

CONTENTS

	PAGE
1. FEATURES	2
2. SPECIFICATIONS	3
3. GENERAL DESCRIPTION	5
4. CIRCUIT DESCRIPTION	6
5. BLOCK DIAGRAM	7
6. GRAPHIC CURVE (TONE CONTROL FREQUENCY RESPONSE)	8
7. ELECTRICAL PARTS LOCATION (P.C. BOARD)	9
8. EXPLODED VIEW	15
9. SCHEMATIC DIAGRAM	16
10. REPLACEMENT PARTS LIST	17

1. FEATURES

- * Employs three Tone Controls with Tone Switch and two Turn Over Switches.
- * Left and Right channel Microphone jacks with the separate Mixing Controls.
- * Wide dynamic range phono equalizer amplifier using an extra high voltage plus-minus split power supply.
- * Highly accurate RIAA frequency response in the phono equalizer.
- * Tape-to-tape duplication from Deck A to Deck B, or from Deck B to Deck A, is possible with a touch of the 3 positions Dubbing Switch, while the listener simultaneously enjoys another program source.
- * 2 position high and low filters feature sharp cut-off response of 12 dB/oct.
- * 3 output terminals for connection up to 3 basic amplifiers.
- * Controls
Power switch, Tone switch, left channel Tone Controls (Bass, Mid and Treble), Low and High Filters, volume and Balance Controls, Mute and Loudness Switches, Source switch, Tone Equalizer Switches, right channel Tone Controls (Bass, Mid and Treble), Dubbing Switch, Tape Monitor Switch, Mode Switch, Fader Control, Microphone Level Control, AUX 2-Phono 2 switches, Voltage Selector (rear panel).
- * Output and Input Terminals
Headphone jack, microphone jacks, Phono 1 and 2, tuner, AUX 1 and 2, tape play back sources, recording outputs for 2 tape recorders, DIN jack, 3 output terminals for connection to main amplifiers.

2. SPECIFICATIONS

INPUT SENSITIVITY

INPUT	SENSITIVITY	INPUT IMPEDANCE
AUX 1	150 – 1500 mV*	47k – 25k ohms
AUX 2	150 mV**	47k ohms
TAPE PLAY (A AND B)	150 mV	47k ohms
PHONO 1	1.5 – 6 mV	47k ohms
PHONO 2	2.5 mV	47k ohms
MICROPHONE	4 mV	10k ohms
TUNER	150 mV	47k ohms

(* : adjustable. ** : adjustable by Mixing Controls)

HUM AND NOISE	PHONO:	74 dB
	AUX (1 and 2):	90 dB
	TUNER:	90 dB
	TAPE PLAY (A and B):	90 dB
DISTORTION	T.H.D. I.M.D.	0.03% at 2V output
FREQUENCY RESPONSE	PHONO (1 and 2):	30 Hz – 15 kHz, ± 0.2 dB.
	AUX (1 and 2):	10 Hz – 70 kHz, ± 1.0 dB.
	TUNER, TAPE PLAY (1 and 2):	10 Hz – 70 kHz, ± 1.0 dB.
MAXIMUM INPUT VOLTAGE	PHONO 1:	150 mV (Input Sensitivity set at 1.5 mV)
(0.2% distortion, at 1 kHz, preset level control at minimum)	PHONO 2:	200 mV
PRE-AMP. OUTPUT VOLTAGE	2 volts at 600 ohms	

RECORDING OUTPUT VOLTAGE (at rated input, unloaded)

SOCKET	OUTPUT	IMPEDANCE
RCA CINCH	150 mV	47k ohms
DIN	30 mV	33k ohms

HEADPHONE OUTPUT VOLTAGE 50 mV (at 8 ohms)

TONE CONTROL RANGE

CONTROL	RESPONSE	TONE EQUALIZER
BASS	± 10 dB (62 Hz/125 Hz)	250 Hz/500 Hz
MID	± 6 dB (1 kHz)	
TREBLE	± 10 dB (10 kHz/20 kHz)	2.5 kHz/5 kHz

AUDIO MUTE LEVEL	-20 dB
LOUDNESS LEVEL	50 Hz : +12 dB
(Volume Control Set at 30 dB)	10 kHz: +3.5 dB
HIGH FREQUENCY FILTER LEVEL	7/12 kHz: -3 dB, 12 dB/oct.
LOW FREQUENCY FILTER LEVEL	40/15 Hz: -3 dB, 12 dB/oct.

GENERAL INFORMATION

SOLID STATE DEVICE	ICs: 4
	DUAL TRANSISTORS: 4
	TRANSISTORS: 32
	DIODES: 9
POWER REQUIREMENT	110/130/220 or 240 V, 50 - 60 Hz AC, switchable.
POWER CONSUMPTION	25 watts
DIMENSIONS	50 (W) x 164 (H) x 295 (D) mm
	(20" x 6.5" x 12"), without legs and protrusions.
WEIGHT	8 kgs. (17.6 lbs.)

3. GENERAL DESCRIPTION

The PS 5500 is an all-transistor and IC preamplifier designed for high quality stereophonic or monophonic reproduction.

The advanced all-transistor and IC design offers all the advantages expected from solid state circuitry — instant warm up, low current consumption, cool operation, low distortion and noise, good transient response, wide frequency at full power.

The preamplifier has inputs for every type of stereo or monophonic program source — record players, multiplex FM tuners, tape recorders, etc.

Also included are two microphone jacks with a separate mixing control. Separate phonograph inputs are provided for record players equipped with magnetic or crystal cartridges, each pair of inputs offering proper loading and equalization for accurate reproduction.

Tape recorder outputs let you record all stereo or monophonic programs reproduced through the preamplifier.

The unique features of this unit is its ability to provide 2 set of three tone controls with tone flat switch and two turnover switches, two microphone jacks with separate mixing level controls, tape-to-tape duplication from Deck A to Deck B, or from Deck B to Deck A, with a touch of the 3 position Dubbing switch while the listener simultaneously enjoys another program source.

Also this model is equipped with a main output consisting of 3 sets of terminals for connection with up to 3 main amplifiers. These provided 3 set of outputs have been 600 ohms impedance which will be matched with any other main amplifiers.

However, it is possible for you to make a connection of power amplifier's inputs so that the unit has a 50 kohms impedance.

A Relay protection circuit is employed to insure against the damage of the output transistors as a result of a short-circuit in the output line. The remarkable flexibility of this model and its many advanced features will become more apparent as you gain experience in the use of the unit. The operation of this preamplifier is not really complicated even though flexibility.

For a detailed understanding of the operation of this model, please refer to the operating instructions which are provided in the "Instruction and Operating manual". This will aid you in understand the correct operation of the controls and their functions. In regard to the alignment of this model, the PS 5500 is completely set at factory and no adjustments are necessary.

TEST EQUIPMENT REQUIRED

Recommendable test equipments

- 1) Sound Technology 1700B Distortion Measuring System
- 2) Digital Volt Meter with an 10 megohm or greater input impedance
- 3) Dual Trace Oscilloscope

4. CIRCUIT DESCRIPTION

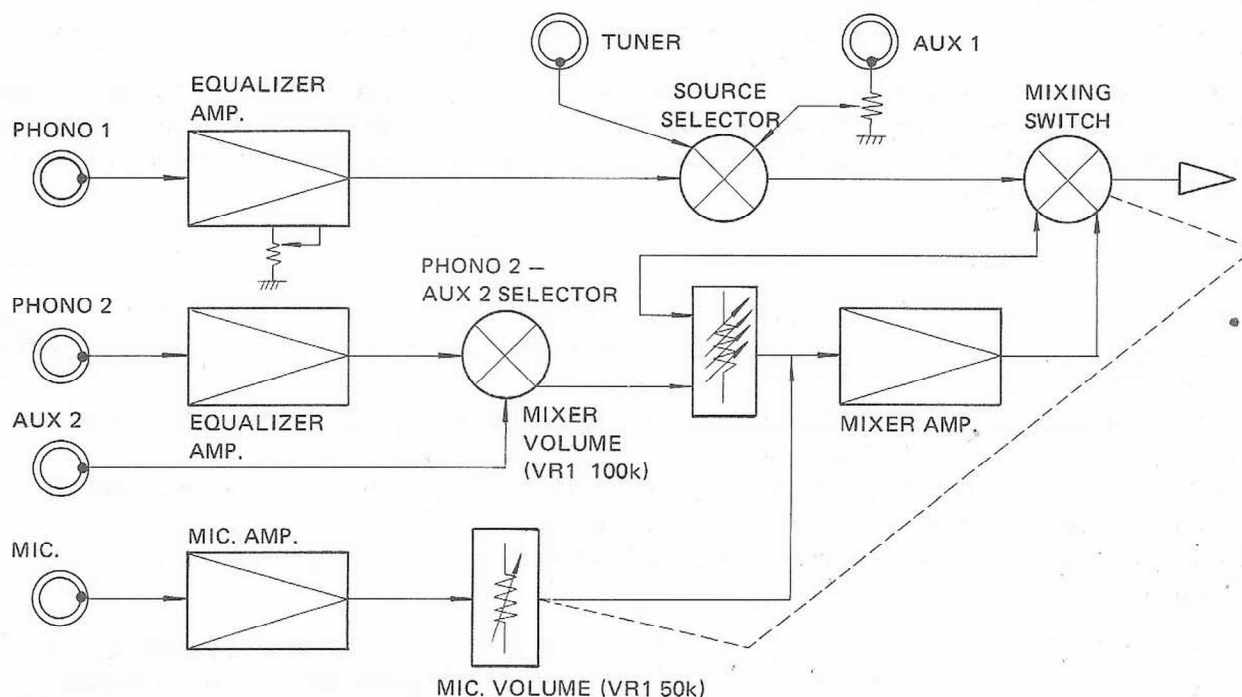
FADER CONTROL CIRCUIT

This model is built-in Fader Control Circuit for the Mixing between two input signals.

These are assembled on printed circuit board PSAZ019C0X, PSPA035C0X and PSPA036C0X.

The Fader Control (Mixing Control) Unit consists of one IC (IC1) amplifier provided mixing circuit, Phono 2 – Aux 2 Selector Switch, Mixing Volume (VR1) on Mixing Unit P.C. Board and Mic. Level/Fader Control provided Mixing Switch.

Please refer to the Mixing Control Circuit Functional block diagram as shown below.



When the Mixing switch (Mic. Level/Fader) is pulled ON, it makes Mixing circuit operative.

The applied input signal from Aux 2 or Phono 2 is fed to Mixer amplifier through Phono 2 – Aux 2 Selector switch and Mixer Volume which is mixed with the program source of Phono 1 or Tuner or Aux 1.

Both input signals, one from Phono 1 or Aux 1 or Tuner and another from Phono 2 or Aux 2 or Mic. input, mixed with Mixer amplifier are controlled by Mixer Volume (VR1), resulting in fading action.

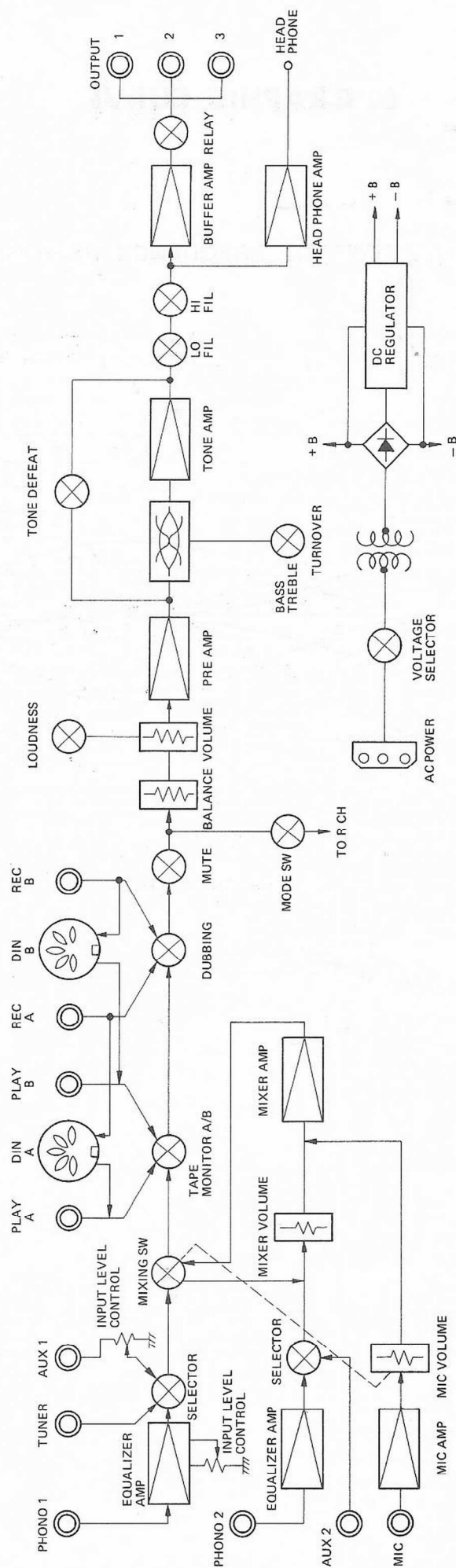
Thus the Fader Control varies the balance of mixing between Phono 2 or Aux 2 and any program source chosen on the Source Selector.

In the same way, Mic. Fader Control operates as the above explanations except the volume of present program is not affected by Mic. Volume (VR1). — that is, when Mic. Level/Fader Control switch (mixing switch) is pulled out position, your amplifier is operating as a conventional amplifier. This switch, when pulled ON position, allows you to mix another program source (Phono 2, Aux 2 and/or Microphones) together with the program source presently being reproduced through the amplifier as previously stated. Fader Control provides the mixing control between Phono 2 or Aux 2 and any other program source.

In short, Fader control adjusts the sound volume of the mixed program, Phono 2 or Aux 2 according to the Phono 2 – Aux 2 Selector switch. Clockwise rotation will increase the Aux 2 or Phono 2 volume and decrease the volume of present program selected by Source switch or Monitor switch. Counterclockwise rotation will decrease the Aux 2 or Phono 2 volume and increase the volume of present program source, Phono 1 or Tuner or Aux 1.

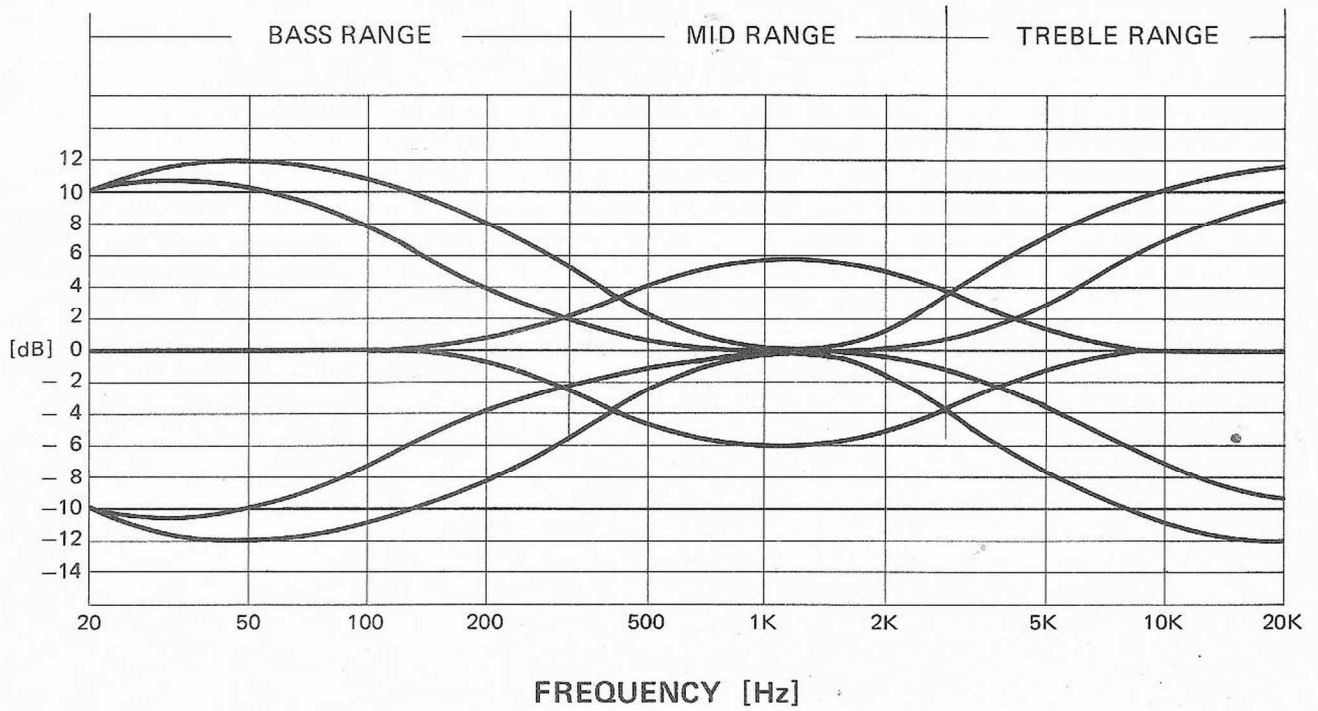
In the center position, both levels are equal.

5. BLOCK DIAGRAM



6. GRAPHIC CURVE

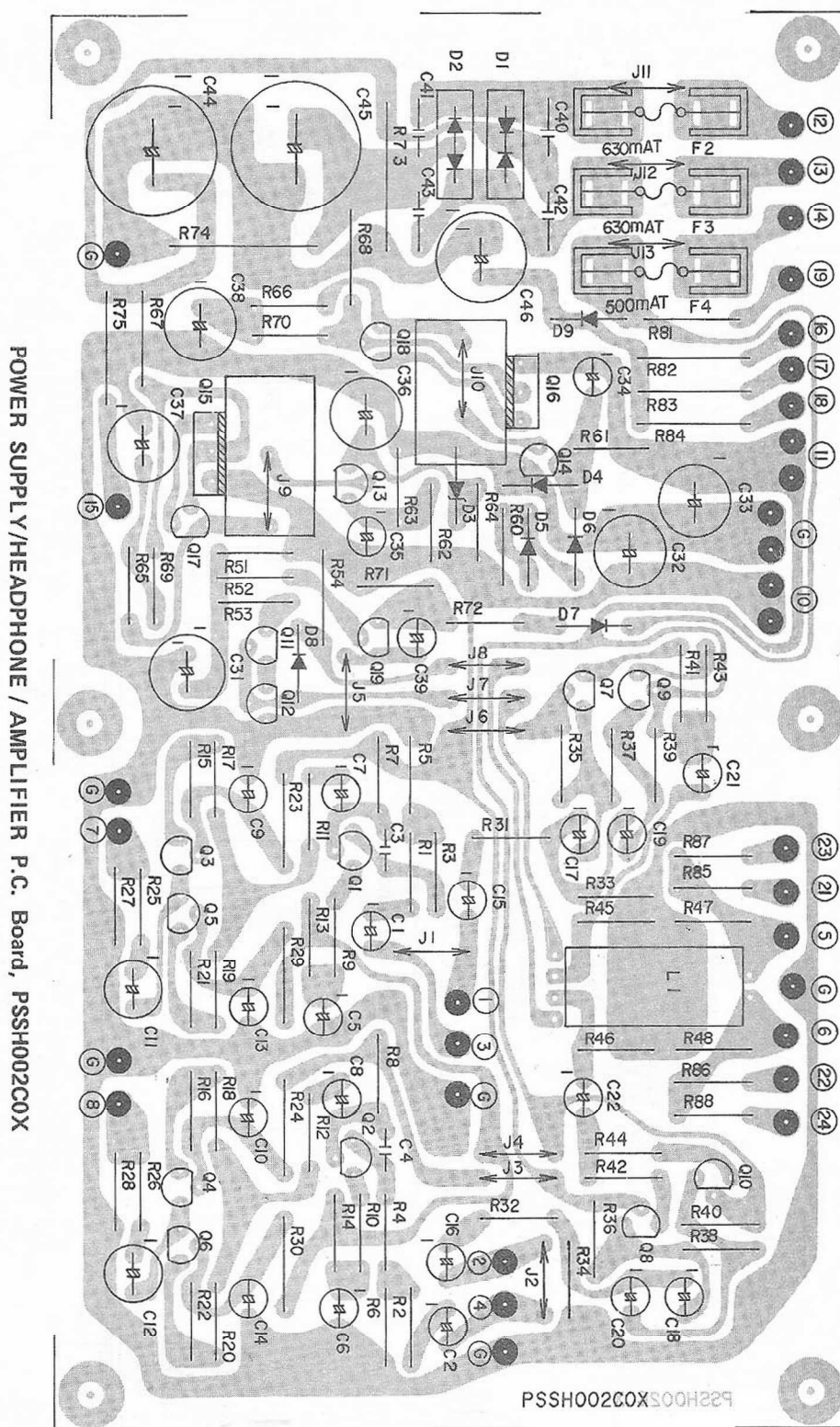
TONE CONTROL FREQUENCY RESPONSE



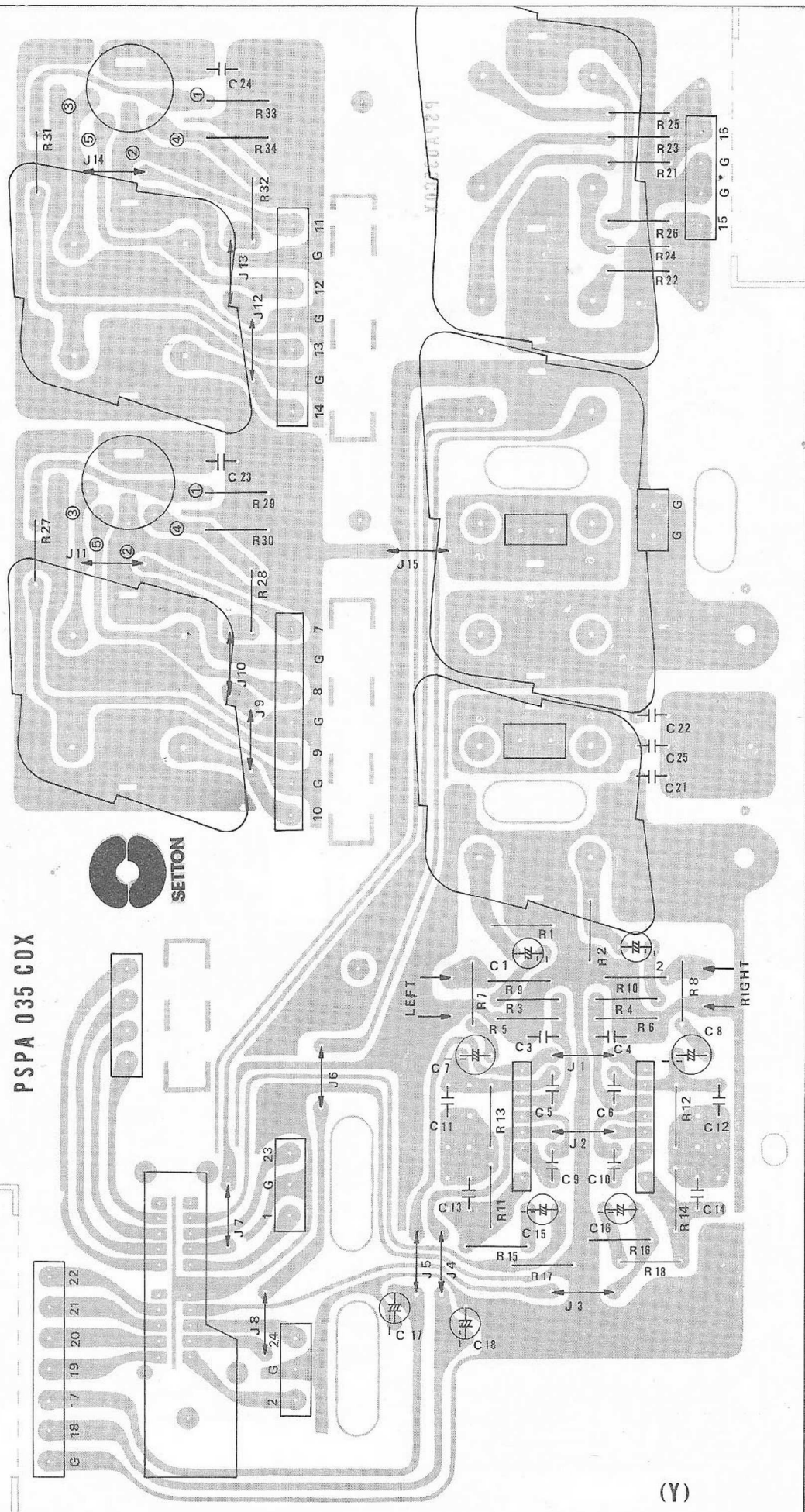
9



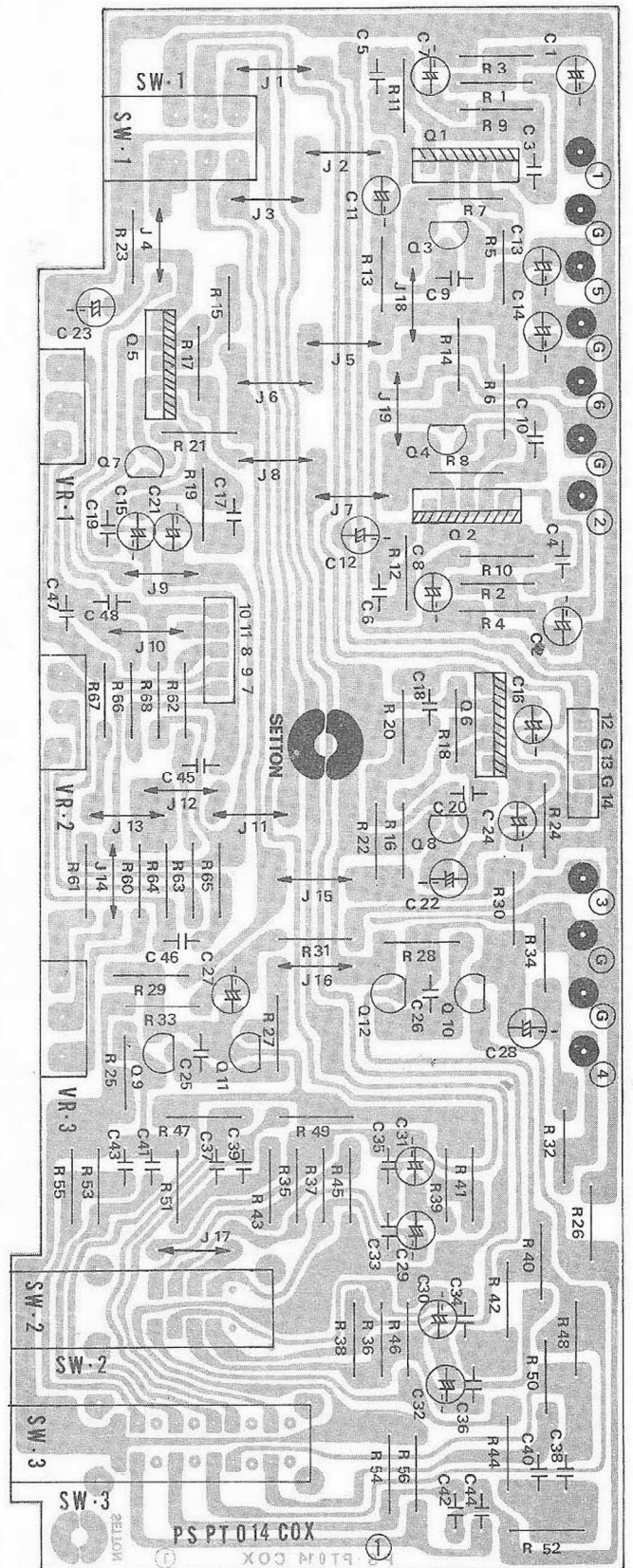
7.1 P.C. Board Detail



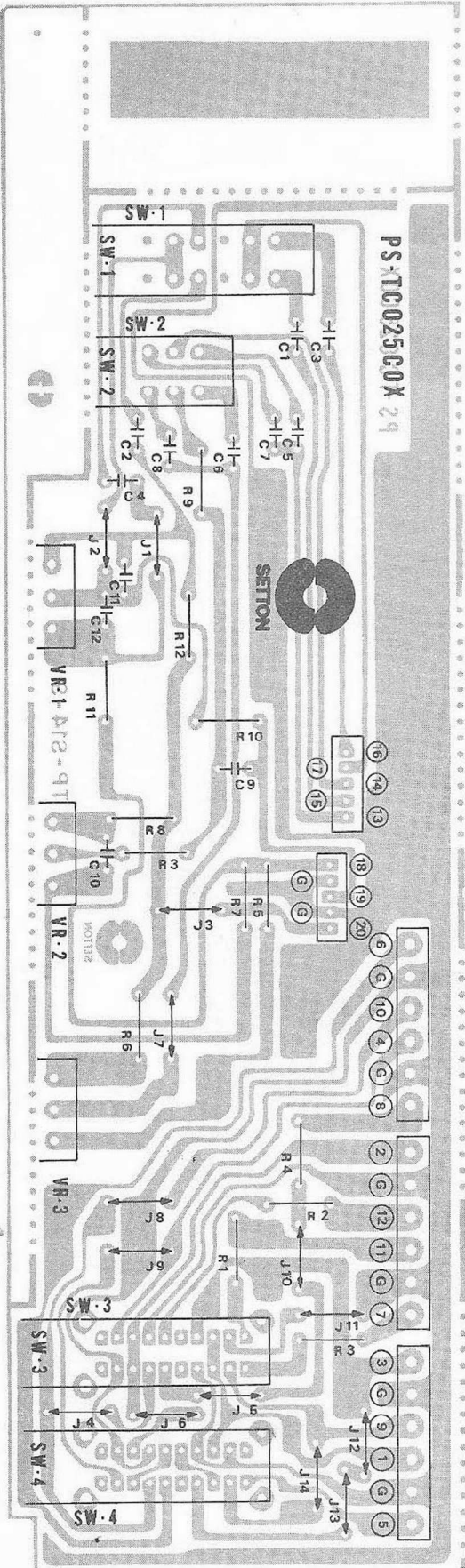
PSPA 035 C0X



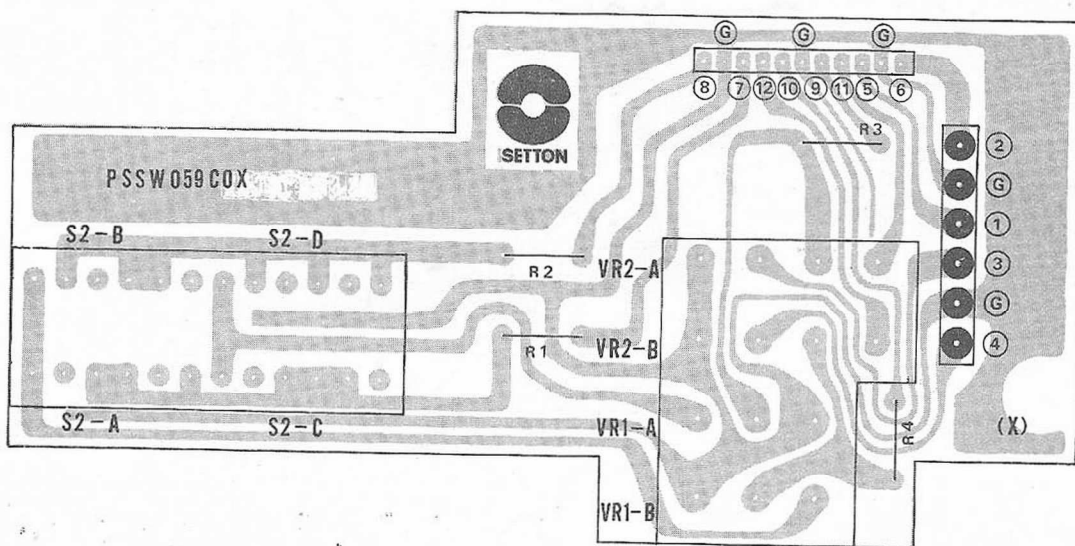
PRE AMPLIFIER P.C. Board, PSPA035C0X



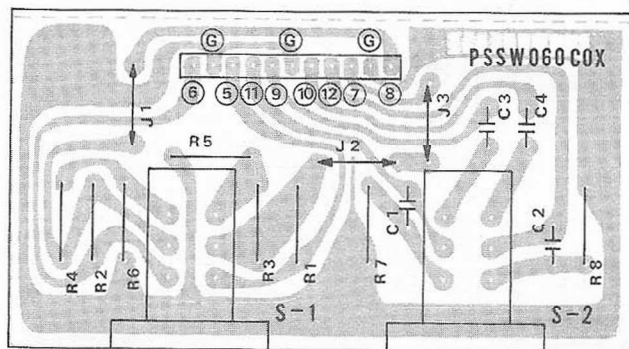
TONE AMPLIFIER P.C. Board, PSPT014C0X



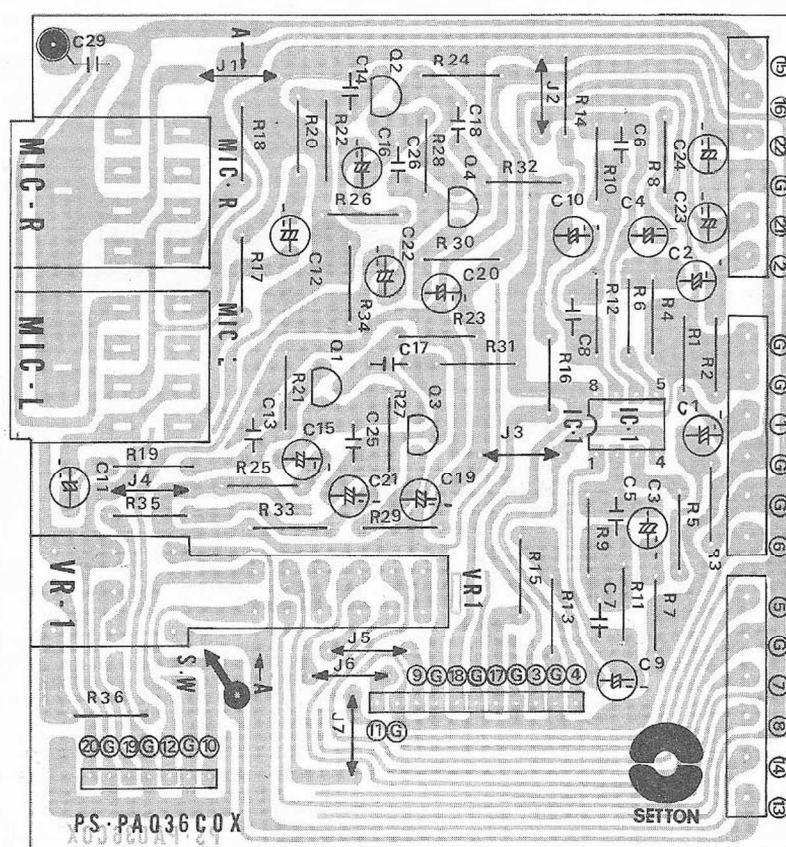
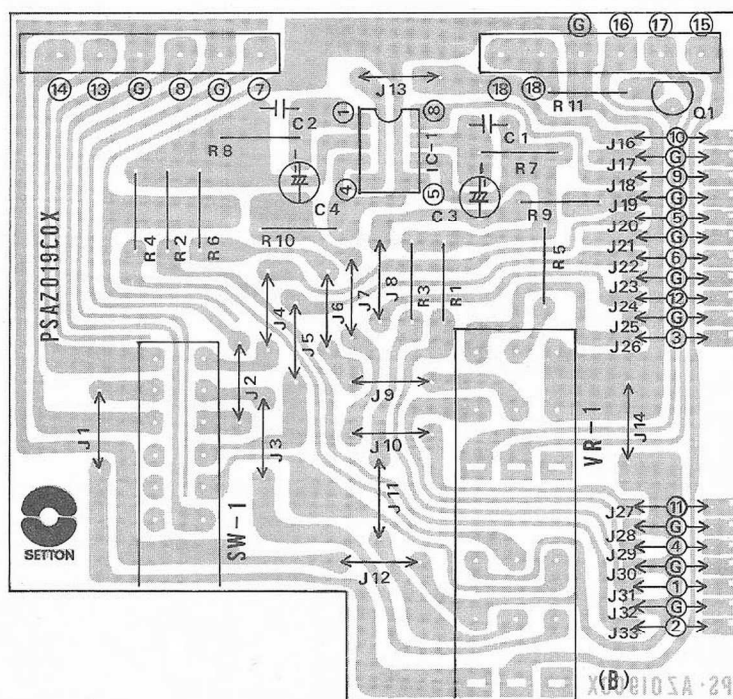
TONE CONTROL P.C. Board, PSTC025C0X



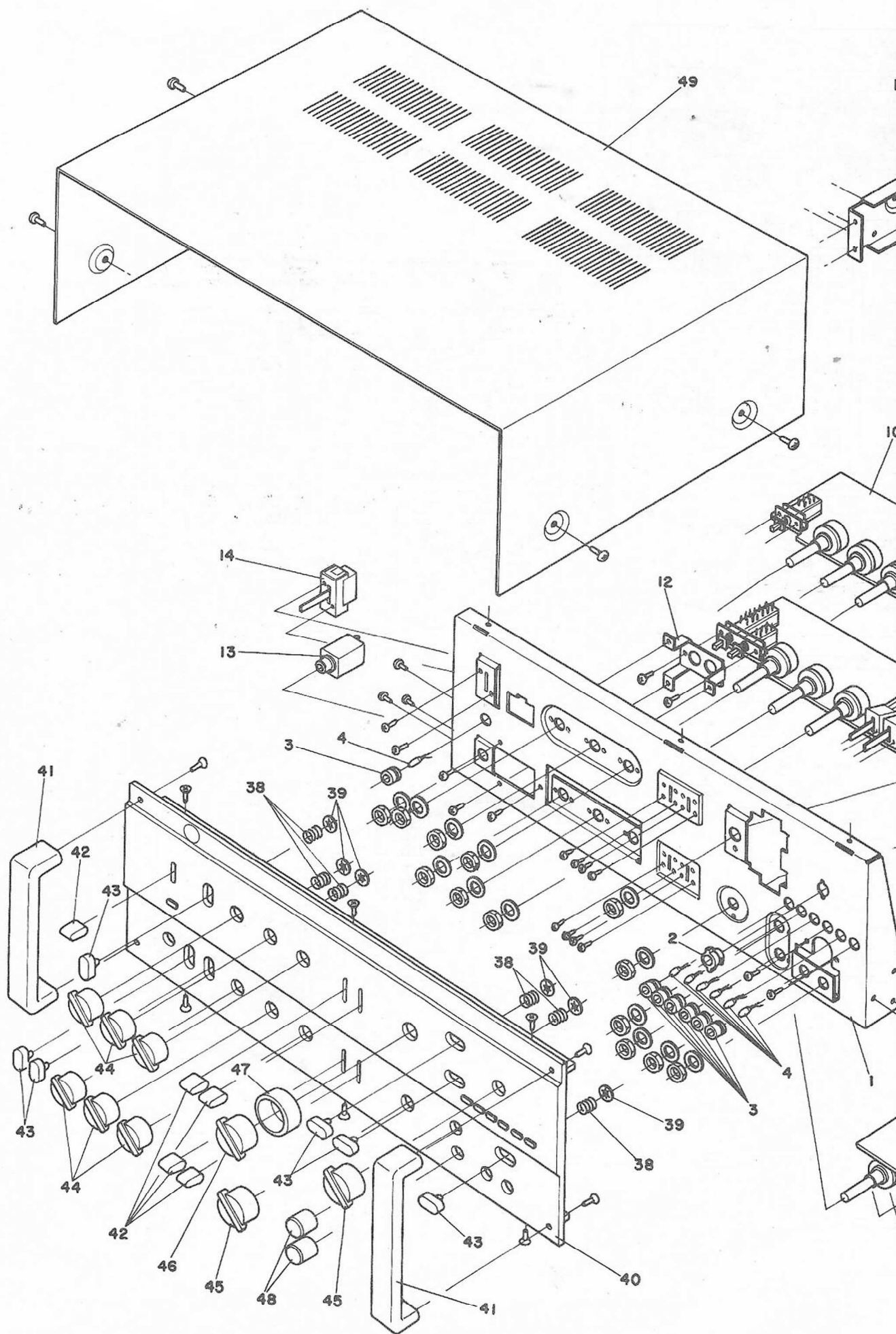
MASTER / BALANCE / VOLUME CONTROL P.C. Board, PSSW059C0X

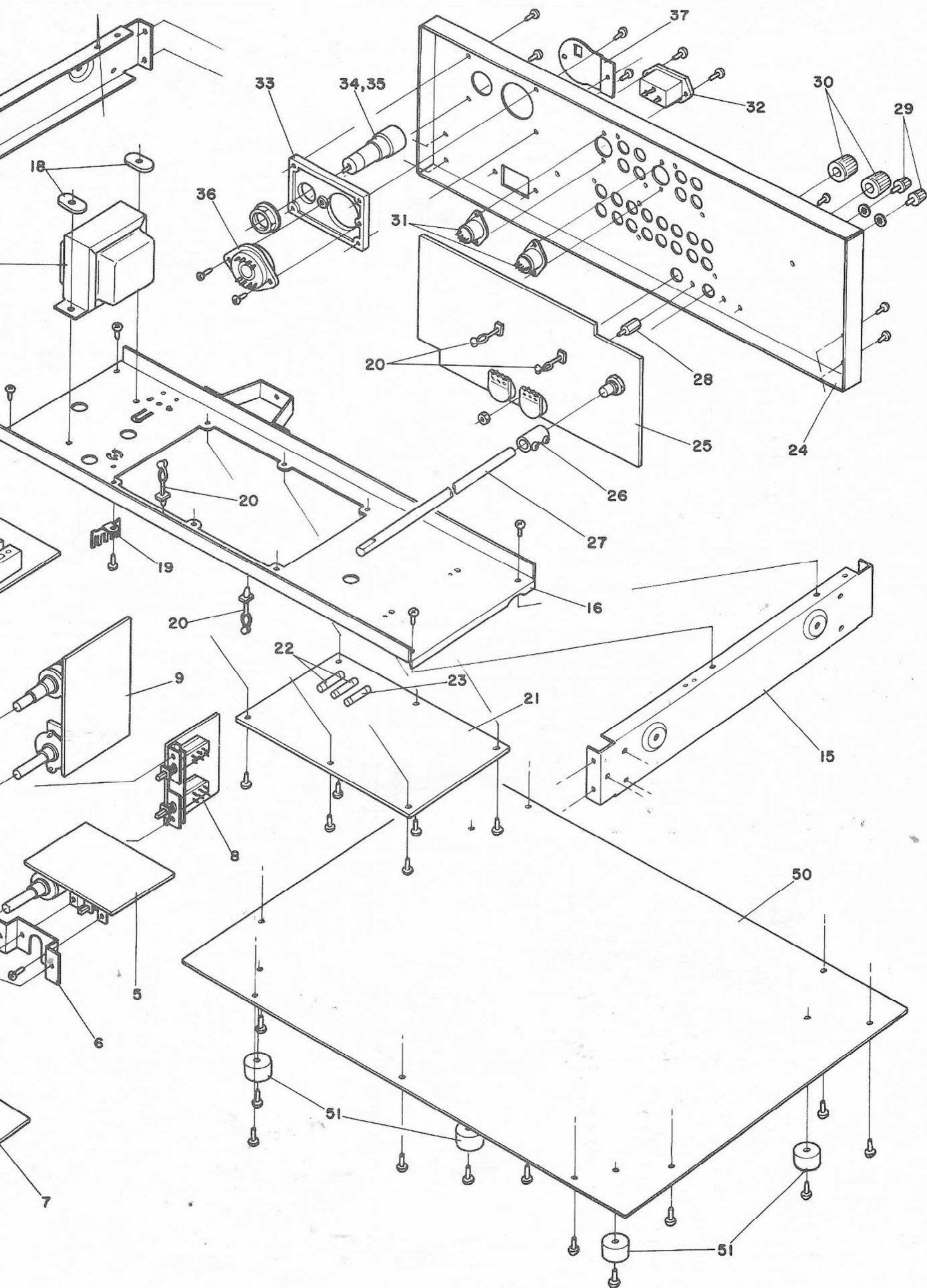


LOUD/TONE SWITCHING P.C. Board, PSSW060C0X

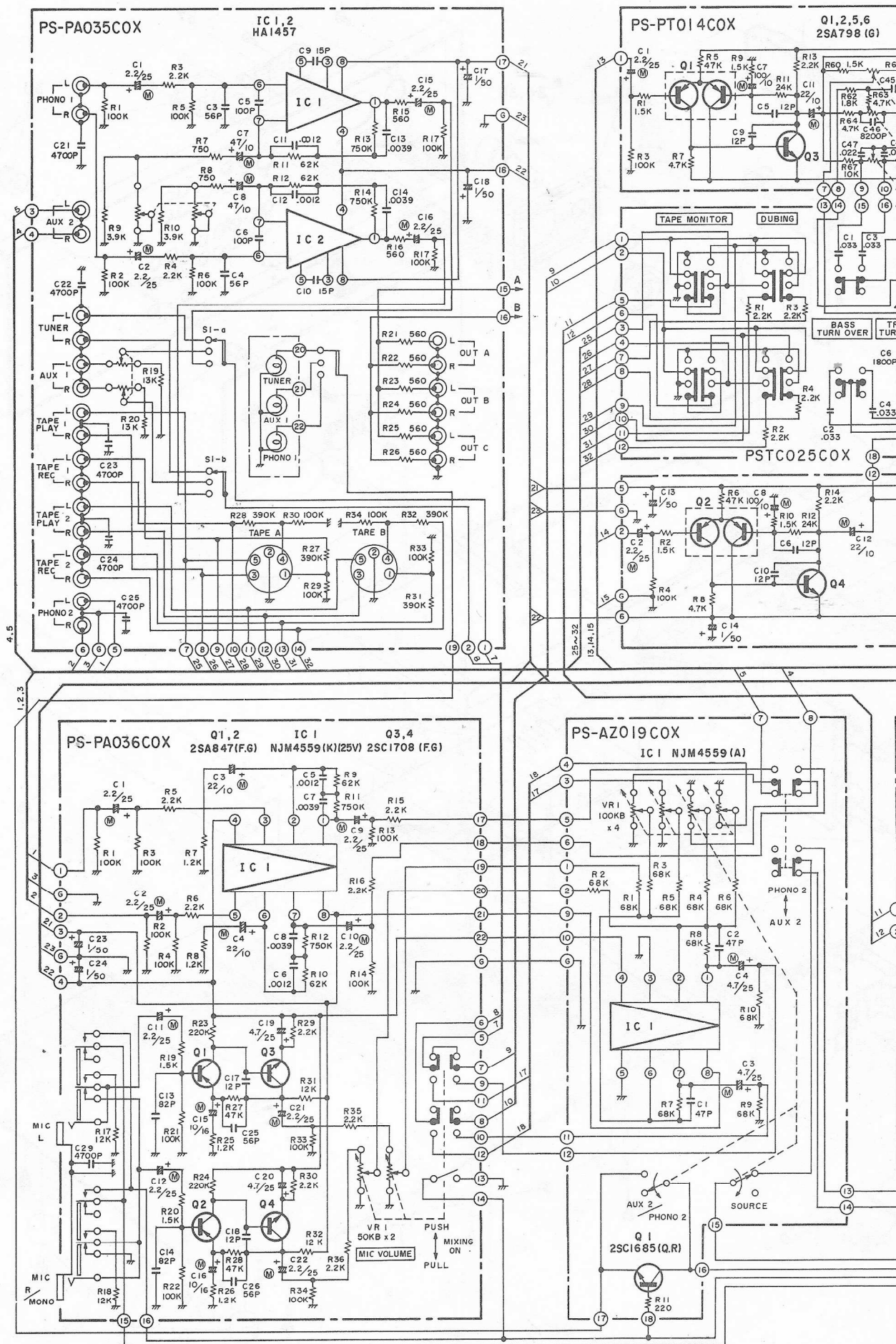


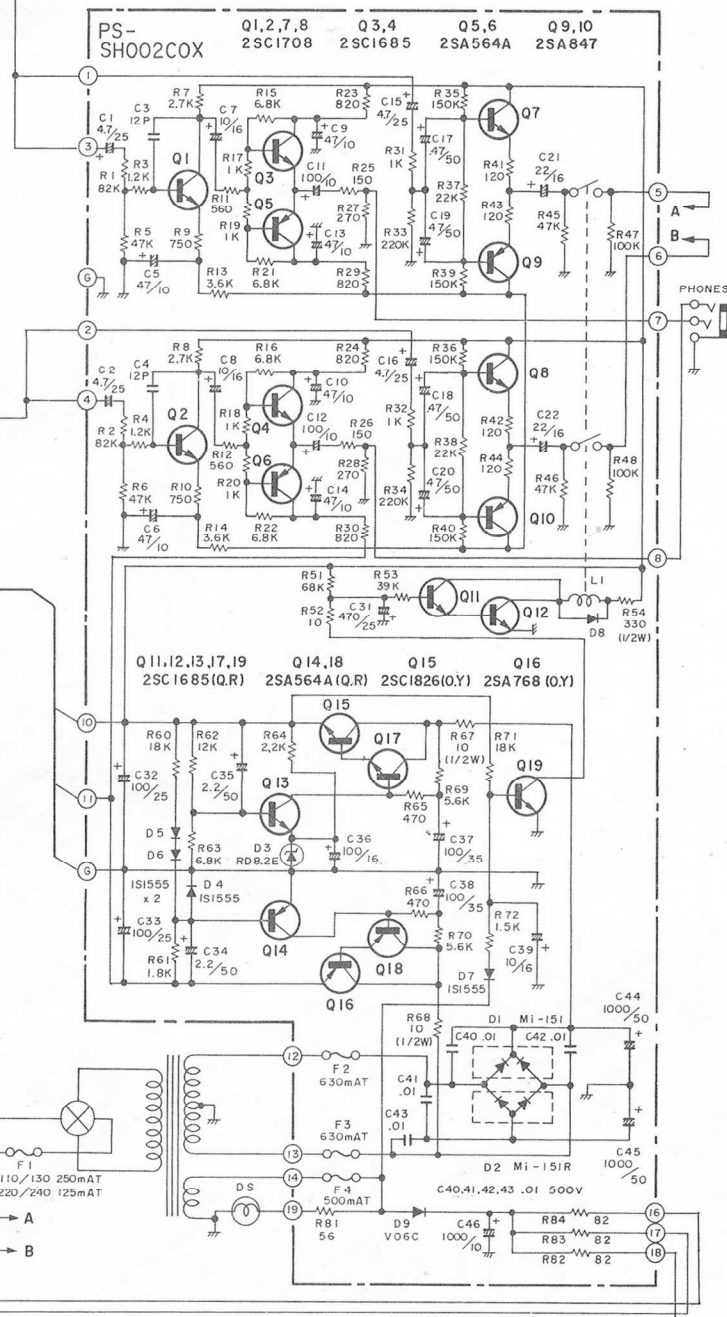
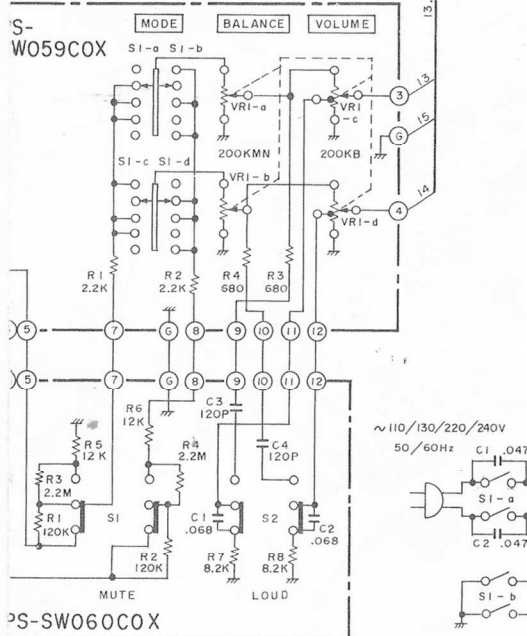
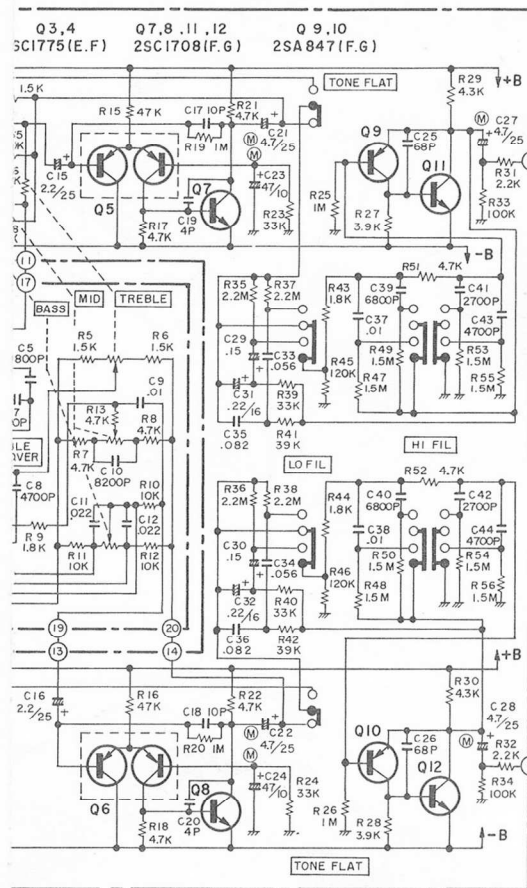
8. EXPLODED VIEW





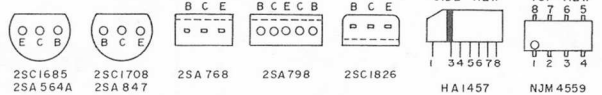
9. SCHEMATIC DIAGRAM





SEMICONDUCTOR TERMINAL CONNECTION
(BOTTOM VIEW UNLESS OTHERWISE NOTED)

E:EMITTER C:COLLECTOR B:BASE



10. REPLACEMENT PARTS LIST FOR PS-5500

SYMBOL NO.		DESCRIPTION		PARTS CODE	Unit Q'ty
PL1-7	(1)	Front Panel		MB-974SZ002	1
	(2)	Bushing	SW Selector	VF-221DN001	1
	(3)	Holder	Lamp	VM-165RW003	7
	(4)	Lamp		ZP-A064126U	7
	(5)	P.W.B. Ass'y	Mixing Amp.	AP-SAZ019AA	1
	(6)	Bracket	PWB Mtg.	MC-322SZ001	1
	(7)	P.W.B. Ass'y	Pre Amp/Mic.	AP-SPA036AA	1
	(8)	P.W.B. Ass'y	SW, Loud, Tone	AP-SSW060AA	1
	(9)	P.W.B. Ass'y	Mode, Master Volume	AP-SSW059AA	1
	(10)	P.W.B. Ass'y	Tone	AP-SPT014AA	1
	(11)	P.W.B. Ass'y	Tone Cont.	AP-STC025AA	1
	(12)	Bracket	Push SW	MX-642SZ003	1
J3	(13)	Jack 3P	Phone	YJ-S03S017Z	1
S1	(14)	Lever Switch	Power SW	SL-020209SA	1
	(15)	Side Bracket		MC-852SZ001	2
	(16)	Chassis		MC-972SZ001	1
PT1	(17)	Power Trans		TP-E54S002Y	1
	(18)	Plate	Trans	MS-317SZ006	2
	(19)	Terminal		ML-331SS001	1
	(20)	Purse Lock	Cord Clamper	VX-421NJ001	4
	(21)	P.W.B. Ass'y	SW, Headphone, Amp, Power	AP-SSH002AA	1
F2.3	(22)	Fuse	630mA	ZF-BQ63101A	2
F4	(23)	Fuse	500mA	ZF-BQ50104A	1
	(24)	Rear Panel		MB-972SM013	1
	(25)	P.W.B. Ass'y	Pre Amp.	AP-SPA035AA	1
	(26)	Coupler	SW Selector	MT-266BD001	1
	(27)	Shaft	SW Selector	MT-865AD007	1
	(28)	Spacer	Phono	MT-263BD003	1
J6.7	(29)	Terminal	Gnd.	YT-D01S001U	2
	(30)	Knob		VN-276SP013	2
J4.5	(31)	Jack 5P	Din	YJ-D05S006Z	2
J1	(32)	Jack 3P	AC	YJ-A03S001S	1
	(33)	Bracket	Voltage Selector	VX-651SB001	1
J2	(34)	Fuse Holder		YH-F1S2001D	1
F1	(35)	Fuse Holder	125mA	ZF-BQ13101A	1
S2	(36)	Voltage Selector		SZ-019901DZ	1
	(37)	Shade	Voltage Selector	MX-551SB002	1
	(38)	Spring	Button	MW-261LY002	6
	(39)	Lock Ring	Button	MS-113SP001	6
	(40)	Escutcheon Ass'y		AM-PS550001	1
	(41)	Handle		MU-274AA001	2
	(42)	Knob (D) Ass'y	Lever SW	AV-KNOB*074	5
	(43)	Button	Push SW	MN-376AA016	6

SYMBOL NO.	DESCRIPTION		PARTS CODE	Unit Q'ty
(44)	Knob (A) Ass'y	Left Right Tone	AV-KNOB*070	6
(45)	Knob (B) Ass'y	Mode Source	AV-KNOB*071	2
(46)	Knob (C) Ass'y	Vol. Balance (Upper)	AV-KNOB*072	1
(47)	Knob (WL) Ass'y	Vol. Balance (Lower)	MN-186AA008	1
(48)	Knob (M) Ass'y	Fader	MN-271AA002	2
(49)	Cover		MB-981SM004	1
(50)	Bottom Plate		MS-986SZ010	1
(51)	Foot		VM-285SB001	4
C1.2.	Fuse	125mAT	ZF-BQ13101A	1
	Polyster Capacitor	0.047 μ F	CQ-UZ473MEX	2
	Wire Kit Ass'y		GP-S5500A08	1
	Ser. No. Plate		VV-SPS55001	1
	Label		VV-L631UL03	2
	Label		VV-L111WN01	1
	Screw, Bras Tap, Front Panel, Side Bracket, etc.		BT-PW3008BZ	29
		M3x8		
	Screw, Inside Toothed, P.W.B.	M3x8	BT-PX3008BZ	6
	Screw, Bras Tap, Selector Cover	M3x6	BT-PW3006BB	1
	Screw, Flat Tap, Power Jack	M3x8	BT-PS3008BB	2
	Screw, Flat Head, Escutcheon	M3x6	BT-PS3006TZ	3
	Screw, Flat Head, Handle	M4x12	BS-PS4012NN	4
	Screw, Cems, Power SW, Push SW	M3x6	BS-PC3006NZ	18
	Screw, Cems, Trans	M4x10	BS-PC4010NZ	2
	Screw, Pan Tap, Vot. Selector, Pin Jack	M3x8	BT-PP3008AB	14
	Screw, Bras Tap, Voltage Selector	M3x8	BT-PW3008AZ	2
	Screw, Bind Nail, Din Jack	M3x6	BS-PL3006NB	11
	Screw, Bras Tap, Foot	M3x14	BT-PW3014BZ	4
	Screw, Bind Head, Cover	M5x10	BS-PB5010NB	4
	Washer, Cover	M7	MS-706SB001	4
	Washer, Flat L. Foot	M3	BW-M30305SN	4
	Washer, Flat L.	M3	BW-M30A08SN	2
	Washer	M3	BW-M30805FR	2
	Nut		BN-HCL30NBN	1
	Washer, Lock		BW-G30655SW	1
	Clamper		MX-315SZ001	1
	Shade		VQ-711MB005	2
	Shade		VS-628MB001	1
	Nail Tap Screw		BT-PL3008BB	6
	Gnd Washer		BW-T30602BN	1
	Escutcheon		ME-97EAA049	1
	BT Bushing		VF-232ST001	3
	Badge		ME-22PAA002	1
	Indicator		VF-121AA005	7
	BT Bushing		VF-232ST002	3
	Instruction Manual		KT-PS5500XX	1

SYMBOL NO.	DESCRIPTION	PARTS CODE	Unit Q'ty
	P.W.B. Ass'y (AP-SSH002AA)	PS-SH002COX	1
Q1.2.7.8	Transistor 2SC1708(G)	QT-C1708XBE	4
Q3.4	Transistor 2SC1685(R)	QT-C1685XCN	2
Q5.6	Transistor 2SA564A(R)	QT-A0564ADN	2
Q9.10	Transistor 2SA847(G)	QT-A0847XBE	2
Q11.12.13.17.19	Transistor 2SC1685(Q)	QT-C1685XAN	5
Q14.18	Transistor 2SA564A(Q)	QT-A0564ACN	2
Q15	Transistor 2SC1826(O)	QT-C1826XBD	1
Q16	Transistor 2SA768(O)	QT-A0768XBD	1
D1	Diode MI-151	QD-S1151X3D	1
D2	Diode MI-151R	QD-S1151R3D	1
D3	Diode Zenner RD8.2E(B)	QD-ZRD8EXBA	1
D4.5.6.7.8	Diode 1S1555	QD-SS1555XT	5
D9	Diode VO6C	QD-SV06CXXB	1
RY	Micro Relay	ZR-A231101Z	1
R1.2	Carbon Resistor 82k ohm 1/4W	RD-25PJ823X	2
R3.4	Carbon Resistor 1.2k ohm 1/4W	RD-25PJ122X	2
R5.6.45.46	Carbon Resistor 47k ohm 1/4W	RD-25PJ473X	4
R7.8	Carbon Resistor 2.7k ohm 1/4W	RD-25PJ272X	2
R9.10	Carbon Resistor 750 ohm 1/4W	RD-25PJ751X	2
R11.12	Carbon Resistor 560 ohm 1/4W	RD-25PJ561X	2
R13.14	Carbon Resistor 3.6k ohm 1/4W	RD-25PJ362X	2
R15.16.21.22.63	Carbon Resistor 6.8k ohm 1/4W	RD-25PJ682X	5
R17.18.19.20.31.32	Carbon Resistor 1k ohm 1/4W	RD-25PJ102X	6
R23.24	Metal Oxide Film Re. 820 ohm 1/2W	RG-HANJ821B	2
R25.26	Carbon Resistor 150 ohm 1/4W	RD-25PJ151X	2
R27.28	Carbon Resistor 270 ohm 1/4W	RD-25PJ271X	2
R29.30	Metal Oxide Film Re. 820 ohm 1/2W	RG-HANJ821B	2
R33.34.35.36.39.40	Carbon Resistor 220k ohm 1/4W	RD-25PJ224X	6
R37.38	Carbon Resistor 22k ohm 1/4W	RD-25PJ223X	2
R41.42.43.44	Carbon Resistor 120 ohm 1/4W	RD-25PJ121X	4
R47.48	Carbon Resistor 100k ohm 1/4W	RD-25PJ104X	2
R51	Carbon Resistor 68k ohm 1/4W	RD-25PJ683X	1
R52	Carbon Resistor 10 ohm 1/4W	RD-25PJ100X	1
R53	Carbon Resistor 39k ohm 1/4W	RD-25PJ393X	1
R54	Metal Oxide Film Re. 330 ohm 1/2W	RG-HANJ331B	1
R60.61.71	Carbon Resistor 18k ohm 1/4W	RD-25PJ183X	3
R62	Carbon Resistor 12k ohm 1/4W	RD-25PJ123X	1
R64	Carbon Resistor 2.2k ohm 1/4W	RD-25PJ222X	1
R65.66	Carbon Resistor 470 ohm 1/4W	RD-25PJ471X	2
R67.68	Metal Oxide Film Re. 10 ohm 1/2W	RX-HAPJ100B	2
R69.70	Carbon Resistor 5.6k ohm 1/4W	RD-25PJ562X	2
R72	Carbon Resistor 1.5k ohm 1/4W	RD-25PJ152X	1
C1.2.15.16	Elyt Capacitor 4.7 μ F 25V	CE-EE4R7ZMN	4
C3.4	Ceramic Capacitor 12 pF 50V	CC-CB120KOM	2

SYMBOL NO.	DESCRIPTION			PARTS CODE	Unit Q'ty
C5.6	Elyt Capacitor	47 μ F	10V	CE-EC470ZMN	2
C7.8.39	Elyt Capacitor	10 μ F	16V	CE-ED100ALN	3
C9.10.13.14	Elyt Capacitor	47 μ F	10V	CE-EC470ALN	4
C11.12	Elyt Capacitor	100 μ F	10V	CE-EC101ALN	2
C17.18.19.20	Elyt Capacitor	0.47 μ F	50V	CE-EGR47ZMN	4
C21.22	Elyt Capacitor	22 μ F	16V	CE-ED220ALN	2
C31	Elyt Capacitor	470 μ F	25V	CE-EE471ALN	1
C32.33	Elyt Capacitor	100 μ F	25V	CE-EE101ALN	2
C34.35	Elyt Capacitor	2.2 μ F	50V	CE-EG2R2ALN	2
C36	Elyt Capacitor	100 μ F	16V	CE-ED101ALN	1
C40-43	Ceramic Capacitor	0.01 μ F	500V	CK-DE103PEM	4
C44.45	Elyt Capacitor	1000 μ F	50V	CE-EG102ALC	2
C46	Elyt Capacitor	1000 μ F	10V	CE-EC102ALN	1
R81	Metal Oxide Film Re.	56 ohm	1/2W	RG-HANJ560B	1
R82-84	Metal Oxide Film Re.	82 ohm	1W	RG-1ANJ820B	3
	Short Jumper	10MM		MW-401CX001	10
	Tie Point	16MM		MW-201BS003	24
	Fuse Holder			YH-F0P0001Z	6
	Heat Sink			MU-242AD001	2
	Screw, Bras Tap		M3x8	BT-PW3008BZ	2
C37.38	Elyt Capacitor	100 μ F	35V	CE-EF101ALN	2
	P.W.B. Ass'y	(AP-SPA035AA)		PS-PA035COX	1
IC1.2	Integrated Circuit	HA1457		QQ-M01457AB	2
S1	Slide Rotary Switch	Source		SH-040301ZA	1
J1.2.3	Jack 4P	Din		YJ-P04S012U	3
J4.5	Jack 6P	Din		YJ-P06S006U	2
VR1	Control	Input Level		RV-QA502B01	1
VR2	Control	Output Level		RV-QA104B01	1
R1.2.5.6.17.18.29.30. 33.34	Carbon Resistor	100k ohm	1/4W	RD-25PJ104X	10
R3.4	Carbon Resistor	2.2k ohm	1/4W	RD-25PJ222X	2
R7.8	Carbon Resistor	750 ohm	1/4W	RD-25PJ751X	2
R9.10	Carbon Resistor	3.9k ohm	1/4W	RD-25PJ392X	2
R11.12	Carbon Resistor	62k ohm	1/4W	RD-25PJ623X	2
R13.14	Carbon Resistor	750k ohm	1/4W	RD-25PJ754X	2
R15.16	Carbon Resistor	560 ohm	1/4W	RD-25PJ561X	2
R19.20	Carbon Resistor	13k ohm	1/4W	RD-25PJ133X	2
R21.22.23.24.25.26	Carbon Resistor	560 ohm	1/4W	RD-25PJ561X	6
R27.28	Carbon Resistor	390k ohm	1/4W	RD-25PJ394X	2
R31.32	Carbon Resistor	390k ohm	1/4W	RD-25PJ394X	2
C1.2	Elyt Capacitor	2.2 μ F	25V	CE-EE2R2ZMN	2
C3.4	Ceramic Capacitor	56 pF	50V	CC-CB560KOM	2
C5.6	Ceramic Capacitor	100 pF	50V	CC-CB101KOM	2
C7.8	Elyt Capacitor	47 μ F	10V	CE-EC470ZMN	2
C9.10	Ceramic Capacitor	15 pF	50V	CC-CB150KOM	2

SYMBOL NO.	DESCRIPTION	PARTS CODE	Unit Q'ty
C11.12	Mylar Capacitor 1200 pF 50V	CQ-MB122JCH	2
C13.14	Mylar Capacitor 3900 pF 50V	CQ-MB392JCH	2
C15.16	Elyt Capacitor 2.2 μ F 25V	CE-EE2R2ZMN	2
C17.18	Elyt Capacitor 1 μ F 50V	CE-EG010ALN	2
C21-25	Ceramic Capacitor 4700 pF 50V	CK-CB472PEM	5
	Short Jumper 10MM	MW-401CX001	15
	Terminal 7P	YZ-A3500002	3
	Terminal 4P	YZ-A2000001	1
	Terminal 3P	YZ-A1500001	2
	Terminal 2P	YZ-A1000002	3
	P.W.B. Ass'y (AP-SPA036AA)	PS-PA036COX	1
IC1	Integrated Circuit NJM4559	QQ-M04559KJ	1
Q1.2	Transistor 2SA847(F)	QT-A0847XAE	2
Q3.4	Transistor 2SC1708(F)	QT-C1708XAE	2
J1.2	Jack Mic Left/Right	YJ-S09S002Z	2
VR1	Control Mic Loud	RV-QZ503B01	1
R1.2.3.4.13.14.21.22 33.34	Carbon Resistor 100k ohm 1/4W	RD-25PJ104X	10
R5.6.15.16.29.30.35.36	Carbon Resistor 2.2k ohm 1/4W	RD-25PJ222X	8
R7.8.25.26	Carbon Resistor 1.2k ohm 1/4W	RD-25PJ122X	4
R9.10	Carbon Resistor 62k ohm 1/4W	RD-25PJ623X	2
R11.12	Carbon Resistor 750k ohm 1/4W	RD-25PJ754X	2
R17.18.31.32	Carbon Resistor 12k ohm 1/4W	RD-25PJ123X	4
R19.20	Carbon Resistor 1.5k ohm 1/4W	RD-25PJ152X	2
R23.24	Carbon Resistor 220k ohm 1/4W	RD-25PJ224X	2
R27.28	Carbon Resistor 47k ohm 1/4W	RD-25PJ473X	2
C1.2.9.10.11.12.21.22	Elyt Capacitor 2.2 μ F 25V	CE-EE2R2ZMN	8
C3.4	Elyt Capacitor 22 μ F 10V	CE-EC220ZMN	2
C5.6	Mylar Capacitor 1200 pF 50V	CQ-MB122JCH	2
C7.8	Mylar Capacitor 3900 pF 50V	CQ-MB392JCH	2
C13.14	Ceramic Capacitor 82 pF 50V	CC-CB820KOM	2
C15.16	Elyt Capacitor 10 μ F 16V	CE-ED100ZMN	2
C17.18	Ceramic Capacitor 12 pF 50V	CC-CB120KOM	2
C19.20	Elyt Capacitor 4.7 μ F 25V	CE-EE4R7ALN	2
C23.24	Elyt Capacitor 1 μ F 50V	CE-EG010ALN	2
C25.26	Ceramic Capacitor 56 pF 50V	CC-CB560KOM	2
C29	Ceramic Capacitor 4700 pF 50V	CK-CB472PEM	1
	Short Jumper 10MM	MW-401CX001	7
	Terminal	MW-201BS003	19
	P.W.B. Ass'y (AP-SPT014AA)	PS-PT014COX	1
Q1.2	Transistor 2SA798(G)	QT-A0798XCE	2
Q3.4	Transistor 2SC1775(E)	QT-C1775XAB	2
C5.6	Transistor 2SA798(G)	QT-A0798XCE	2
Q7.8	Transistor 2SC1708(F)	QT-C1708XAE	2
Q9.10	Transistor 2SA847(F)	QT-A0847XAE	2

SYMBOL NO.	DESCRIPTION		PARTS CODE	Unit Q'ty
Q11.12	Transistor	2SC1708(F)	QT-C1708XAE	2
VR1-3	Control	50KB	RV-NA503B10	3
S1	Push Switch		SP-01AAX25A	1
S2	Slide Lever Switch		SL-020304ZA	1
S3	Slide Lever Switch		SL-04D303ZA	1
R1.2.9.10.60.61	Carbon Resistor	1.5k ohm 1/4W	RD-25PJ152X	6
R3.4.33.34	Carbon Resistor	100k ohm 1/4W	RD-25PJ104X	4
R5.6.15.16	Carbon Resistor	47k ohm 1/4W	RD-25PJ473X	4
R7.8.21.22.17.18.51.52 63.64.65	Carbon Resistor	4.7k ohm 1/4W	RD-25PJ472X	11
R11.12	Carbon Resistor	24k ohm 1/4W	RD-25PJ243X	2
R13.14	Metal Oxide Film Re.	2.2k ohm 1/2W	RG-HAPJ222B	2
R19.20.25.26	Carbon Resistor	1M ohm 1/4W	RD-25PJ105X	4
R23.24.39.40	Carbon Resistor	33k ohm 1/4W	RD-25PJ333X	4
R27.28	Carbon Resistor	3.9k ohm 1/4W	RD-25PJ392X	2
R29.30	Carbon Resistor	4.3k ohm 1/4Q	RD-25PJ432X	2
R31.32	Carbon Resistor	2.2k ohm 1/4W	RD-25PJ222X	2
R35.35.37.38	Carbon Resistor	2.2M ohm 1/4W	RD-25PJ225X	4
R41.42	Carbon Resistor	39k ohm 1/4W	RD-25PJ393X	2
R43.44.62	Carbon Resistor	1.8k ohm 1/4W	RD-25PJ182X	3
R45.46	Carbon Resistor	120k ohm 1/4W	RD-25PJ124X	2
R47.48.49.50.53.54.55 56	Carbon Resistor	1.5M ohm 1/4W	RD-25PJ155X	8
R66.67.68	Carbon Resistor	10k ohm 1/4W	RD-25PJ103X	3
C1.2	Elyt Capacitor	2.2 μ F 25V	CE-EE2R2ZMN	2
C5.6.9.10	Elyt Capacitor	12 pF 50V	CC-CB120KOM	4
C7.8	Elyt Capacitor	100 μ F 10V	CE-EC101ZMN	2
C11.12	Elyt Capacitor	22 μ F 10V	CE-EC220ZMN	2
C13.14	Elyt Capacitor	1 μ F 50V	CE-EG010ALN	2
C15.16.21.22.27.28	Elyt Capacitor	4.7 μ F 25V	CE-EE4R7ZMN	6
C17.18	Ceramic Capacitor	10 pF 50V	CC-CB100DOM	2
C19.20	Ceramic Capacitor	4 pF 50V	CC-CB040COM	2
C23.24	Elyt Capacitor	47 μ F 10V	CE-EC470ZMN	2
C25.26	Ceramic Capacitor	68 pF 50V	CC-CB680KOM	2
C29.30	Tantalum Capacitor	0.15 μ F 16V	CS-SDR15MDC	2
C31.32	Tantalum Capacitor	0.22 μ F 16V	CS-SDR22MDC	2
C33.34	Mylar Capacitor	0.056 μ F 50V	CQ-MB563KCH	2
C35.36	Mylar Capacitor	0.082 μ F 50V	CQ-MB823KCH	2
C39.40.45	Mylar Capacitor	0.01 μ F 50V	CQ-MB103KCH	3
C37.38	Mylar Capacitor	6800 pF 50V	CQ-MB682KCH	2
C43.44	Mylar Capacitor	2700 pF 50V	CQ-MB272KCH	2
C41.42	Mylar Capacitor	4700 pF 50V	CQ-MB472KCH	2
C46	Mylar Capacitor	8200 pF 50V	CQ-MB822KCH	1
C47.48	Mylar Capacitor	0.022 μ F 50V	CQ-MB223KCH	2
	Short Jumper		MW-401CX001	19

SYMBOL NO.	DESCRIPTION	PARTS CODE	Unit Q
	P.C. Joint 5 pcs. 200MM	ZZ-Z0000040	2
	Terminal 16MM	MW-201BS003	11
	Heat Sink	MX-221AD001	2
	P.W.B. Ass'y (AP-STC025AA)	PS-TC025COX	1
S3.4	Lever Slide Switch	SL-040302ZA	2
S1.2	Push Switch	SP-02DAX04A	1
VR1.3	Control	RV-NA503B10	3
R1.2.3.4	Carbon Resistor 2.2k ohm 1/4W	RD-25PJ222X	4
R5.6	Carbon Resistor 1.5k ohm 1/4W	RD-25PJ152X	2
R7.8.13	Carbon Resistor 4.7k ohm 1/4W	RD-25PJ472X	3
R9	Carbon Resistor 1.8k ohm 1/4W	RD-25PJ182X	1
R10.11.12	Carbon Resistor 10k ohm 1/4W	RD-25PJ103X	3
C1.2.3.4	Mylar Capacitor 0.033 μ F 50V	CQ-MB333KCH	4
C5.6	Mylar Capacitor 1800 pF 50V	CQ-MB182KCH	2
C7.8	Mylar Capacitor 4700 pF 50V	CQ-MB472KCH	2
C9	Mylar Capacitor 0.01 μ F 50V	CQ-MB103KCH	1
C10	Mylar Capacitor 8200 pF 50V	CQ-MB822KCH	1
C11.12	Mylar Capacitor 0.022 μ F 50V	CQ-MB223KCH	2
	Short Jumper 10MM	MW-401CX001	14
	Terminal 6P	YZ-A3000001	3
	P.W.B. Ass'y (AP-SAZ019AA)	PS-AZ019COX	1
IC1	Integrated Circuit NJM4559	QQ-M04559AJ	1
Q1	Transistor 2SC1685(Q)	QT-C1685XAN	1
VR1	Control Fader	RV-SE104101	1
S1	Push Switch Aux. Phono	SP-01AAX24A	1
R1.2.3.4.5.6.7.8.9.10. 11	Carbon Resistor 68k ohm 1/4W	RD-25PJ683X	10
R11	Carbon Resistor 220 ohm 1/4W	RD-25PJ221X	1
C1.2	Ceramic Capacitor 47 pF 50V	CC-CB470KOM	2
C3.4	Elyt Capacitor 4.7 μ F 25V	CE-EE4R7ZMN	2
	Short Jumper 10MM	MW-401CX001	14
	P.C. Joint 100MM 7 pcs.	ZZ-Z0000038	1
	P.C. Joint 100MM 11 pcs.	ZZ-Z0000039	1
	Terminal 6P 5MM	YZ-A3000001	2
	P.W.B. Ass'y (AP-SSW059AA)	PS-SW059COX	1
S1	Rotary Switch SP Mode	SR-0405204T	1
VR1	Control Volume	RV-GA204X04	1
R1.2	Carbon Resistor 2.2k ohm 1/4W	RD-25PJ222X	2
R3.4	Carbon Resistor 680 ohm 1/4W	RD-25PJ681X	2
	P.C. Joint 11 pcs. 70MM	ZZ-Z0000016	1
	Terminal 6 pcs. 5MM	YZ-A3000002	1
	P.W.B. Ass'y (AP-SSW060AA)	PS-SW060COX	1
S1	Push Switch mute Loud	SP-02YAX08A	1
R1.2	Carbon Resistor 120k ohm 1/4W	RD-25PJ124X	2
R3.4	Carbon Resistor 2.2M ohm 1/4W	RD-25PJ225X	2

SYMBOL NO.	DESCRIPTION	PARTS CODE	Unit Q'ty
R5.6	Carbon Resistor 12k ohm 1/4W	RD-25PJ123X	2
R7.8	Carbon Resistor 8.2k ohm 1/4W	RD-25PJ822X	2
C1.2	Mylar Capacitor 0.068 μ F 50V	CQ-MB683KCH	2
C3.4	Ceramic Capacitor 120 pF 50V	CC-CB121KOM	2
	Short Jumper	MW-401CX001	3