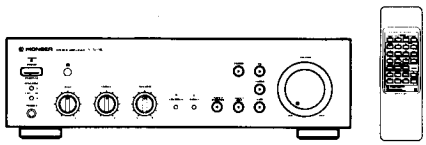
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
ARP2854

STEREO AMPLIFIER
A-303R

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	A-303R		
HB	○	AC240V	AC220—230V, *
HEWZ	○	AC220—230V	AC240V, *
HE	○	AC220—230V	AC240V, *
HL	○	AC220—230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

• **For HEWZ, HE, HL types, refer to page 18.**

CONTENTS

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1. EXPLODED VIEWS, PACKING AND PARTS LIST

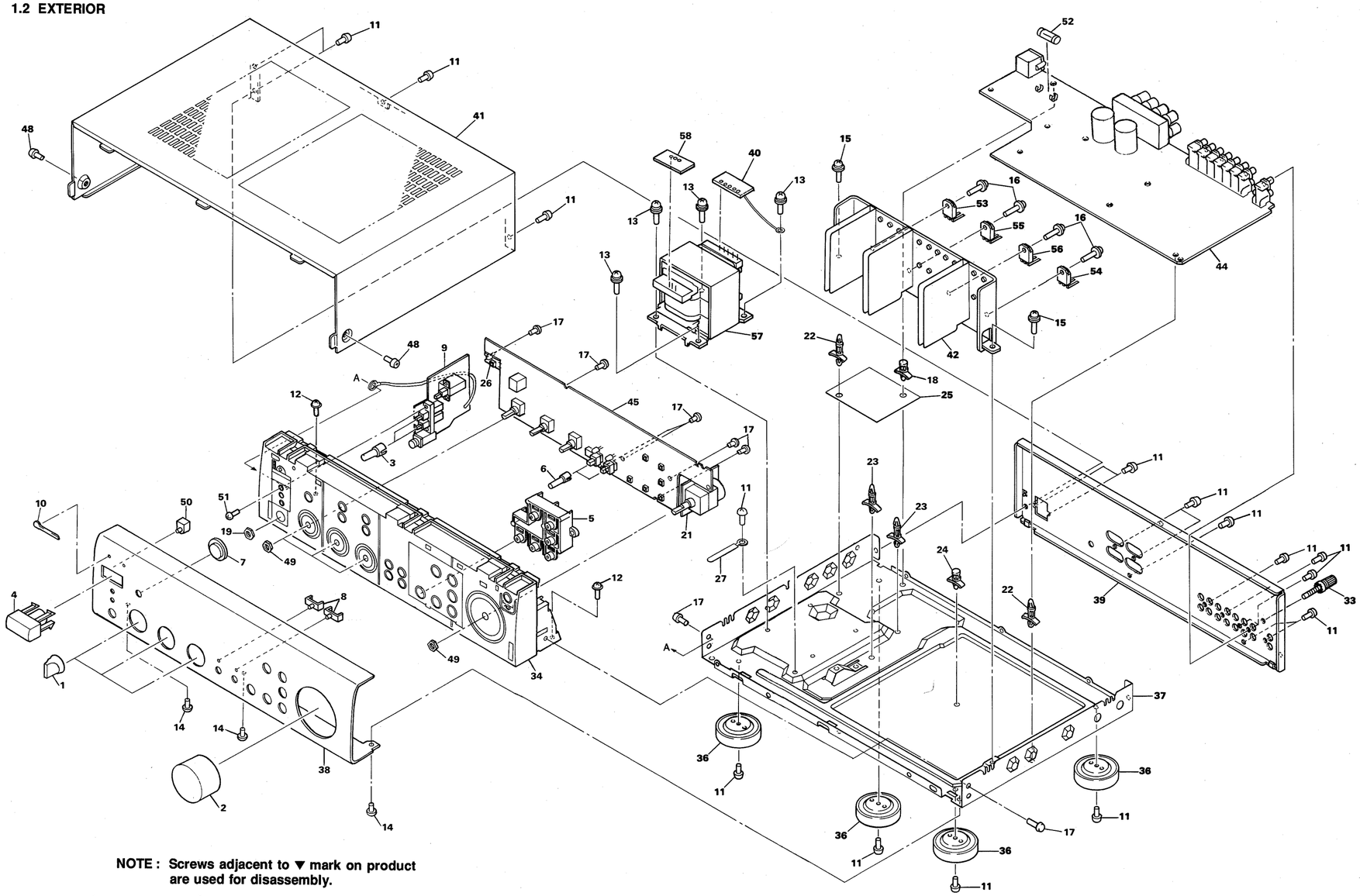
NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by " ◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

1.1 PARTS LIST

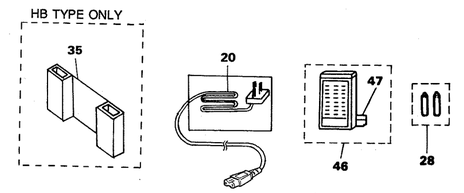
Mark	No.	Description	Parts No.
	1	ROTARY KNOB (PLS)	AAB1349
	2	ROTARY KNOB L (PLS)	AAB1343
	3	PUSH BUTTON(PLS)	AAD2423
	4	POWER BUTTON(PLS)	AAD2421
	5	FUNCTION BUTTON(PLS)	AAD2422
	6	PUSH BUTTON(PLS)	AAD4037
	7	REMOCON WINDOW(PLS)	AAK2457
	8	LED LENS(PLS)	AAK2459
NSP	9	SPEAKER SWITCH ASS'Y	AWZ5548
	10	NAME PLATE (METAL)	AAM1058
	11	SCREW	ABA−298
	12	SCREW (STEEL)	ABA1011
	13	SCREW	ABA1200
	14	SCREW (STEEL)	ABA1048
	15	SCREW	ABA1054
	16	SCREW	ABA1082
	17	SCREW	BPZ30P080FMC
	18	PCB SUPPORTS	AEC1215
	19	NUT	ABN−065
⚠	20	AC POWER CORD	ADG1143
NSP	21	VOLUME ASS'Y	AWZ5546
	22	PCB SUPPORT	AEC1216
	23	PCB SUPPORT	AEC1121
	24	PCB SUPPORT	AEC1232
NSP	25	BARRIER	AEC1241
NSP	26	POWER KEY ASS'Y	AWZ5556
	27	BINDER	AEP−215
NSP	28	BATTERY(R6P,AA)	AEX−010
	29	FRONT PAD	AHA1590
	30	REAR PAD	AHA1591
	31	PACKING CASE	AHD2750
	32	PACKING SHEET	AHG1016
	33	TERMINAL SCREW	AKE−031
	34	PANEL BASE(PLS)	AMB2485
	35	SPACER (HBXJ TYPE ONLY)	AHB1110
	36	INSULATOR	AMR2140
NSP	37	CHASSIS	ANA1489
	38	FRONT PANEL(MET)	ANB1817
	39	REAR PANEL(MET)	ANC2226
NSP	40	SECONDARY ASS'Y	AWZ5550
	41	BONNET CASE	ANE14~~15~~38 (GJ-A49043)
NSP	42	RADIATOR	ANH1312
	43	OPE. INSTRUCTIONS (English)	ARB1486
	44	AF ASS'Y	AWZ5540
	45	CONTROL ASS'Y	AWZ5543
	46	REMO−CON(CU−A010)	AXD1392
	47	BATTERY COVER	AZN2249
	48	SCREW	BBZ30P060FZK
	49	NUT	NK90FUC
NSP	50	LED LENS	PNW2019
	51	SCREW	VMZ30P060FCU
⚠	52	FUSE(FU1)(T1.25A/250V)	AEK−509
⚠	53	POWER TRANSISTOR(Q1)	2SC4689
⚠	54	POWER TRANSISTOR(Q2)	2SC4689
⚠	55	POWER TRANSISTOR(Q3)	2SA1804
⚠	56	POWER TRANSISTOR(Q4)	2SA1804
⚠	57	POWER TRANSFORMER(T1)	ATS1531
	58	POWER PRIMARY ASS'Y	AWZ5545

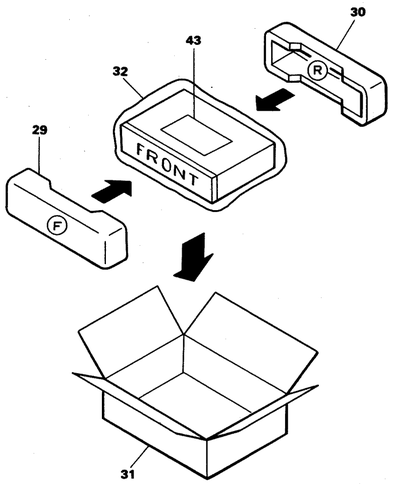
1.2 EXTERIOR



NOTE : Screws adjacent to ▼ mark on product are used for disassembly.

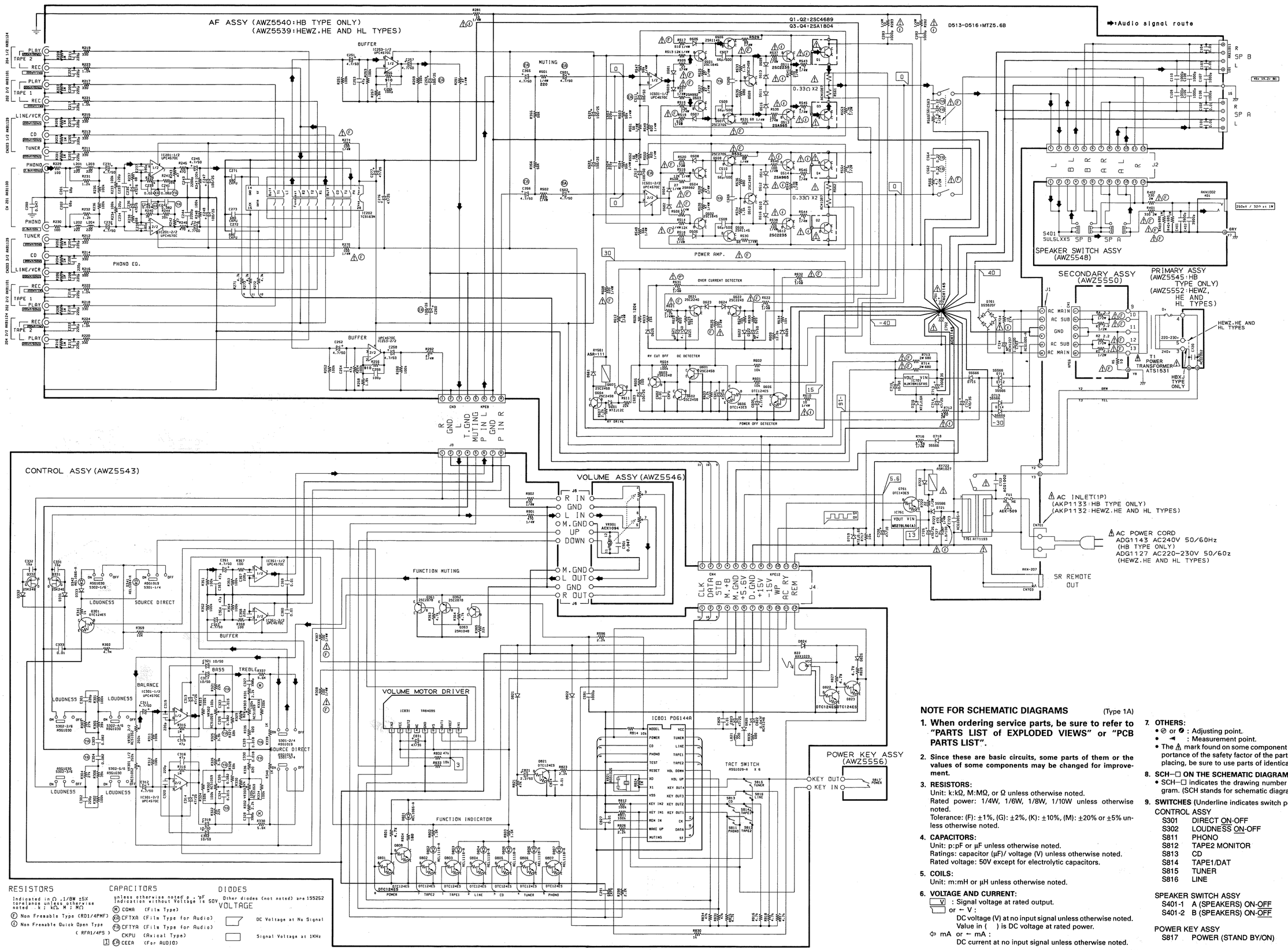
1.3 PACKING





2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 SCHEMATIC DIAGRAM



NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   V : Signal voltage at rated output.
   or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⓿ : Adjusting point.
   - ⫤ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH—□ ON THE SCHEMATIC DIAGRAM:**
   - SCH—□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

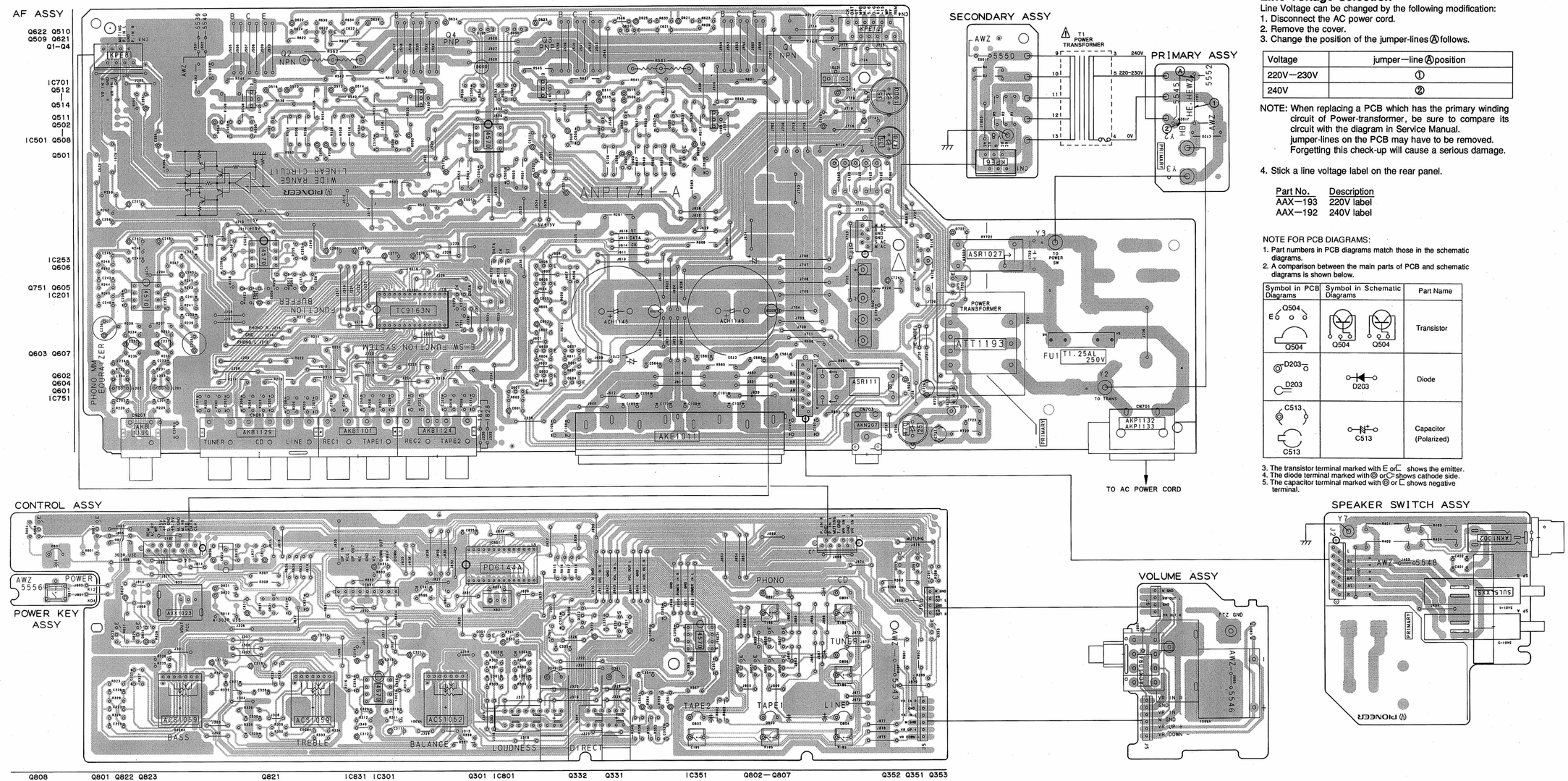
CONTROL ASSY
- S301 DIRECT ON-OFF
- S302 LOUDNESS ON-OFF
- S811 PHONO
- S812 TAPE2 MONITOR
- S813 CD
- S814 TAPE1/DAT
- S815 TUNER
- S816 LINE

SPEAKER SWITCH ASSY
- S401-1 A (SPEAKERS) ON-OFF
- S401-2 B (SPEAKERS) ON-OFF

POWER KEY ASSY
- S817 POWER (STAND BY/ON)

2.2 PCB CONNECTION DIAGRAM

● This diagram is viewed from the mounted parts side.



Line Voltage Selection

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the position of the jumper-lines Ⓐ follows.

Voltage	jumper—line Ⓐ position
220V—230V	①
240V	②

NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual. jumper-lines on the PCB may have to be removed. Forgetting this check-up will cause a serious damage.

4. Stick a line voltage label on the rear panel.

Part No.	Description
AAX—193	220V label
AAX—192	240V label

NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 (E, Q504)	Q504, Q504	Transistor
D203	D203	Diode
C513	C513	Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ⊖ or ⊐ shows cathode side.
5. The capacitor terminal marked with ⊖ or ⊏ shows negative terminal.

2.2 PCB CONNECTION DIAGRAM

- This diagram is viewed from the foil side.

3. PCB PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by " ◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	→	*56×10¹*	→ *561* ·····	*RD1/8PM 5 6 1 J*
47kΩ	→	*47×10³*	→ *473* ·····	*RD1/4PS 4 7 3 J*
0.5Ω	→	*0R5*	·····	*RN2H 0 R 5 K*
1Ω	→	*010*	·····	*RS1P 0 1 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562×10¹ → 5621 ····· RN1/4PC 5 6 2 1 F

Mark	No.	Description	Parts No.	Mark

LIST OF ASSEMBLIES

NSP	AF ASS'Y	AWK1828	
	├— AF ASS'Y	AWZ5540	
	├— CONTROL ASS'Y	AWZ5543	
	├— PRIMARY ASS'Y	AWZ5545	
NSP	├— VOLUME ASS'Y	AWZ5546	
NSP	├— SPEAKER SWITCH ASS'Y	AWZ5548	
NSP	├— SECONDARY ASS'Y	AWZ5550	
NSP	└— POWER KEY ASS'Y	AWZ5556	

AF ASS'Y

SEMICONDUCTORS

IC751	M5278L56(A)	
IC701	NJM78M15FAS	
IC202	TC9163N	
IC201,IC253,IC501	UPC4570C	
Q603	2SA1048	
Q505,Q506	2SA1145	
Q513,Q514	2SA965	
Q503,Q504	2SA992	
Q501,Q502	2SC1845	
Q511,Q512	2SC2235	
Q621,Q622	2SC2240	
Q509,Q510,Q601,Q602,Q604	2SC2458	
Q607	2SC2458	
Q507,Q508	2SC2705	
Q605	DTC124ES	
Q606,Q751	DTC143ES	
D501－D512,D561,D621－D626	1SS252	
D722	1SS252	
D701	D5SB20F	
D601	MTZJ12C	
D716	MTZJ16A	
D513－D516,D719	MTZJ5.6B	
D711－D715,D718,D721	S5566	

COILS AND FILTERS

L201－L204	LAU221K	

TRANSFORMERS

⚠	T751	(1.6VA)	ATT1193

SWITCHES AND RELAYS

RY561	ASR－111	
⚠ RY722	ASR1027	

CAPACITORS

⚠	C722 (0.01/AC400V)	ACG1002
	C703,C723 (0.01/AC150V)	ACG1005
⚠	C701,C702 (5600/DC50V)	ACH1145
	C724	ACH1237
	C255,C256	CCCSL101J50
	C233,C234	CCCSL121J50
	C237,C238	CCCSL181J50
	C203－C212,C217,C218	CCCSL221J50
	C221,C222,C503,C504	CCCSL221J50
	C253,C254	CCCSL470J50
	C507－C510	CCCSL560K500
	C201,C202	CCCSL680J50
	C727	CEANP010M100
	C621,C622	CEANP4R7M50
	C715	CEAS100M50
	C247,C248,C521,C522,C603	CEAS101M25
	C713	CEAS102M35
	C726	CEAS470M10
	C276,C277,C714	CEAS470M25
	C725	CEAS471M25
	C712	CEAS471M35
	C235,C236,C601	CEAS471M6
	C231,C232,C245,C246	CEAS4R7M50
	C251,C252,C257,C258,C605	CEAS4R7M50
	C259,C260	CEEA101M25
	C511,C512	CEEA101M50
	C355,C356,C501,C502	CEEA4R7M50
	C239,C240	CFTXA243J50
	C505,C506	CFTYA105J50
	C561－C564	CFTYA224J50
	C241,C242	CFTYA823J50
	C105－C110,C282,C283	CKCYB102K50
	C243,C244	CKCYB222K50
	C101－C104	CKCYF103Z50
	C200	CKCYF473Z50
	C271－C273	CKPUYB681K50
	C602	CKPUYF103Z25

RESISTORS

⚠	R561,R562 (0.33/5W)	ACN1087
	R722	RD1/2PM220J
	R553,R554	RD1/2PM272J
⚠	R565,R566	RD1/2PMF4R7J

Mark	No.	Description	Parts No.	Mark
	R513－R516		RD1/4PM123J	
	R501,R502		RD1/4PM221J	
	R716		RD1/4PM332J	
	R291,R292,R525－R528		RD1/4PM470J	
	R612		RD1/4PM472J	
	R551,R552		RD1/4PM560J	
	R503,R504,R547,R548		RD1/4PM563J	
	R549,R550		RD1/4PM821J	
⚠	R274,R275,R625		RD1/4PMF101J	
⚠	R608		RD1/4PMF221J	
⚠	R621,R622,R631,R632		RD1/4PMF222J	
⚠	R505－R508		RD1/4PMF270J	
⚠	R517－R520		RD1/4PMF511J	
⚠	R529－R532		RD1/4PMF680J	
⚠	R281－R283,R610,R724		RFA1/4PS100J	
⚠	R537－R540		RFA1/4PS101J	
⚠	R541,R542		RFA1/4PS271J	
⚠	R723		RFA1/4PS471J	
⚠	R543－R546		RFA1/4PS4R7J	
⚠	R712		RS2LMF331J	
⚠	R713,R714		RS2LMF681J	
		Other Resistors	RD1/8PM□□□J	

OTHERS

	CN201	PIN JACK(2P)	AKB1100
	202	PIN JACK(4P)	AKB1101
	204	PIN JACK(4P)	AKB1124
	CN203	PIN JACK(6P)	AKB1129
	101	SPEAKER TERMINAL 8－P	AKE1011
	CN703	JACK	AKN－207
⚠	CN701	AC INLET(1P)	AKP1133
	CN4	CONNECTOR(12P)	KPE12
	CN3	CONNECTOR(8P)	KPE8

CONTROL ASS'Y

SEMICONDUCTORS

IC801		PD6144A
IC831		TA8409S
IC301,IC351		UPC4570C
Q353		2SA1048
Q351,Q352		2SC2878
Q331,Q332		2SK246
Q301,Q801－Q808,Q821－Q823		DTC124ES
D331－D333,D821,D822		1SS252
D824－D826		1SS252
D342,D801		AEL1065
D341		AEL1084
D802－D807		AEL1118

COILS AND FILTERS

L821		LAU221K

SWITCHES AND RELAYS

S301		ASG1019
S811－S816		ASG1029
S302		ASG1030

CAPACITORS

C822		ACH1246
C331,C332		CCCSL150J50
C353,C354		CCCSL470J50
C315,C316		CCMSL470J50
C317,C318,C321,C322		CEAS100M50
C821		CEAS2R2M50
C313,C314,C823		CEAS470M25
C831		CEAS470M35
C311,C312,C351,C352		CEAS4R7M50
C323,C324		CFTYA153J50
C329,C330		CFTYA183J50
C303,C304,C325,C326		CFTYA823J50
C591		CKCYB102K50
C333,C359,C360,C824,C825		CKCYF103Z50
C827		CKCYF103Z50
C301,C302,C319,C320		CKMYB221K50
C357,C358		CKMYB221K50
C291		CKPUYB681K50
C327,C328		CQMA332J50

RESISTORS

	R901,R902		RD1/4PM471J
⚠	R307,R308		RD1/4PMF101J
	VR301		ACS1052
	VR302,VR303	(100K－20C×2)	ACS1059
		Other Resistors	RD1/8PM□□□J

OTHERS

	X821	CERAMIC RESONATOR	ASS1025
	822	REMOTE RECEIVER UNIT	AXX1023

PRIMARY ASS'Y

CAPACITORS

⚠	C720	(0.01/AC400V)	ACG1002

VOLUME ASS'Y

CAPACITORS

C901		CKCYF473Z50

RESISTORS

VR901	(100K－A5×2)	ACX1094

SPEAKER SWITCH ASS'Y

SWITCHES AND RELAYS

S401		SUL5LXXS

CAPACITORS

C401,C402		CGMYX392M25

RESISTORS

⚠	R403,R404		RS1LMF681J
⚠	R401,R402		RS2LMF331J

OTHERS

	401	JACK	AKN1002

SECONDARY ASS'Y

RESISTORS

⚠	R1－R4		RD1/2PMF2R2J
⚠		Other Resistors	RD1/4PM□□□J

OTHERS

	CN1	CONNECTOR(6P)	KPE6

POWER KEY ASS'Y

SWITCHES AND RELAYS

S817		ASG1052

4. IC INFORMATION

● The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ PD6144A (IC801)
AMP CONTROL MICROCOMPUTER

●Pin Function

I: CMOS Input HI: Hysteresis Input O: CMOS Output UN: Nch Opened Tray with Pullup

No.	NAME	I/O	FUNCTION	PORT SETTING
1	P04	I/O	I: Changing Model (O/I=Remote Control/ Mechanism) O:Function Mute (After Power On)	INPUT OUTPUT
2	P05	I/O	STAND BY IND, AC RLY	OUTPUT
3	P06	I/O	FUNC IND CD	OUTPUT
4	P07	I/O	FUNC IND PHONO	OUTPUT
5	TEST	I		INPUT
6	$\overline{RST}$	HI/UN	RESET TERMINAL	INPUT
7	X0	—	4.19M CERALOCK	—
8	X1	—		—
9	Vss	—	GND	—
10	P37	I/O	KEY SCAN INPUT 2	INPUT
11	P36	I/O	KEY SCAN INPUT 1	INPUT
12	P35	HI/O	REMOCON INPUT	INPUT
13	P34	HI/O	AC DETECTING PORT	INPUT
14	P33	I/O	MUTE IND, MUTE ON/OFF	OUTPUT

No.	NAME	I/O	FUNCTION	PORT SETTING
15	P32	HI/O	FUNC FOR ELECTRONIC SW STB	OUTPUT
16	P31	I/O	FUNC FOR ELECTRONIC SW DATA	OUTPUT
17	P30	HI/O	FUNC FOR ELECTRONIC SW CLOCK	OUTPUT
18	P40	UN	KEY SCAN OUTPUT 1	OUTPUT
19	P41	UN	KEY SCAN OUTPUT 2	OUTPUT
20	P42	UN	KEY SCAN OUTPUT 3	OUTPUT
21	P43	UN	KEY SCAN OUTPUT 4	OUTPUT
22	P44	UN	VOLUME UP (TA8409)	OUTPUT
23	P45	UN	VOLUME DOWN	OUTPUT
24	P00	I/O	FUNC IND TAPE 2	OUTPUT
25	P01	I/O	FUNC IND TAPE 1	OUTPUT
26	P02	I/O	FUNC IND LINE	OUTPUT
27	P03	I/O	FUNC IND TUNER	—
28	Vcc	—	+5V	

Note:
CHANGING MODEL/FUNCTION MUTE (P04)

- When RESET starting (Input)
  L: A-303R (Remote Control Model) with STAND BY mode
  H: A-303, 403 (Mechanical POWER SW Model) without STAND BY mode

- After POWER ON (Output)
  FUNCTION MUTE ON/OFF

5. FOR A-303R/HEWZ, HE AND HL TYPES

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

CONTRAST OF MISCELLANEOUS PARTS

A-303R/HEWZ, HE, HL and A-303R/HB have the same construction except for the following:

Mark	Symbol & Description	Part No.				Remarks
		A-303R HB	A-303R HEWZ	A-303R HE	A-303R HL	
	AF assembly	AWZ5540	AWZ5539	AWZ5539	AWZ5539	
	PRIMARY assembly	AWZ5545	AWZ5552	AWZ5552	AWZ5552	
⚠	AC power cord	ADG1143	ADG1127	ADG1127	ADG1127	
	Rear panel	ANC2205	ANC2191	ANC2191	ANC2191	
	Operating instructions (English)	ARB1486	.....	.....	ARB1486	
	Operating instructions (German)	.....	ARC1474	.....	.....	
	Operating instructions (English/ French/German/Italian/ Swedish/Dutch/Spanish/ Portguese)	.....	.....	ARE1315	ARE1315	
	Operating instructions (Chinese)	.....	.....	.....	ARC1475	
	Spacer	AHB1100	.....	.....	.....	for Packing
	Packing case	AHD2750	AHD2749	AHD2749	AHD2749	
	Rear panel	ANC2226	ANC2224	ANC2225	ANC2227	

AF ASSEMBLY

AWZ5539 and AWZ5540 have the same construction except for the following:

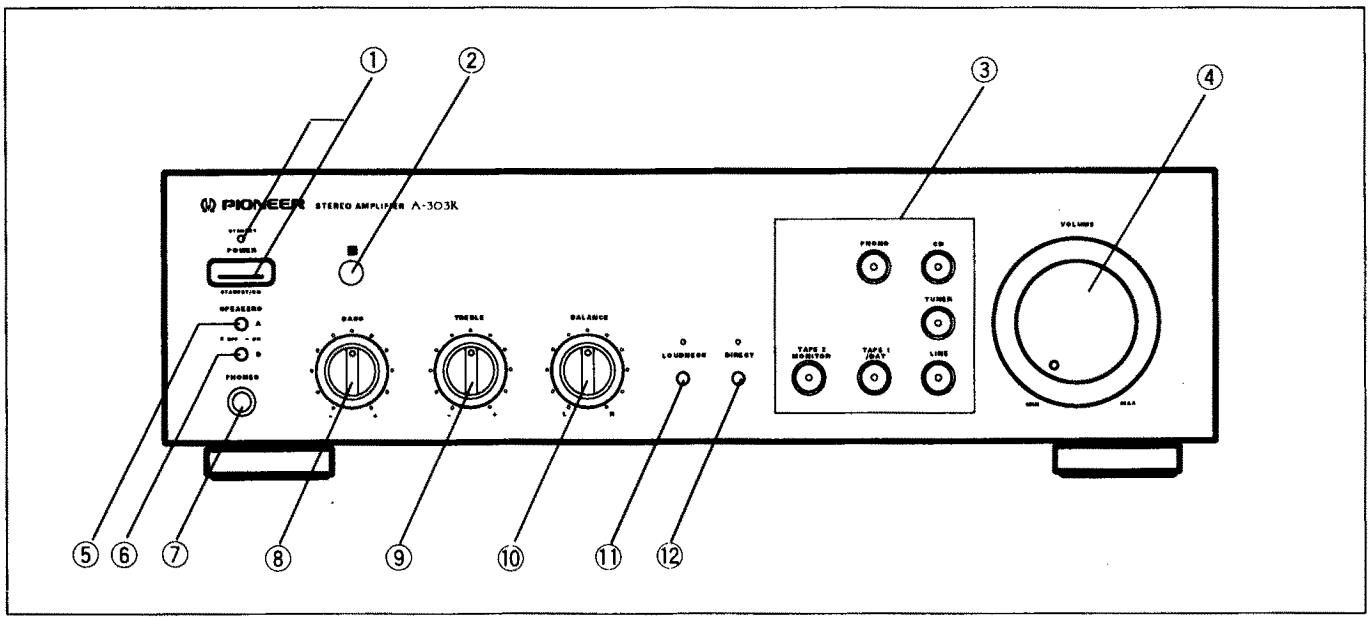
Mark	Symbol & Description	Part No.		Remarks
		AWZ5540	AWZ5539	
⚠	AC INLET (1P)	AKP1133	AKP1132	

PRIMARY ASSEMBLY

Although AWZ5552 and AWZ5545 are different in part number, they have the same service parts.

6. PANEL FACILITIES

FRONT PANEL



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. When the STANDBY indicator lights, the unit is in STANDBY.

NOTE:

When performing timer recording with this unit, be sure to set the POWER STANDBY/ON switch to ON.

② Remote control sensor window

③ Input selector buttons/indicators

Use to select the playback source.

PHONO: For record playback with a turntable.

CD: For compact disc playback with a CD player.

TUNER: For AM or FM broadcast reception with a tuner.

TAPE 2 MONITOR:
For playback with a cassette deck or adaptor connected to TAPE2/MONITOR (ADPT) terminals.

TAPE1/DAT:
For playback with a cassette deck or digital audio cassette deck connected to TAPE 1/DAT terminals.

LINE: For playback with a component connected to LINE terminals.

④ VOLUME control

Use to adjust the volume level.

⑤ SPEAKERS A selector button

Use this button to listen to the speaker systems connected to SPEAKERS A terminals.

ON(▬): Depressed position: Sound is heard from the speaker systems.

OFF(▮): Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

⑥ SPEAKERS B selector button

Use this button to listen to the speaker systems connected to SPEAKERS B terminals.

ON(▬): Depressed position: Sound is heard from the speaker systems.

OFF(▮): Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

⑦ PHONES jack

When using headphones, insert the plug into this jack.

⑧ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

This control does not operate when DIRECT button is in the on position.

⑨ TREBLE tone control

Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

This control does not operate when DIRECT button is in the on position.

⑩ BALANCE control
Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L (left) position and if the left side is louder, turn toward the R (right) position.

NOTE:

This control does not operate when DIRECT button is in the on position.

⑪ LOUDNESS button/indicator
Use when listening at low volume levels.

On: The indicator lights. Boosts low and high frequencies to give added punch to playback even at low volume levels.

Off: The indicator goes off. Should normally be left in this position.

NOTE:

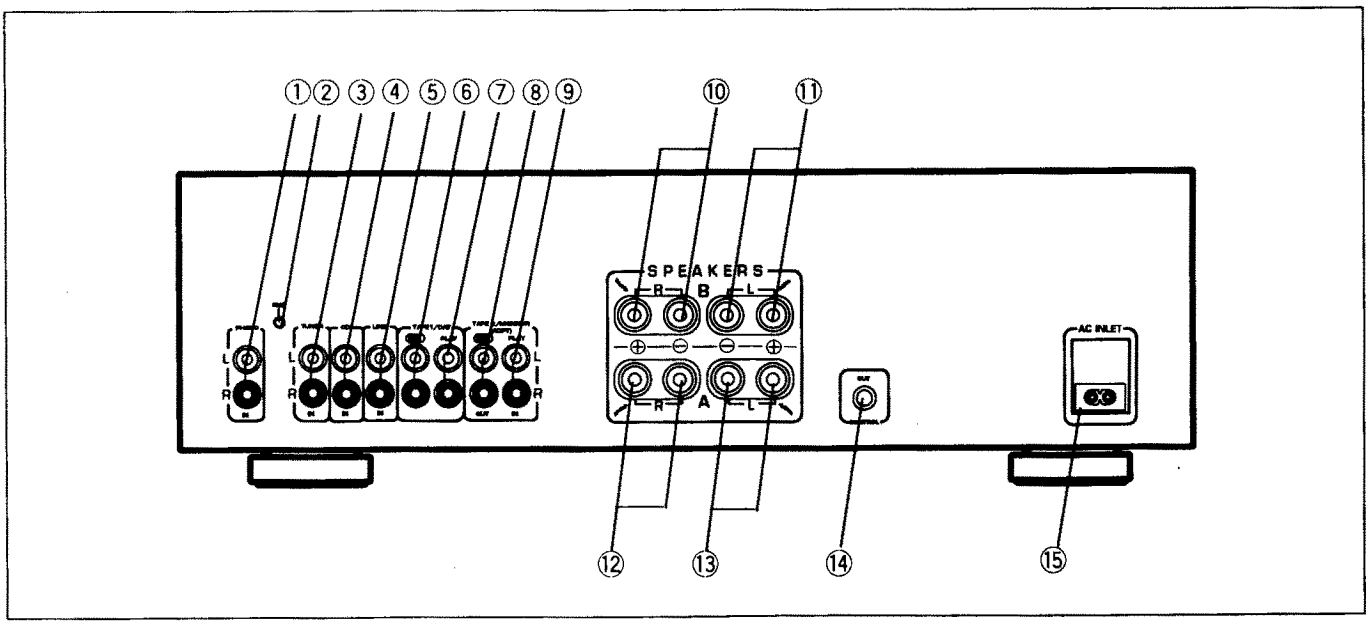
This button does not operate when the DIRECT button is in the on position.

⑫ DIRECT button/indicator
Use this button when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, BALANCE, LOUDNESS).
This button also operates with respect to the component connected to the TAPE 2/MONITOR (ADPT) terminals.

On: The indicator lights: The signals input through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

Off: The indicator goes out: The signal passes through the various frequency adjusting circuits.

REAR PANEL



① **PHONO terminals**

② **Turntable ground terminal (GND)**

③ **TUNER terminals**

④ **CD terminals**

⑤ **LINE terminals**

⑥ **TAPE 1/DAT REC terminals**

⑦ **TAPE 1/DAT PLAY terminals**

⑧ **TAPE 2/MONITOR (ADPT) REC terminals**

⑨ **TAPE 2/MONITOR (ADPT) PLAY terminals**

⑩ **SPEAKERS B terminals (Right channel)**

⑪ **SPEAKERS B terminals (Left channel)**

⑫ **SPEAKERS A terminals (Right channel)**

⑬ **SPEAKERS A terminals (Left channel)**

⑭ CONTROL OUT jack
This jack is for output of control signals when operating other components bearing the SR mark with the attached remote control unit.

⑮ AC INLET jack
Connect one end of the power cord to here and the other end to an AC wall socket, or the AC outlet of an audio timer.
If you are going to be away from home for a long period of time, disconnect the unit from the wall socket.

7. SPECIFICATIONS

Amplifier Section

Continuous power output
(both channels driven at 20Hz to 20kHz)**
T.H.D. 0.05%, 8 Ω ..... 35 W + 35 W*
T.H.D. 0.1%,4 Ω ..... 40 W + 40 W*
DIN Continuous power output (both channels driven at 1kHz)
T.H.D. 1%, 8 Ω ..... 45 W+ 45 W
T.H.D. 1%, 4 Ω ..... 55 W+ 55 W
Dynamic power output (on EIA dynamic test signal)
4 Ω ..... 66 W
Total harmonic distortion**
20 Hz to 20 kHz, 17.5 W, 8Ω 0.05%*

● *Power output specification is for when power supply is 230 V.*

Input sensitivity/impedance
PHONO (MM) ..... 2.8 mV/50 kΩ
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2/MONITOR (ADPT) ..... 200 mV/50 kΩ
PHONO overload level
1kHz, T.H.D. 0.1% (MM) ..... 150 mV
Output level/impedance
TAPE 1/DAT, TAPE 2/MONITOR (ADPT) output
..... 200 mV/1 kΩ
Frequency response
PHONO (MM) ..... 20 Hz to 20 kHz ±0.5dB
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2/MONITOR (ADPT) ..... 5 Hz to 100 kHz $^{+0}_{-3}$dB*
Tone control
BASS ..... ±8 dB (100 Hz)
TREBLE ..... ±8 dB (10 kHz)
Loudness contour (volume control set at -30dB position)
.....+5 dB (100Hz)/ +3 dB (10kHz)
Signal-to-Noise ratio(IHF short circuit, A network)
PHONO (MM,5 mV input) ..... 84 dB*
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2/MONITOR (ADPT)..... 105 dB*
Signal-to-Noise ratio(DIN, continuous power/50 mW)
PHONO(MM) ..... 69 dB/65 dB*
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2/MONITOR (ADPT) ..... 89 dB/69 dB*

Power Supply/Miscellaneous

Power requirements
U.K. model ..... a.c. 240 Volts~, 50/60 Hz
Singapore model ..... a.c.220-230 Volts, 50/60 Hz
Power consumption ..... 370 W
Dimensions ..... 420(W)×360(D)×125(H)mm
Weight(without package) ..... 6.3 kg

Accessories

Remote control unit 1
Batteries(IEC R6P, AA) 2
Operating instructions 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

* Measured with DIRECT button set to on.
**Measured by Audio Spectrum Analyzer.