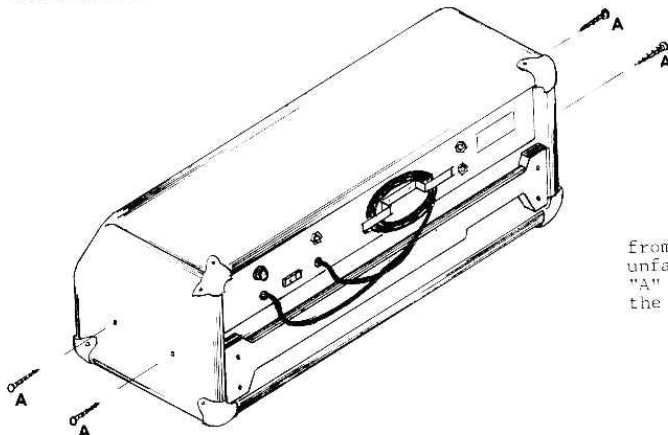




BT-140

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

TRADE NAME	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

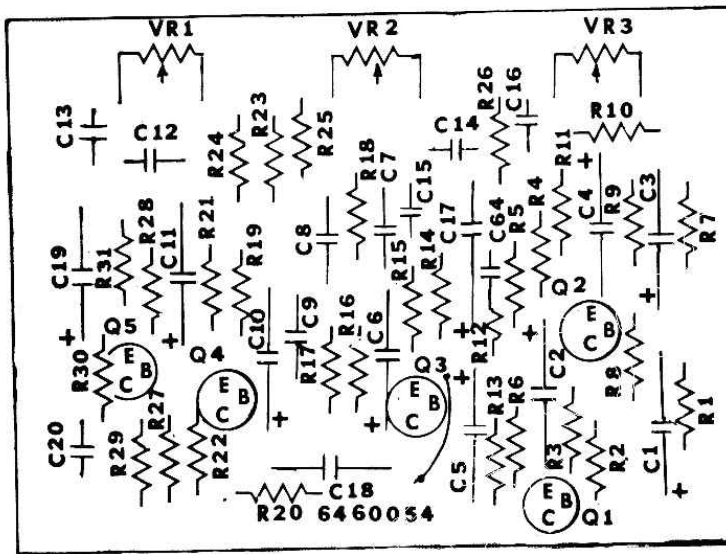


MECHANICAL DISASSEMBLY

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

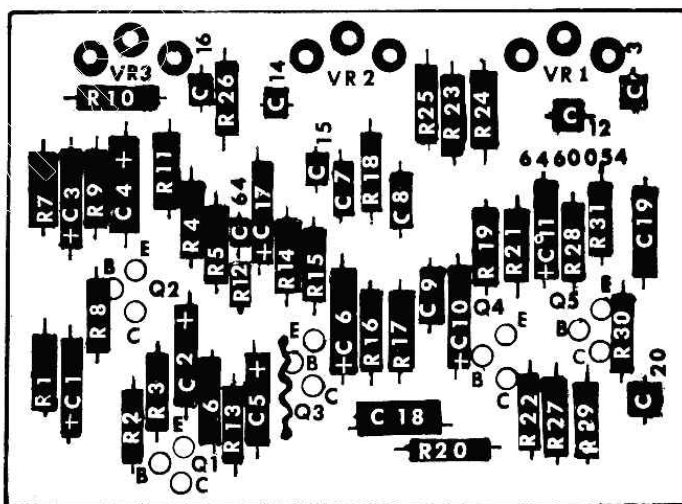
P.C. PRE-AMPLIFIER BOARD CHANNEL ONE

BOTTOM (copper) VIEW



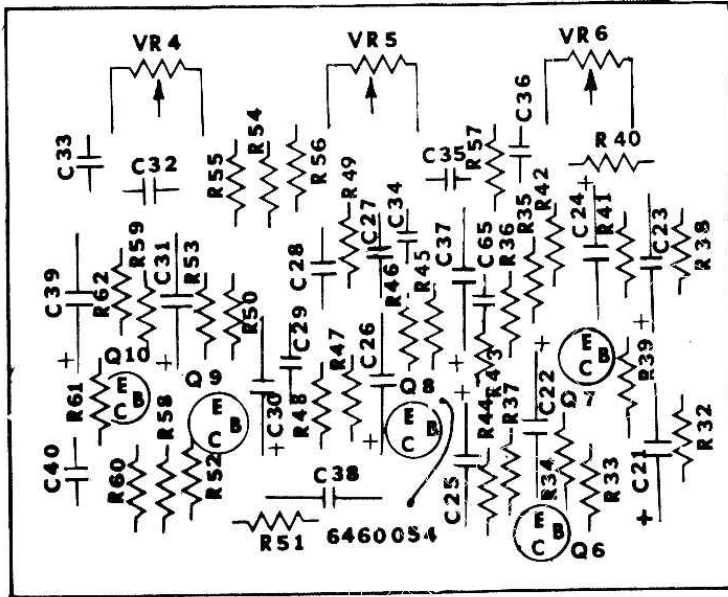
P.C. PRE-AMPLIFIER BOARD CHANNEL ONE

TOP (component) VIEW



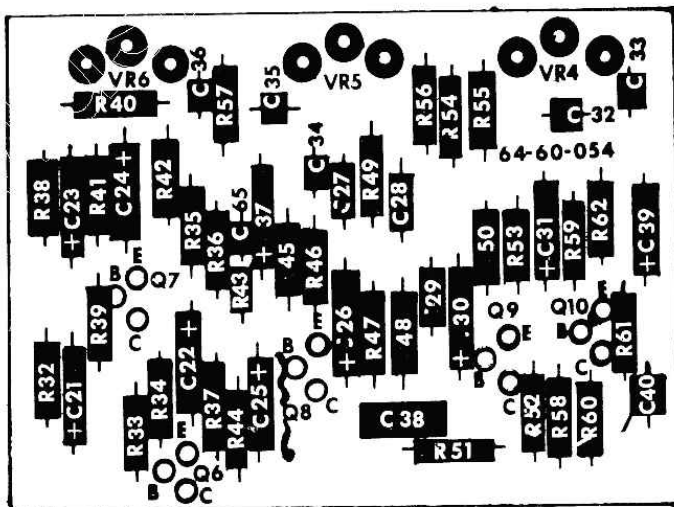
P.C. PRE-AMPLIFIER BOARD CHANNEL TWO

BOTTOM (copper) VIEW

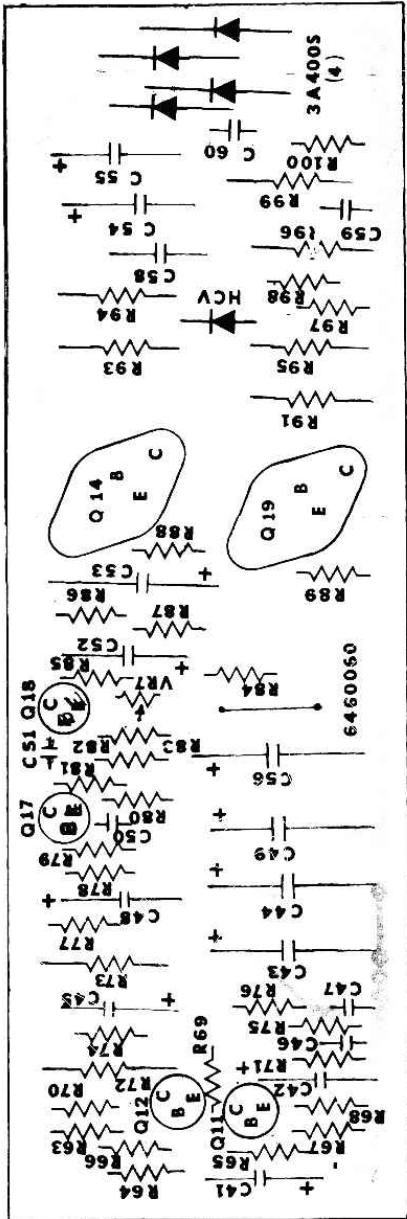


P.C. PRE-AMPLIFIER BOARD CHANNEL TWO

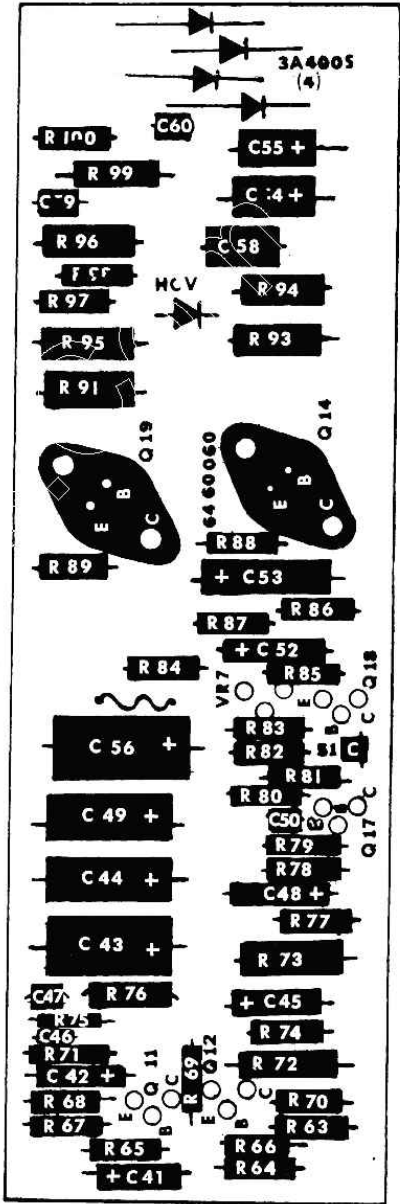
TOP (component) VIEW



P.C. MAIN POWER BOARD
BOTTOM (copper) VIEW



P.C. MAIN POWER BOARD
TOP (component) VIEW



PRE-AMPLIFIER BOARD
IBM # 6460-054

RESISTORS

NO.	OHMS	WATTS	± %	STOCK NO.
R 1,7	100	1/2	10	5910-002
R 2,4,8,10	100 K	1/2	10	5910-026
R 3,9,13,14	470 K	1/2	10	5910-092
R 5,11	15 K	1/2	10	5910-127
R 6,12,24	2.2 K	1/2	10	5910-010
R 15	2.7 K	1/2	10	5910-027
R 16,17	1.5 K	1/2	10	5910-008
R 18	680	1/2	10	5910-162
R 19,23	22 K	1/2	10	5910-022
R 20	390 K	1/2	10	5910-032
R 21	220	1/2	10	5910-102
R 22	4.7 K	1/2	10	5910-014
R 25,29	10 K	1/2	10	5910-018
R 26	5.6 MG	1/2	10	5910-094
R 27	820 K	1/2	10	5910-025
R 28	47 K	1/2	5	5910-056
R 30	150	1/2	10	5910-177
R 31	470	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.	1/2	Bass /channel one/	2410-014
VR 2	100 K	Log.	1/2	Treble /channel one/	2410-014
VR 3	50 K	Lin.	1/2	Volume /channel one/	2410-009
VR 4	100 K	Log.	1/2	Bass /channel two/	2410-014
VR 5	100 K	Log.	1/2	Treble /channel two/	2410-014
VR 6	50 K	Lin.	1/2	Volume /channel one/	2410-009
VR 7	250	Lin.	1/2	Bias	2410-114

All control are ± 20%

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				QTY	STOCK NO.
	PART NO.	SIZE	FIELD	V.C. IMPEDANCE		
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 91,93,94 95	100	$\frac{1}{2}$		10	5910-002
R 96	.47	5		10	5930-028
R 97	.1	5		10	5930-032
R 98	1	$\frac{1}{2}$		10	5910-023
R 99	2.7	$\frac{1}{2}$		10	5910-011
R 100	39	2		10	5910-013
	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

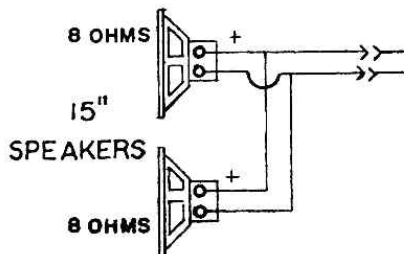
TRANSFORMER

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

MISCELLANEOUS

ITEM	NOTES	STOCK NO.
C 57,61,62	Capacitor 2500mf/90V Electrolytic	1240-002
R 90,92	Resistor 300 Ohms 20W± 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
	Panelescent 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



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".

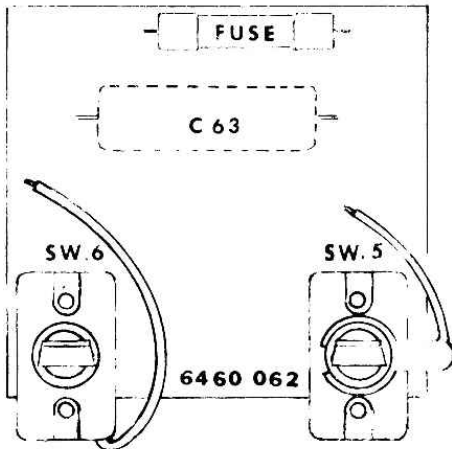
ITEM	TRANSISTOR	COLLECTOR	BASE	EMITTER
Q 1.	BC-169-B		.29V	.29V
Q 2	BC-169-B		.29V	.29V
Q 3	BC-169-B		.2V	.2V
Q 4*	BC-169-B	.2V	.1V	
Q 5**	BC-169-B	.05V	.008V	
Q 6	BC-169-B		.29V	.29V
Q 7	BC-169-B		.29V	.29V
Q 8	BC-169-B		.2V	.2V
Q 9*	BC-169-B	.2V	.1V	
Q 10**	BC-169-B	.05V	.01V	
Q 11	BC-169-B	.35V	.001V	
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".

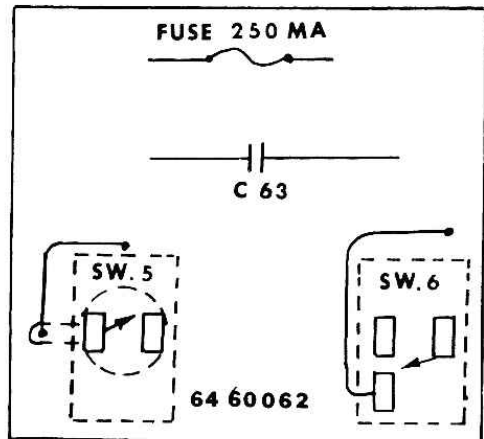
** - Q 5 and Q 10
 Collector | Base
 .06V | .01V Ultra Hi switch "on ".

A.C. POWER SUPPLY BOARD

TOP (component) VIEW

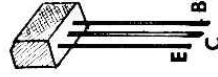
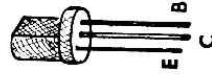
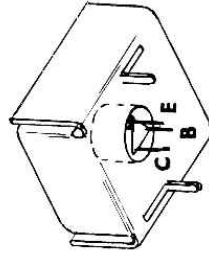
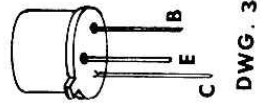
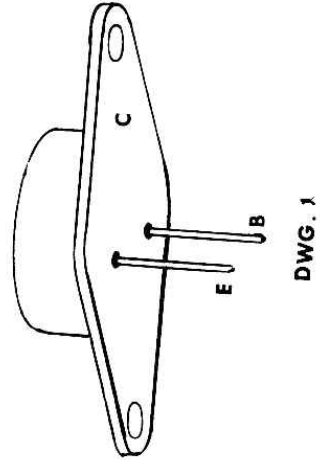


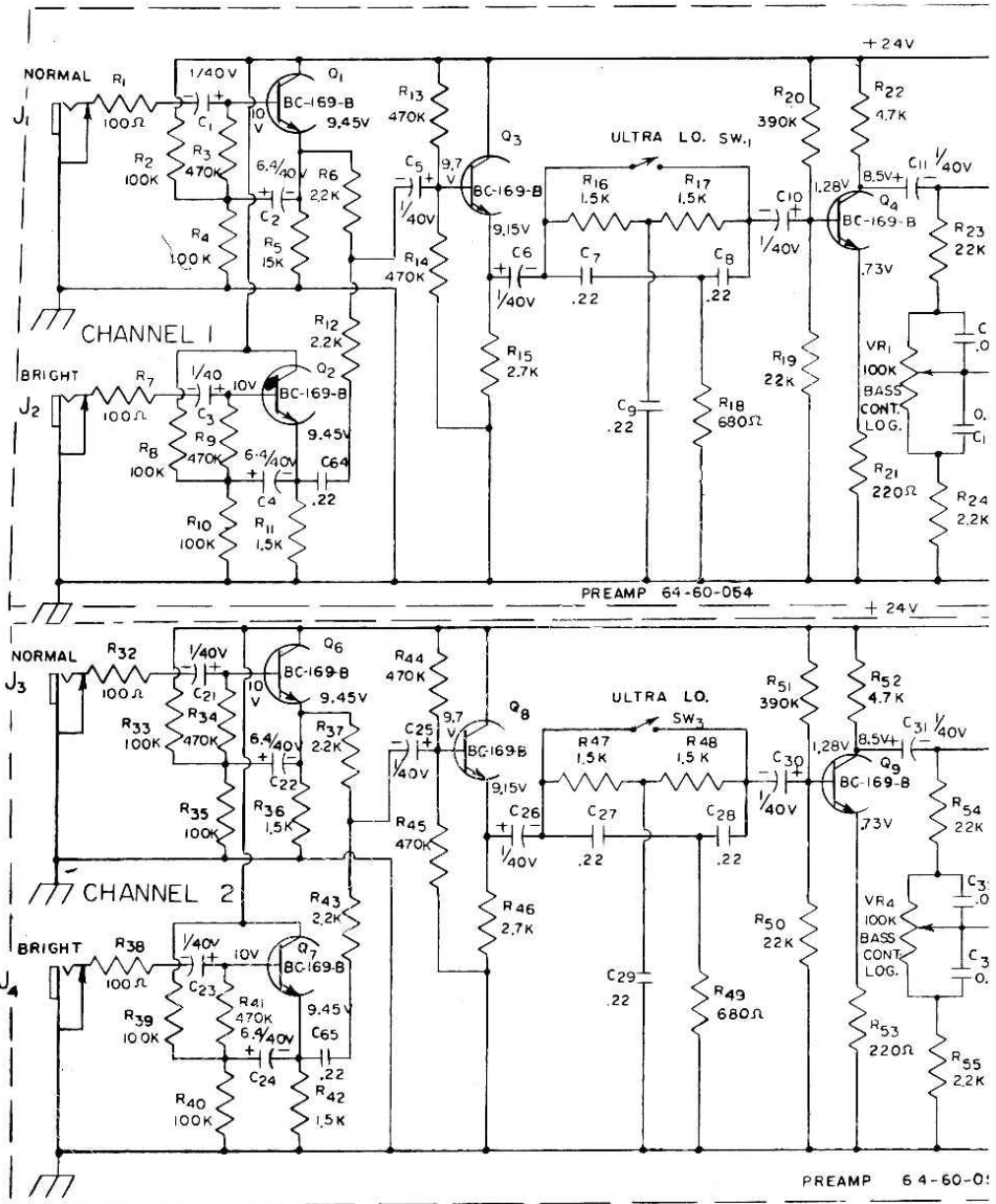
BOTTOM (copper) VIEW




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

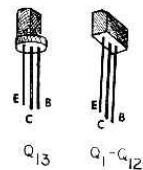


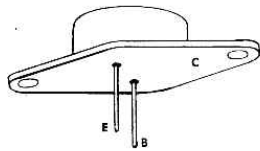
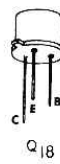
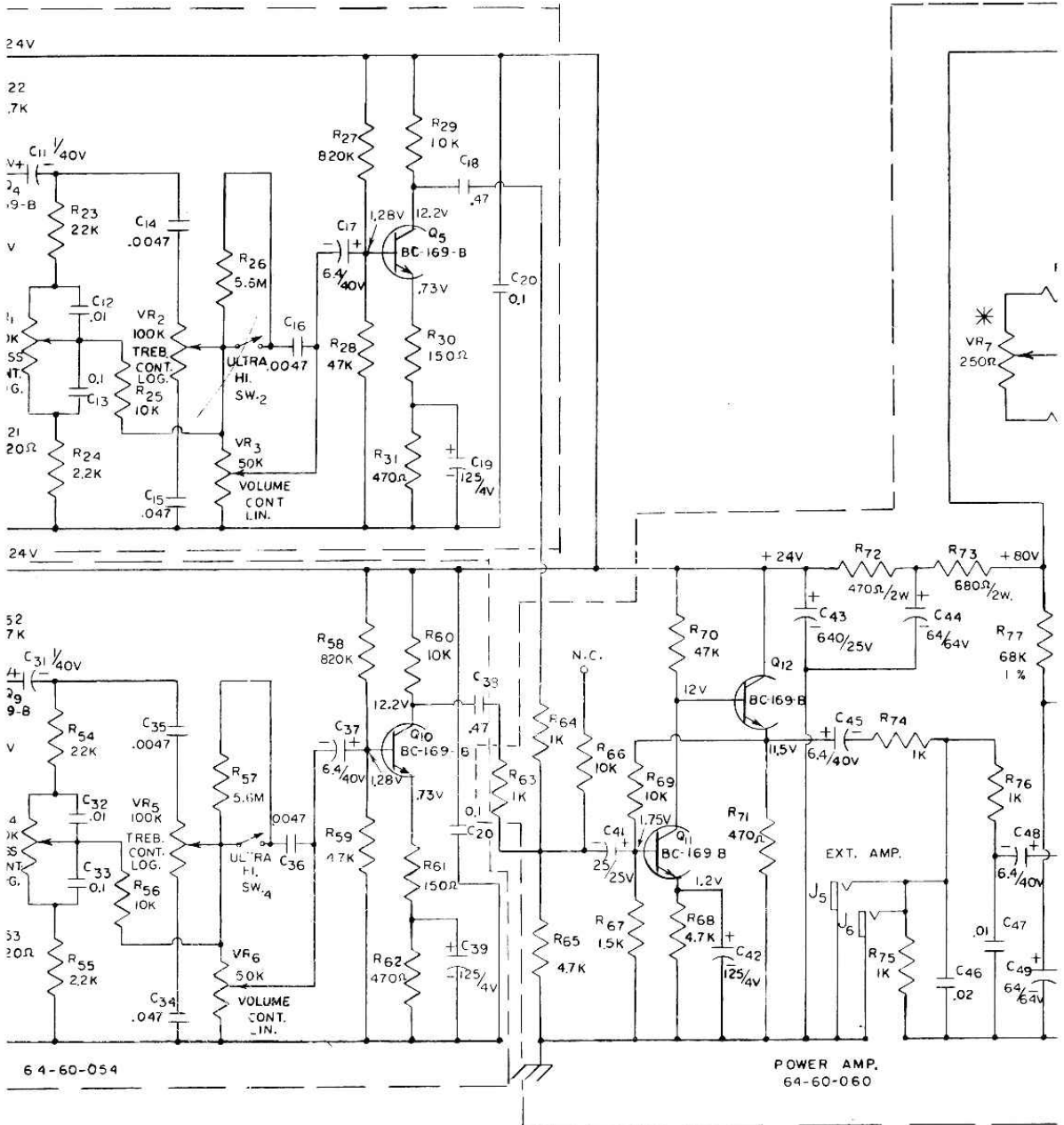


POST OFFICE BOX 515
 AREA CODE (201) 935-6700

ampeg
 LINDEN, NEW JERSEY 07036

MODEL
 BT-140
 SOLID STATE AMPLIFIERS
 U.S. PATENT PENDING

DRN BY	DATE	DWG NO	PART NO	REV
S. C.	768	05300	4010164	





MusicParts.Com

NOTES

- 1- ALL
- 2- ALL
- 3- D.C.
- 4 THE
- "
- "

* 5 ADJ

