 0Ω, 5%, 1/4W
- 0Ω, 5%, 1/4W
- S1001 to CS2308: FP, 10Ω, 1/4W....(7381)
- S2309 and above: FP, 15Ω, 1/4W....(7381)
- S1001 to CS1487: CF, 3kΩ, 1/4W....(6985)
- S1488 and above: CF, 330Ω, 1/4W....(6985)
- S1001 to CS1487: CF, 2.2kΩ, 1/4W....(6985)
- S1488 and above: CF, 270Ω, 1/4W....(6985)
- S1001 to CS1487: POT, 2kΩ, 1/4W....(6985)
- S1488 and above: POT, 200Ω, 1/4W....(6985)
- S1038 and above: CF, 47kΩ, 1/2W....(6948)
- 10Ω, 5%, 1/4W
- S1001 to CS2308: CF, 39Ω, 1/4W....(7381)
- S2309 and above: CF, 47Ω, 1/4W....(7381)
- 1kΩ, 5%, 1/4W
- 8kΩ, 5%, 1/4W
- 10kΩ, 5%, 1/4W
- 1Ω, 5%, 1/4W
- 7kΩ, 5%, 1/4W
- S1488 and above: CF, 10kΩ, 1/4W....(6985)
- S1488 and above: CF, 1, 5%, 1/4W....(6985)
- S1696 and above: CF, 47kΩ, 1/4W....(7230)
- S1696 and above: CF, 22kΩ, 1/4W....(7230)
- S2309 and above: CF, 470Ω, 1/4W....(7381)
- S2850 and above: CF, 1kΩ, 1/4W....(7416)
- S2850 and above: CF, 47Ω, 1/4W....(7416)
- S1001 to CS1038: CF, 18kΩ, 1/4W....(6948)

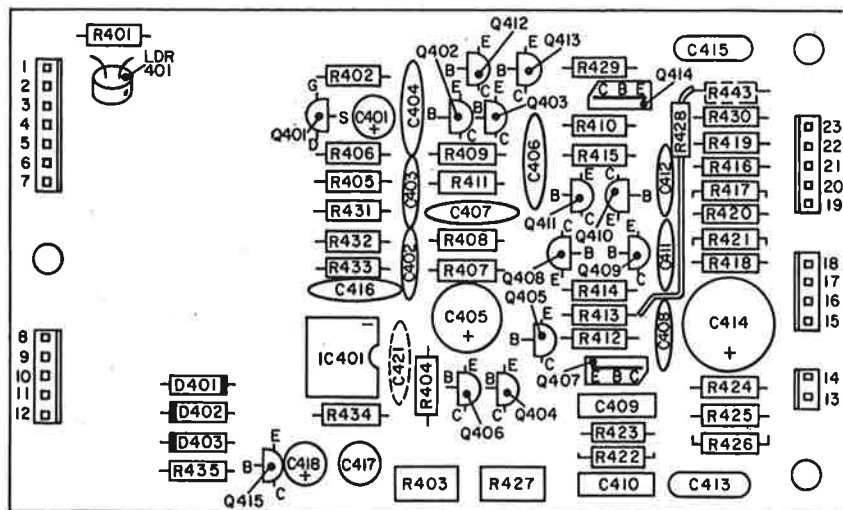
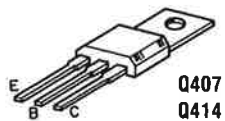
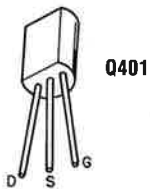
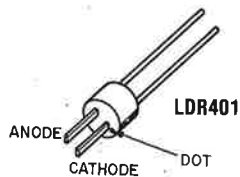
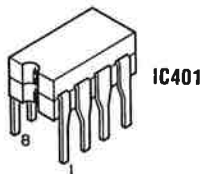
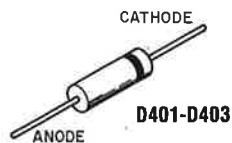


Fig. 5-1. PARTS LOCATION - PC board 045618 used in units S/N CS1001 to CS1487.

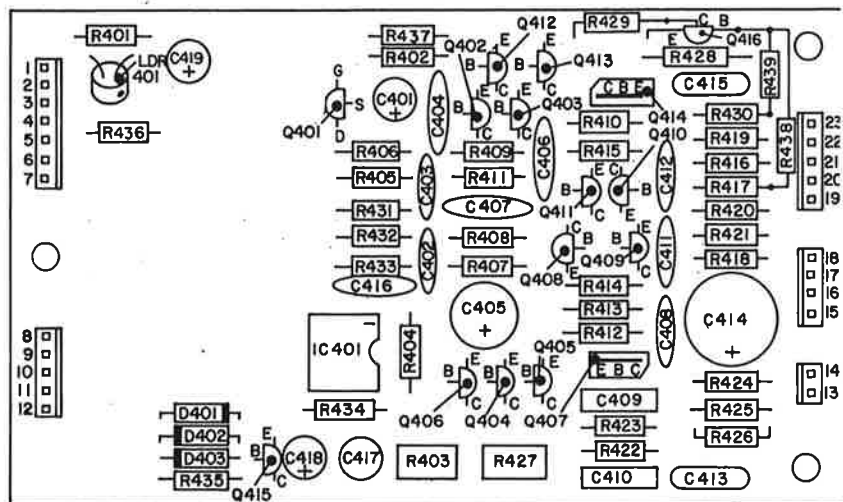


Fig. 5-2. PARTS LOCATION - PC board 045741 used in units S/N CS1488 to CS2103.

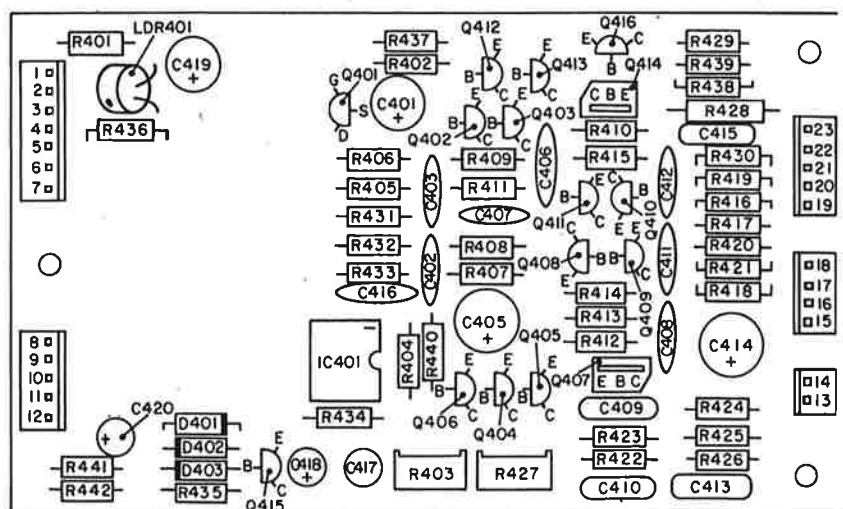


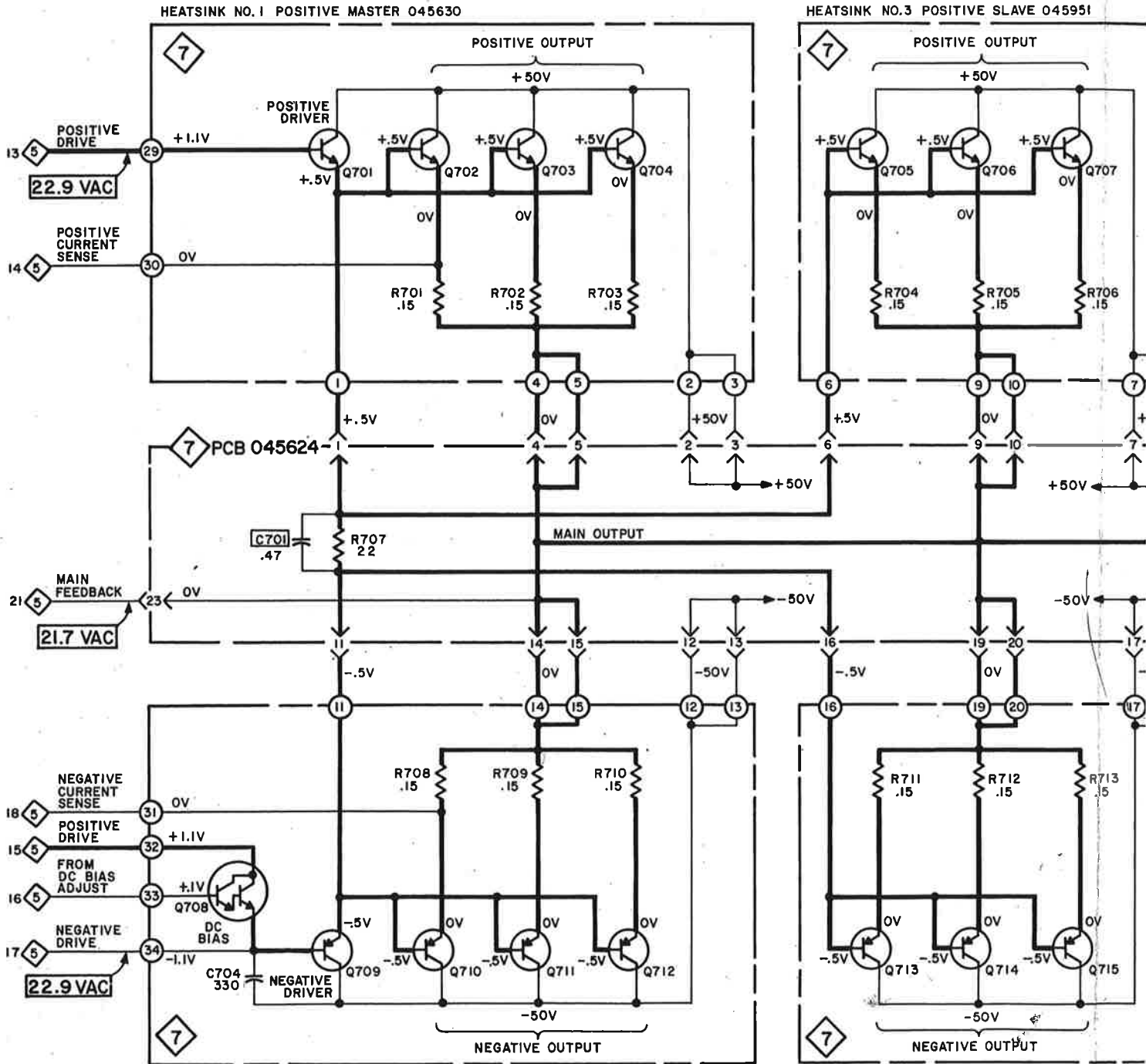
Fig. 5-3. PARTS LOCATION - PC board 045900 and 045928 used in units CS2104 and above.

sk (*) are replacement parts stockment and must be ordered from it be ordered by part number. Parts ed from electronic parts suppliers.

SECTION

7

POWER OUTPUT (LEFT CHANNE



Schematic No. 156048A

HEATSINK NO. 4 NEGATIVE SLAVE O45634

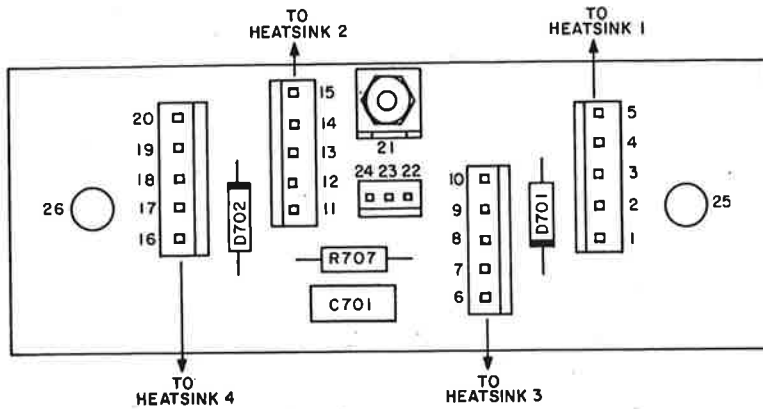
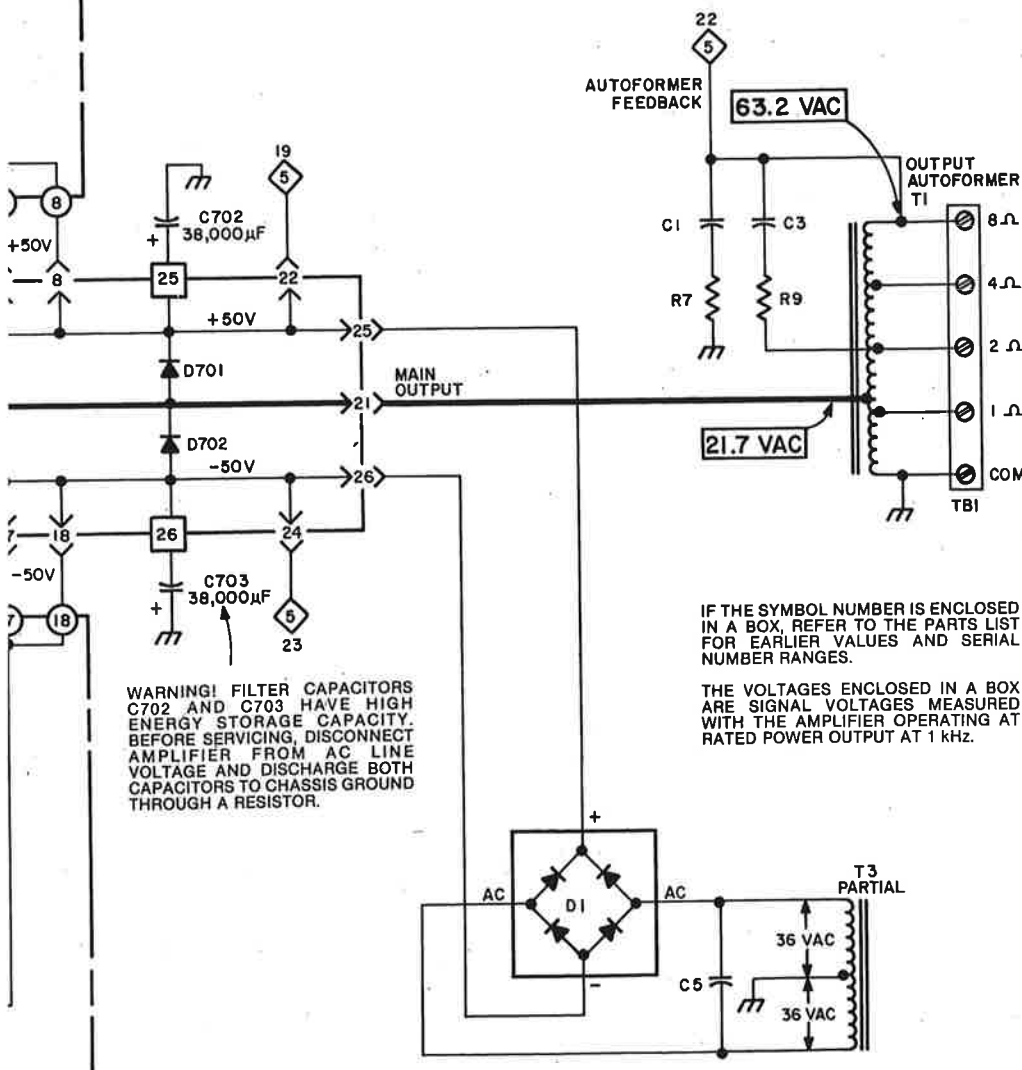


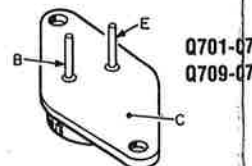
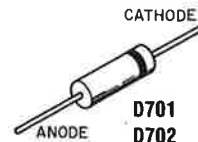
Fig. 7-1. PARTS LOCATION - PC board 045624.



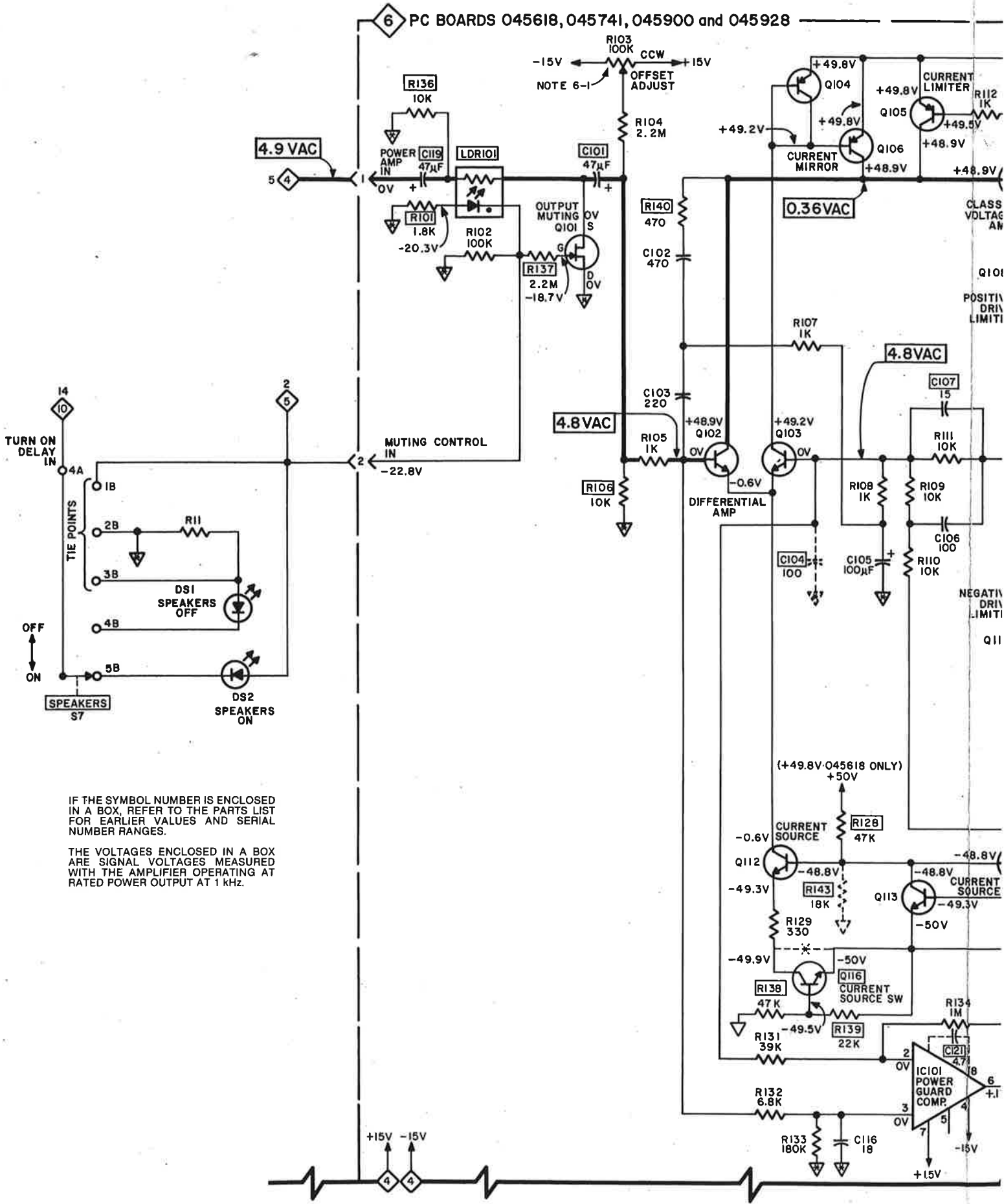
PARTS LIST

Symbol No.	Part No.	Description
CAPACITORS (CD = Ceramic Disc, ELECT = Electrolytic, MPE = Metalized Polyester)		
C701	064190	S/N CS1001 to CS231 0.22 μ F, 5%, 63V...
	064262	S/N CS2309 and above .47 μ F, 10%, 63V...
*C702	066331	ELECT, 38,000 μ F, 50V
*C703	066331	ELECT, 38,000 μ F, 50V
C704	061029	CD, 330pF, 10%
DIODES (RECT = Rectifier, Si = Silicon)		
*D701	070031	Si, RECT, 400 PIV, 1A
*D702	070031	Si, RECT, 400 PIV, 1A
TRANSISTORS (DAR = Darlington, Si = Silicon)		
*Q701	132197	Si, NPN, Selected MJ
*Q702	132208	Si, NPN....(7062)
*Q703	132208	Si, NPN....(7062)
*Q704	132208	Si, NPN....(7062)
*Q705	132208	Si, NPN....(7062)
*Q706	132208	Si, NPN....(7062)
*Q707	132208	Si, NPN....(7062)
*Q708	132090	Si, NPN, DAR, Selected MJ
*Q709	132198	Si, PNP, Selected MJ
*Q710	132209	Si, PNP....(7062)
*Q711	132209	Si, PNP....(7062)
*Q712	132209	Si, PNP....(7062)
*Q713	132209	Si, PNP....(7062)
*Q714	132209	Si, PNP....(7062)
*Q715	132209	Si, PNP....(7062)
RESISTORS (FP = Flameproof, WW = Wirewound)		
*R701	139125	WW, .15 Ω , 5%, 5W
*R702	139125	WW, .15 Ω , 5%, 5W
*R703	139125	WW, .15 Ω , 5%, 5W
*R704	139125	WW, .15 Ω , 5%, 5W
*R705	139125	WW, .15 Ω , 5%, 5W
*R706	139125	WW, .15 Ω , 5%, 5W
*R707	144066	FP, 22 Ω , 10%, 1/2W
*R708	139125	WW, .15 Ω , 5%, 5W
*R709	139125	WW, .15 Ω , 5%, 5W
*R710	139125	WW, .15 Ω , 5%, 5W
*R711	139125	WW, .15 Ω , 5%, 5W
*R712	139125	WW, .15 Ω , 5%, 5W
*R713	139125	WW, .15 Ω , 5%, 5W
MISCELLANEOUS		
*017131		Heatsink Mounting/A
*178056		Transistor Socket, T1
*178057		Transistor Socket, T1

* Parts marked with an asterisk (*) are repaired by our Service Department and must be returned to McIntosh. These parts must be ordered by part number. Other parts may be obtained from electronic suppliers.



6 PC BOARDS 045618, 045741, 045900 and 045928



IF THE SYMBOL NUMBER IS ENCLOSED IN A BOX, REFER TO THE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

THE VOLTAGES ENCLOSED IN A BOX ARE SIGNAL VOLTAGES MEASURED WITH THE AMPLIFIER OPERATING AT RATED POWER OUTPUT AT 1 KHz.