

Service Manual

STEREO AMPLIFIER

SA-500A/KU, KC, FV

NOTE

MODEL SA-500A COMES IN THREE VERSIONS DISTINGUISHED AS FOLLOWS:

Round label on rear panel	Voltage	Type
KU KC FV	120V only 120V only 5-position selector	UL approved (U.S.A.) CSA approved (Canada) General export model

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1. SPECIFICATIONS

SEMICONDUCTORS

Transistors	18
Diodes	6
Music Power Output (IHF)	44 watts (4Ω) 36 watts (8Ω)
Continuous Power Output (each channel driven)	16W/16W (4Ω) 13W/13W (8Ω)
Continuous Power Output (both channel driven)	12W/12W (4Ω) 10W/10W (8Ω)
Harmonic Distortion	Less than 0.5% (Continuous power output)
Intermodulation	Less than 0.7%
Distortion	(Continuous power output)
Power Bandwidth (IHF)	20Hz to 40kHz (8Ω, Harmonic Distortion 0.5%)
Speakers	4 to 16Ω
Damping Factor	40 (8Ω, 1kHz)
Frequency Response (AUX)	30Hz to 50kHz, +1 dB -2 dB
Input Sensitivity/ Impedance	PHONO 1 MAG 2.5mV/50kΩ
(1kHz, for rated output)	PHONO 2 MAG 2.5mV/50kΩ TUNER 200mV/100kΩ AUX 200mV/100kΩ TAPE MONITOR 1,2 200mV/100kΩ
Recording Output	TAPE REC 1,2 (Pin jack) 200mV TAPE REC (DIN connector) 30mV

BASS Control	-11 dB, +12 dB/100Hz
TREBLE Control	-10 dB, +9.5 dB/10kHz
Equalization Curve	PHONO: RIAA S.T.D. +10dB/100Hz, +5.5dB/ 10kHz with Volume Control set at -40 dB position.
Loudness Contour	PHONO More than 75dB TUNER, AUX More than 90 dB
Hum and Noise (IHF)	PHONO More than 50 dB TUNER, AUX More than 55 dB
Channel Separation (1kHz)	PHONO More than 50 dB TUNER, AUX More than 55 dB

MISCELLANEOUS

Power Requirements	120V 60Hz (for 120V voltage only) or 110V, 120V, 130V, 220V and 240V. (Switchable) 50-60Hz.
Power Consumption	75W (Max)
Dimensions (overall)	13in./330mm (Width) 4-5/8in./118mm (Height) 12-7/16in./316mm (Depth)
Weight	without package 12lb. 2oz/5.5kg with package 15lb. 3oz/6.9kg
Furnished Accessories	Pin Plug 2 Speaker Plug 4 Connecting Cords (L,R) 2 Polishing cloth 1 Operating Instructions 1

NOTE: Specifications and the design subject to possible modifications without notice due to improvements



2. FRONT PANEL FACILITIES

BASS & TREBLE CONTROLS

Control bass and treble. Turning each control clockwise from the FLAT position will boost the tone, and turning it counterclockwise will diminish the tone.

SPEAKER SWITCH

This switch is used to select the speaker systems, and also functions as the power switch.

- POWER OFF For turning power off.
- A For turning on the speaker systems connected to the A speaker socket.
- SPKRS OFF For turning all the speaker systems off. Set the switch to this position when listening through the headphones.
- B For turning on the speaker systems connected to the B speaker socket.
- A + B For turning on the speaker systems connected to both the A and B speaker sockets.

PHONES JACK

Use this to plug in stereo headphones. A full selection of high-performance headphones is available from Pioneer.

LOUDNESS SWITCH

To listen to quieter sound, set this to the ON position. This emphasizes the low and high notes. For normal listening, set it to off.

VOLUME CONTROL

This control is used to adjust the volume of sounds from the speaker systems. Turning the control to the right (→) will increase the volume. This volume control is a friction-type control consisting of two knobs. The front knob is for controlling the left channel, and the rear knob is for controlling the right channel. Usually, both knobs turn simultaneously. When adjusting the volume for one channel only or taking a balance between both channels, turn the knob for the channel to be adjusted, holding the other knob by hand.

SELECTOR SWITCH

This selects the program source to be fed into the SA-500A.

- PHONO 1 To use the turntable connected to PHONO 1 jacks.
- PHONO 2 To use the turntable connected to PHONO 2 jacks.
- TUNER For listening broadcasts through the tuner.
- AUX When component unit connected to AUX jacks is used.

MODE SWITCH

STEREO When set to STEREO, stereo sound is present.

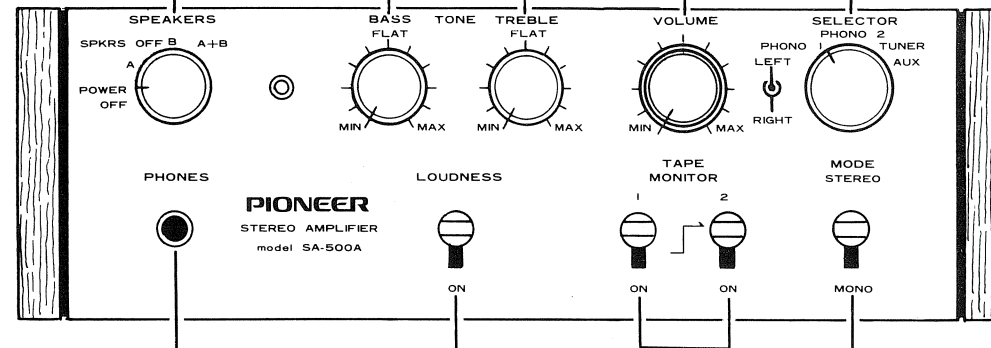
MONO When set to MONO, the left and right channel signals are blended most to reproduce a monophonic sound.

TAPE MONITOR SWITCHES (1 and 2)

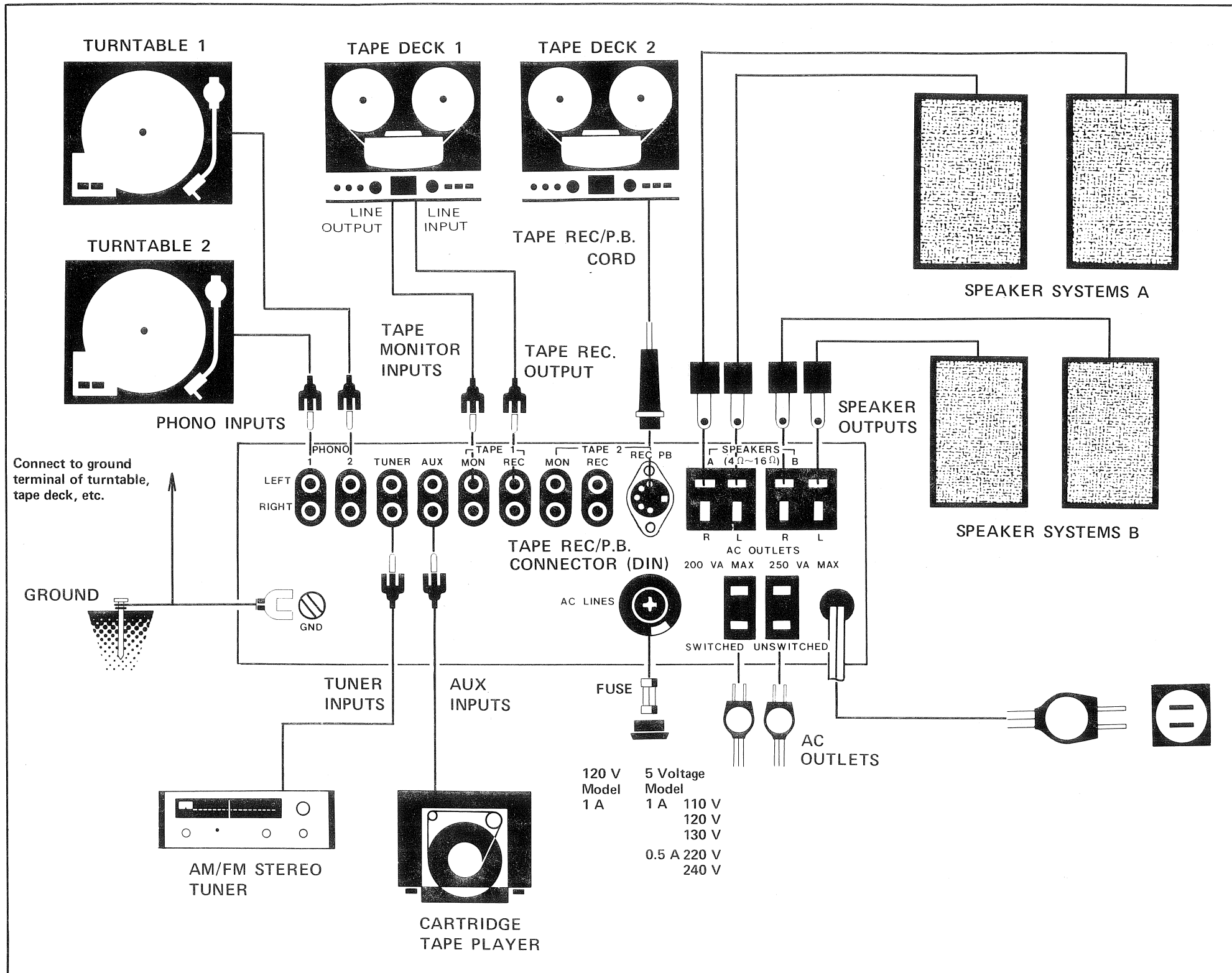
These switches are set to ON for test-listening of recording in progress or playback of recorded tapes with tape decks.

- 1 This switch is set to ON for using a tape deck plugged into TAPE 1 MON jacks and TAPE 1 REC jacks.
- 2 This switch is set to ON for using a tape deck plugged into TAPE 2 MON jacks and TAPE 2 REC jacks or TAPE REC/P.B. connector.

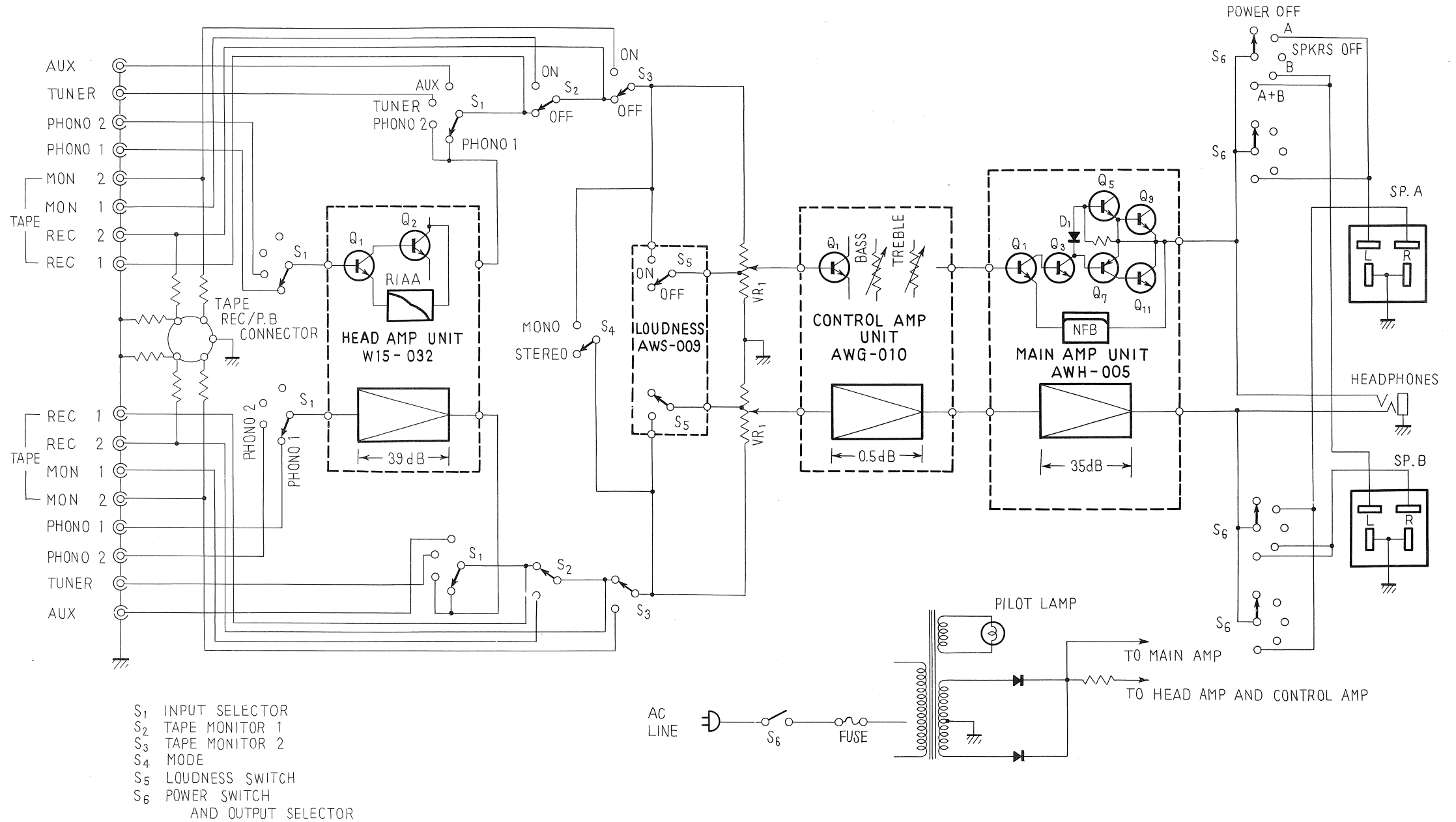
NOTE: For a normal record playback or listening to broadcasts, leave these switches set to the upper position (off position). If the switches are set to ON, sound does not produce from speakers.



3. CONNECTION DIAGRAM



4. BLOCK DIAGRAM



5. DISASSEMBLY

5.1 METAL COVER

Remove 4 screws from sides of the metal cover. Pull the cover backward off the amplifier housing. See photo 1.

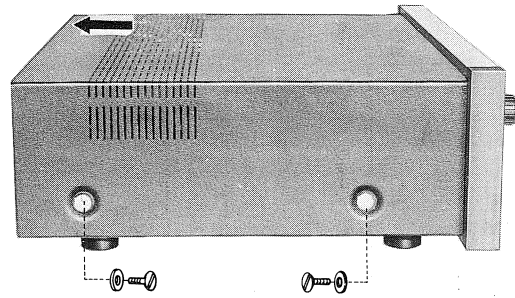


Photo 1

5.2 FRONT PANEL

Pull off all knobs, then remove the nuts and washers from their shafts as in photo 2, and remove 2 screws from the sides of the front panel. (See photo 3.) The front panel can now be removed.

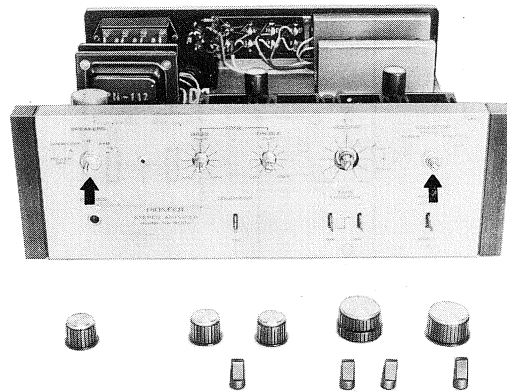


Photo 2

5.3 BOTTOM PLATE

The bottom plate can be removed after loosening the 5 screws. See photo 4.

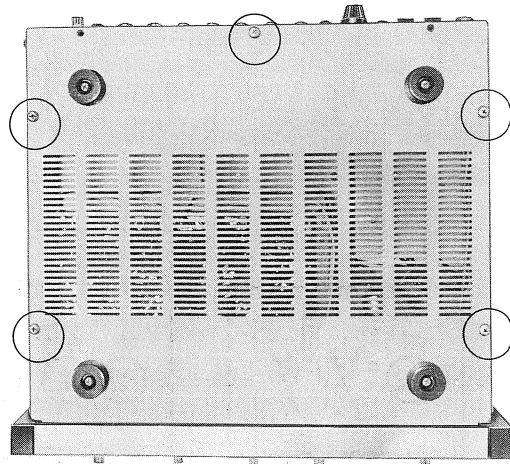


Photo 4

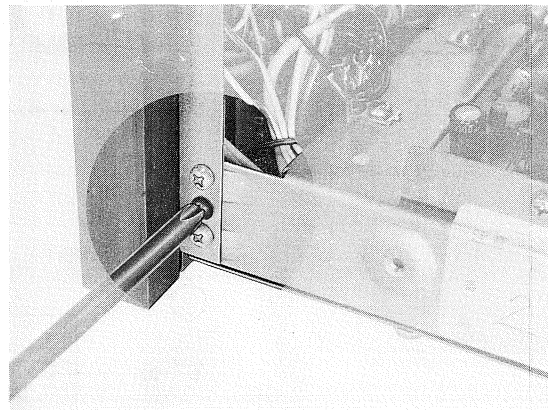
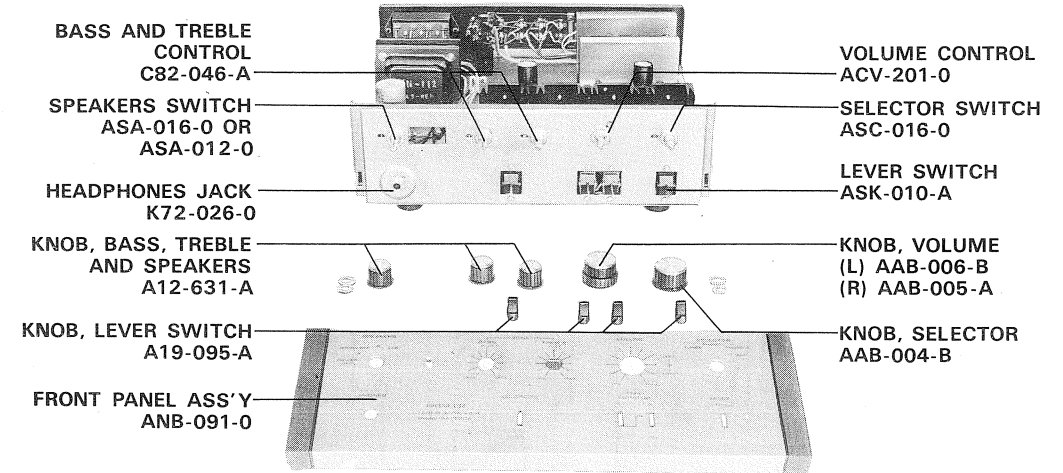


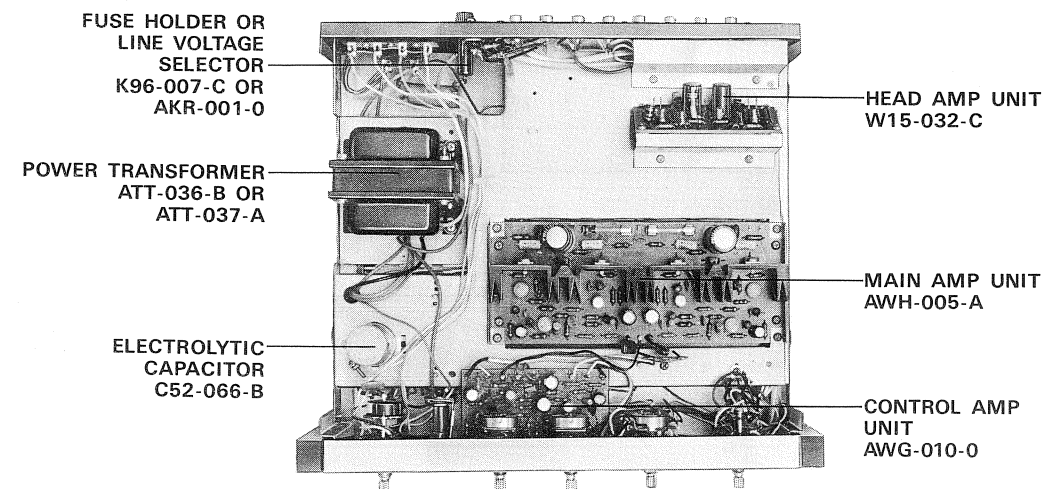
Photo 3

6. PARTS AND PCB LOCATION

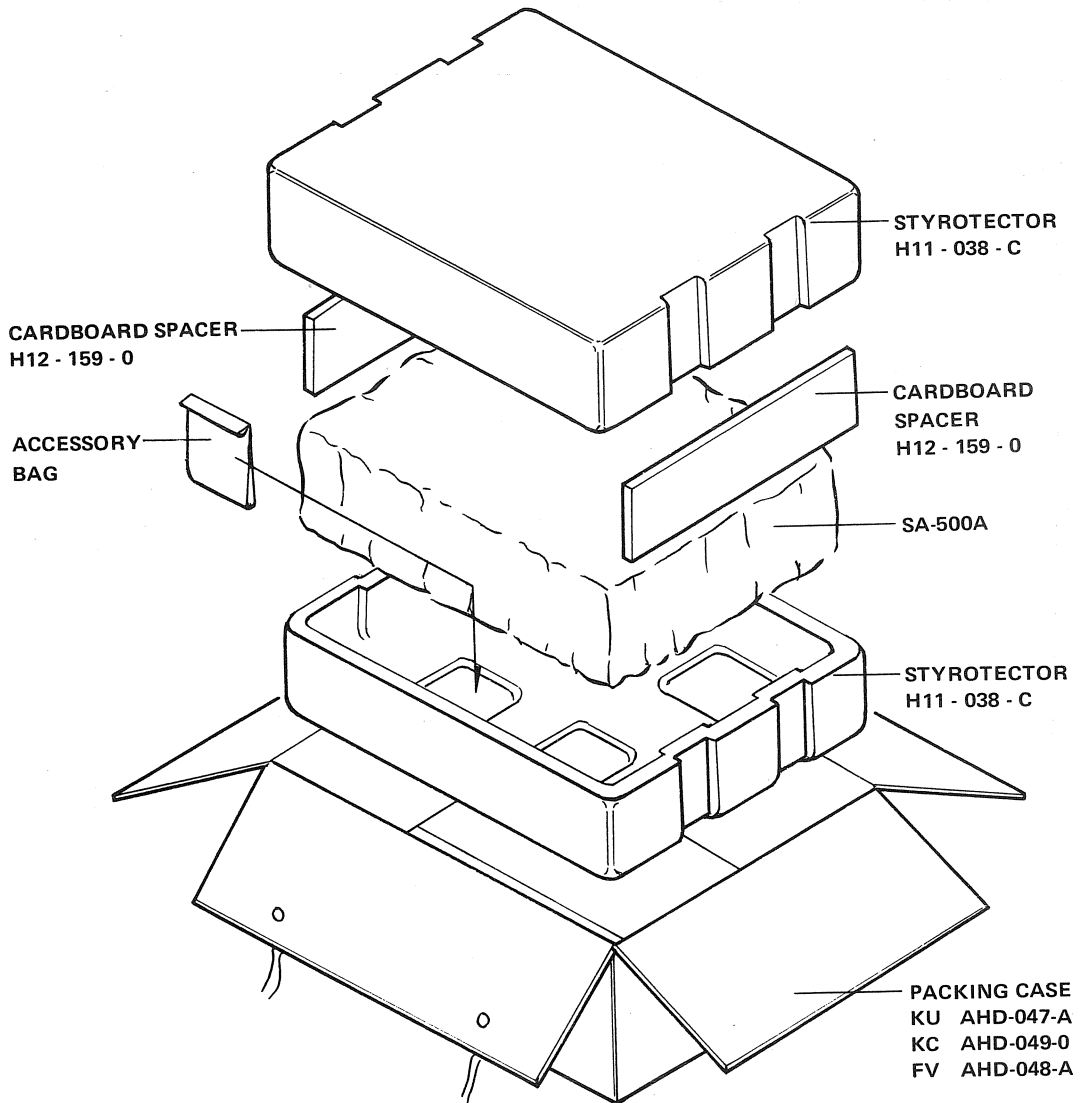
FRONT VIEW



TOP VIEW

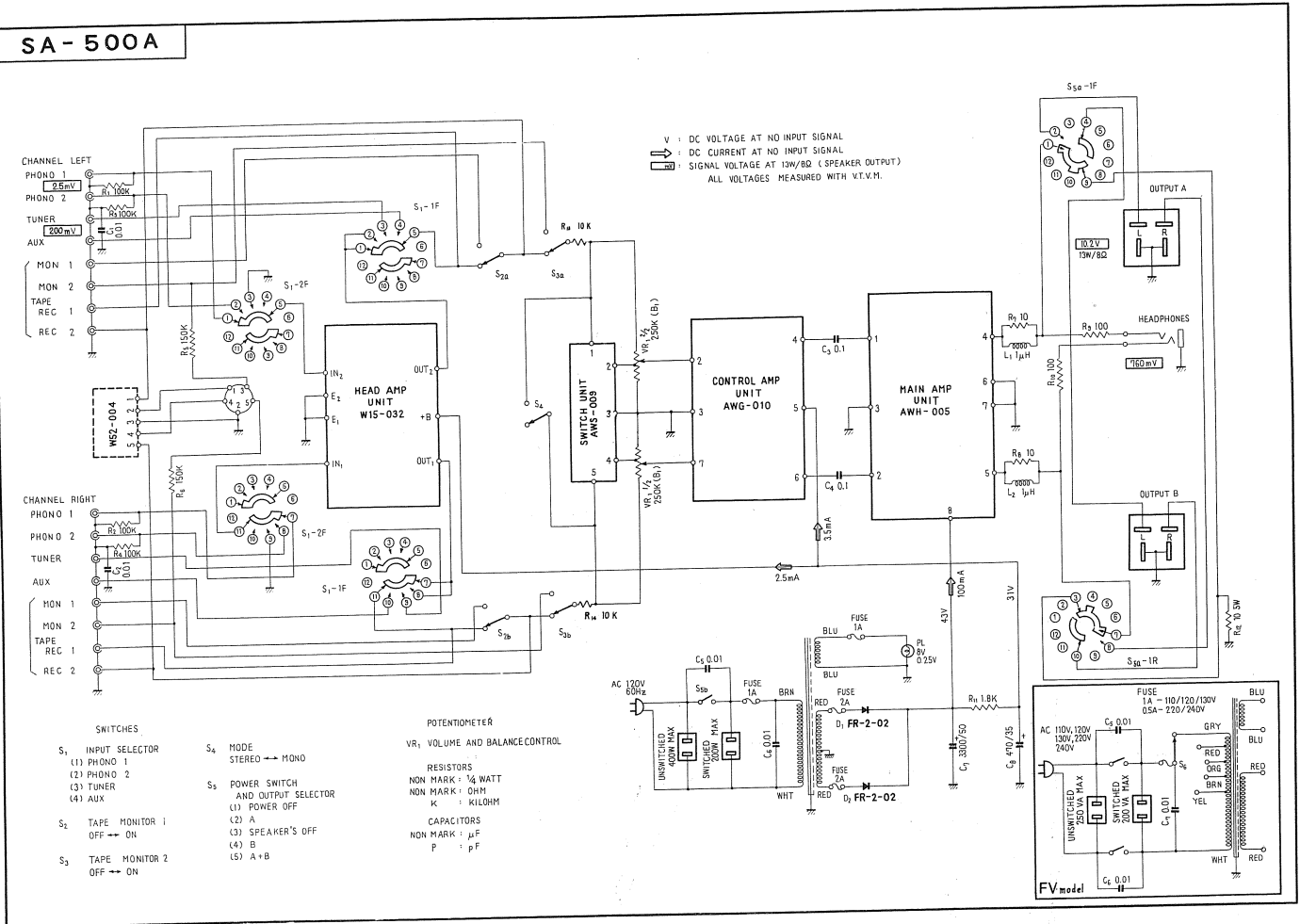


7. PACKING METHOD AND PART NUMBERS



8. SCHEMATIC DIAGRAMS, PCB PATTERNS AND PARTS LIST

8.1 UNIT CONNECTION DIAGRAM AND MISCELLANEOUS PARTS



MISCELLANEOUS PARTS

NOTE

This parts list is for the KU model, the KC or FV model uses some different parts as following pages:

for KC model 15
for FV model 17

CAPACITORS

IN μ F UNLESS OTHERWISE NOTED. p: μ μ F.

Symbol	Description			Part No.
C1	Ceramic	0.01	50V	CKDYF 103Z 50
C2	Ceramic	0.01	50V	CKDYF 103Z 50
C3	Mylar	0.1	50V	CQMA 104K 50
C4	Mylar	0.1	50V	CQMA 104K 50
C5	Ceramic	0.01	DC 1.4kV	C43-003-0
C6	Oil paper	0.01	800V	ACE-001-0
C7	Electrolytic	3300	50V	C52-066-B
C8	Electrolytic	470	35V	CEB 471P 35

RESISTORS

IN Ω , $\frac{1}{2}$ W UNLESS OTHERWISE NOTED. k: k Ω , M: M Ω .

Symbol	Description			Part No.
R1	Carbon film	100k		RD $\frac{1}{4}$ PS 104J
R2	Carbon film	100k		RD $\frac{1}{4}$ PS 104J
R3	Carbon film	100k		RD $\frac{1}{4}$ PS 104J
R4	Carbon film	100k		RD $\frac{1}{4}$ PS 104J
R5	Carbon film	150k		RD $\frac{1}{4}$ PS 154J
R6	Carbon film	150k		RD $\frac{1}{4}$ PS 154J
R7	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R8	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R9	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R10	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R11	Carbon film	1.8k	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 182J
R12	Wire wound	10	5W	RT5B 100K
R13	Carbon film	10k		RD $\frac{1}{4}$ PS 103J
R14	Carbon film	10k		RD $\frac{1}{4}$ PS 103J

SWITCHES

Symbol	Description	Part No.
S1	Selector Switch	ASC-016-0
S2	Lever Switch (Tape Mon 1)	ASK-009-A
S3	Lever Switch (Tape Mon 2)	ASK-009-A
S4	Lever Switch (Mode)	ASK-010-A
S5	Speakers Switch	ASA-011-0

13 SEMICONDUCTORS

Symbol	Description	Part No.	
D1	FR2-02 Diode		
D2	FR2-02 Diode		

COILS AND TRANSFORMER

Symbol	Description	Part No.	
L1	Power Transformer	ATT-036-B	
L2	Choke Coil	ATH-003-0	
	Choke Coil	ATH-003-0	

POTENTIOMETER

Symbol	Description	Part No.	
VR1	Volume Control, 250k-B1	ACV-201-0	

OTHERS

Symbol	Description	Part No.	
	Head Amp Unit	W15-032-C	
	Control Amp Unit	AWG-010-0	
	Main Amp Unit	AWH-005-A	
	Switch Unit	AWS-009-0	
	Front Panel Ass'y	ANB-091-0	
	Metal Cover	ANE-006-A	
	Knob for Volume (L)	AAB-006-B	
	Knob for Volume (R)	AAB-005-A	
	Knob for Selector	AAB-004-B	
	Knob for Bass, Treble and Speakers	A12-631-A	
	Knob for Lever Switch	A19-095-A	
	16P Input Terminal Board	AKB-002-0	
	4P Ground Terminal	K13-047-0	
	Compound Part for Rec Terminal	W52-004-0	
	Speaker Socket	K72-031-0	
	Spare AC Outlet	AKP-002-0	
	Fuse Holder	K96-007-C	
	Pilot Lamp Socket	K41-002-B	
	5P Connector (DIN)	K93-003-B	
	Headphones Jack	K72-026-0	
	Pilot Lamp	E22-026-0	
	Fuse 1A	E21-033-0	
	Foot	M61-017-A	
	Fuse 1A for Protection	AEX-004-0	
	Fuse 2A for Protection	AEX-002-0	

Symbol	Description	Part No.	
	Screw for Grounding Screw to fix Metal Cover AC Power Cord Operating Instructions Connection Cord (white) Connection Cord (red) Speaker Plug Packing Case Styrotector Vinyl Bag Soft Paper Cardboard Spacer	B11-012-A B11-015-B D11-003-E ARB-040-0 D51-003-B D51-004-B K72-007-B AHD-047-A H11-038-C H14-044-0 H12-126-A H12-159-0	

51 For KC model

CAPACITORS

IN μ F UNLESS OTHERWISE NOTED. p: μ μ F.

Symbol	Description			Part No.
C1	Ceramic	0.01	50V	CKDYF 103Z 50
C2	Ceramic	0.01	50V	CKDYF 103Z 50
C3	Mylar	0.1	50V	CQMA 104K 50
C4	Mylar	0.1	50V	CQMA 104K 50
C5	Ceramic	0.01	DC 1.4kV	C43-003-0
C6	Oil paper	0.01	450V	C15-001-0
C7	Electrolytic	3300	50V	C52-066-B
C8	Electrolytic	470	35V	CEB 471P 35

RESISTORS

IN Ω , $\frac{1}{2}$ W UNLESS OTHERWISE NOTED. k: k Ω , M: M Ω .

Symbol	Description			Part No.
R1	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R2	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R3	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R4	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R5	Carbon film	150k		RD $\frac{1}{2}$ PS 154J
R6	Carbon film	150k		RD $\frac{1}{2}$ PS 154J
R7	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R8	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R9	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R10	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R11	Carbon film	1.8k	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 182J
R12	Wire wound	10	5W	RT5B 100K
R13				RD $\frac{1}{2}$ PS 103J
R14				RD $\frac{1}{2}$ PS 103J

SWITCHES

Symbol	Description	Part No.
S1	Selector Switch	ASC-016-0
S2	Lever Switch (Tape Mon 1)	ASK-009-A
S3	Lever Switch (Tape Mon 2)	ASK-009-A
S4	Lever Switch (Mode)	ASK-010-A
S5	Speakers Switch	ASA-016-0

SEMICONDUCTORS

Symbol	Description	Part No.
D1	FR2-02 Diode	
D2	FR2-02 Diode	

COILS AND TRANSFORMER

Symbol	Description	Part No.
L1	Power Transformer	ATT-036-B
L2	Choke Coil	ATH-003-0
	Choke Coil	ATH-003-0

POTENTIOMETER

Symbol	Description	Part No.
VR1	Volume Control, 250k-B1	ACV-201-0

OTHERS

Symbol	Description	Part No.
	Head Amp Unit	W15-032-C
	Control Amp Unit	AWG-010-0
	Main Amp Unit	AWH-005-A
	Switch Unit	AWS-009-0
	Front Panel Ass'y	ANB-091-0
	Metal Cover	ANE-006-A
	Knob for Volume (L)	AAB-006-B
	Knob for Volume (R)	AAB-005-A
	Knob for Selector	AAB-004-B
	Knob for Bass, Treble and Speakers	A12-631-A
	Knob for Lever Switch	A19-095-A
	16P Input Terminal Board	AKB-002-0
	4P Ground Terminal	K13-047-0
	Compound Part for Rec Terminal	W52-004-0
	Speaker Socket	K72-031-0
	Spare AC Outlet	K82-014-0
	Fuse Holder	K96-007-C
	Pilot Lamp Socket	K41-002-B
	5P Connector (DIN)	K93-003-B
	Headphones Jack	K72-026-0
	Pilot Lamp	E22-026-0
	Fuse 1A	E21-004-A
	Foot	AEC-012-0
	Fuse 1A for Protection	E21-020-0
	Fuse 2A for Protection	E21-026-0

Symbol	Description	Part No.
	Screw for Grounding	B11-012-A
	Screw to fix Metal Cover	B11-005-C
	AC Power Cord	D11-003-E
	Operating Instructions	ARB-039-0
	Connection Cord (white)	D51-003-B
	Connection Cord (red)	D51-004-B
	Speaker Plug	K72-032-0
	Packing Case	AHD-049-0
	Styrorector	H11-038-C
	Vinyl Bag	H14-044-0
	Soft Paper	H12-126-A
	Cardboard Spacer	H12-159-0
	Pin Plug	K72-015-A

17 For FV model

CAPACITORS

IN μ F UNLESS OTHERWISE NOTED. p: μ μ F.

Symbol	Description			Part No.
C1	Ceramic	0.01	50V	CKDYF 103Z 50
C2	Ceramic	0.01	50V	CKDYF 103Z 50
C3	Mylar	0.1	50V	CQMA 104K 50
C4	Mylar	0.1	50V	CQMA 104K 50
C5	Ceramic	0.01	DC 1.4kV	C43-003-0
C6	Ceramic	0.01	DC 1.4kV	C43-003-0
C7	Ceramic	0.01	DC 1.4kV	C43-003-0
C8	Electrolytic	3300	50V	C52-066-B
C9	Electrolytic	470	35V	CEB 471P35

RESISTORS

IN Ω , $\frac{1}{2}$ W UNLESS OTHERWISE NOTED. k: k Ω , M: M Ω .

Symbol	Description			Part No.
R1	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R2	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R3	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R4	Carbon film	100k		RD $\frac{1}{2}$ PS 104J
R5	Carbon film	150k		RD $\frac{1}{2}$ PS 154J
R6	Carbon film	150k		RD $\frac{1}{2}$ PS 154J
R7	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R8	Carbon film	10	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 100J
R9	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R10	Carbon film	100	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 101J
R11	Carbon film	1.8k	$\frac{1}{2}$ W	RD $\frac{1}{2}$ PS 182J
R12	Wire wound	10	5W	RT5B 100K
R13	Carbon film	10k		RD $\frac{1}{2}$ PS 103J
R14	Carbon film	10k		RD $\frac{1}{2}$ PS 103J

SWITCHES

Symbol	Description	Part No.
S1	Selector Switch	ASC-016-0
S2	Lever Switch (Tape Mon 1)	ASK-009-A
S3	Lever Switch (Tape Mon 2)	ASK-009-A
S4	Lever Switch (Mode)	ASK-010-A
S5	Speakers Switch	ASA-012-0
S6	Line Voltage Selector	AKR-001-0

SEMICONDUCTORS

Symbol	Description	Part No.
D1	FR2-02 Diode	
D2	FR2-02 Diode	

COILS AND TRANSFORMER

Symbol	Description	Part No.
L1	Power Transformer	ATT-037-A
L2	Choke Coil	ATH-003-0
	Choke Coil	ATH-003-0

POTENTIOMETER

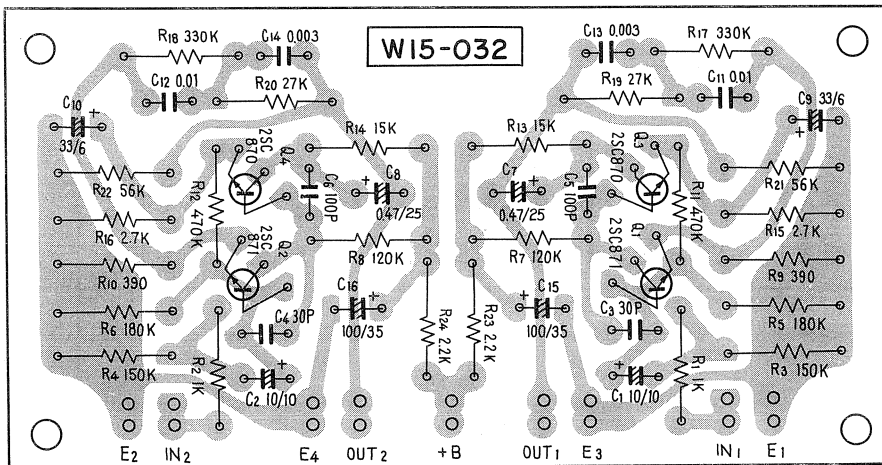
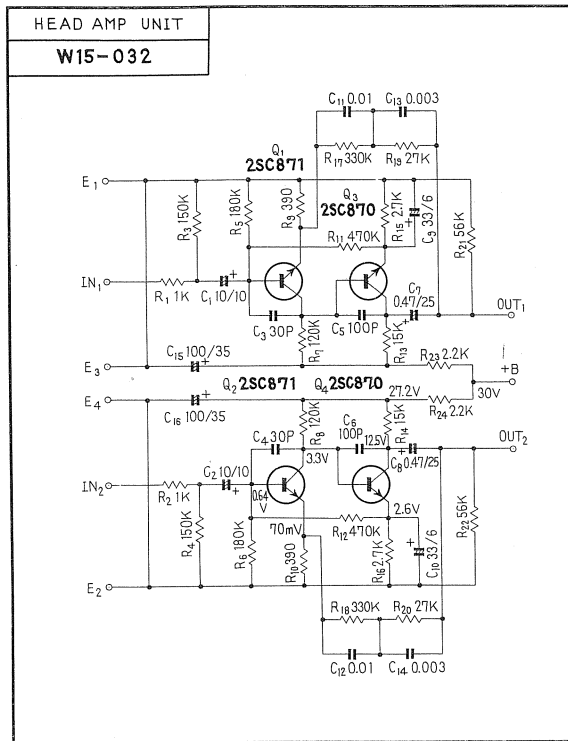
Symbol	Description	Part No.
VR1	Volume Control, 250k-B1	ACV-201-0

OTHERS

Symbol	Description	Part No.	
	Head Amp Unit	W15-032-C	
	Control Amp Unit	AWG-010-0	
	Main Amp Unit	AWH-005-A	
	Switch Unit	AWS-009-0	
	Front Panel Ass'y	ANB-091-0	
	Metal Cover	ANE-006-A	
	Knob for Volume (L)	AAB-006-B	
	Knob for Volume (R)	AAB-005-A	
	Knob for Selector	AAB-004-B	
	Knob for Bass, Treble and Speakers	A12-631-A	
	Knob for Lever Switch	A19-095-A	
	16P Input Terminal Board	AKB-002-0	
	4P Ground Terminal	K13-047-0	
	Compound Part for Rec Terminal	W52-004-0	
	Speaker Socket	K72-031-0	
	Spare AC Outlet	K82-014-0	
	Pilot Lamp Socket	K41-002-B	
	5P Connector (DIN)	K93-003-B	
	Headphones Jack	K72-026-0	
	Pilot Lamp	E22-026-0	
	Fuse 1A	E21-004-A	
	Foot	M61-017-A	
	Fuse 1A for Protection	E21-020-0	
	Fuse 2A for Protection	E21-026-0	
	Screw for Grounding	B11-012-A	

Symbol	Description	Part No.	
	Screw to fix Metal Cover	B11-015-B	
	AC Power Cord	D11-003-E	
	Operating Instructions	ARB-039-0	
	Connection Cord (white)	D51-003-B	
	Connection Cord (red)	D51-004-B	
	Speaker Plug	K72-007-B	
	Packing Case	AHD-048-A	
	Styrorector	H11-038-C	
	Vinyl Bag	H14-044-0	
	Soft Paper	H12-126-A	
	Cardboard Spacer	H12-159-0	
	Fuse 0.5A	E21-007-0	

8.2 HEAD AMP UNIT (W15-032)



PARTS LIST OF HEAD AMP UNIT

CAPACITORS

Symbol	Description	Part No.	
C1	Electrolytic 10 10V	CEA 100P 10	
C2	Electrolytic 10 10V	CEA 100P 10	
C3	Ceramic 30p 50V	CCDSL 300K 50	
C4	Ceramic 30p 50V	CCDSL 300K 50	
C5	Ceramic 100p 50V	CCDSL 101K 50	
C6	Ceramic 100p 50V	CCDSL 101K 50	
C7	Electrolytic 0.47 25V	CSSA R47M 25	
C8	Electrolytic 0.47 25V	CSSA R47M 25	
C9	Electrolytic 33 6V	CEA 330P 6	
C10	Electrolytic 33 6V	CEA 330P 6	
C11	Mylar 0.01 50V	CQMA 103M 50	
C12	Mylar 0.01 50V	CQMA 103M 50	
C13	Mylar 0.003 50V	CQMA 302M 50	
C14	Mylar 0.003 50V	CQMA 302M 50	
C15	Electrolytic 100 35V	CEA 101P 35	
C16	Electrolytic 100 35V	CEA 101P 35	
C17	Ceramic 100p 50V	CCDSL 101K 50	
C18	Ceramic 100p 50V	CCDSL 101K 50	

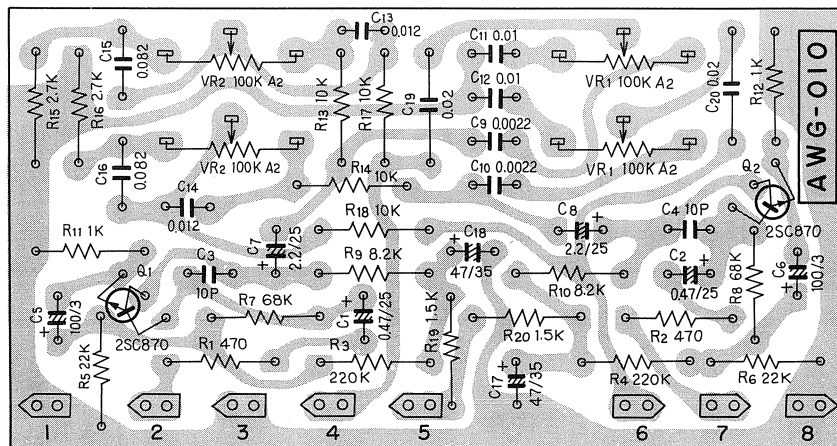
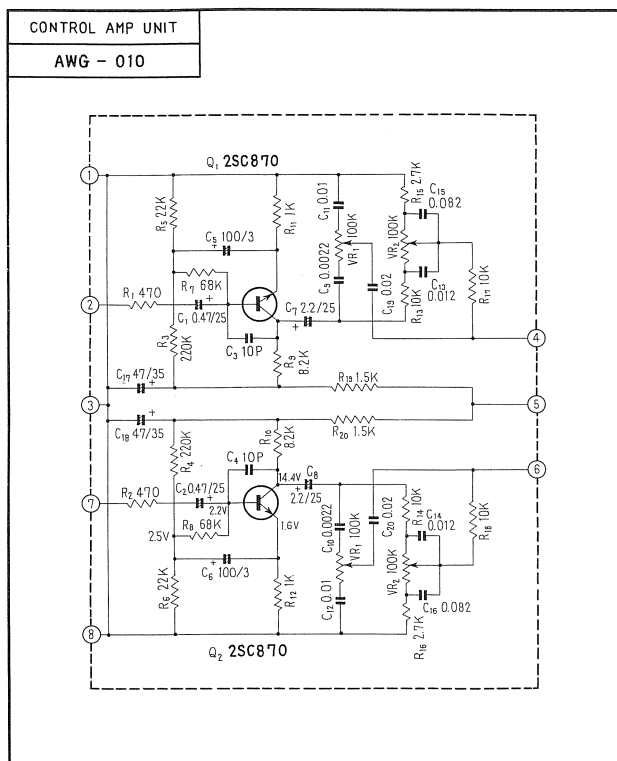
SEMICONDUCTORS

Symbol	Description	Part No.	
Q1	2SC871GR or BL Transistor		
Q2	2SC871GR or BL Transistor		
Q3	2SC870 Transistor		
Q4	2SC870 Transistor		

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 470k	RD¼PS 474K	
R12	Carbon film 470k	RD¼PS 474K	
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 2.2k	RD¼PS 222K	
R24	Carbon film 2.2k	RD¼PS 222K	

8.3 CONTROL AMP UNIT (AWG-010)



PARTS LIST OF CONTROL AMP UNIT

CAPACITORS

Symbol	Description			Part No.
C1	Electrolytic	0.47	25V	CSSA R47X 25
C2	Electrolytic	0.47	25V	CSSA R47X 25
C3	Ceramic	10p	50V	CCDSL 100K 50
C4	Ceramic	10p	50V	CCDSL 100K 50
C5	Electrolytic	100	3V	CEA 101P 3
C6	Electrolytic	100	3V	CEA 101P 3
C7	Electrolytic	2.2	25V	CSSA 2R2X 25
C8	Electrolytic	2.2	25V	CSSA 2R2X 25
C9	Mylar	0.0022	50V	CQMA 222K 50
C10	Mylar	0.0022	50V	CQMA 222K 50
C11	Mylar	0.01	50V	CQMA 103K 50
C12	Mylar	0.01	50V	CQMA 103K 50
C13	Mylar	0.012	50V	CQMA 123K 50
C14	Mylar	0.012	50V	CQMA 123K 50
C15	Mylar	0.082	50V	CQMA 823K 50
C16	Mylar	0.082	50V	CQMA 823K 50
C17	Electrolytic	47	35V	CEA 470P 35
C18	Electrolytic	47	35V	CEA 470P 35
C19	Mylar	0.02	50V	CQMA 203K 50
C20	Mylar	0.02	50V	CQMA 203K 50

SEMICONDUCTORS

Symbol	Description	Part No.
Q1	2SC870-BL Transistor	
Q2	2SC870-BL Transistor	

RESISTORS

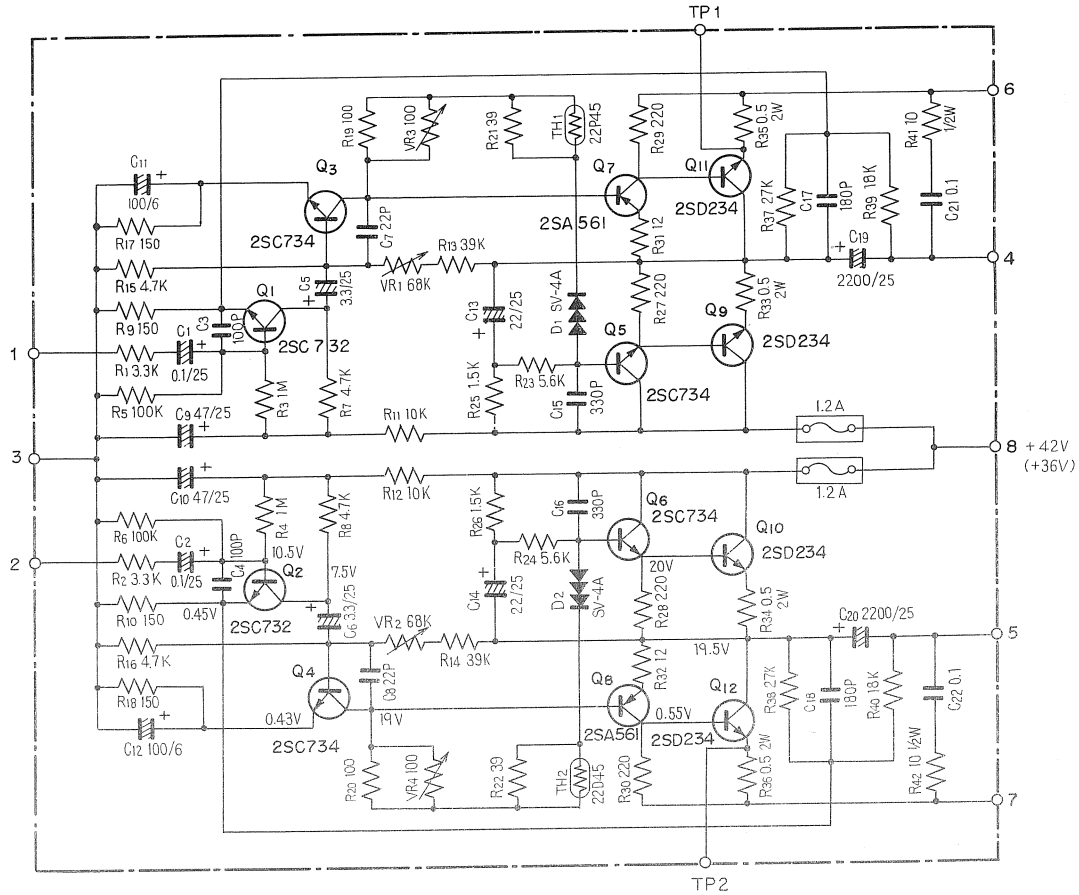
Symbol	Description		Part No.
R1	Carbon film	470	RD¼PS 471J
R2	Carbon film	470	RD¼PS 471J
R3	Carbon film	220k	RD¼PS 224J
R4	Carbon film	220k	RD¼PS 224J
R5	Carbon film	22k	RD¼PS 223J
R6	Carbon film	22k	RD¼PS 223J
R7	Carbon film	68k	RD¼PS 683J
R8	Carbon film	68k	RD¼PS 683J
R9	Carbon film	8.2k	RD¼PS 822J
R10	Carbon film	8.2k	RD¼PS 822J
R11	Carbon film	1k	RD¼PS 102J
R12	Carbon film	1k	RD¼PS 102J
R13	Carbon film	10k	RD¼PS 103J
R14	Carbon film	10k	RD¼PS 103J
R15	Carbon film	2.7k	RD¼PS 272J
R16	Carbon film	2.7k	RD¼PS 272J
R17	Carbon film	10k	RD¼PS 103J
R18	Carbon film	10k	RD¼PS 103J
R19	Carbon film	1.5k	RD¼PS 152J
R20	Carbon film	1.5k	RD¼PS 152J

POTENTIOMETERS

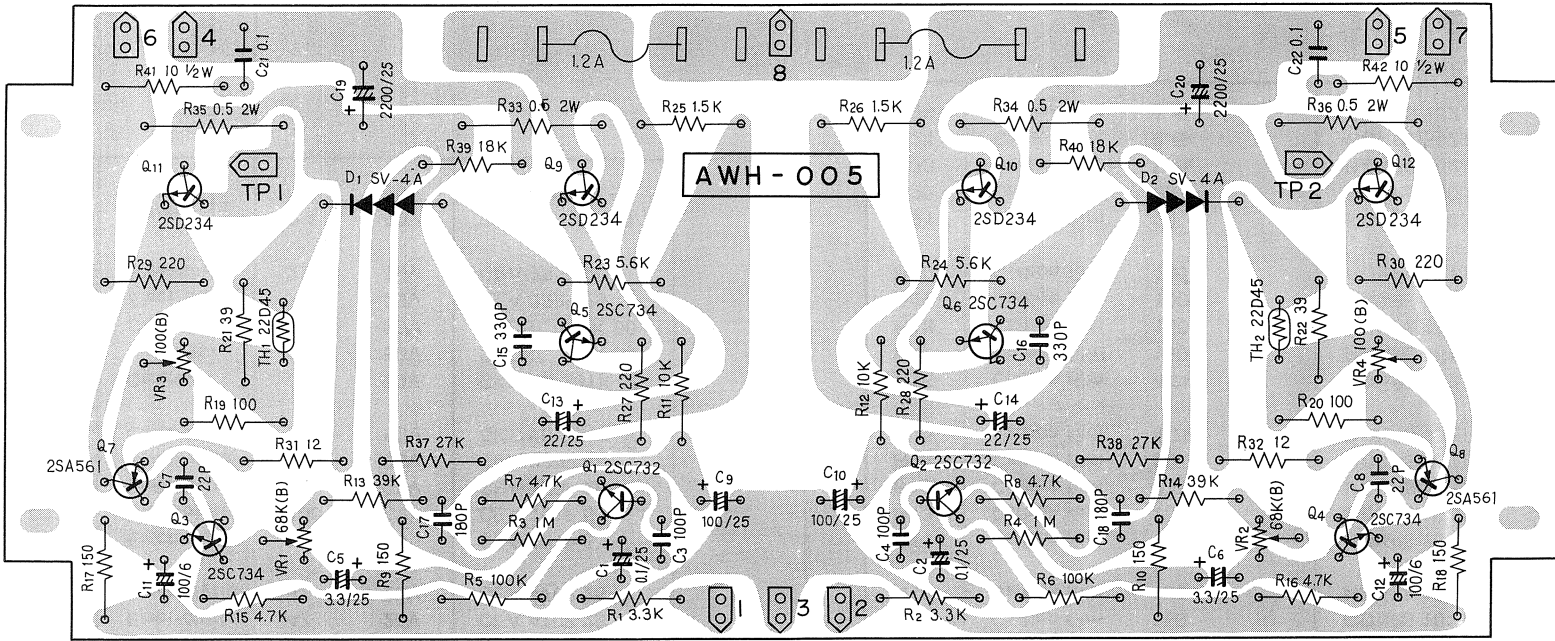
Symbol	Description	Part No.
VR1	100k-A2 dual	C82-046-A
VR2	100k-A2 dual	C82-046-A

8.4 MAIN AMP UNIT (AWH-005)

MAIN AMP UNIT AWH -005



AWH-005



PARTS LIST OF MAIN AMP UNIT

CAPACITORS

Symbol	Description			Part No.
C1	Electrolytic	0.1	25V	CSSA 0R1X 25
C2	Electrolytic	0.1	25V	CSSA 0R1X 25
C3	Ceramic	100p	50V	CCDSL 101K 50
C4	Ceramic	100p	50V	CCDSL 101K 50
C5	Electrolytic	3.3	25V	CEA 3R3P 25
C6	Electrolytic	3.3	25V	CEA 3R3P 25
C7	Ceramic	22p	50V	CCDSL 220K 50
C8	Ceramic	22p	50V	CCDSL 220K 50
C9	Electrolytic	47	25V	CEA 470P 25
C10	Electrolytic	47	25V	CEA 470P 25
C11	Electrolytic	100	6V	CEA 101P 6
C12	Electrolytic	100	6V	CEA 101P 6
C13	Electrolytic	22	25V	CEA 220P 25
C14	Electrolytic	22	25V	CEA 220P 25
C15	Ceramic	330p	50V	CKDYB 331K 50
C16	Ceramic	330p	50V	CKDYB 331K 50
C17	Ceramic	180p	50V	CCDSL 181K 50
C18	Ceramic	180p	50V	CCDSL 181K 50
C19	Electrolytic	2200	25V	CEA 222P 25
C20	Electrolytic	2200	25V	CEA 222P 25
C21	Mylar	0.1	50V	CQMA 104M 50
C22	Mylar	0.1	50V	CQMA 104M 50

RESISTORS

Symbol	Description		Part No.
R1	Carbon film	3.3k	RD½PS 332J
R2	Carbon film	3.3k	RD½PS 332J
R3	Carbon film	1M	RD½PS 105J
R4	Carbon film	1M	RD½PS 105J
R5	Carbon film	100k	RD½PS 104J
R6	Carbon film	100k	RD½PS 104J
R7	Carbon film	4.7k	RD½PS 472J
R8	Carbon film	4.7k	RD½PS 472J
R9	Carbon film	150	RD½PS 151J
R10	Carbon film	150	RD½PS 151J
R11	Carbon film	10k	RD½PS 103J
R12	Carbon film	10k	RD½PS 103J
R13	Carbon film	39k	RD½PS 393J
R14	Carbon film	39k	RD½PS 393J
R15	Carbon film	4.7k	RD½PS 472J
R16	Carbon film	4.7k	RD½PS 472J
R17	Carbon film	150	RD½PS 151J
R18	Carbon film	150	RD½PS 151J
R19	Carbon film	100	RD½PS 101J
R20	Carbon film	100	RD½PS 101J
R21	Carbon film	39	RD½PS 390J
R22	Carbon film	39	RD½PS 390J
R23	Carbon film	5.6k	RD½PS 562J
R24	Carbon film	5.6k	RD½PS 562J
R25	Carbon film	1.5k	RD½PS 152J

Symbol	Description	Part No.	
R26	Carbon film 1.5k	RD½PS 152J	
R27	Carbon film 220	RD½PS 221J	
R28	Carbon film 220	RD½PS 221J	
R29	Carbon film 220	RD½PS 221J	
R30	Carbon film 220	RD½PS 221J	
R31	Carbon film 12	RD½PS 120J	
R32	Carbon film 12	RD½PS 120J	
R33	Metal oxide 0.5 2W	RN2H 0R5K	
R34	Metal oxide 0.5 2W	RN2H 0R5K	
R35	Metal oxide 0.5 2W	RN2H 0R5K	
R36	Metal oxide 0.5 2W	RN2H 0R5K	
R37	Carbon film 27k	RD½PS 273J	
R38	Carbon film 27k	RD½PS 273J	
R39	Carbon film 18k	RD½PS 183J	
R40	Carbon film 18k	RD½PS 183J	
R41	Carbon film 10 ½W	RD½PS 100J	
R42	Carbon film 10 ½W	RD½PS 100J	

POTENTIOMETERS

Symbol	Description	Part No.	
VR1	68k-B, Semi-fixed	ACP-002-0	
VR2	68k-B, Semi-fixed	ACP-002-0	
VR3	100-B, Semi-fixed	C92-063-0	
VR4	100-B, Semi-fixed	C92-063-0	

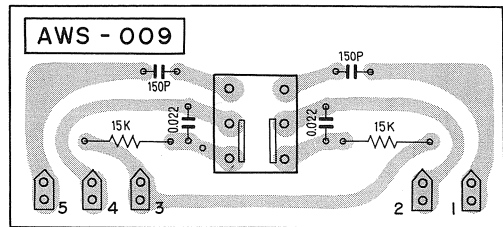
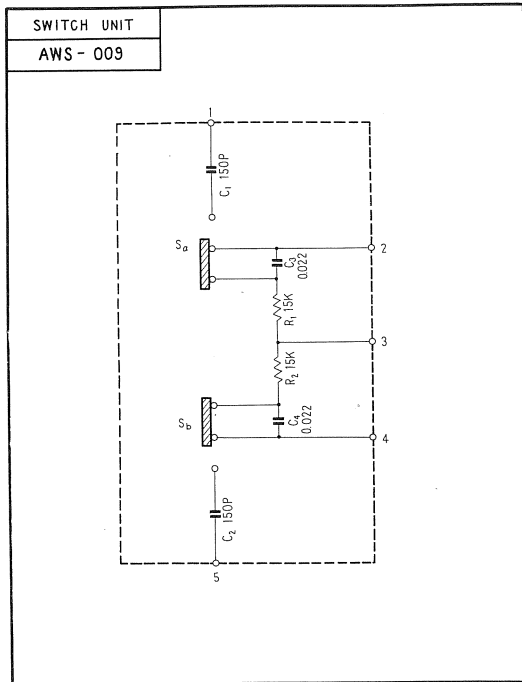
SEMICONDUCTORS

Symbol	Description	Part No.	
Q1	2SC732 Transistor		
Q2	2SC732 Transistor		
Q3	2SC734-Y or GR Transistor		
Q4	2SC734-Y or GR Transistor		
Q5	2SC734 Transistor		
Q6	2SC734 Transistor		
Q7	2SA561 Transistor		
Q8	2SA561 Transistor		
Q9	2SA561 Transistor		
Q10	2SD234 Transistor		
Q11	2SD234 Transistor		
Q12	2SD234 Transistor		
D1	SV-4A Varistor		
D1	SV-4A Varistor		
TH1	22D45 Thermistor		
TH2	22D45 Thermistor		

OTHERS

Symbol	Description	Part No.	
	Insulating spacer	E32-102-0	
	Insulating screw	ABB-001-0	
	Fuse 1.2A for protection	AEK-010-0	

8.5 SWITCH UNIT (AWS-009)



PARTS LIST OF SWITCH UNIT

CAPACITORS

Symbol	Description			Part No.
C1	Ceramic	150p	50V	CCDSL 151K 50
C2	Ceramic	150p	50V	CCDSL 151K 50
C3	Mylar	0.022	50V	CQMA 223K 50
C4	Mylar	0.022	50V	CQMA 223K 50

RESISTORS

Symbol	Description		Part No.
R1	Carbon film	15k	RD¼PS 153J
R2	Carbon film	15k	RD¼PS 153J

SWITCH

Symbol	Description	Part No.
S1	Lever Switch (Loudness)	ASK-011-A

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