

Service Manual

STEREO AMPLIFIER

SA-600 / KUW, KCW, FVW

NOTE: Model SA-600 comes in three versions distinguished as follows:

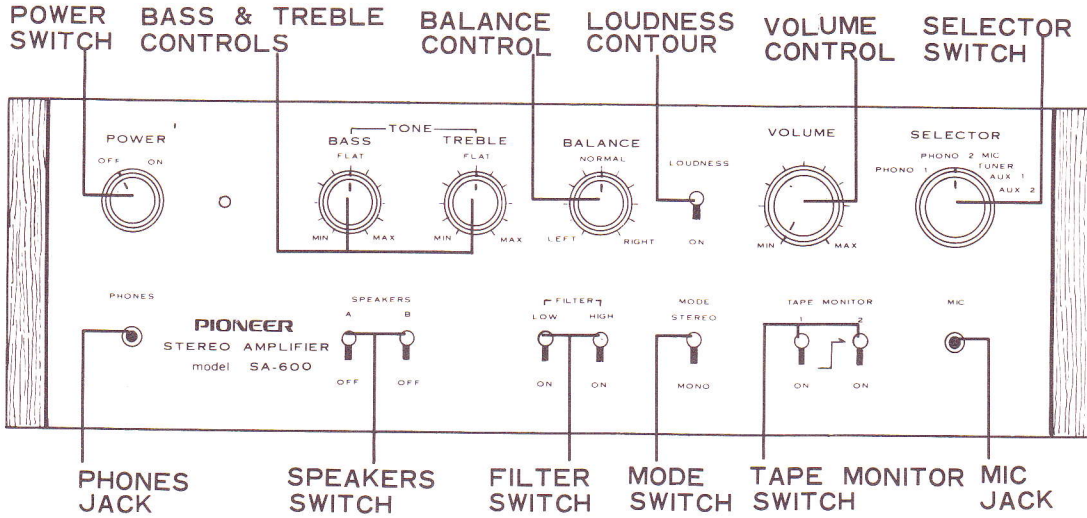
Round level on rear panel	Voltages	Type
KUW	120V only	UL approved (U.S.A.)
KCW	120V only	CSA approved (CANADA)
FVW	5-position selector	SEV approved (SWITZERLAND)

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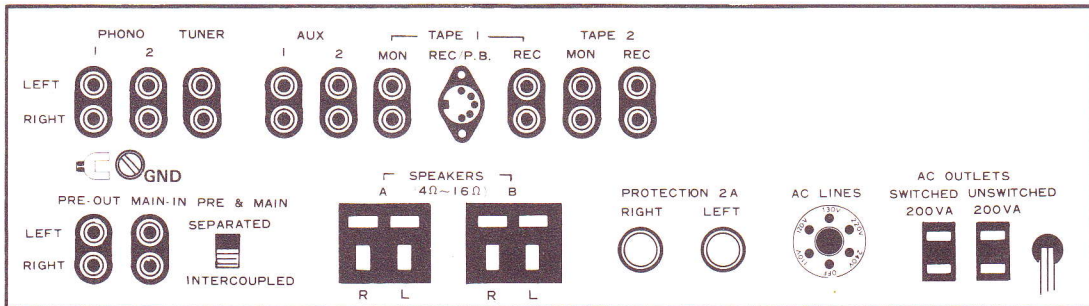
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1. OUTSIDE VIEW

FRONT VIEW



REAR VIEW



2. SPECIFICATIONS

SEMICONDUCTORS

Transistors	21
Diodes	8

POWER AMPLIFIER SECTION

Music Power Output (IHF)	100 Watts (4Ω) 70 Watts (8Ω)
Continuous Power Output (each channel driven)	31W/31W (4Ω) 25W/25W (8Ω)
Continuous Power Output (both channel driven)	20W + 20W (4Ω) 19W + 19W (8Ω)
Power Output in the range of 20Hz to 20kHz (both channel driven)	13W + 13W (8Ω , Harmonic Distortion Less than 0.5%)
Harmonic Distortion	Less than 0.5% (Continuous power output)
Intermodulation Distortion	Less than 0.5% (Continuous power output)
Power Bandwidth (IHF)	10Hz to 50kHz (8Ω , Harmonic Distortion Less than 0.5%)
Frequency Response	15Hz to 70kHz, ± 1 dB
Input Sensitivity/Impedance (1kHz, Continuous power output)	420mV/70k Ω
Speakers	4 to 16 Ω
Damping Factor	30 (8Ω , 1kHz)

PREAMPLIFIER SECTION

Output Voltage	1V (Rated output), 3V (Max.)
Harmonic Distortion	Less than 0.1%
Frequency Response	20Hz to 30kHz, ± 1 dB
Input Sensitivity/Impedance (1kHz, for rated output)	PHONO 1, 2, 2.3mV/50k Ω MIC 3.3mV/20k Ω TUNER 200mV/95k Ω AUX 1, 2 200mV/95k Ω TAPE MONITOR 1, 2 200mV/95k Ω
Recording Output	TAPE REC 1, 2 (Pin jack) 200mV TAPE REC (DIN connector) 30mV
BASS Control	-15dB, +13dB/50Hz
TREBLE Control	-10dB, +9.5dB/10kHz
LOW Filter	-6.5dB/50Hz
HIGH Filter	-8dB/10kHz
Equalization Curve	PHONO: RIAA S.T.D.
Loudness Contour	+13dB/50Hz + 7dB/10kHz with Volume Control set at -40dB position.
Hum and Noise (IHF)	PHONO More than 80dB TUNER, AUX More than 95dB
Channel Separation (1kHz)	PHONO More than 50dB TUNER, AUX More than 55dB

SA-600

MISCELLANEOUS

Power Requirements

FVW 110V, 120V, 130V, 220V and
240V. (Switchable) 50 – 60Hz

Power Consumption

KUW and KCW 120V, 60Hz
FVW 145W (Max.)

Dimensions (overall)

55W rating KUW and KCW
16-15/16in./430 mm (width)
5-11/16in./145 mm (height)
13-1/4in./337 mm (depth)

Weight Without package

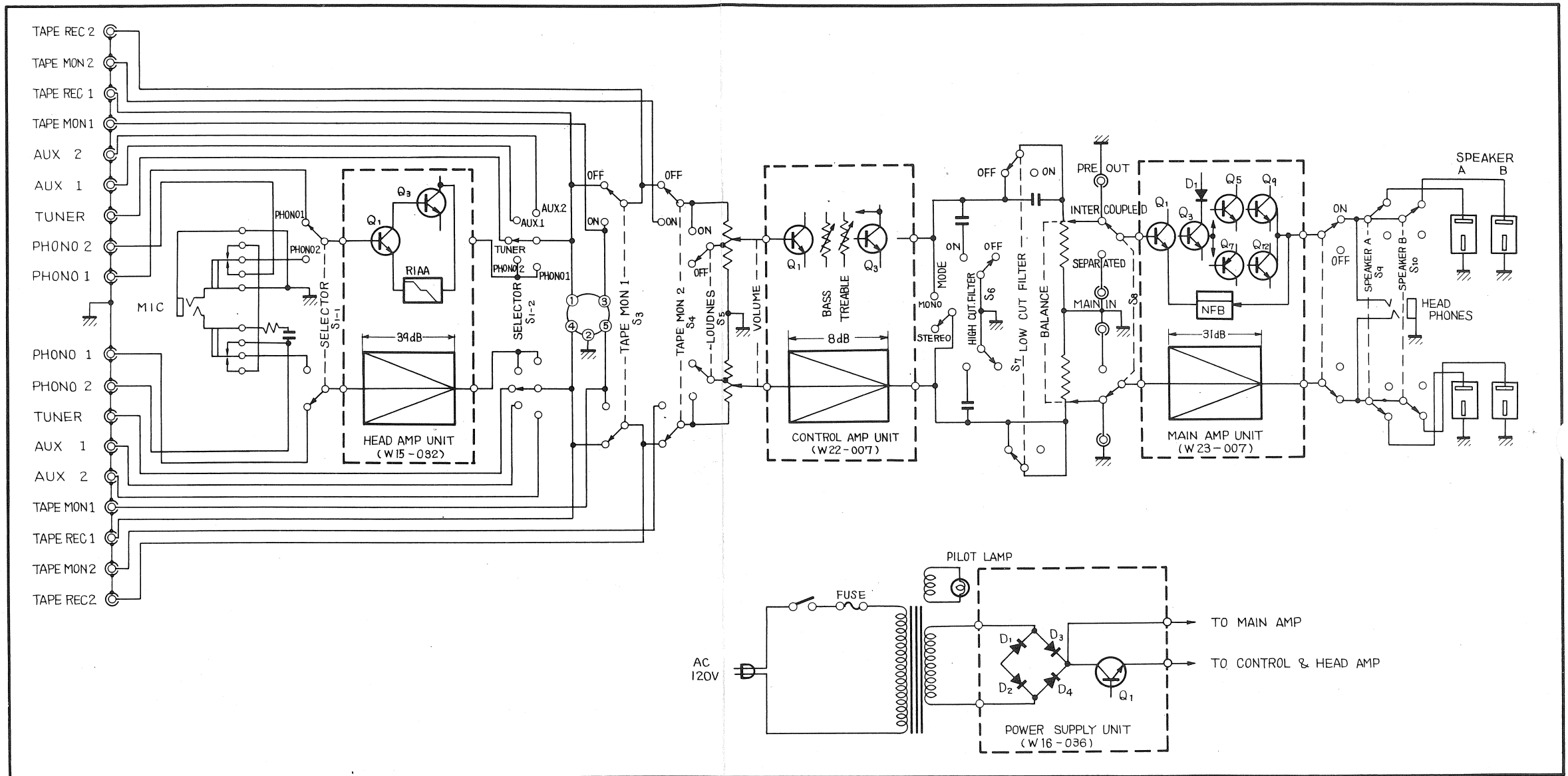
19 lb, 9oz/8.9kg

With Package

24 lb./10.9kg



3. BLOCK DIAGRAM



4. DISASSEMBLY

● REMOVE THE TOP COVER

Remove the two screws from each side of the cover. Move the cover backward a little, and pull the cover up (Photo 1).

● REMOVE THE BOTTOM COVER

Remove the ten screws from the bottom plate. The bottom plate will now come off (Photo 2).

● REMOVE THE FRONT PANEL

Pull all the control and switch knobs off from the shafts. Remove the nuts and washers from the shafts of the POWER switch, SELECTOR switch, and remove two setscrews holding the front panel as shown in Photo 3. The front panel will now come off.

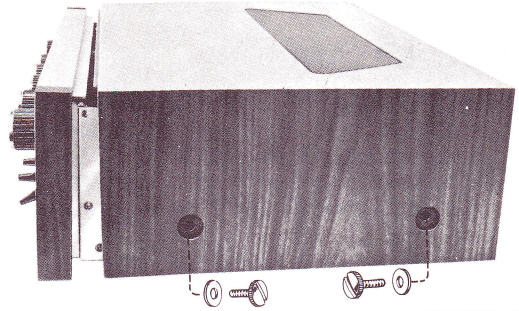


PHOTO 1

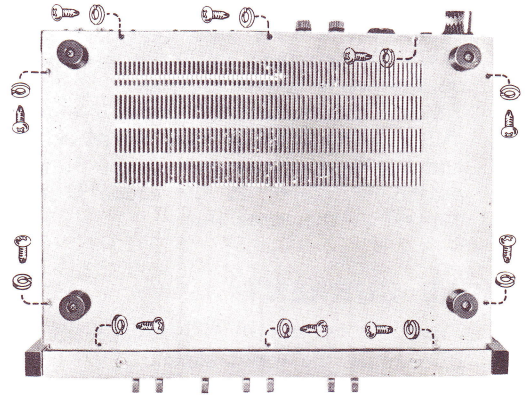


PHOTO 2

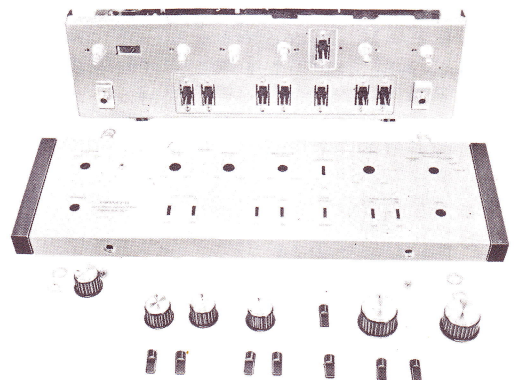


PHOTO 3

5. ADJUSTMENT

● DC BALANCE

Adjust DC balance in following steps:

- Connect the audio generator through the attenuator to MAIN IN terminal.
- Connect the oscilloscope and V.T.V.M. to SPEAKER OUTPUT terminal as shown in Fig. 1.
- Connect the load resistor ($8\ \Omega$ 30W) in parallel to SPEAKER OUTPUT terminal as shown in Fig. 1.
- Turn the PRE-MAIN switch on the rear panel to SEPARATE position.
- Apply the 1 kHz input signal to the MAIN IN terminals until the waveform on the scope is just clipped.
- Adjust the semi-fixed potentiometers (VR1, VR2) in the printed circuit board and positive/negative half cycles of the output waveform on the scope is just clipped at the same time.

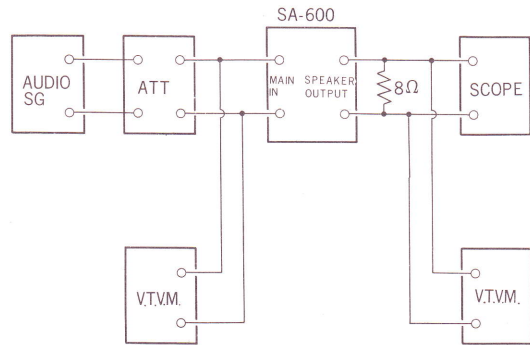


Fig. 1

● IDLE CURRENT

Adjust the idle current in following steps:

- Disconnect the input signal.
- Take 15 minutes for warming up.
- Connect the DC V.T.V.M. to the terminal 13 of the main amplifier's printed circuit board, the positive lead of the DC V.T.V.M. is connected to the terminal 13 and negative is connected to ground terminal as shown in Fig. 2.
- Adjust the semi-fixed potentiometer (VR3) in the printed circuit to get 10 mV reading on the DC V.T.V.M.
- Likewise, adjust the VR4 by connecting the positive lead of DC V.T.V.M. to the terminal 14.

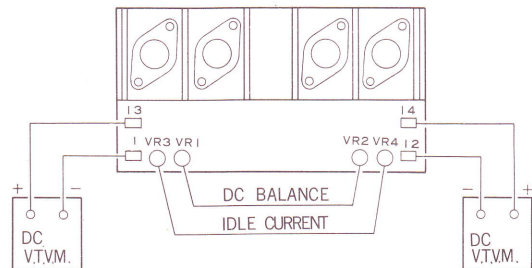
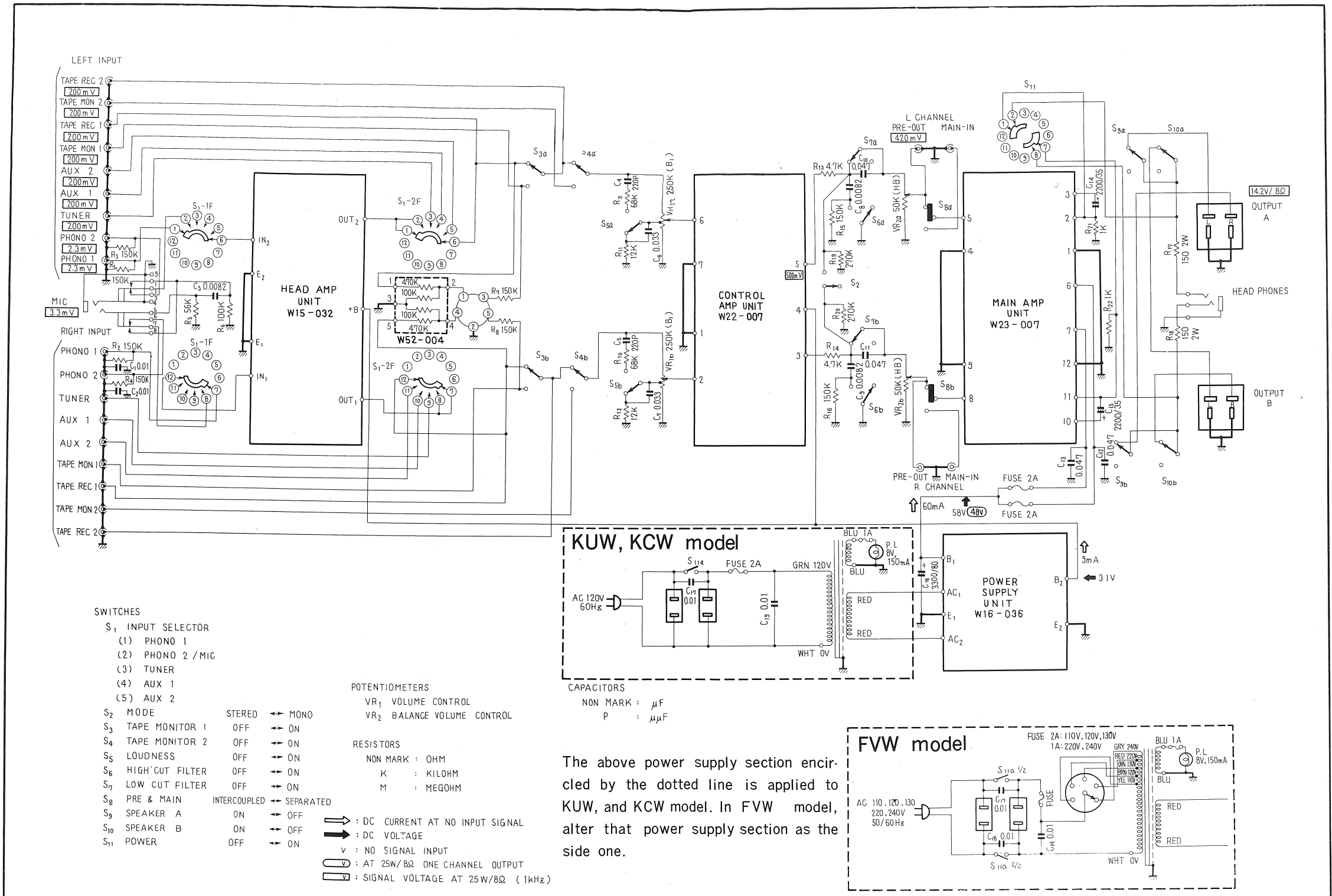


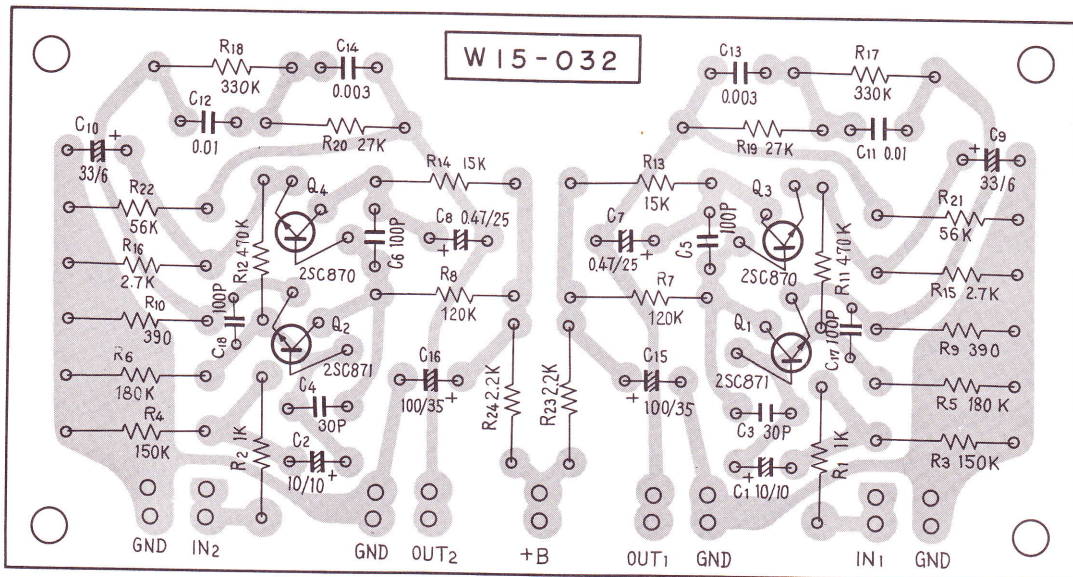
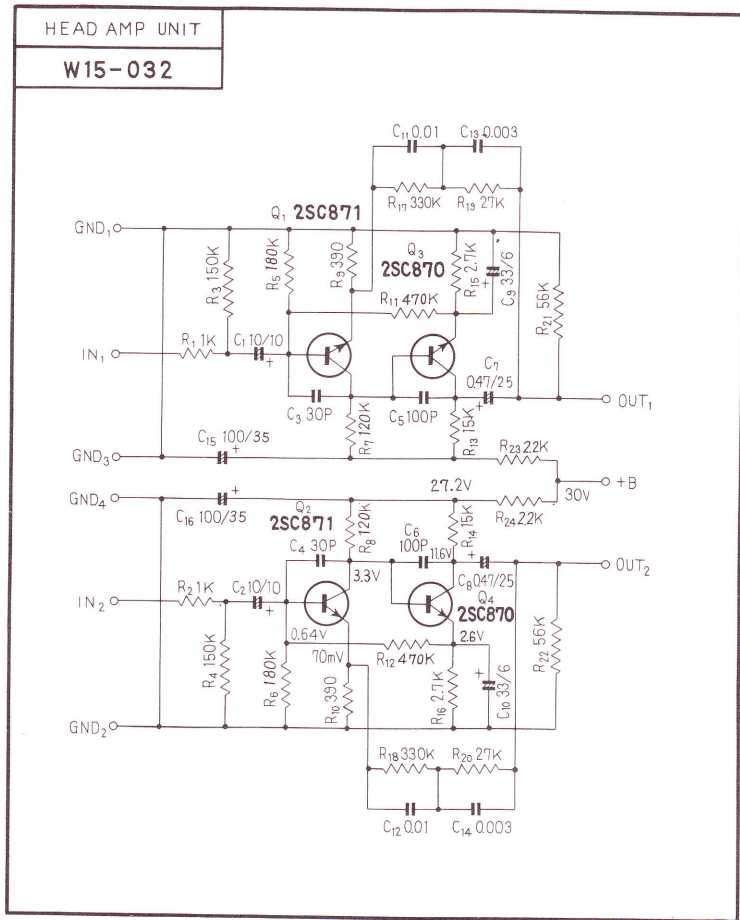
Fig. 2

6. CIRCUIT DIAGRAMS AND PRINTED CIRCUIT BOARDS

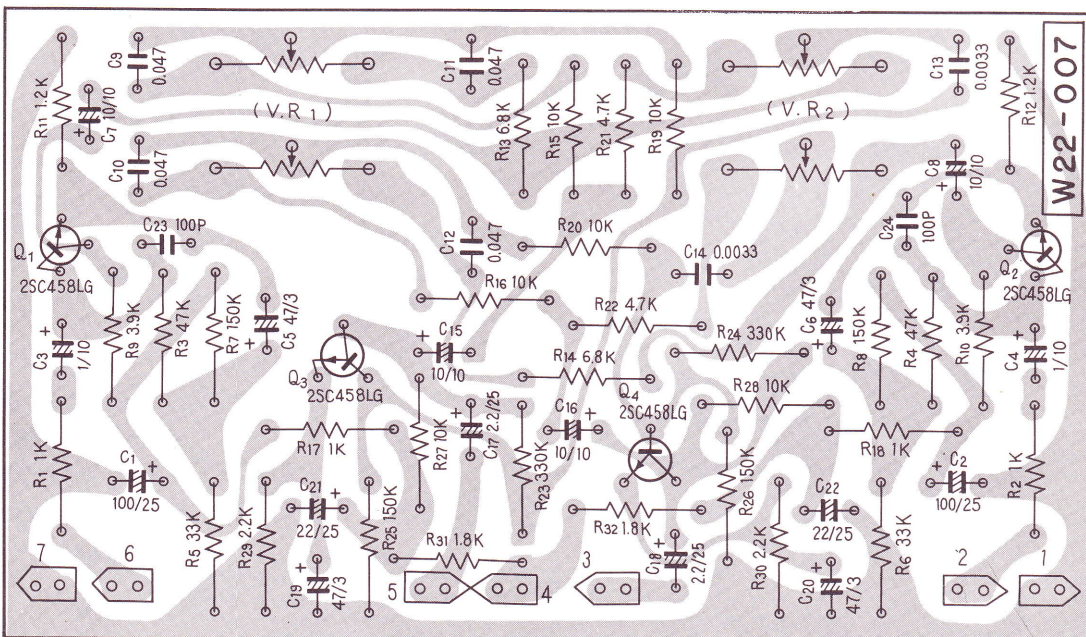
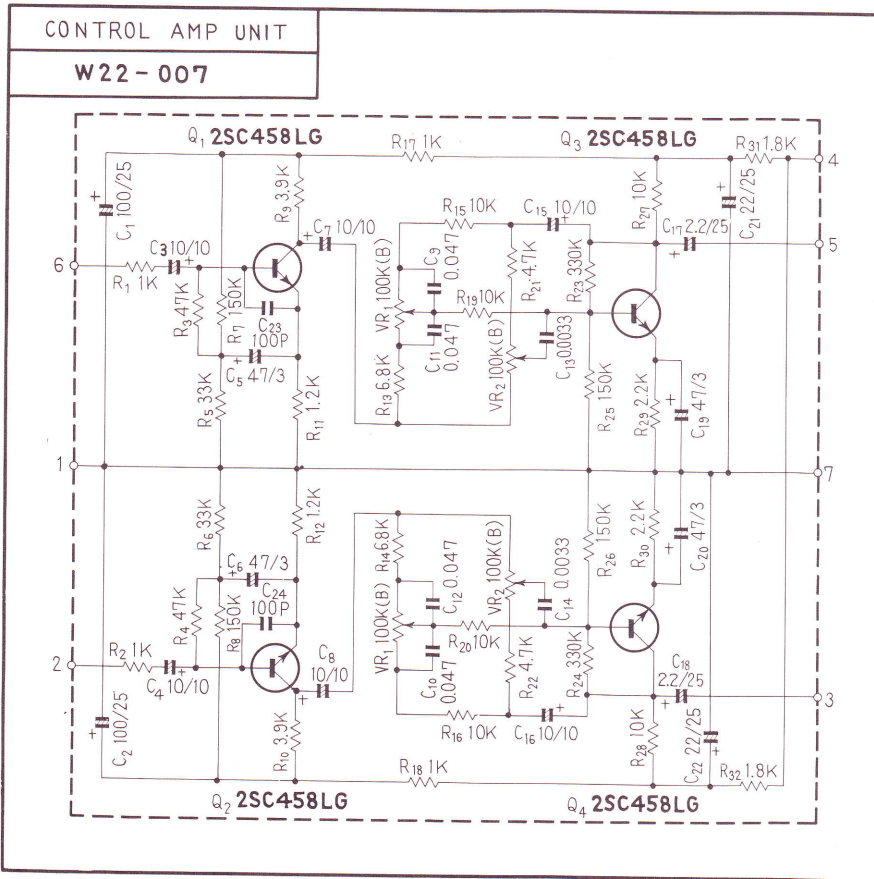
6.1. UNIT CONNECTION DIAGRAM (SA-600 / KUW, KCW, FUW)



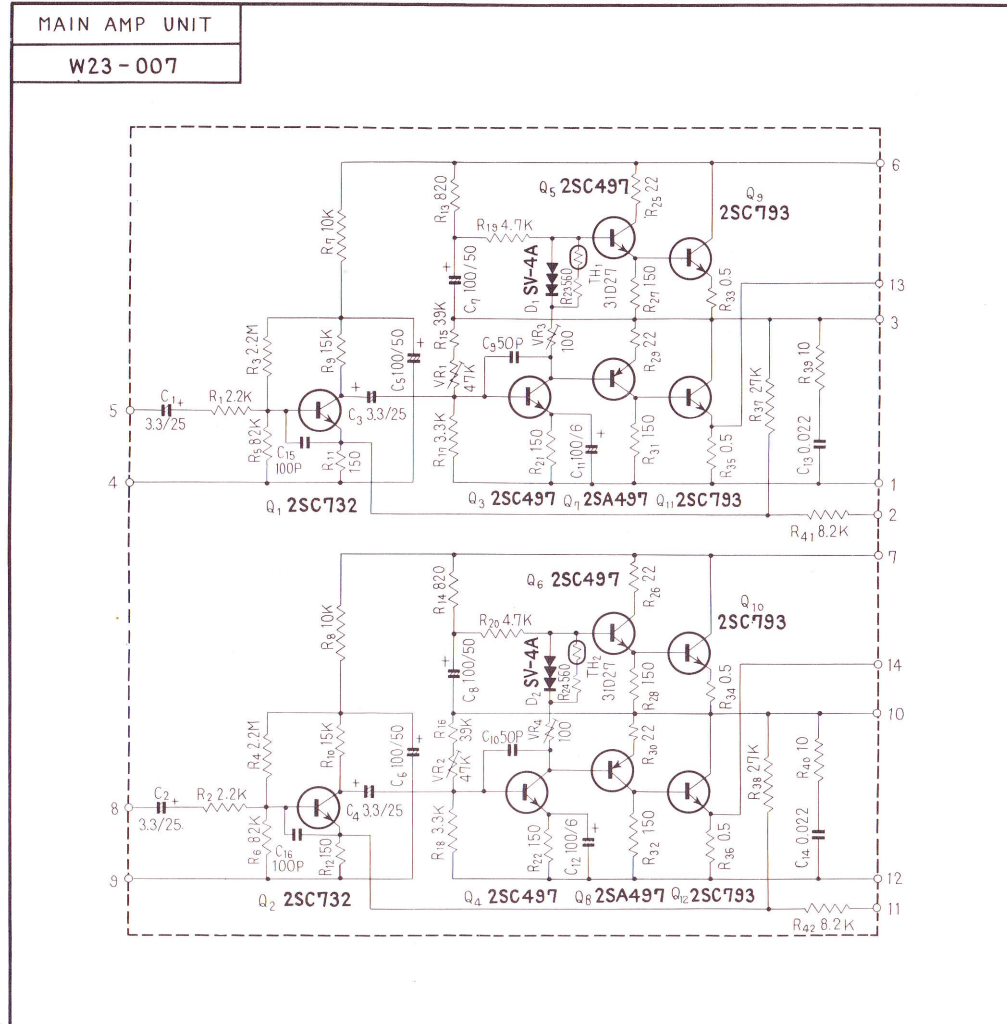
6.2. HEAD AMP UNIT (W15-032)

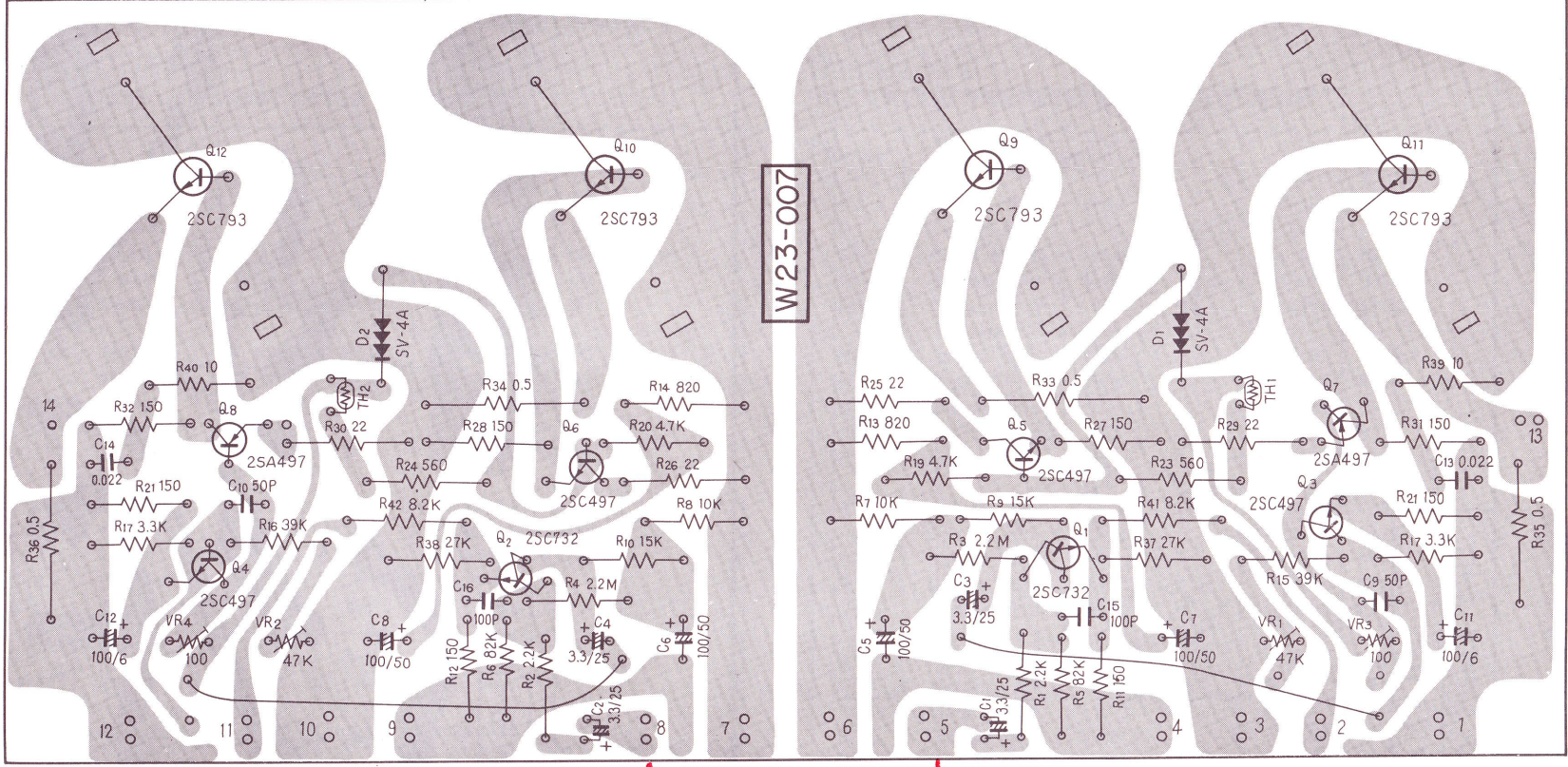


6.3. CONTROL AMP UNIT (W22-007)



6.4. MAIN AMP UNIT (W23-007)





SWITCHES

Symbol	Description	Part No.	
S1	Input selector switch	S13-024-B	
S2	Lever switch (Mode)	S42-012-A	
S3	Lever switch (Tape monitor 1)	S42-012-A	
S4	Lever switch (Tape monitor 2)	S42-012-A	
S5	Lever switch (Loudness)	S42-012-A	
S6	Lever switch (High cut filter)	S42-012-A	
S7	Lever switch (Low cut filter)	S42-012-A	
S8	Slide switch (Pre & Main)	S41-022-A	
S9	Lever switch (Speaker A)	S42-011-A	
S10	Lever switch (Speaker B)	S42-011-A	
S11	Power switch	ASA-007-O	

OTHERS

Symbol	Description	Part No.	
	Head amp unit	W15-032-B	
	Control amp unit	W22-007-B	
	Main amp unit	W23-007-A	
	Power supply unit	W16-036-O	
	Front panel assembly	ANB-060-O	
	Wooden case	M52-139-O	
	Foot	AEC-012-C	
	Knobs for Volume control, Selector switch	A12-229-O	
	Knobs for Power switch, Tone, Balance, controls	A12-232-A	
	Knobs for Lever switches	A19-095-O	

Symbol	Description	Part No.	
	6P input jacks	K22-013-O	
	4P input jacks	K21-010-E	
	4P terminal for ground	K13-047-O	
	Power transformer	ATT-015-O	
	Pilot lamp	E22-020-O	
	2A fuse for protection	E21-035-O	
	2A fuse for UL	E21-027-O	
	1A fuse for UL	AEK-004-O	
	Speaker socket	K72-028-O	
	Pilot lamp socket	K42-003-A	
	Headphones jack	K72-026-O	
	5P connector socket	K93-003-B	
	Microphone jack	K72-020-O	
	Spare AC outlet	AKP-002-O	
	Fuse holder for UL	K96-007-B	
	AC cord (with plug)	D11-003-E	
	Setscrews for wooden case	B11-041-A	
	Operating instructions	ARB-012-O	
	Cord (with pin plug)	D51-003-B	
	Cord (with pin plug)	D51-004-B	
	Packing case	AHD-028-A	
	Styrotector	H11-070-B	
	Compound part for REC terminal	W52-004-O	
	Pin plug	K72-015-A	
	Speaker plugs	K71-032-O	
	Screw for GND	B11-012-A	

81 7.2. MISCELLANEOUS PARTS (FOR KCW MODEL)

CAPACITORS

Symbol	Description	Part No.	
C1	Ceramic 0.01 50V	CKDYF103Z 50	
C2	Ceramic 0.01 50V	CKDYF103Z 50	
C3	Mylar 0.0082 50V	CQMA 822K 50	
C4	Ceramic 220p 50V	CCDSL 221K 50	
C5	Ceramic 220p 50V	CCDSL 221K 50	
C6	Mylar 0.033 50V	CQMA 333K 50	
C7	Mylar 0.033 50V	CQMA 333K 50	
C8	Mylar 0.0082 50V	CQMA 822K 50	
C9	Mylar 0.0082 50V	CQMA 822K 50	
C10	Mylar 0.047 50V	CQMA 473K 50	
C11	Mylar 0.047 50V	CQMA 473K 50	
C12	Mylar 0.047 100V	CQMA 473K 100	
C13	Mylar 0.047 100V	CQMA 473K 100	
C14	Electrolytic 2200 35V	C52-077-A	
C15	Electrolytic 2200 35V	C52-077-A	
C16	Electrolytic 3300 80V	C52-085-0	
C17	Ceramic 0.01 DC 1.4kV	C43-003-0	
C18			
C19	Oil paper 0.01 450V	C15-001-0	

POTENTIOMETERS

Symbol	Description	Part No.	
VR1	Dual type Volume control 250k	C82-038-0	
VR2	Dual type Balance volume control 50k	C85-052-0	

RESISTORS

Symbol	Description	Part No.	
R1	Carbon film 150k	RD½PS 154K	
R2	Carbon film 150k	RD½PS 154K	
R3	Carbon film 150k	RD½PS 154K	
R4	Carbon film 150k	RD½PS 154K	
R5	Carbon film 56k	RD½PS 563K	
R6	Carbon film 100k	RD½PS 104K	
R7	Carbon film 150k	RD½PS 154K	
R8	Carbon film 150k	RD½PS 154K	
R9	Carbon film 68k	RD½PS 683K	
R10	Carbon film 68k	RD½PS 683K	
R11	Carbon film 12k	RD½PS 123K	
R12	Carbon film 12k	RD½PS 123K	
R13	Carbon film 4.7k	RD½PS 472K	
R14	Carbon film 4.7k	RD½PS 472K	
R15	Carbon film 150k	RD½PS 154K	
R16	Carbon film 150k	RD½PS 154K	
R17	Metal oxide 150 2W	RS2P 151K	
R18	Metal oxide 150 2W	RS2P 151K	
R19	Carbon film 270k	RD½PS 274K	
R20	Carbon film 270k	RD½PS 274K	
R21	Carbon film 1k ½W	RD½PS 102K	
R22	Carbon film 1k ½W	RD½PS 102K	

SWITCHES

Symbol	Description	Part No.	
S1	Input selector switch	S13-024-B	
S2	Lever switch (Mode)	S42-012-A	
S3	Lever switch (Tape monitor 1)	S42-012-A	
S4	Lever switch (Tape monitor 2)	S42-012-A	
S5	Lever switch (Loudness)	S42-012-A	
S6	Lever switch (High cut filter)	S42-012-A	
S7	Lever switch (Low cut filter)	S42-012-A	
S8	Slide switch (Pre & Main)	S41-022-A	
S9	Lever switch (Speaker A)	S42-011-A	
S10	Lever switch (Speaker B)	S42-011-A	
S11	Power switch	S11-023-B	

OTHERS

Symbol	Description	Part No.	
	Head amp unit	W15-032	
	Control amp unit	W22-007	
	Main amp unit	W23-007	
	Power supply unit	W16-036	
	Front panel assembly	ANB-060-O	
	Wooden case	M52-139-C	
	Foot	AEC-012-C	
	Knobs for Volume control, Selector switch	A12-229-A	
	Knobs for Power switch, tone, Balance, controls	A12-232-A	
	Knobs for Lever switches	A19-095-O	

Symbol	Description	Part No.	
	6P input jacks	K22-013-D	
	4P input jacks	K21-010-E	
	4P terminal for ground	K13-047-O	
	Power transformer	ATT-015-O	
	Pilot lamp	E22-020-O	
	2A fuse for protection	E21-035-O	
	2A fuse	E21-005-O	
	2A fuse (with the lead wire)	E21-026-O	
	1A fuse (with the lead wire)	E21-020-O	
	Speaker sockets	K72-028-O	
	Pilot lamp socket	K42-003-A	
	Headphones jack	K72-026-O	
	5P connector socket	K93-003-B	
	Microphone jack	K72-020-O	
	AC socket	AKP-002-O	
	Fuse holder for UL	K96-007-B	
	AC cord (with plug)	D11-003-E	
	Setscrews for wooden case	B11-041-A	
	Operating instructions	ARB-012-O	
	Cord (with pin plug)	D51-003-B	
	Cord (with pin plug)	D51-004-B	
	Packing case	AHD-061-O	
	Styrotector	H11-070-B	
	Compound part for REC terminal	W52-004-O	
	Pin plug	K72-015-A	
	Speaker plugs	K71-032-O	
	Spare AC outlet	K82-014-O	
	Screw for GND	B11-012-A	

20 7-3. MISCELLANEOUS PARTS (FOR FVW MODEL)

CAPACITORS

Symbol	Description	Part No.
C1	Ceramic 0.01 50V	CKDYF103Z 50
C2	Ceramic 0.01 50V	CKDYF103Z 50
C3	Mylar 0.0082 50V	CQMA 822K 50
C4	Ceramic 220p 50V	CCDSL 221K 50
C5	Ceramic 220p 50V	CCDSL 221K 50
C6	Mylar 0.033 50V	CQMA 333K 50
C7	Mylar 0.033 50V	CQMA 333K 50
C8	Mylar 0.0082 50V	CQMA 822K 50
C9	Mylar 0.0082 50V	CQMA 822K 50
C10	Mylar 0.047 50V	CQMA 473K 50
C11	Mylar 0.047 50V	CQMA 473K 50
C12	Mylar 0.047 100V	CQMA 473K 100
C13	Mylar 0.047 100V	CQMA 473K 100
C14	Electrolytic 2200 35V	C52-077-A
C15	Electrolytic 2200 35V	C52-077-A
C16	Electrolytic 3300 80V	C52-085-B
C17	Ceramic 0.21 DC 1.4kV	C43-003-O
C18	Ceramic 0.01 DC 1.4kV	C43-003-O
C19	Ceramic 0.01 DC 1.4kV	C43-003-O

POTENTIOMETERS

Symbol	Description	Part No.
VR1	Dual type Volume control 250k	C82-038-O
VR2	Dual type Balance volume control 50k	C85-052-O

RESISTORS

Symbol	Description	Part No.
R1	Carbon film 150k	RD½PS 154K
R2	Carbon film 150k	RD½PS 154K
R3	Carbon film 150k	RD½PS 154K
R4	Carbon film 150k	RD½PS 154K
R5	Carbon film 56k	RD½PS 563K
R6	Carbon film 100k	RD½PS 104K
R7	Carbon film 150k	RD½PS 154K
R8	Carbon film 150k	RD½PS 154K
R9	Carbon film 68k	RD½PS 683K
R10	Carbon film 68k	RD½PS 683K
R11	Carbon film 12k	RD½PS 123K
R12	Carbon film 12k	RD½PS 123K
R13	Carbon film 4.7k	RD½PS 472K
R14	Carbon film 4.7k	RD½PS 472K
R15	Carbon film 150k	RD½PS 154K
R16	Carbon iflm 150k	RD½PS 154K
R17	Metal oxide 150 2W	RS2P 151K
R18	Metal oxide 150 2W	RS2P 151K
R19	Carbon film 270k	RD½PS 274K
R20	Carbon film 270k	RD½PS 274K
R21	Carbon film 1k ½W	RD½PS 102K
R22	Carbon film 1k ½W	RD½PS 102K

SWITCHES

Symbol	Description	Part No.	
S1	Input selector switch	S13-024-B	
S2	Lever switch (Mode)	S42-012-A	
S3	Lever switch (Tape monitor 1)	S42-012-A	
S4	Lever switch (Tape monitor 2)	S42-012-A	
S5	Lever switch (Loudness)	S42-012-A	
S6	Lever switch (High cut filter)	S42-012-A	
S7	Lever switch (Low cut filter)	S42-012-A	
S8	Slide switch (Pre & Main)	S41-022-A	
S9	Lever switch (Speaker A)	S42-011-A	
S10	Lever switch (Speaker B)	S42-011-A	
S11	Power switch	S11-024-B	

OTHERS

Symbol	Description	Part No.	
	Head amp unit	W15-032	
	Control amp unit	W22-007	
	Main amp unit	W23-007	
	Power supply unit	W16-036	
	Front panel assembly	ANB-060-O	
	Wooden case	M52-139-B	
	Foot	AEC-012-C	
	Knobs for Volume control, Selector switch	A12-229-A	
	Knobs for Power switch, Tone, Balance controls	A12-232-A	
	Knobs for Lever switches	A19-095-O	

Symbol	Description	Part No.	
	6P input jacks	K22-013-D	
	4P input jacks	K21-010-E	
	4P terminal for ground	K13-047-O	
	Power transformer	ATT-016-O	
	Pilot lamp	E22-020-O	
	2A fuse for protection	E21-035-A	
	1A fuse	E21-004-O	
	1A fuse (with lead wire)	E21-020-O	
	Speaker sockets	K72-028-O	
	Pilot lamp socket	K42-003-A	
	Headphones jack	K72-26-O	
	5P connector socket	K93-003-B	
	Microphone jack	K72-020-O	
	Spare AC outlet	K82-014-O	
	Fuse holder	K96-006-C	
	Line voltage selector	AKR-001-O	
	AC cord	D11-002-B	
	Setscrews for wooden case	B11-041-O	
	Screws for GND	B11-012-A	
	Operating instructions	ARB-005-O	
	Pin plug	K72-015-A	
	Speaker plug	K72-007-B	
	Cord (with pin plug)	D51-003-B	
	Cord (with pin plug)	D51-004-B	
	Packing case	AHD-020-O	
	Styrotector	H11-070-B	
	Compound part for REC terminal	W52-004-O	

● As the KUW (or KCW) model of the SA-600 uses the same circuits as the FVW model concerning the each unit, refer to the followings on the parts list of the each unit.

7.4. HEAD AMP UNIT (W15-032)

CAPACITORS

Symbol	Description	Part No.	
C1	Electrolytic 10 10V	CEA 100P 10	
C2	Electrolytic 10 10V	CEA 100P 10	
C3	Mylar 0.003 50V	CQMA 302K50	
C4	Mylar 0.003 50V	CQMA 302K50	
C5	Ceramic 100p 50V	CCDSL 101K50	
C6	Ceramic 100p 50V	CCDSL 101K50	
C7	Electrolytic 0.47 25V	CEA R47P 25	
C8	Electrolytic 0.47 25V	CEA R47P 25	
C9	Electrolytic 33 6V	CEA 330P 6	
C10	Electrolytic 33 6V	CEA 330P 6	
C11	Mylar 0.001 50V	CQMA 102K50	
C12	Mylar 0.001 50V	CQMA 102K50	
C13	Mylar 0.003 50V	CQMA 302K50	
C14	Mylar 0.003 50V	CQMA 302K50	
C15	Electrolytic 100 35V	CEA 101P 35	
C16	Electrolytic 100 35V	CEA 101P 35	

RESISTORS

Symbol	Description	Part No.	
R1	Carbon film 1k	RD¼PS 102K	
R2	Carbon film 1k	RD¼PS 102K	
R3	Carbon film 150k	RD¼PS 154K	
R4	Carbon film 150k	RD¼PS 154K	
R5	Carbon film 180k	RD¼PS 184K	
R6	Carbon film 180k	RD¼PS 184K	
R7	Carbon film 120k	RD¼PS 124K	
R8	Carbon film 120k	RD¼PS 124K	
R9	Carbon film 390	RD¼PS 391K	
R10	Carbon film 390	RD¼PS 391K	
R11	Carbon film 470	RD¼PS 471K	
R12	Carbon film 470	RD¼PS 471K	
R13	Carbon film 15k	RD¼PS 153K	
R14	Carbon film 15k	RD¼PS 153K	
R15	Carbon film 2.7k	RD¼PS 272K	
R16	Carbon film 2.7k	RD¼PS 272K	
R17	Carbon film 330k	RD¼PS 334K	
R18	Carbon film 330k	RD¼PS 334K	
R19	Carbon film 27k	RD¼PS 273K	
R20	Carbon film 27k	RD¼PS 273K	
R21	Carbon film 56k	RD¼PS 563K	
R22	Carbon film 56k	RD¼PS 563K	
R23	Carbon film 22k	RD¼PS 223K	
R24	Carbon film 22k	RD¼PS 223K	

SEMICONDUCTORS

Symbol	Description	Part No.	
Q1	Transistor 2SC871-GR		
Q2	Transistor 2SC871-GR		
Q3	Transistor 2SC870		
Q4	Transistor 2SC870		

7.5. CONTROL AMP UNIT (W22-007)

CAPACITORS

Symbol	Description	Part No.	
C1	Electrolytic 100 25V	CEA 101P 25	
C2	Electrolytic 100 25V	CEA 101P 25	
C3	Electrolytic 10 10V	CEA 100P 10	
C4	Electrolytic 10 10V	CEA 100P 10	
C5	Electrolytic 47 3V	CEA 470P 3	
C6	Electrolytic 47 3V	CEA 470P 3	
C7	Electrolytic 10 10V	CEA 100P 10	
C8	Electrolytic 10 10V	CEA 100P 10	
C9	Mylar 0.047 50V	CQMA 473M 50	
C10	Mylar 0.047 50V	CQMA 473M 50	
C11	Mylar 0.047 50V	CQMA 473M 50	
C12	Mylar 0.047 50V	CQMA 473M 50	
C13	Mylar 0.0033 50V	CQMA 332M 50	
C14	Mylar 0.0033 50V	CQMA 332M 50	
C15	Electrolytic 10 10V	CEA 100P 10	

Symbol	Description	Part No.	
C16	Electrolytic 10 10V	CEA 100P 10	
C17	Electrolytic 2.2 10V	CEA 2R2P 10	
C18	Electrolytic 2.2 10V	CEA 2R2P 10	
C19	Electrolytic 47 3V	CEA 470P 3	
C20	Electrolytic 47 3V	CEA 470P 3	
C21	Electrolytic 22 25V	CEA 220P 25	
C22	Electrolytic 22 25V	CEA 220P 25	

RESISTORS

Symbol	Description	Part No.	
R1	Carbon film 1k	RD $\frac{1}{4}$ PS 102K	
R2	Carbon film 1k	RD $\frac{1}{4}$ PS 102K	
R3	Carbon film 47k	RD $\frac{1}{4}$ PS 473K	
R4	Carbon film 47k	RD $\frac{1}{4}$ PS 473K	
R5	Carbon film 33k	RD $\frac{1}{4}$ PS 333K	
R6	Carbon film 33k	RD $\frac{1}{4}$ PS 333K	
R7	Carbon film 150k	RD $\frac{1}{4}$ PS 154K	
R8	Carbon film 150k	RD $\frac{1}{4}$ PS 154K	
R9	Carbon film 3.9k	RD $\frac{1}{4}$ PS 392K	
R10	Carbon film 3.9k	RD $\frac{1}{4}$ PS 392K	
R11	Carbon film 1.2k	RD $\frac{1}{4}$ PS 122K	
R12	Carbon film 1.2k	RD $\frac{1}{4}$ PS 122K	
R13	Carbon film 6.8k	RD $\frac{1}{4}$ PS 682K	
R14	Carbon film 6.8k	RD $\frac{1}{4}$ PS 682K	
R15	Carbon film 15k	RD $\frac{1}{4}$ PS 153K	

7.6. MAIN AMP UNIT (W23-007)

CAPACITORS

Symbol	Description	Part No.	
R16	Carbon film 10k	RD¼PS 103K	
R17	Carbon film 1k	RD¼PS 102K	
R18	Carbon film 1k	RD¼PS 102K	
R19	Carbon film 10k	RD¼PS 103K	
R20	Carbon film 10k	RD¼PS 103K	
R21	Carbon film 4.7k	RD¼PS 472K	
R22	Carbon film 4.7k	RD¼PS 472K	
R23	Carbon film 330k	RD¼PS 334K	
R24	Carbon film 330k	RD¼PS 334K	
R25	Carbon film 150k	RD¼PS 154K	
R26	Carbon film 150k	RD¼PS 154K	
R27	Carbon film 10k	RD¼PS 103K	
R28	Carbon film 10k	RD¼PS 103K	
R29	Carbon film 2.2k	RD¼PS 222K	
R30	Carbon film 2.2k	RD¼PS 222K	

SEMICONDUCTORS

Symbol	Description	Part No.	
Q1	Transistor 2SC458LG B or C		
Q2	Transistor 2SC458LG B or C		
Q3	Transistor 2SC458LG B or C		
Q4	Transistor 2SC458LG B or C		

Symbol	Description	Part No.	
C1	Electrolytic 3.3 25V	CEA 3R3P 25	
C2	Electrolytic 3.3 25V	CEA 3R3P 25	
C3	Electrolytic 3.3 25V	CEA 3R3P 25	
C4	Electrolytic 3.3 25V	CEA 3R3P 25	
C5	Electrolytic 100 50V	CEA 101P 50	
C6	Electrolytic 100 50V	CEA 101P 50	
C7	Electrolytic 100 50V	CEA 101P 50	
C8	Electrolytic 100 50V	CEA 101P 50	
C9	Ceramic 22p 50V	CCDSL 220K 50	
C10	Ceramic 22p 50V	CCDSL 220K 50	
C11	Electrolytic 100 6V	CEA 101P 6	
C12	Electrolytic 100 6V	CEA 101P 6	
C13	Mylar 0.022 50V	CQMA 223M 50	
C14	Mylar 0.022 50V	CQMA 223M 50	
C15	Ceramic 100p 50V	CCDSL 101K 50	
C16	Ceramic 100p 50V	CCDSL 101K 50	

POTENTIOMETERS

Symbol	Description	Part No.	
VR1	Semi-fixed 47k-B	C92-048-O	
VR2	Semi-fixed 47k-B	C92-048-O	
VR3	Semi-fixed 100-B	C92-063-O	
VR4	Semi-fixed 100-B	C92-063-O	

RESISTORS

Symbol	Description	Part No.
R1	Carbon film 2.2k	RD¼PS 222K
R2	Carbon film 2.2k	RD¼PS 222K
R3	Carbon film 2.2M	RD¼PS 225K
R4	Carbon film 2.2M	RD¼PS 225K
R5	Carbon film 82k	RD¼PS 823K
R6	Carbon film 82k	RD¼PS 823K
R7	Carbon film 10k	RD¼PS 103K
R8	Carbon film 10k	RD¼PS 103K
R9	Carbon film 15k	RD¼PS 153K
R10	Carbon film 15k	RD¼PS 153K
R11	Carbon film 150k	RD¼PS 154K
R12	Carbon film 150k	RD¼PS 154K
R13	Carbon film 820	RD¼PS 821K
R14	Carbon film 820	RD¼PS 821K
R15	Carbon film 39k	RD¼PS 393K
R16	Carbon film 39k	RD¼PS 393K
R17	Carbon film 3.3k	RD¼PS 332K
R18	Carbon film 3.3k	RD¼PS 332K
R19	Carbon film 4.7k	RD¼PS 472K
R20	Carbon film 4.7k	RD¼PS 472K
R21	Carbon film 150	RD¼PS 151K
R22	Carbon film 150	RD¼PS 151K
R23	Carbon film 560	RD¼PS 561K
R24	Carbon film 560	RD¼PS 561K
R25	Carbon film 22 ½W	RD¼PS 220K
R26	Carbon film 22 ½W	RD¼PS 220K
R27	Carbon film 150	RD¼PS 151K
R28	Carbon film 150	RD¼PS 151K
R29	Carbon film 22 ½W	RD¼PS 220K
R30	Carbon film 22 ½W	RD¼PS 220K

Symbol	Description	Part No.
R31	Carbon film 150	RD¼PS 151K
R32	Carbon film 150	RD¼PS 151K
R33	Wire wound 0.5 2W	RT2P 0R5K
R34	Wire wound 0.5 2W	RT2P 0R5K
R35	Wire wound 0.5 2W	RT2P 0R5K
R36	Wire wound 0.5 2W	RT2P 0R5K
R37	Carbon film 27k	RD¼PS 273K
R38	Carbon film 27k	RD¼PS 273K
R39	Carbon film 10	RD¼PS 100K
R40	Carbon film 10	RD¼PS 100K

SEMICONDUCTORS

Symbol	Description	Part No.
Q1	Transistor 2SC732	
Q2	Transistor 2SC732	
Q3	Transistor 2SC497-O	
Q4	Transistor 2SC497-O	
Q5	Transistor 2SC497-O	
Q6	Transistor 2SC497-O	
Q7	Transistor 2SA497-O	
Q8	Transistor 2SA497-O	
Q9	Transistor 2SC793-Y	
Q10	Transistor 2SC793-Y	
Q11	Transistor 2SC793-Y	
Q12	Transistor 2SC793-Y	
D1	Varistor VB-11B	
D2	Varistor VB-11B	
TH1	Thermistor 31D27	
TH2	Thermistor 31D27	

7.7. POWER SUPPLY UNIT (W16-036)

CAPACITORS

Symbol	Description	Part No.	
C1	Ceramic 0.01 DC 1.4kV	C43-003-O	
C2	Ceramic 0.01 DC 1.4kV	C43-003-O	
C3	Ceramic 0.01 DC 1.4kV	C43-003-O	
C4	Ceramic 0.01 DC 1.4kV	C43-003-O	
C5	Electrolytic 100 50V	CEA 101P 50	
C6	Electrolytic 100 35V	CEA 101P 35	

RESISTORS

Symbol	Description	Part No.	
R1	Carbon film 1k	RD¼PS 102K	
R2	Carbon film 22k	RD¼PS 223K	
R3	Carbon film 120k	RD¼PS 124K	
R4	Carbon film 1k	RD¼PS 102K	

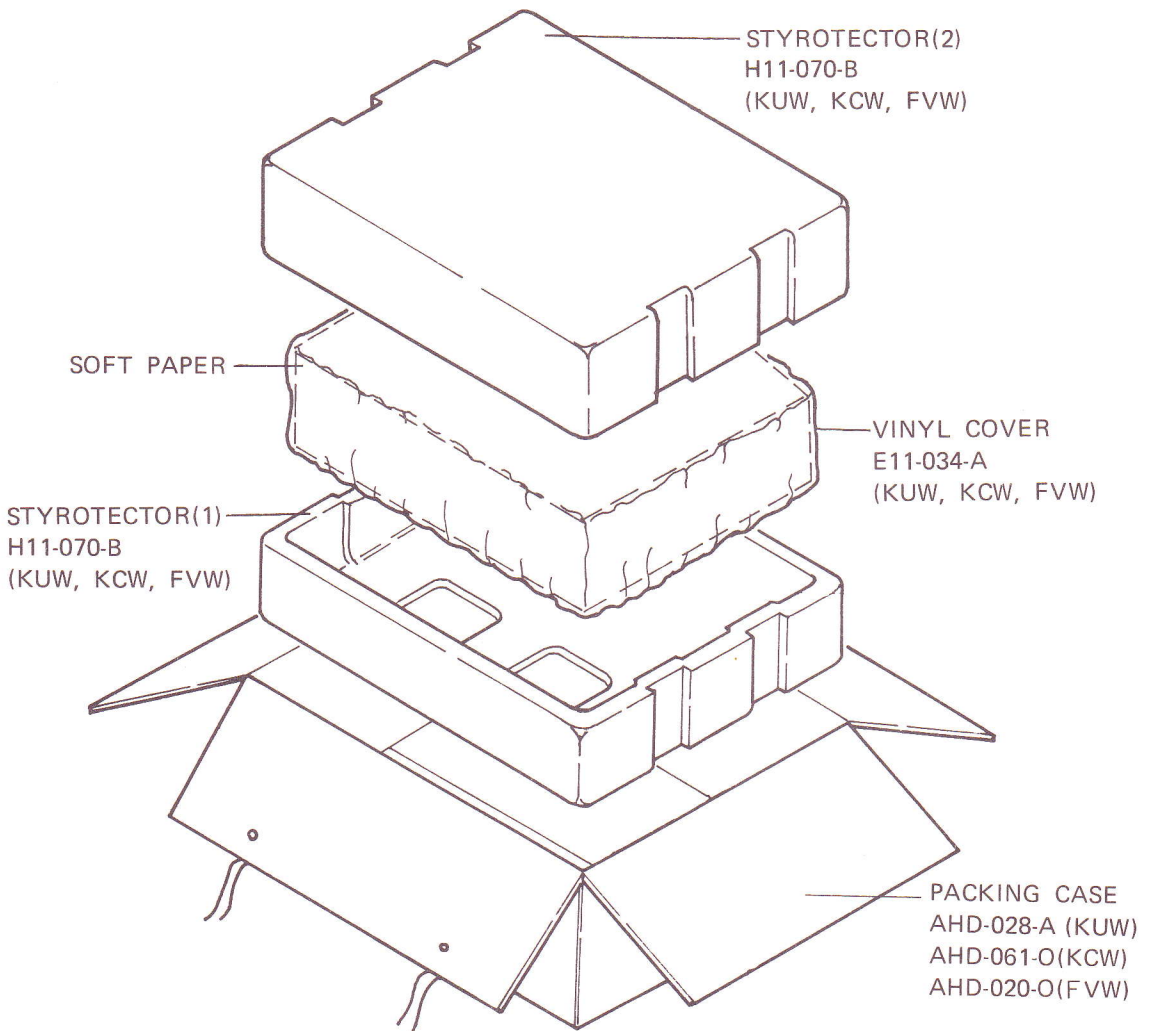
SEMICONDUCTORS

Symbol	Description	Part No.	
Q1	Transistor	2SC968Y-2	
D1	Diode	FR-2-02	
D2	Diode	FR-2-02	
D3	Diode	FR-2-02	
D4	Diode	FR-2-02	

8. PACKING PROCEDURE AND PART NUMBER

● PACKING PROCEDURE

1. Wrap up WOODEN COVER in SOFT PAPER and then affix cellophane tape firmly to the paper-wrapped BOTTOM COVER of the SA-600.
2. Cover the SA-600 with VINYL COVER.
3. Put the SA-600 in STYROTECTOR (1) being brought into PACKING CASE.
4. Then cover up the SA-600 with STYROTECTOR (2) turned upside down.
5. Finally close the lids of PACKING CASE.



MEMO

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