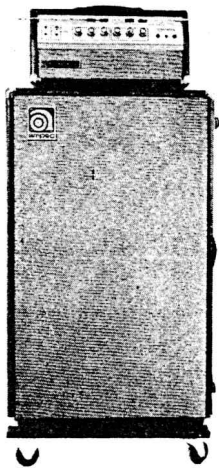


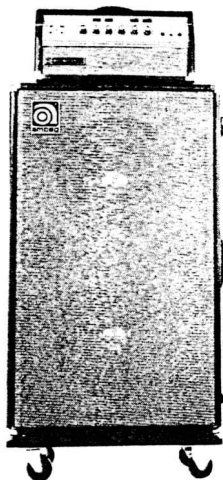
1 thru 11

4/69 97

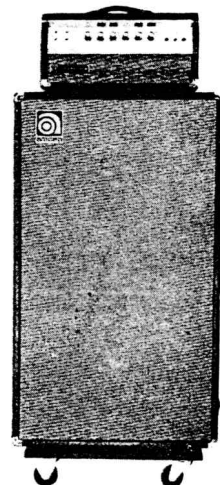
7/68

**BT-25**

300 Watts Peak Music Power,
(120 Watts RMS)/Two
Channels/4 Inputs/Two 15"
Speakers/Solid State/ Polarity
Switch/A.C. outlet/Extension
amp. jack/Ultra-Hi/Ultra-Lo/
Carrying Weight: 118 lbs./
9½" x 18½" x 10" (Head)/
40" x 24" x 14" (Speaker)/
Dolly Standard

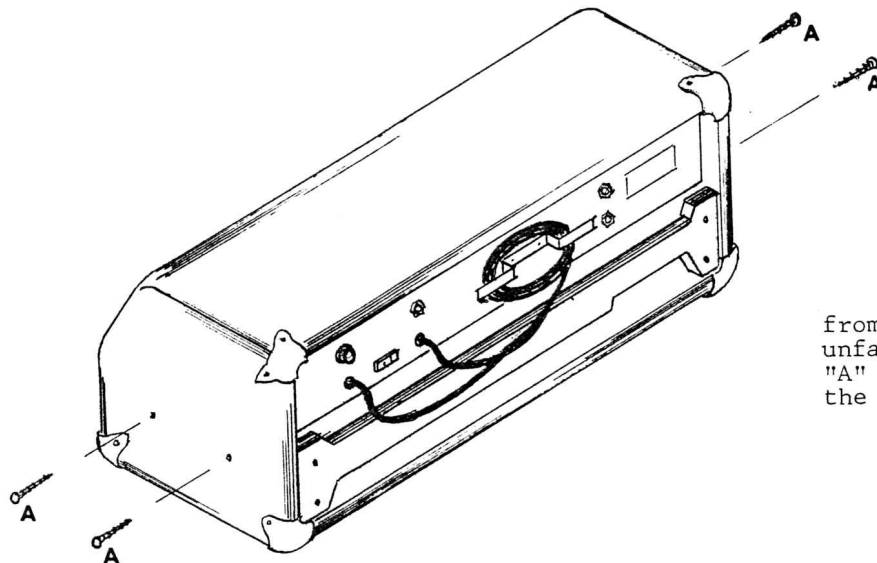
**BT-25L**

300 Watts Peak Music Power,
(120 Watts RMS)/Solid State/
Two Channels/4 Inputs/Two
15" Altec Lansing Speakers/
Polarity Switch/A.C. outlet/
Extension amp. jack/Ultra-Hi/
Ultra-Lo/Carrying Weight:
118 lbs./9½" x 18½" x 10"
(Head)/40" x 24" x 14"
(Speaker)/Dolly Standard

**BT-140**

300 Watts Peak Music Power,
(120 Watts RMS)/Solid State/
Two Channels/4 Inputs/Two
15" James B. Lansing D140F
Speakers/Polarity Switch/ A.C.
outlet/Extension amp. jack/
Ultra-Hi/Ultra-Lo/Carrying
Weight: 125 lbs./9½" x
18½" x 10" (Head)/42" x 24" x
15" (Speaker)/Special cabinet
design/Dolly Standard

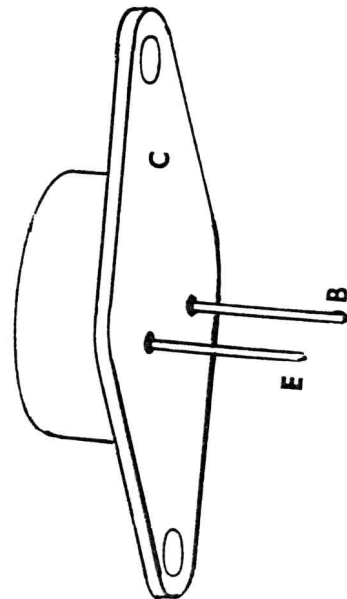
	Model No. BT-25	PIGGYBACK
TRADE NAME	Model No. BT-25-L	PIGGYBACK
	Model No. BT-140	PIGGYBACK
MANUFACTURER	AMPEG Co., Inc., Industrial Park, Linden, N.J.	
TYPE SET	Solid State Audio Amplifier /Two Channels/	
POWER SUPPLY	117V A.C. 50/60 Cycles Rating 3 Amp.	
POWER OUTPUT	120 Watts R M S (4 Ohms Impedance)	
PEAK POWER	300 Watts	

**MECHANICAL DISASSEMBLY**

To remove amplifier chassis
from cabinet for servicing,
unfasten the four screws marked
"A" and extract the chassis from
the rear of the cabinet.

TRANSISTORS

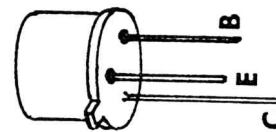
ITEM	TRANSISTORS	TYPE	USE	DWG #	EQUIVLENT	STOCK NO.
Q 1-5	BC-169-B	NPN	Pre-Amplifier channel one	7	2N3391A	6480-026
Q 6-10	BC-169-B	NPN	Pre-Amplifier channel two	7	2N3391A	6480-026
Q 11	BC-169-B	NPN	Mixer 1	7	2N3391A	6480-026
Q 12	BC-169-B	NPN	Mixer 2	7	2N3391A	6480-026
Q 13	2N3403	NPN	Heat sensor	6	2N3403	6480-029
Q 14	2N3767	NPN	Driver	1	2N3767	6480-025
Q 15	10003	NPN	Output	1	40411	6480-000
Q 16	10003	NPN	Output	1	40411	6480-000
Q 17	2N4062	PNP	1st Pre-driver	5	2N4062	6480-017
Q 18	10000	NPN	2nd Pre-driver	3	40408	6480-006
Q 19	2N3741	PNP	Driver	1	2N3741	6480-021
Q 20	10003	NPN	Output	1	40411	6480-000
Q 21	10003	NPN	Output	1	40411	6480-000



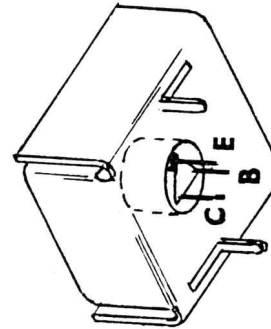
DWG. 1



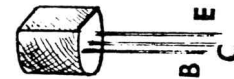
DWG. 2



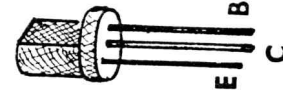
DWG. 3



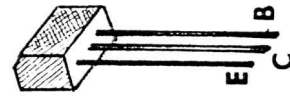
DWG. 4



DWG. 5



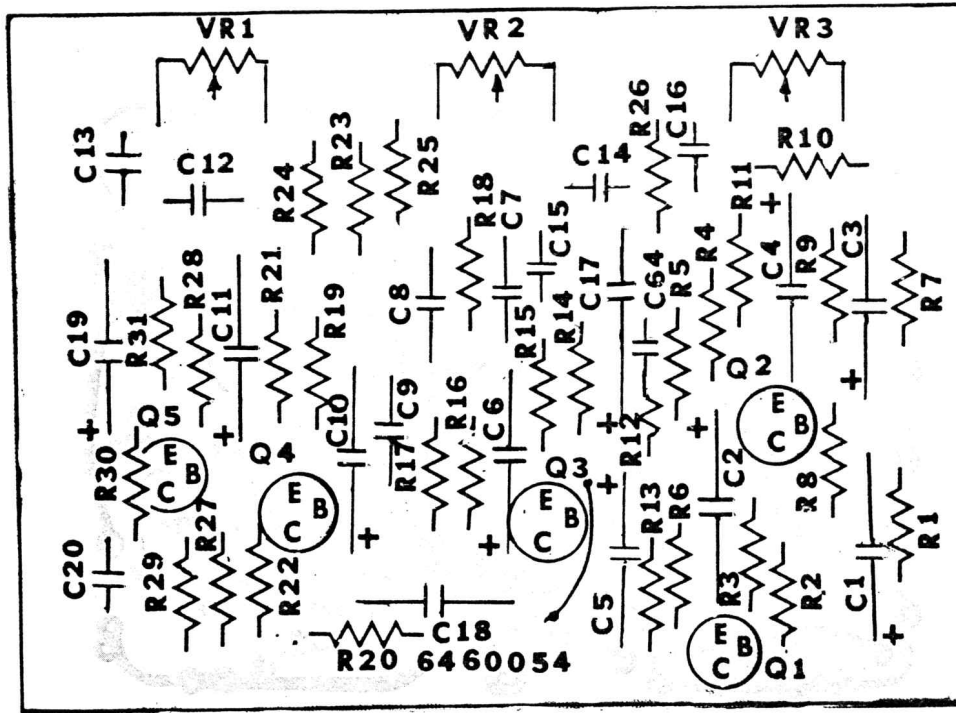
DWG. 6



DWG. 7

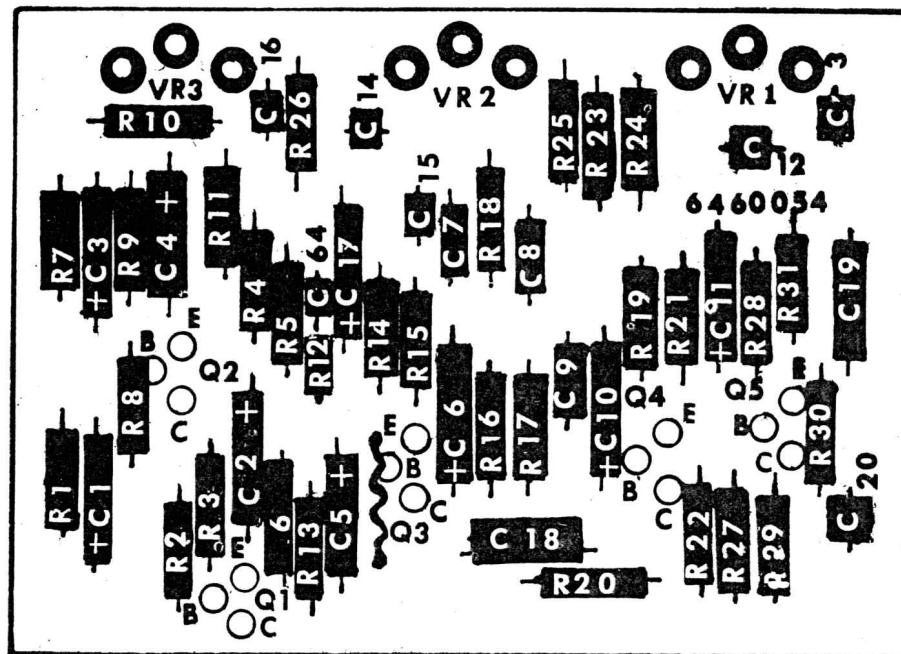
P.C. PRE-AMPLIFIER BOARD CHANNEL ONE

BOTTOM (copper) VIEW



P.C. PRE-AMPLIFIER BOARD CHANNEL ONE

TOP (component) VIEW



PRE-AMPLIFIER BOARD
IBM # 6460-054

RESISTORS

NO.	OHMS	WATTS	± %	STOCK NO.
R 1,7	100	$\frac{1}{2}$	10	5910-002
R 2,4,8,10	100 K	$\frac{1}{2}$	10	5910-026
R 3,9,13,14	470 K	$\frac{1}{2}$	10	5910-092
R 5,11	15 K	$\frac{1}{2}$	10	5910-127
R 6,12,24	2.2 K	$\frac{1}{2}$	10	5910-010
R 15	2.7 K	$\frac{1}{2}$	10	5910-027
R 16,17	1.5 K	$\frac{1}{2}$	10	5910-008
R 18	680	$\frac{1}{2}$	10	5910-162
R 19,23	22 K	$\frac{1}{2}$	10	5910-022
R 20	390 K	$\frac{1}{2}$	10	5910-032
R 21	220	$\frac{1}{2}$	10	5910-102
R 22	4.7 K	$\frac{1}{2}$	10	5910-014
R 25,29	10 K	$\frac{1}{2}$	10	5910-018
R 26	5.6 MG	$\frac{1}{2}$	10	5910-094
R 27	820 K	$\frac{1}{2}$	10	5910-025
R 28	47 K	$\frac{1}{2}$	5	5910-056
R 30	150	$\frac{1}{2}$	10	5910-177
R 31	470	$\frac{1}{2}$	10	5910-004

CAPACITORS

NO.	MFD	VOLT	TYPE	STOCK NO.
C 1,3,4,5,6 10,11	1	40	Electrolytic	1240-126
C 2,17	6.4	40	Electrolytic	1240-127
C 7,8,9,64	.22	250	Flat Foil	1270-004
C 12	.01	600	Ceramic	1210-127
C 13,20	.1	250	Flat Foil	1270-135
C 14,16	.0047	250	Flat Foil	1270-008
C 15	.047	250	Flat Foil	1270-131
C 18	.47	250	Flat Foil	1270-134
C 19	125	4	Electrolytic	1240-129

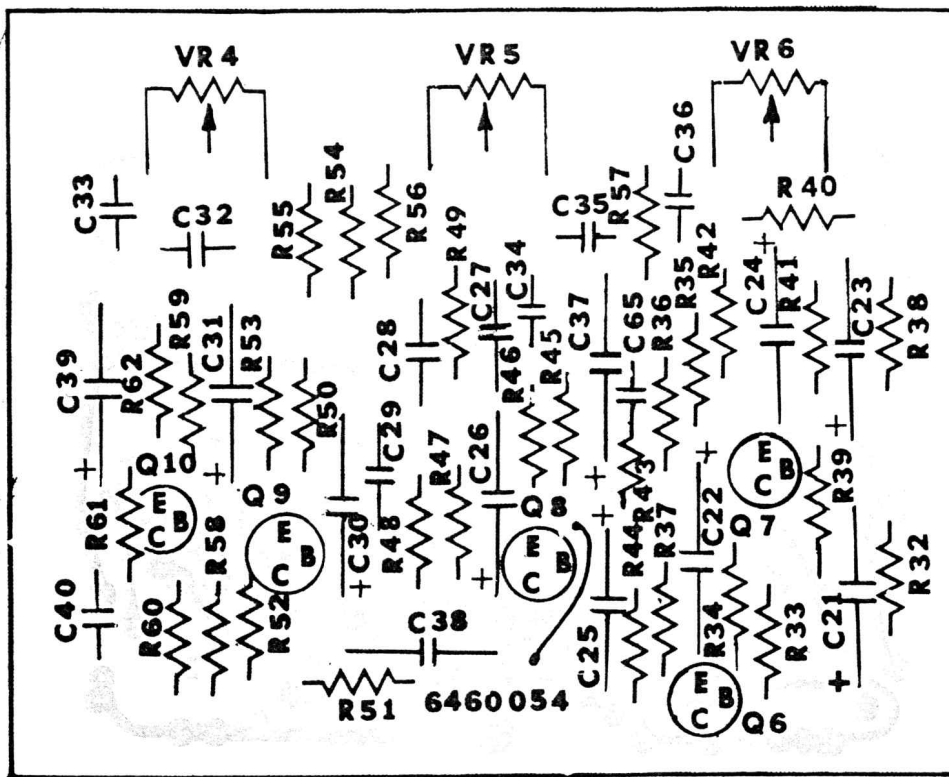
CONTROLS

ITEM	OHMS	TYPE	WATTS	USE	STOCK NO.
VR 1	100 K	Log.	$\frac{1}{2}$	Bass /channel one/	2410-014
VR 2	100 K	Log.	$\frac{1}{2}$	Treble /channel one/	2410-014
VR 3	50 K	Lin.	$\frac{1}{2}$	Volume /channel one/	2410-009
VR 4	100 K	Log.	$\frac{1}{2}$	Bass /channel two/	2410-014
VR 5	100 K	Log.	$\frac{1}{2}$	Treble /channel two/	2410-014
VR 6	50 K	Lin.	$\frac{1}{2}$	Volume /channel one/	2410-009
VR 7	250	Lin.	$\frac{1}{4}$	Bias	2410-114

All control are $\pm 20\%$

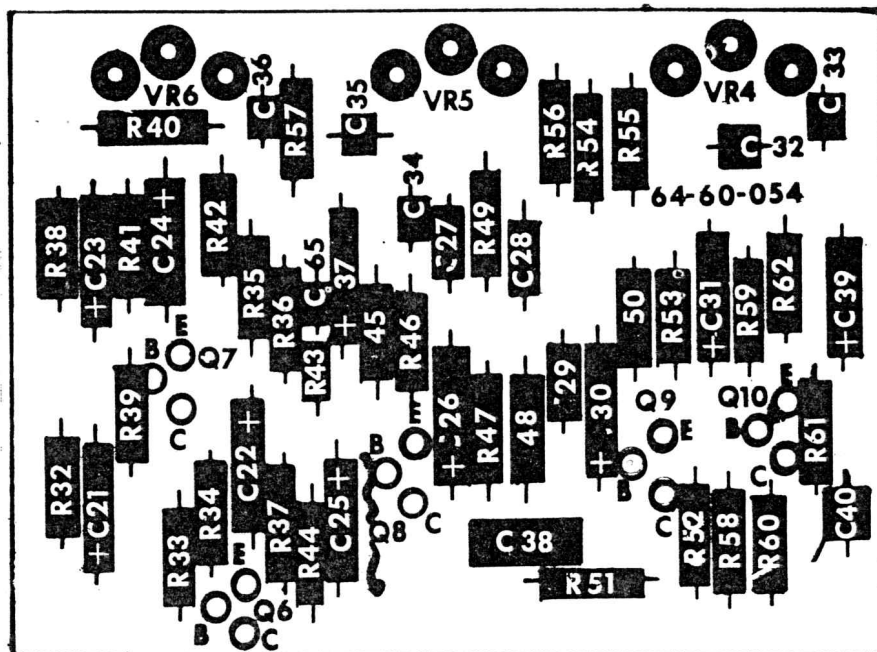
P.C. PRE-AMPLIFIER BOARD CHANNEL TWO

BOTTOM (copper) VIEW



P.C. PRE-AMPLIFIER BOARD CHANNEL TWO

TOP (component) VIEW



PRE-AMPLIFIER BOARD

IBM # 6460-054

RESISTORS

NO.	OHMS	WATTS	+ -	%	STOCK NO.
R 32,38	100	$\frac{1}{2}$	10		5910-002
R 33,35,39					
40	100 K	$\frac{1}{2}$	10		5910-026
R 34,41,44					
45	470 K	$\frac{1}{2}$	10		5910-092
R 36,42	15 K	$\frac{1}{2}$	10		5910-127
R 37,43,55	2.2 K	$\frac{1}{2}$	10		5910-010
R 46	2.7 K	$\frac{1}{2}$	10		5910-027
R 47,48	1.5 K	$\frac{1}{2}$	10		5910-008
R 49	680	$\frac{1}{2}$	10		5910-162
R 50,54	22 K	$\frac{1}{2}$	10		5910-022
R 51	390 K	$\frac{1}{2}$	10		5910-032
R 52	47 K	$\frac{1}{2}$	10		5910-014
R 53	220	$\frac{1}{2}$	10		5910-102
R 56,60	10 K	$\frac{1}{2}$	10		5910-018
R 57	5.6 MG	$\frac{1}{2}$	10		5910-094
R 58	820 K	$\frac{1}{2}$	10		5910-025
R 59	47 K	$\frac{1}{2}$	5		5910-056
R 61	150	$\frac{1}{2}$	10		5910-177
R 62	470	$\frac{1}{2}$	10		5910-004

CAPACITORS

NO.	MFD	VOLT	TYPE	STOCK NO.
C 21,23,24				
25,26,30,31	1	40	Electrolytic	1240-126
C 22,37	6.4	40	Electrolytic	1240-127
C 27,28,29				
65	.22	250	Flat Foil	1270-004
C 32	.01	600	Ceramic	1210-127
C 33,40	.1	250	Flat Foil	1270-135
C 34	.047	250	Flat Foil	1270-131
C 35,36	.0047	250	Flat Foil	1270-008
C 38	.47	250	Flat Foil	1270-134
C 39	125	4	Electrolytic	1240-129

SPEAKERS

MODEL NO.	RATING					STOCK NO.
	PART NO.	SIZE	FIELD	V.C. IMPEDANCE	QTY	
BT-25	CTS 15	15 "	P. M.	8 Ohms	2	6930-009
BT-25-L*	418B	15 "	P. M.	8 Ohms	2	6930-031
BT-140**	D140F	15 "	P. M.	8 Ohms	2	6930-001

* - Altec Lansing speakers

** - J. B. Lansing speakers

P.C. MAIN POWER BOARD
IBM # 6460-060

NO.	OHMS	WATTS	+ - %	STOCK NO.
R 63,64,74 85,86,87 75,76	1 K	$\frac{1}{2}$	10	5910-103
R 65,68,81	4.7 K	$\frac{1}{2}$	10	5910-014
R 66,69	10 K	$\frac{1}{2}$	10	5910-018
R 67	1.5 K	$\frac{1}{2}$	10	5910-008
R 70	47 K	$\frac{1}{2}$	10	5910-151
R 71,84	470	$\frac{1}{2}$	10	5910-004
R 72	470	2	10	5910-160
R 73	680	2	10	5910-005
R 78	68 K	$\frac{1}{2}$	10	5910-021
R 79	14 K	$\frac{1}{2}$	1	5910-019
R 80	1.5 K	$\frac{1}{2}$	1	5910-181
R 82	33	$\frac{1}{2}$	10	5910-125
R 83	5.6 K	$\frac{1}{2}$	10	5910-020
R 88,89	100	$\frac{1}{2}$	10	5910-002
R 91,93,94 95	.47	5	10	5930-028
R 96	.1	5	10	5930-032
R 97	1	$\frac{1}{2}$	10	5910-023
R 98	2.7	$\frac{1}{2}$	10	5910-011
R 99	39	2	10	5910-013
R 100	2.2 K	$\frac{1}{2}$	10	5910-010

CAPACITORS

NO.	MFD	VOLT	TYPE	STOCK NO.
C 41	25	25	Electrolytic	1240-035
C 42,52	125	4	Electrolytic	1240-129
C 43,56	640	25	Electrolytic	1240-131
C 44,49,53	64	64	Electrolytic	1240-128
C 45,48	6.4	40	Electrolytic	1240-127
C 46	.02	200	Ceramic	1210-070
C 47	.01	600	Ceramic	1210-127
C 50	.0001	200	Ceramic	1210-075
C 51	.00005	600	Ceramic	1210-126
C 54,55	125	16	Electrolytic	1240-130
C 58	.47	250	Flat Foil	1270-134
C 59,60	.1	250	Flat Foil	1270-135

TRANSFORMER

PART NO.	RATING			STOCK NO.
	PRIMARY	SECONDARY 1	SECONDARY 2	
PT-115	117V A.C. 50/60 Cycles	56V A.C. 1.6 Amp D.C.	180V A.C. 15 MA A.C.	8930-068

A.C. VOLTAGE MEASUREMENTS

INPUT: .3V A.C. 400/cps.
 OUTPUT: 12V A.C. across 4 ohms load
 Bass and Treble controls at middle position.
 Ultra Hi and ultra Lo switches "off".

ITEM	TRANSISTOR	COLLECTOR	BASE	EMITTER
Q 1.	BC-169-B		.29V	.29V
Q 2	BC-169-B		.29V	.29V
Q 3	BC-169-B		.2V	.2V
Q 4*	BC-169-B	2V	.1V	
Q 5**	BC-169-B	.05V	.008V	
Q 6	BC-169-B		.29V	.29V
Q 7	BC-169-B		.29V	.29V
Q 8	BC-169-B		.2V	.2V
Q 9*	BC-169-B	2V	.1V	
Q 10**	BC-169-B	.05V	.01V	
Q 11	BC-169-B	.35V	.001V	
Q 12	BC-169-B		.35V	.35V
Q 13	2N3403	13.5V	13.5V	13.5V
Q 14	2N3767		13.5V	13.5V
Q 15	10003		13.5V	13.5V
Q 16	10003		13.5V	13.5V
Q 17	2N4062	.006V	.15V	.15V
Q 18	10000	13.5V	.006V	
Q 19	2N3741	.7V	13.5V	
Q 20	10003	13.5V	.7V	
Q 21	10003	13.5V	.7V	

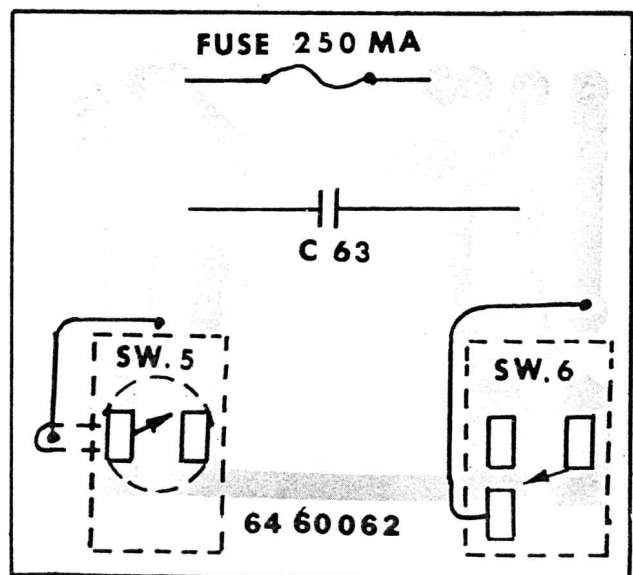
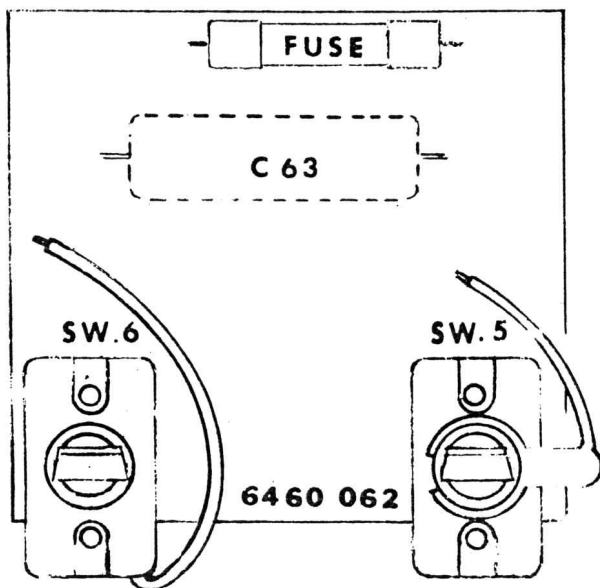
* - Q 4 and Q 9
Collector | Base
 .5V | .03V Ultra Lo switch "on".

** - Q 5 and Q 10
Collector | Base
 .06V | .01V Ultra Hi switch "on".

A.C. POWER SUPPLY BOARD

TOP (component) VIEW

BOTTOM (copper) VIEW



MISCELLANEOUS

ITEM	NOTES	STOCK NO.
C 57,61,62	Capacitor 2500mf/90V Electrolytic	1240-002
R 90,92	Resistor 300 Ohms 20W $\pm$ 10%	5930-026
J 1,2,3,4	Input jack closed ckt.	3830-021
J 5,6	External amplifier jack open ckt.	3830-009
SW. 1,2,3,4	Rocker switch SPDT	2430-063
Fuse Holder		3824-026
Fuse	MTH 4 Amp	3824-004
	A.C. Line cord 10 foot	9720-004
Strain Relief	For speaker and A.C. line cord	3878-002
	Fluorescent panel	3845-018
BT-25	Luma panel	3842-015
BT-25-L	Luma panel	3842-016
BT-140	Luma panel	3842-017
	Capacitor clamp	3801-049
Knob		3815-026
Socket	For 10003 transistor	3863-000
Heat Sink	For 10003 transistor	5410-060-4
A.C. Outlet	Receptacle	3812-027
3A400S	Diode 400 P.I.V. 3 Amp	6410-022
HCV	Diode 100 P.I.V. 500 MA	6410-006
Bumper		3845-015
Handle	For speaker cabinet	3827-013
Handle	For amplifier cabinet	3827-014
Corners		3818-002
A4F	Chassis speaker connector	3812-015
C4M	Speaker cabinet connector	3812-018
Logo	AMPEG	4030-007
Logo	Solid State	4030-008
	P.C. BOARD ASSEMBLY	
	IBM # 6460-062	
SW. 5	Power switch SPST 6 Amp/250V	2430-077
SW. 6	Polarity switch SPDT 6 Amp/250V	2430-073
C 63	Capacitor .047/1000V Paper	1270-045
Fuse	GJV 250 MA	3824-010
P.L.	Pilot light	3845-015

SPEAKER CONNECTION

