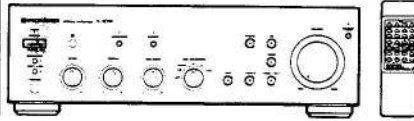


Service Manual

PIONEER®
The Art of Entertainment



The illustration shows model A-503R.

ORDER NO.
ARP2853

STEREO AMPLIFIER

A-503R

A-503R-G

A-403R

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-503R	A-503R-G	A-403R		
HE	○	—	○	AC220—230V	AC240V, *
HB	○	—	—	AC240V	AC220—230V, *
HEWZ	○	—	○	AC220—230V	AC240V, *
HEZ	—	○	—	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 the following: A-503R/HB and HEWZ; A-503R-G/HEZ; A-403R/HEWZ, refer to page 26.

CONTENTS

1. EXPLODED VIEWS, PACKING AND PARTS LIST	2
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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
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O-FFO APR. 1994 Printed in Japan

1. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

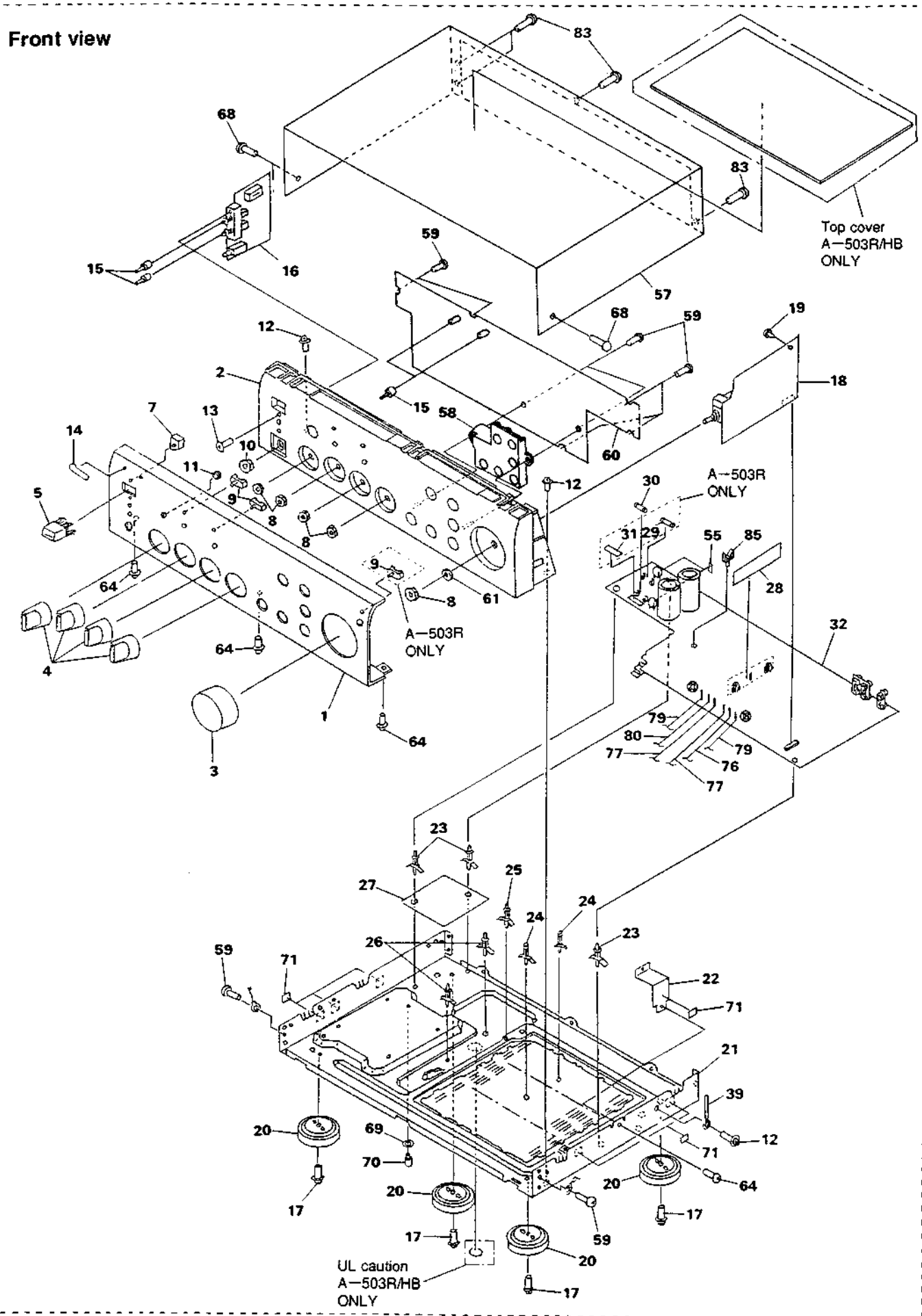
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●"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

1.1 FRONT VIEW AND REAR VIEW

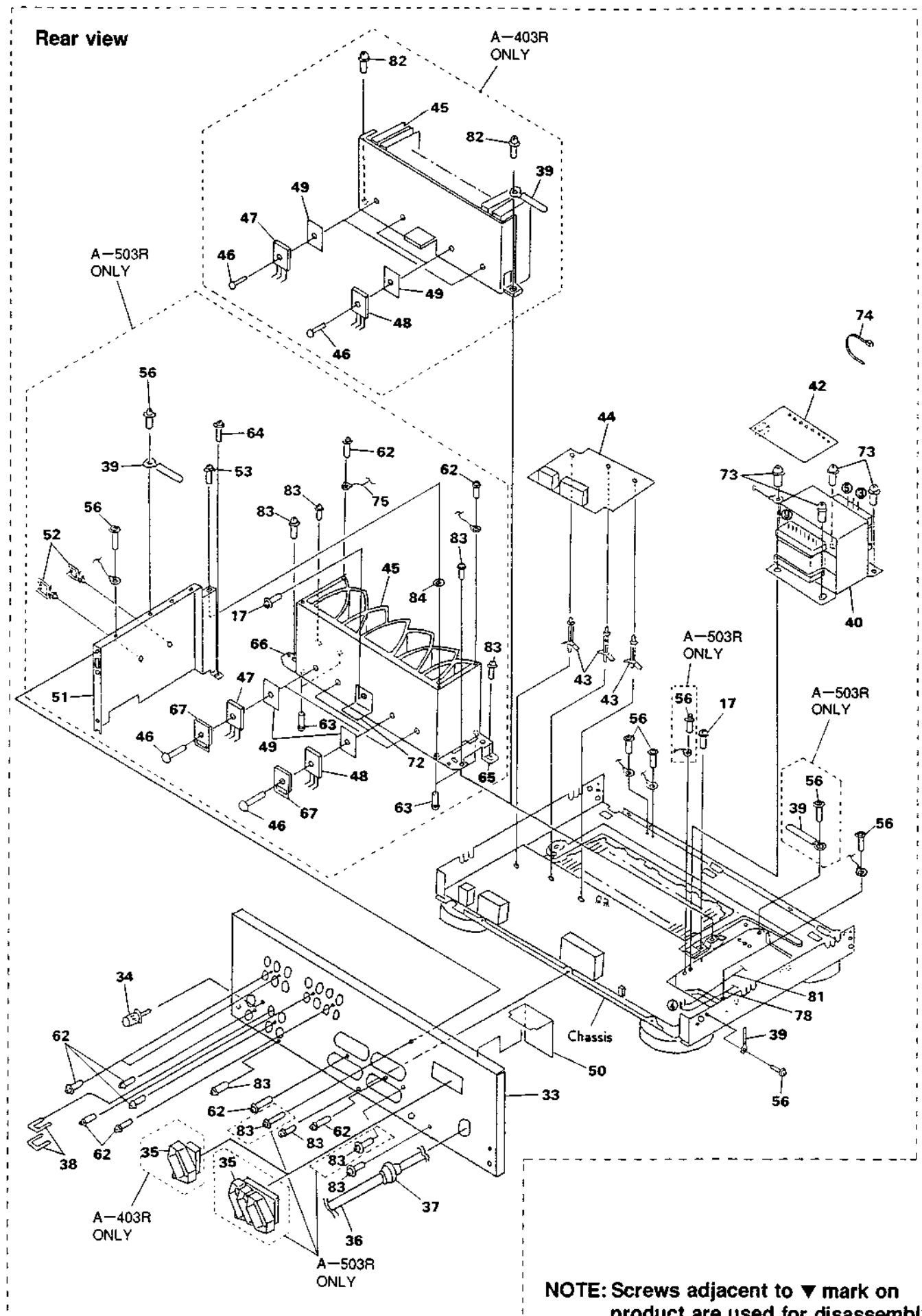
•Part List (For A-503R/HE and A-403R/HE)

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	Front panel (A-503R)	ANB1820		42	TRANS ass'y (A-403R)	AWZ5696
	1	Front panel (A-403R)	ANB1821	NSP	43	Cushion	AEC1286
	2	Panel base	AMB2135		44	INPUT ass'y (A-503R)	AWZ5585
	3	Rotary knob (PLS)	AAB1343		44	INPUT ass'y (A-403R)	AWZ5591
	4	Rotary knob (PLS)	AAB1349		45	Heat sink (A-503R)	ANH1428
	5	Power button (PLS)	AAD2421		45	Heat sink (A-403R)	ANH1266
	6	.....			46	Screw	ABA1082
NSP	7	LED lens (ABS)	PNW2019	Δ	47	Transistor (Q1, Q2) (A-503R)	2SC3281
	8	Nut	NK90FUC	Δ	47	Transistor (Q1, Q2) (A-403R)	2SC3181N
	9	LED lens (PLS)	AAK2459	Δ	48	Transistor (Q3, Q4) (A-503R)	2SA1302
	10	Nut	ABN-065	Δ	48	Transistor (Q3, Q4) (A-403R)	2SA1264N
	11	Remocon window (PLS)	AAK2457		49	Sheet	AEE1014
	12	Screw (STEEL)	ABA1011	NSP	50	Shield plate C	AEC1538
	13	Screw	VMZ30P060FCU		51	Chamber frame (A-503R)	ANG1820
	14	Name plate (MET)	AAM1058	NSP	52	Wire clip (A-503R)	AEC1388
	15	Push button (PLS)	AAD2423	NSP	53	Screw (A-503R)	ABA1088
	16	SP switch ass'y (A-503R)	AWZ5581		54	Holder (A-503R)	ANG1922
	16	SP switch ass'y (A-403R)	AWZ5589	NSP	55	Tape (A-503R)	AEH1005
	17	Screw	ABA-298		56	Screw (STEEL)	ABA1009
	18	Motor VOL ass'y (A-503R)	AWZ5586		57	Bonnet case	ANE1438
	18	Motor VOL ass'y (A-403R)	AWZ5592		58	Function button (PLS)	AAD2422
	19	Nylon rivet	AEC1160		59	Screw	BPZ30P080FMC
	20	Insulator	PNW1912		60	CONTROL ass'y (A-503R)	AWZ5582
NSP	21	Chassis	ANA1489		60	CONTROL ass'y (A-403R)	AWZ5590
	22	VR PCB holder	ANG1821		61	Washer	ABE1018
	23	PCB support	AEC1215		62	Screw (STEEL)	ABA1050
NSP	24	PCB support	AEC1232		63	Screw (STEEL)(A-503R)	ABA1208
NSP	25	PCB support	AEC1231		64	Screw (STEEL)	ABA1192
NSP	26	PCB support	AEC1216		65	Heat sink holder A (A-503R)	ANG1818
NSP	27	Barrier	AEC1241		66	Heat sink holder B (A-503R)	ANG1819
	28	Shield ass'y	AWZ5583		67	Transistor cover LL (A-503R)	ANG1840
Δ	29	Fuse (FU2, T500mA) (A-503R)	AEK-505		68	Screw	BBT30P060FZK
Δ	30	Fuse (FU1, T1.6A) (A-403R)	AEK-510		69	PVC ring	ABF1030
Δ	30	Fuse (FU1, T2A) (A-503R)	AEK-511		70	Foot ass'y	AEC1531
NSP	31	Fuse card (A-503R)	AAX1581	NSP	71	Spacer	AEB1254
	32	AF ass'y (A-503R)	AWZ5580	NSP	72	PCB holder (A-503R)	ANG1062
	32	AF ass'y (A-403R)	AWZ5588		73	Screw	ABA1200
	33	Rear panel (A-503R)	ANC2214		74	Nylon binder	AEC-093
	33	Rear panel (A-403R)	ANC2216		75	Ground lead (A-503R)	ADX1565
	34	Terminal screw	AKE-031	Δ	76	Cut wire (Y6)	YJ80W0-30-35/35
Δ	35	AC socket 3-P (A-503R)	AKP-502	Δ	77	Cut wire (Y7, Y11)	YJ80W1-30-35/35
Δ	35	AC socket 1-P (A-403R)	AKP-508	Δ	78	Cut wire (Y2)	YJ80W1-35-35/35
Δ	36	AC power cord	ADG1049	Δ	79	Cut wire (Y9, Y10)	YJ80W4-30-35/35
	37	Strain relief	AEC-882	Δ	80	Cut wire (Y8)	YJ80W8-30-35/35
	38	plug	AKM1061	Δ	81	Cut wire (Y1)	YJ80W9-35-35/35
	39	Binder	AEP-215		82	Screw (A-403R)	ABA1054
Δ	40	Power transformer (T1) (A-503R)	ATS1537		83	Screw	ABA1207
Δ	40	Power transformer (T1) (A-403R)	ATS1532		84	Washer (A-503R)	ABE-053
	41	.....		NSP	85	Mini clamp	AEC1530
	42	TRANS ass'y (A-503R)	AWZ5584				

Front view

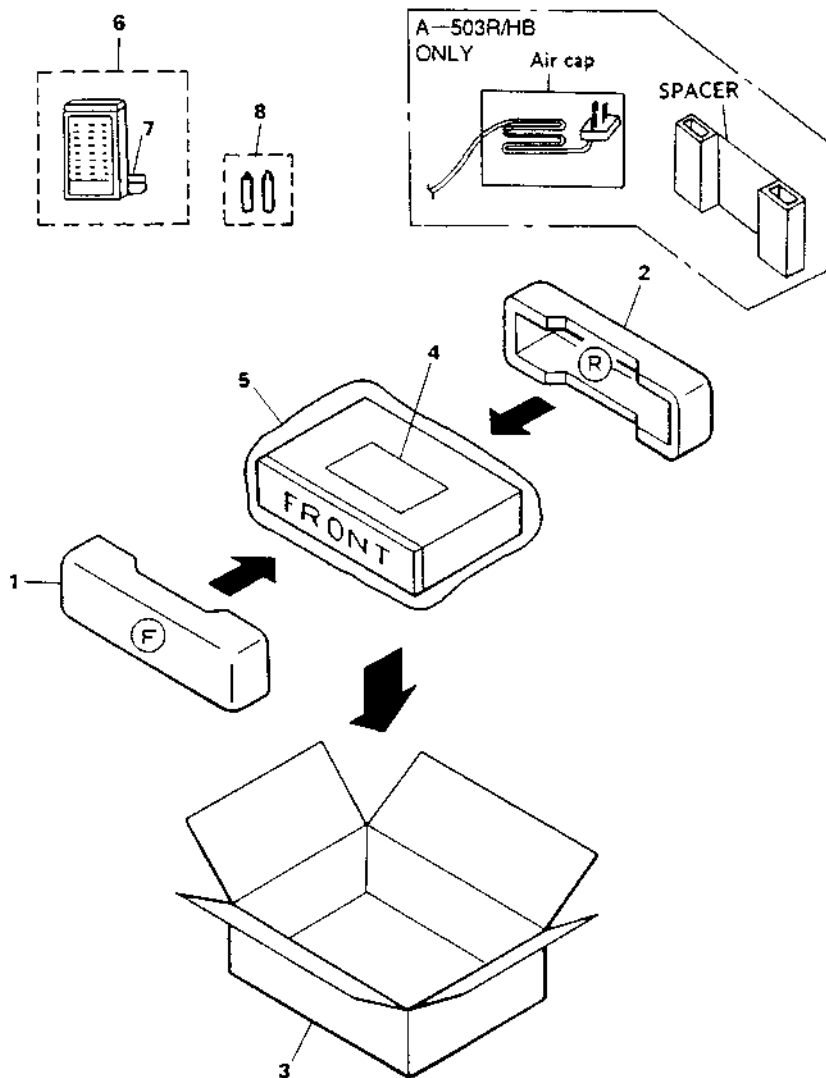


Rear view



1.2 PACKING (For A-503R/HE and A-403R/HE)

Mark No.	Description	Parts No.
1	Front pad	AHA1590
2	Rear pad	AHA1591
3	Packing case (A-503R)	AHD2740
3	Packing case (A-403R)	AHD2743
4	Operating instructions (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE1314
5	Packing sheet	AHG1016
6	Remote control unit (CU-A011) (A-503R)	AXD1391
6	Remote control unit (CU-A010) (A-403R)	AXD1392
7	Battery cover	AZN2249
NSP 8	Battery (R6P)	AEX-010



2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 OVERALL WIRING DIAGRAM, AF, CONTROL, SP SWITCH AND SHIELD ASSEMBLIES

AF ASS'Y (AWZ5580 : A-503R/HE, A-503R/HEWZ AND A-503R-G/HEZ)
(AWZ5587 : A-503R/HB)
(AWZ5588 : A-403R/HE AND A-403R/HEWZ)

A

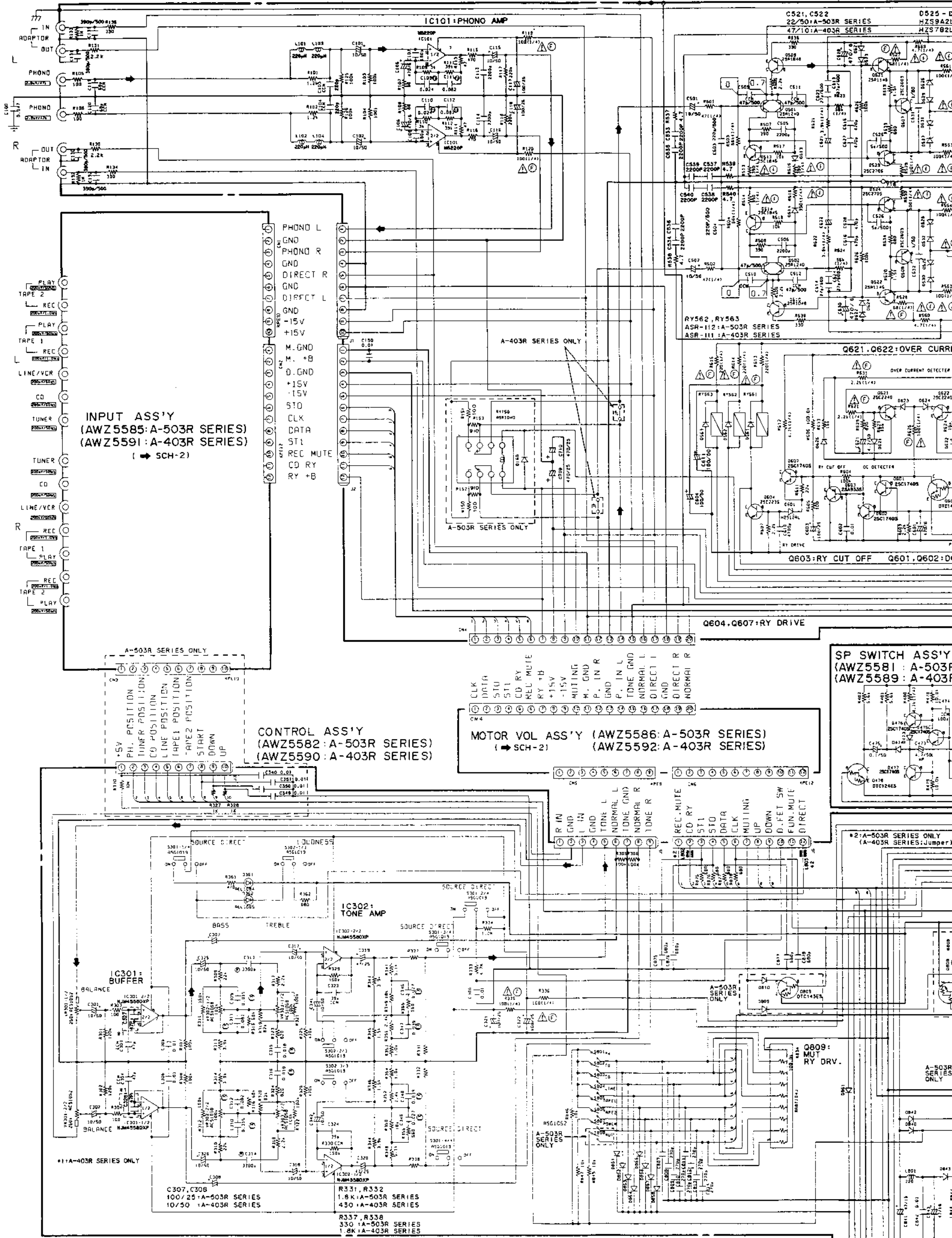
B

C

D

E

F



SCH-1

OVERALL,
AF ASSY, CONTROL ASSY,
SP SWITCH ASSY,
SHIELD ASSY

RESISTORS
Indicated in Ω, 1/8W ±5% tolerance unless otherwise noted (V.M.M.K.)

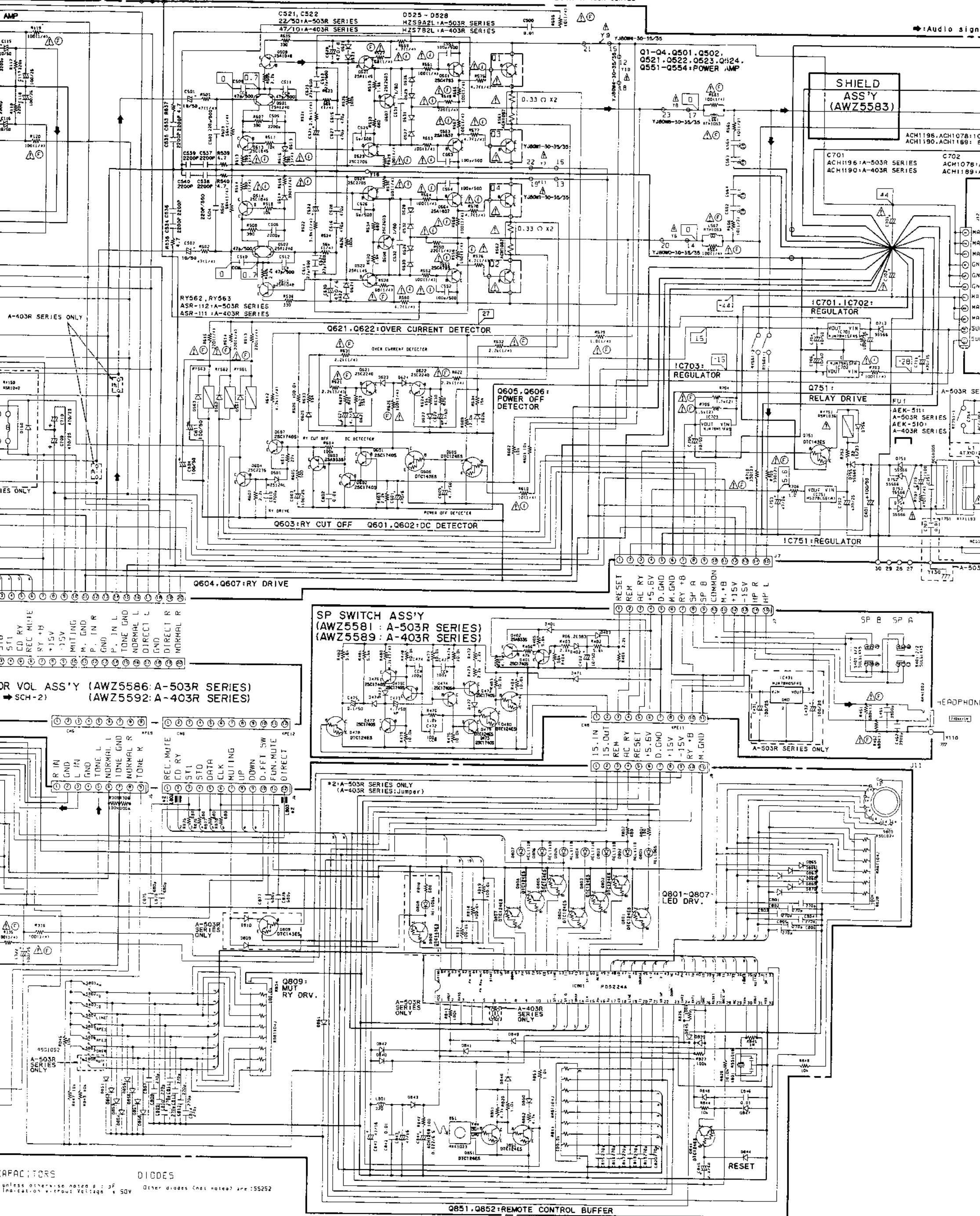
CAPACITORS
Unless otherwise noted 2 or 3 of Ind. cap. or without Voltage is 50V

DIODES
Other 3-axis (not noted) are 1SS252

RAMS
ASSEMBLIES

(HEZ)

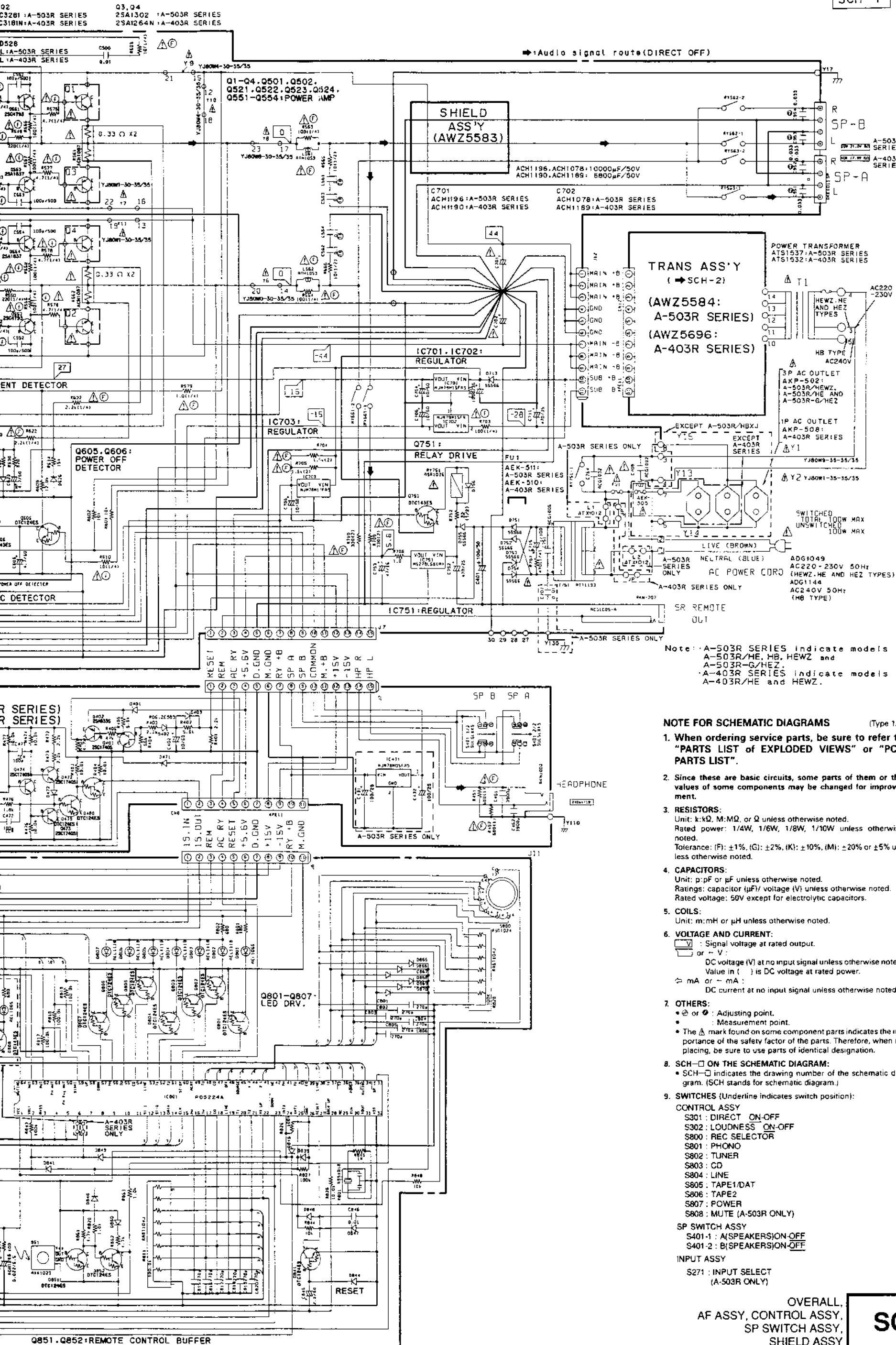
01,02 25C3281:A-503R SERIES
25C3181N:A-403R SERIES
03,04 25A1302:A-503R SERIES
25A1264N:A-403R SERIES



CAPACITORS DIODES
Unless otherwise noted: C = pF
Indication without Voltage = 50V
Other diodes (not noted) are 1N5222

Q851, Q852: REMOTE CONTROL BUFFER

SCH-1



Note: A-503R SERIES indicate models A-503R/HE, HB, HEWZ and A-503R-G/HEZ. A-403R SERIES indicate models A-403R/HE and HEWZ.

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

- When ordering service parts, be sure to refer to "PARTS LIST OF EXPLODED VIEWS" or "PCB PARTS LIST".
- Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
- RESISTORS:**
Unit: k Ω , M Ω , or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.
- CAPACITORS:**
Unit: p μ F or μ F unless otherwise noted.
Ratings: capacitor (μ F)/voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.
- COILS:**
Unit: m μ H or μ H unless otherwise noted.
- VOLTAGE AND CURRENT:**
⎓ : 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.
- OTHERS:**
⊙ or ⊛ : Adjusting point.
⊙ : Measurement point.
⚠ : The Δ 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.
- SCH-□ ON THE SCHEMATIC DIAGRAM:**
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
- SWITCHES (Underline indicates switch position):**
CONTROL ASSY
S301: DIRECT ON-OFF
S302: LOUDNESS ON-OFF
S800: REC SELECTOR
S801: PHONO
S802: TUNER
S803: CD
S804: LINE
S805: TAPE1/DAT
S806: TAPE2
S807: POWER
S808: MUTE (A-503R ONLY)
SP SWITCH ASSY
S401-1: A(SPEAKERS)ON-OFF
S401-2: B(SPEAKERS)ON-OFF
INPUT ASSY
S271: INPUT SELECT (A-503R ONLY)

OVERALL, AF ASSY, CONTROL ASSY, SP SWITCH ASSY, SHIELD ASSY

SCH-1

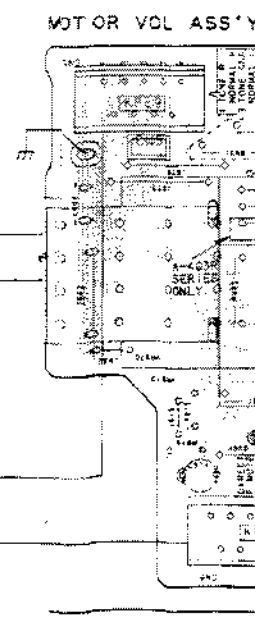
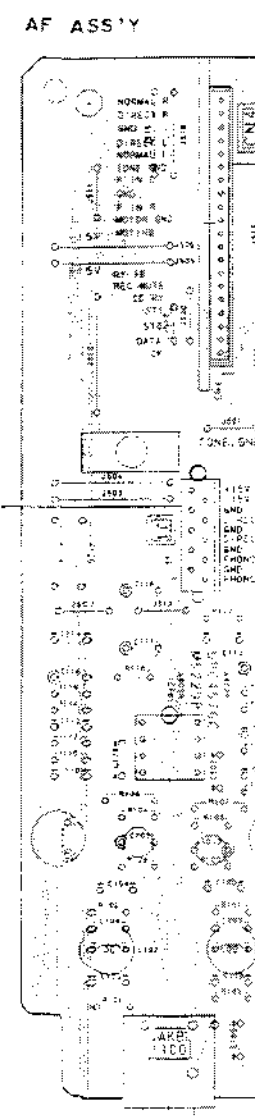
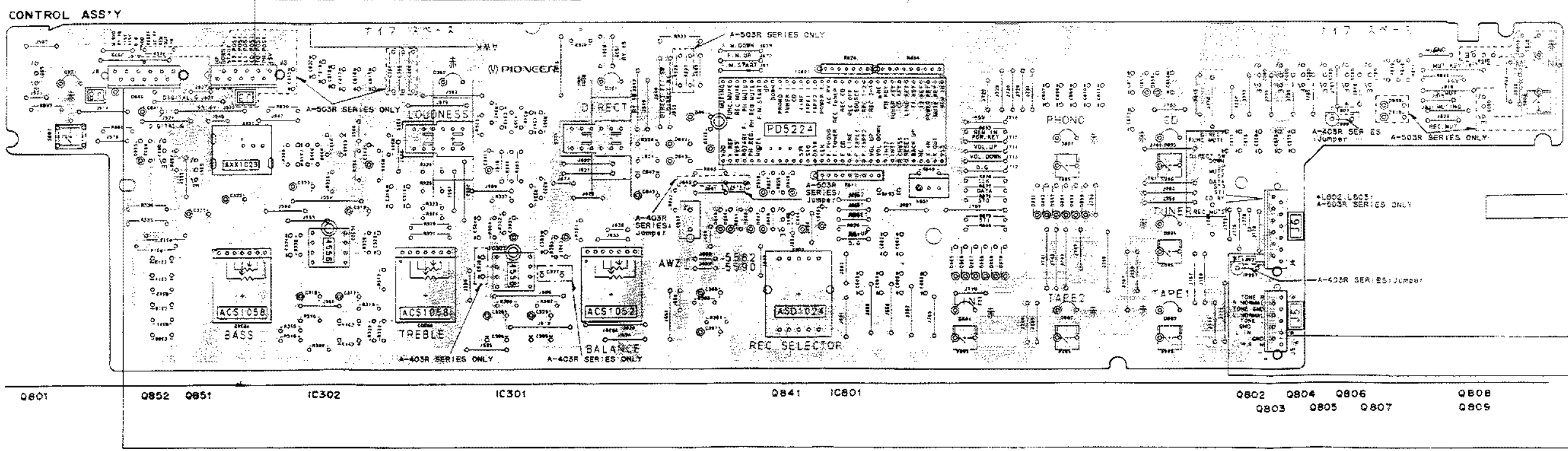
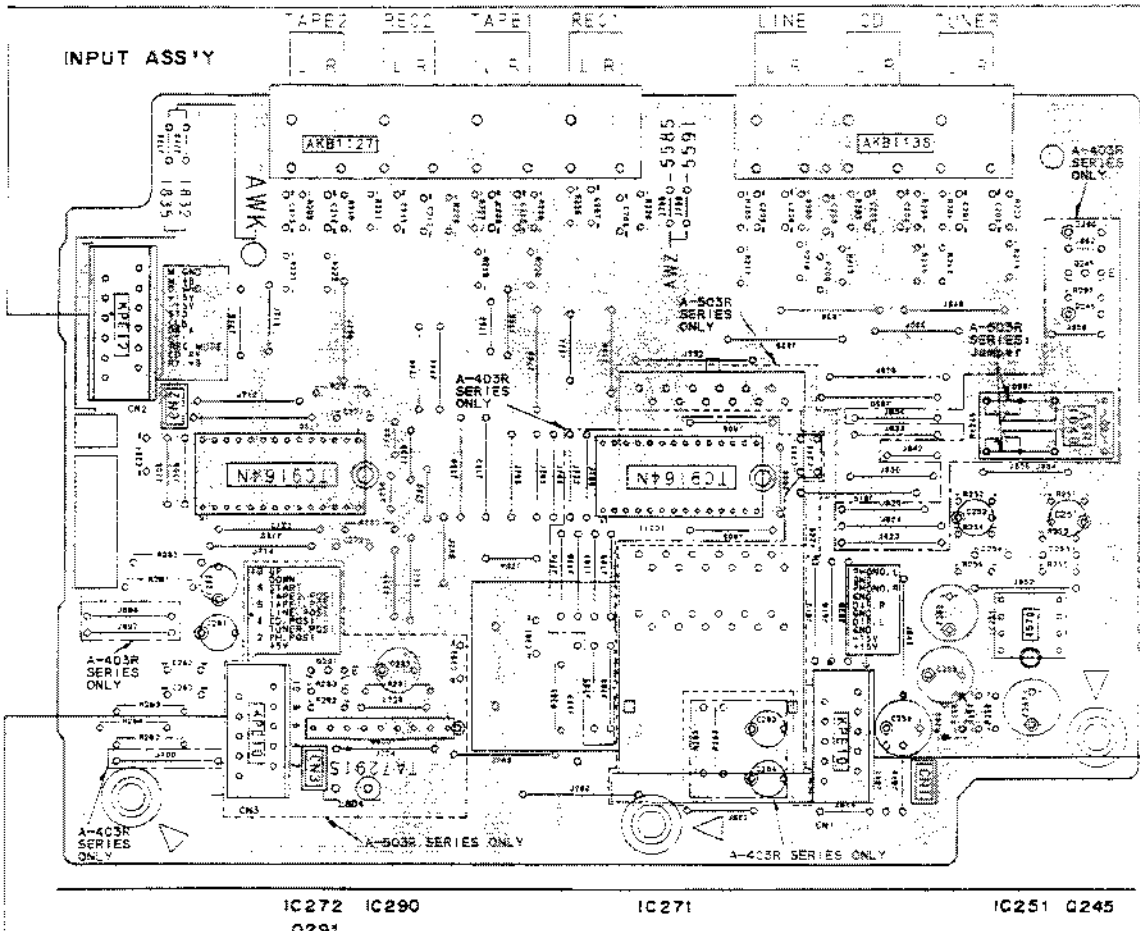
NOTE FOR PCB DIAGRAMS:

- 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
<p>Q504</p>	<p>Q504 Q504</p>	Transistor
<p>D203</p>	<p>D203</p>	Diode
<p>C513</p>	<p>C513</p>	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.

Note: A-503R SERIES indicate models A-503R/HC, HB, HEWZ and A-503R/S/HEZ. A-403R SERIES indicate models A-403R/HC and HEWZ.



A

B

C

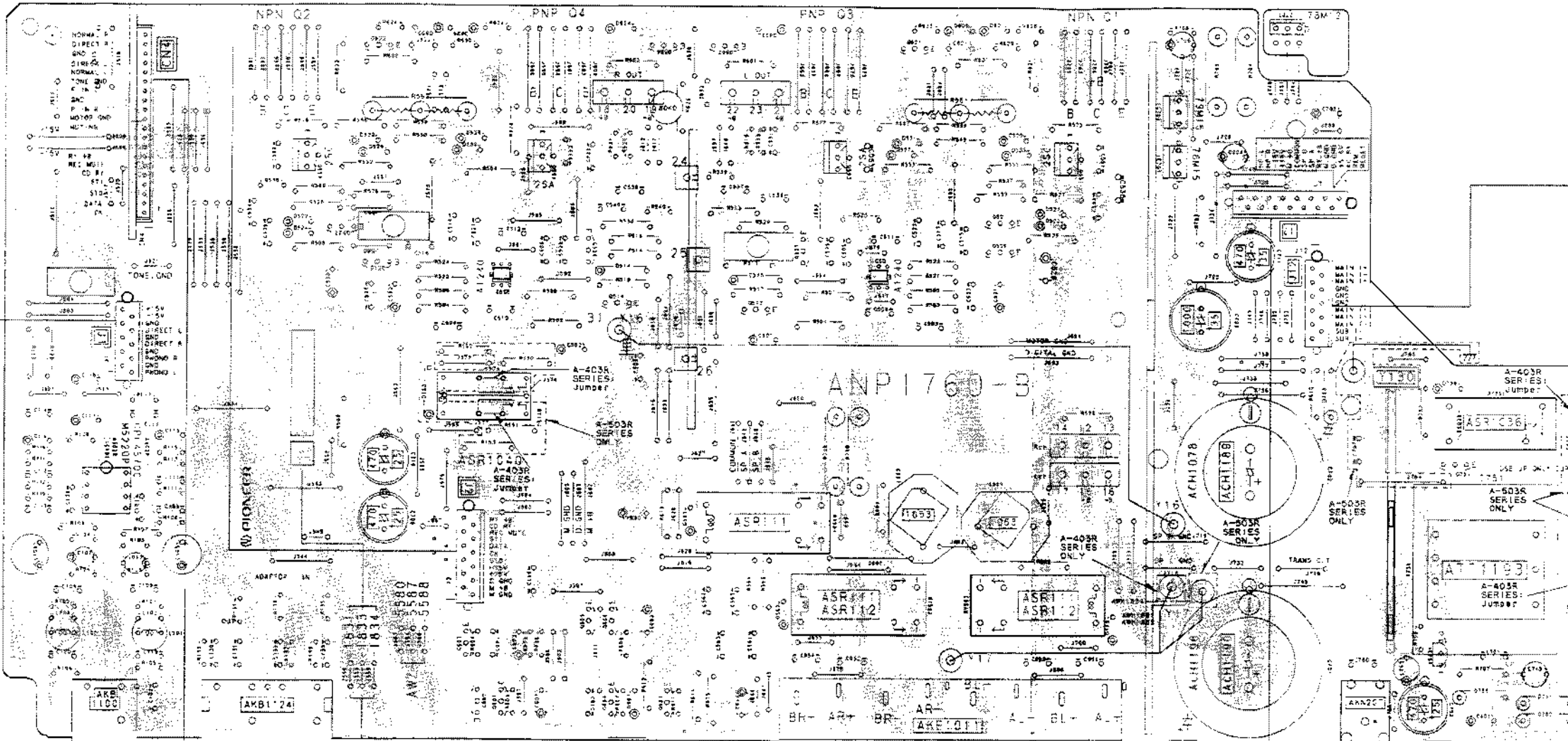
D

• This diagram is viewed from the mounted parts side.

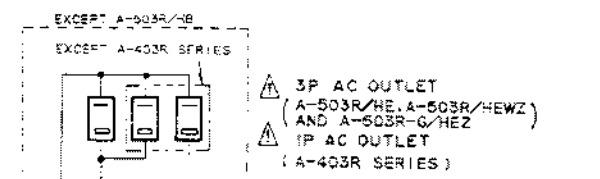
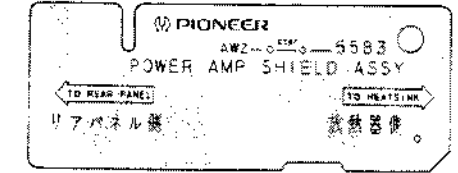
Note: P709 and C780 are used for push on.

AF ASS'Y

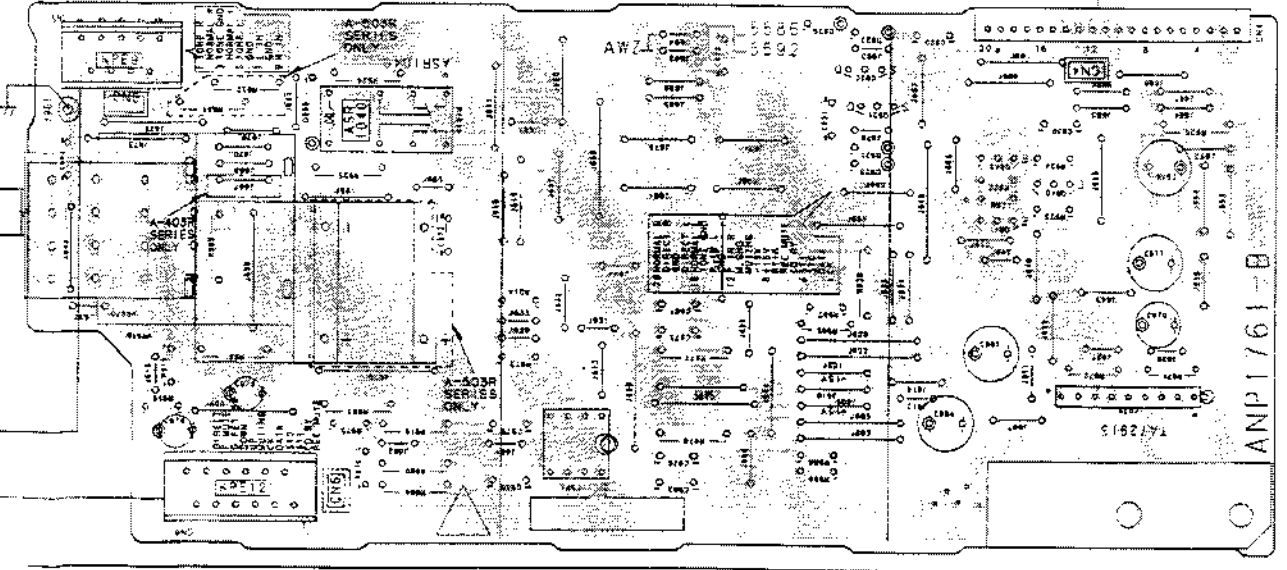
01-Q4
IC703
07 Q621
IC702
IC701
13 Q551
12 Q521
Q509
23 Q510
21 Q502
14 Q513
Q751
IC101
5 Q606
IC751
4 Q607



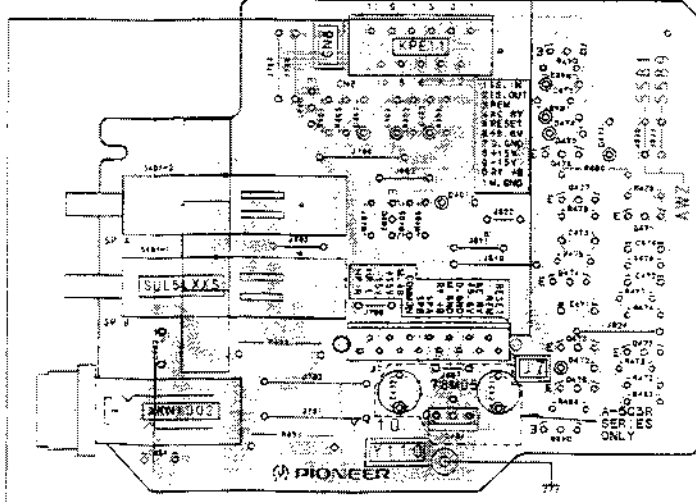
SHIELD ASS'Y



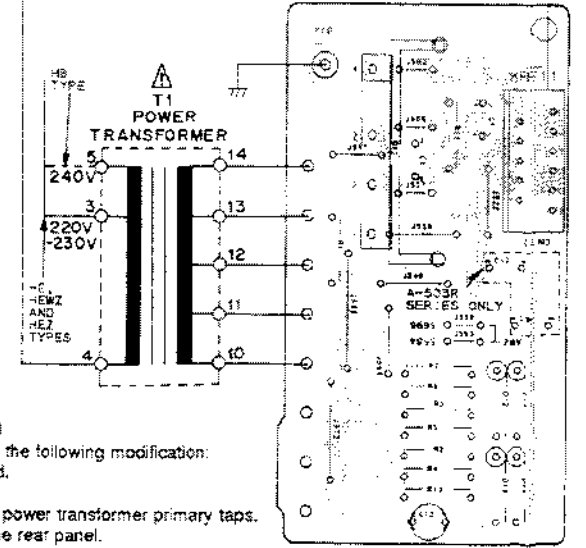
MOTOR VOL ASS'Y



SP SWITCH ASS'Y



TRANS ASS'Y



Line Voltage Selection

Line Voltage can be changed by the following modification:

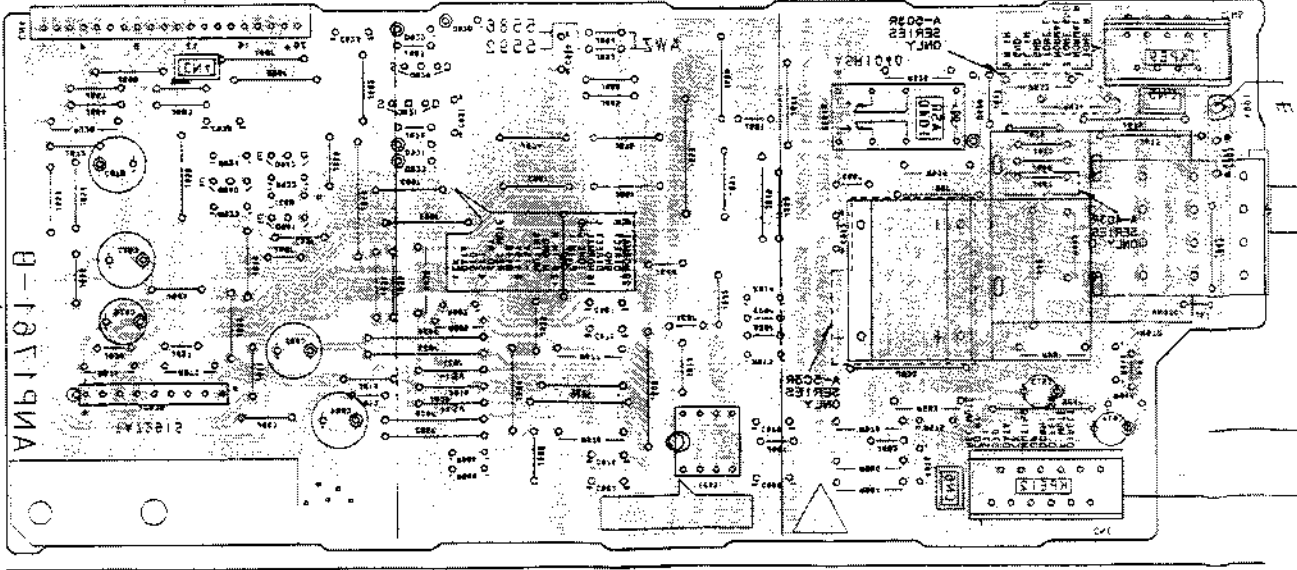
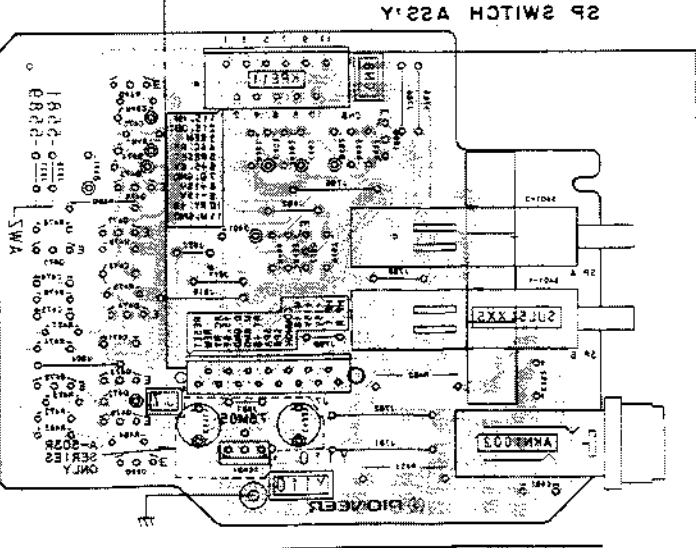
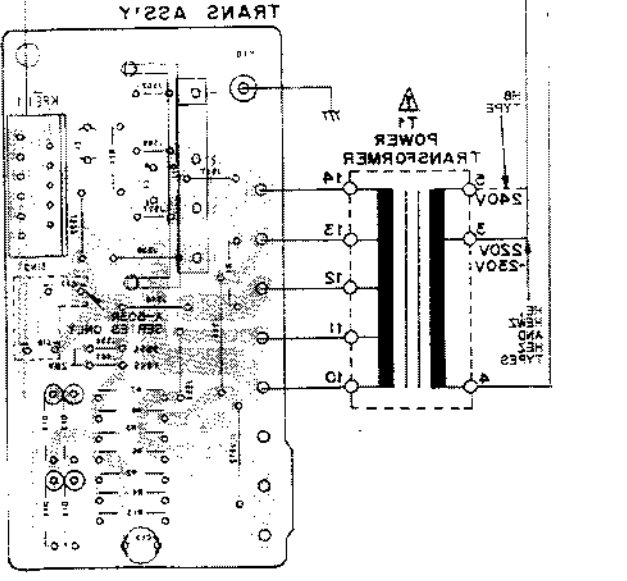
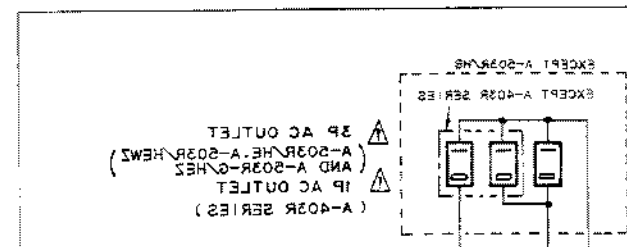
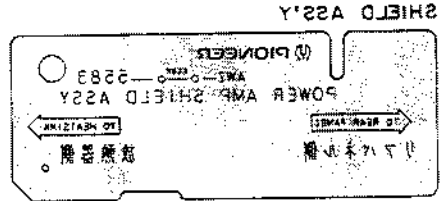
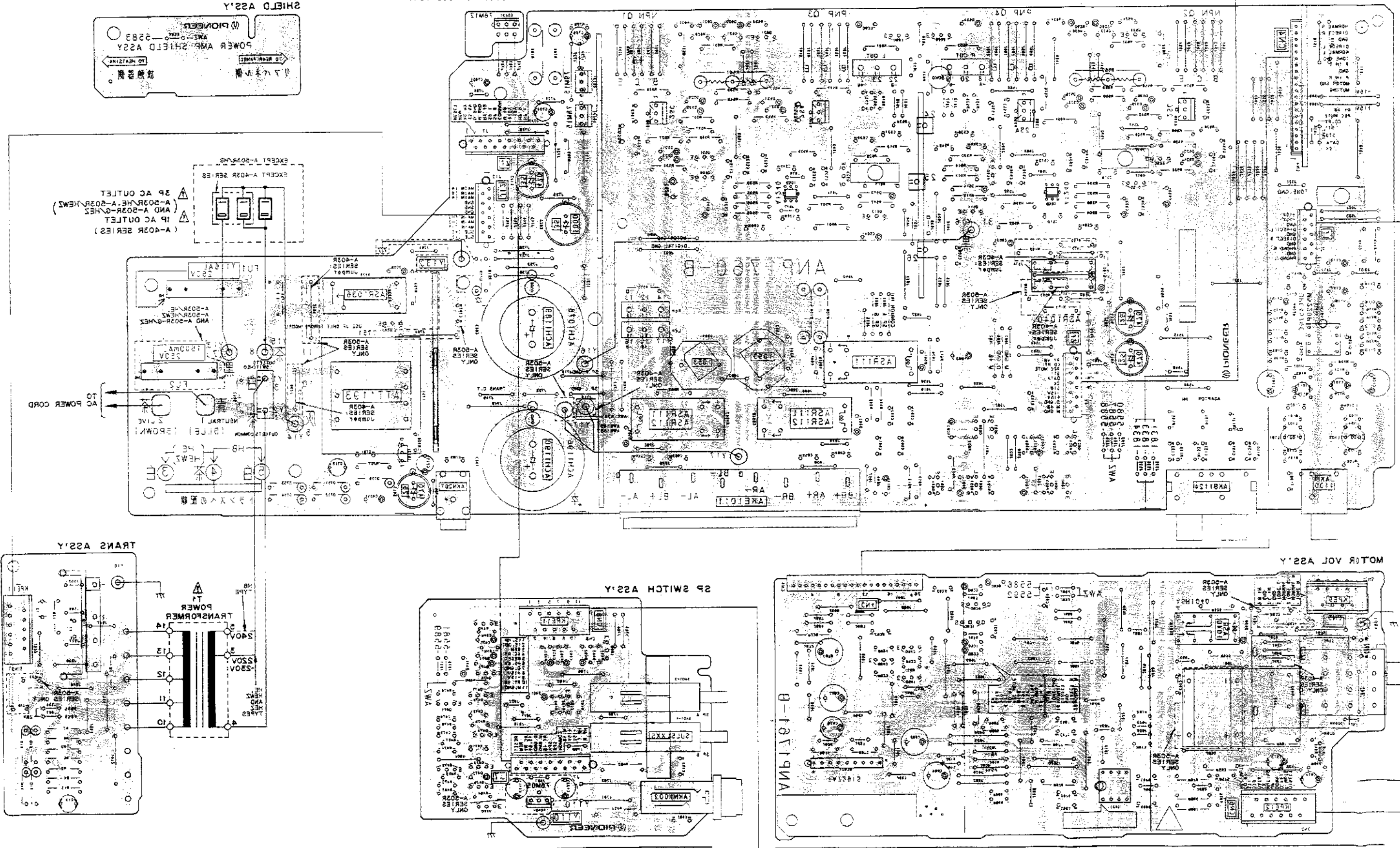
1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the connection of the power transformer primary taps.
4. Stick a line voltage label on the rear panel.

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

IC971 Q920 Q942 Q940 IC970
Q921 Q941

Q401 Q402 IC431 Q472 - Q480

This diagram is viewed from the foil side.



14 0313
 01 0305
 53 0310
 55 0351
 33 0321
 1C701
 1C705
 01 0351
 01-04
 1C703

14 0303
 1C721
 2 0308
 0101
 0121
 MOTOR VOL ASSY

AF ASSY

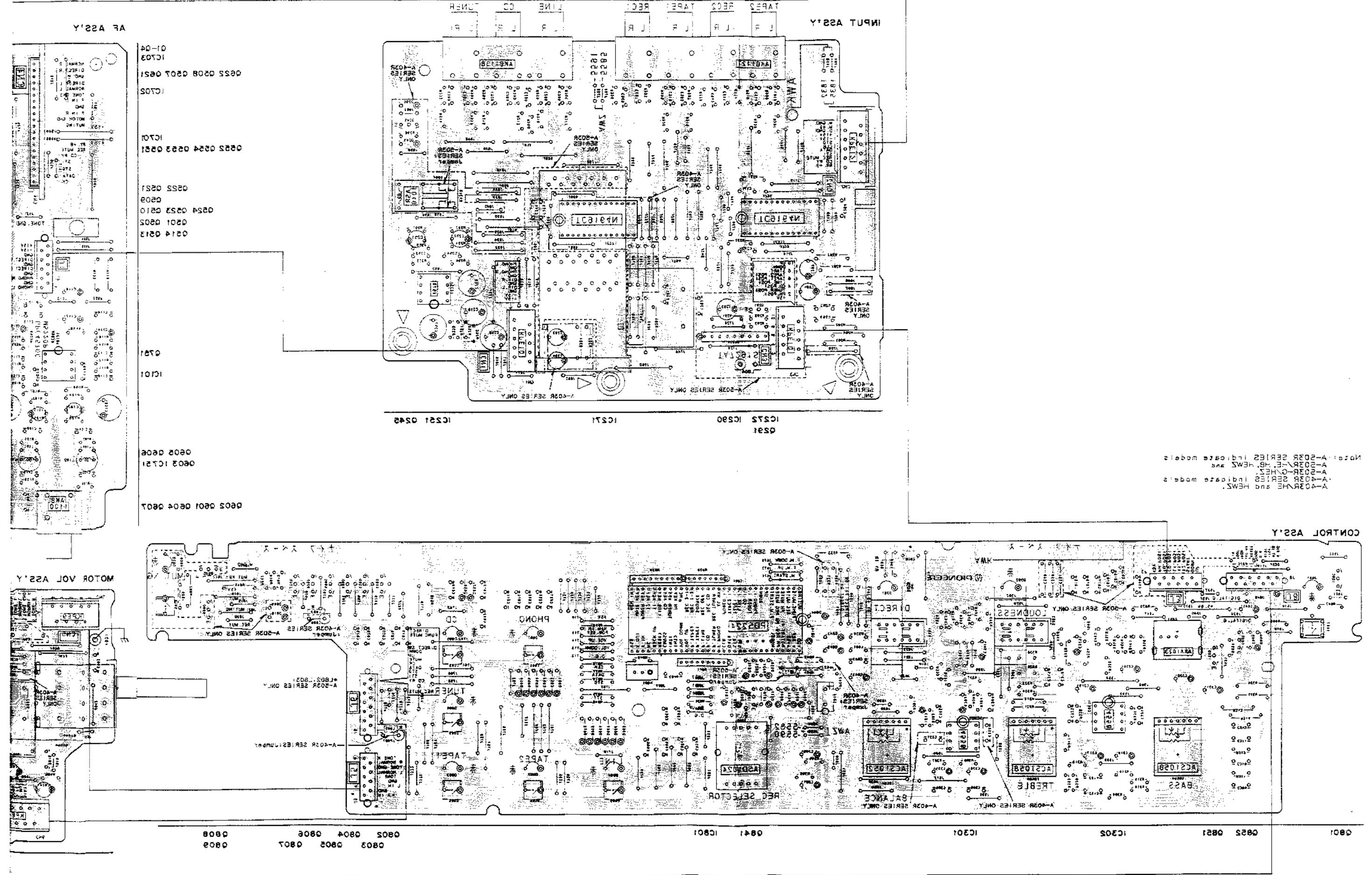
Note: R708 and C780 are used for optional.

A

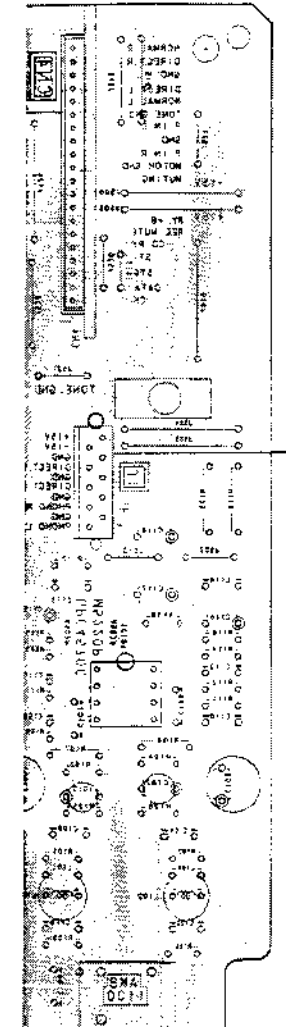
B

C

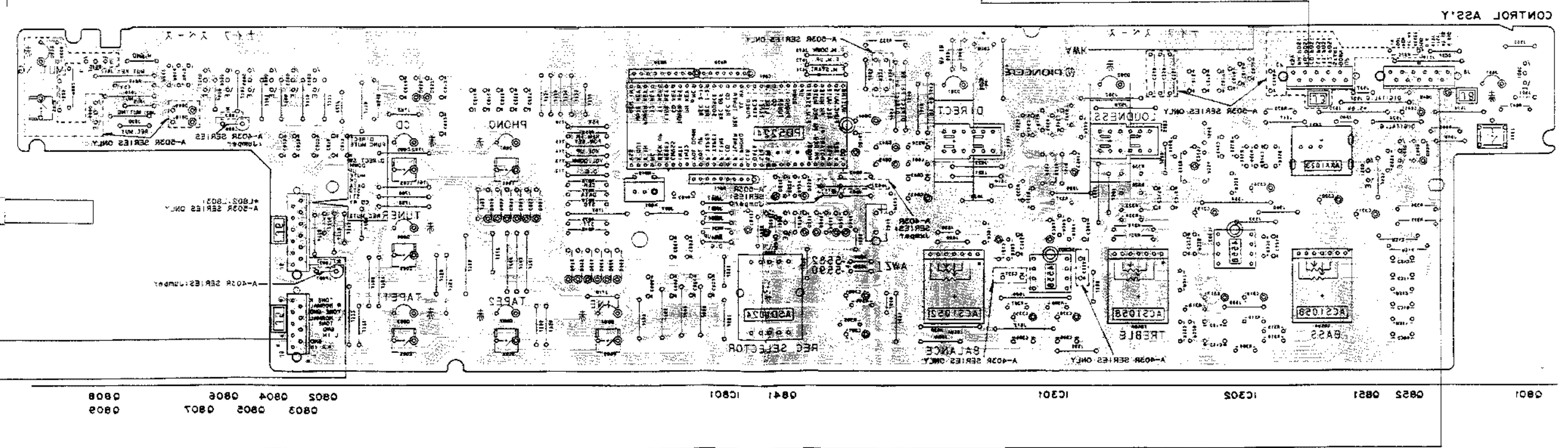
D



AF ASS'Y

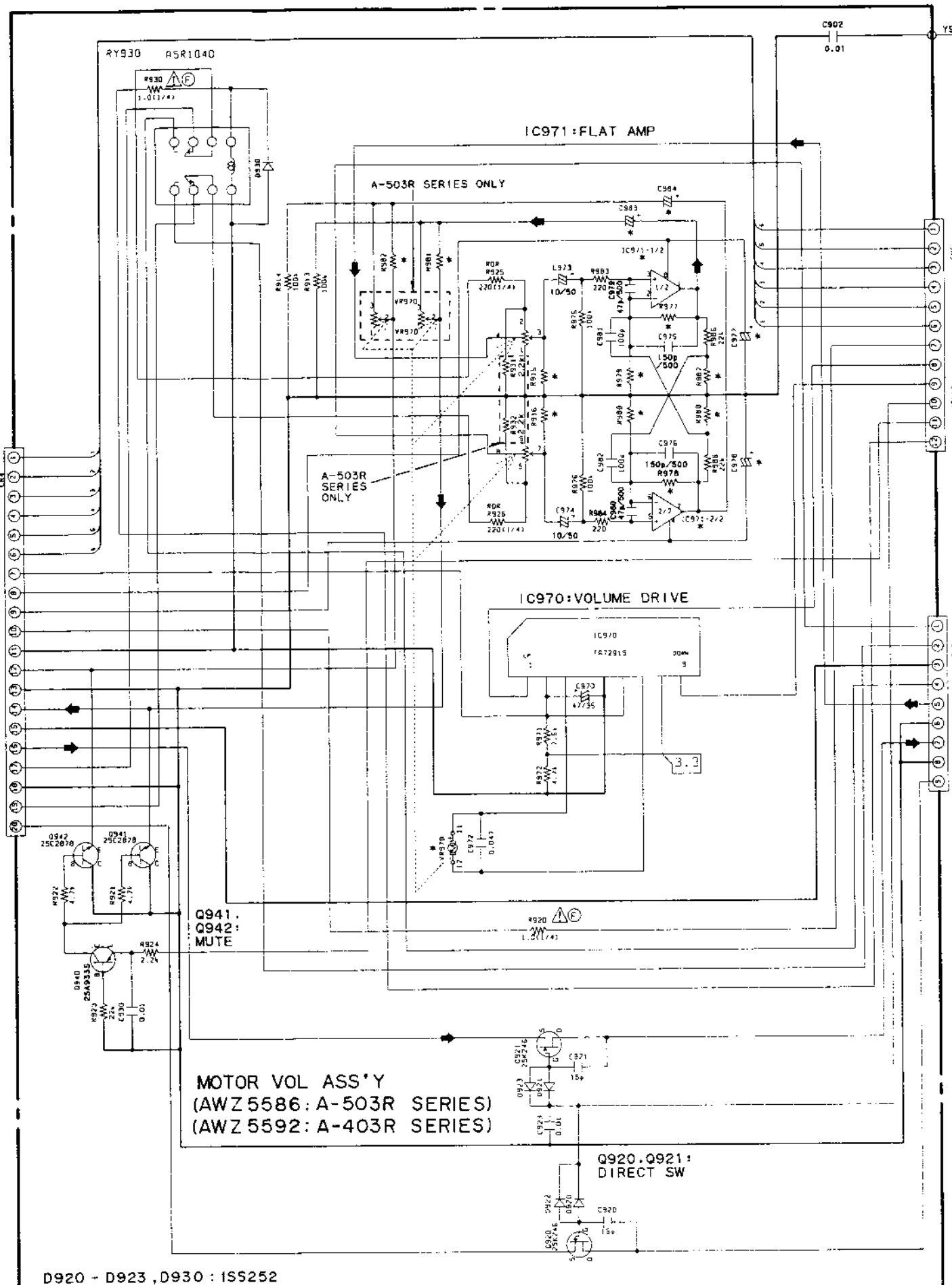


0214 0213
 0201 0205
 0254 0252 0210
 0209
 0255 0251
 0225 0224 0223 0221
 0205
 01-04
 0203



0801
 0825 0821
 0805
 0801
 0841 0801
 0803 0802 0801
 0805 0804 0806
 0808
 0808

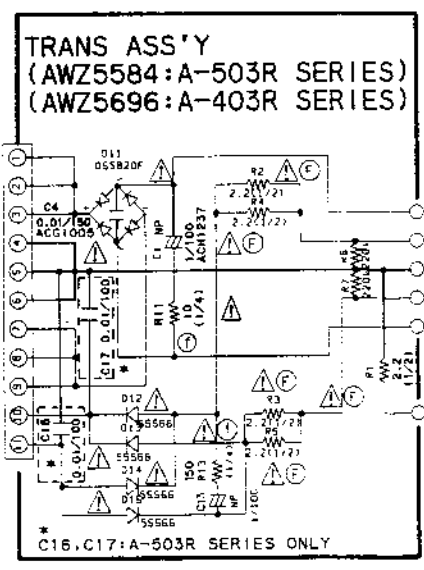
Audio signal route(DIRECT OFF)



- TO AF ASS'Y J1 (SCH-1)
- CLK
 - DATA
 - STC
 - STI
 - CD RY
 - REC MUTE
 - RY +B
 - 15V
 - 15V
 - MUTING
 - M.GND
 - POWER IN R
 - GND
 - POWER IN L
 - TONE GND
 - NORMAL L
 - DIRECT L
 - GND
 - DIRECT R
 - NORMAL R

- TO CONTROL ASS'Y J6 (SCH-1)
- REC MUTE
 - CD RY
 - STI
 - STC
 - DATA
 - CLK
 - MUTING
 - UP
 - DOWN
 - D.FET SW
 - F.MUTE
 - DIRECT

- TO CONTROL ASS'Y J5 (SCH-1)
- TONE R
 - NORMAL R
 - TONE GND
 - NORMAL L
 - TONE L
 - GND
 - L IN
 - GND
 - R IN



- TO AF ASS'Y J12 (SCH-1)
- MAIN -B
 - MAIN -0.2V
 - MAIN -0.4V
 - GND
 - GND
 - GND
 - MAIN -B
 - MAIN -5
 - MAIN -5
 - SUB -B
 - SUB -B
 - SUB -B

- TO POWER TRANSFORMER T1 (SCH-1)
- ADX2068

	A-503R SERIES	A-403R SERIES
C977, C978, C983, C984	100/25	10/50
IC971	NJM5532D-D	UPC4570C
R915, R916	8.2K	100K
R977, R978	2.7K	2.2K
R979, R980	390	430
R981, R982	3.3K	1K
R987	820	1K
R988	1K	2K
VR970	ACX1083	ACX1084

Note: A-503R SERIES indicate models A-503R/HE, HB, HEWZ and A-503R-G/HEZ. A-403R SERIES indicate models A-403R/HE and HEWZ.

TO AF ASS'Y J2 (SCH-1)

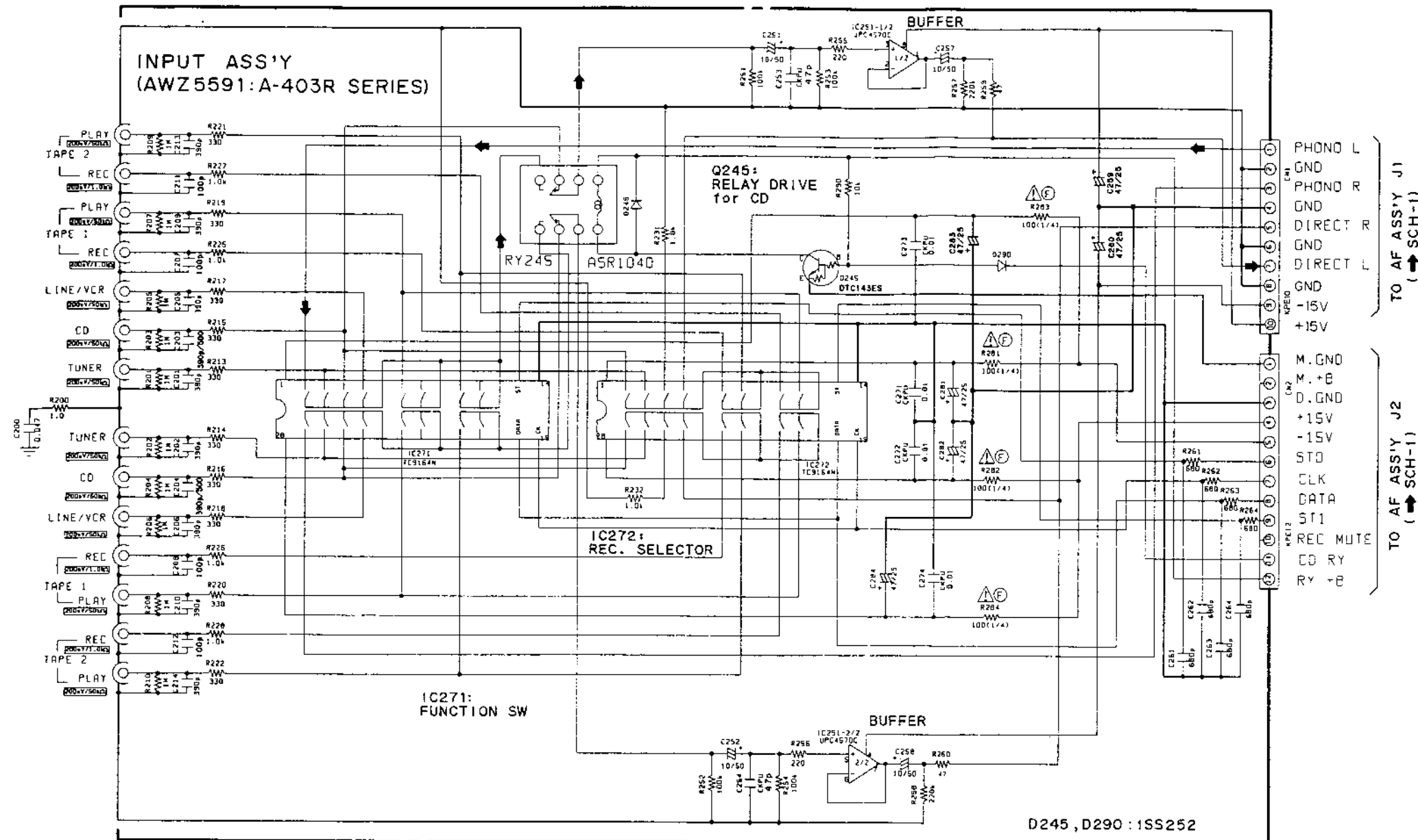
TO AF ASS'Y J3 (SCH-1)

TO CONTROL ASS'Y J3 (SCH-1)

INPUT ASSY,
MOTOR VOL ASSY,
TRANS ASSY

2.2 INPUT, MOTOR VOL AND TRANS ASSEMBLIES

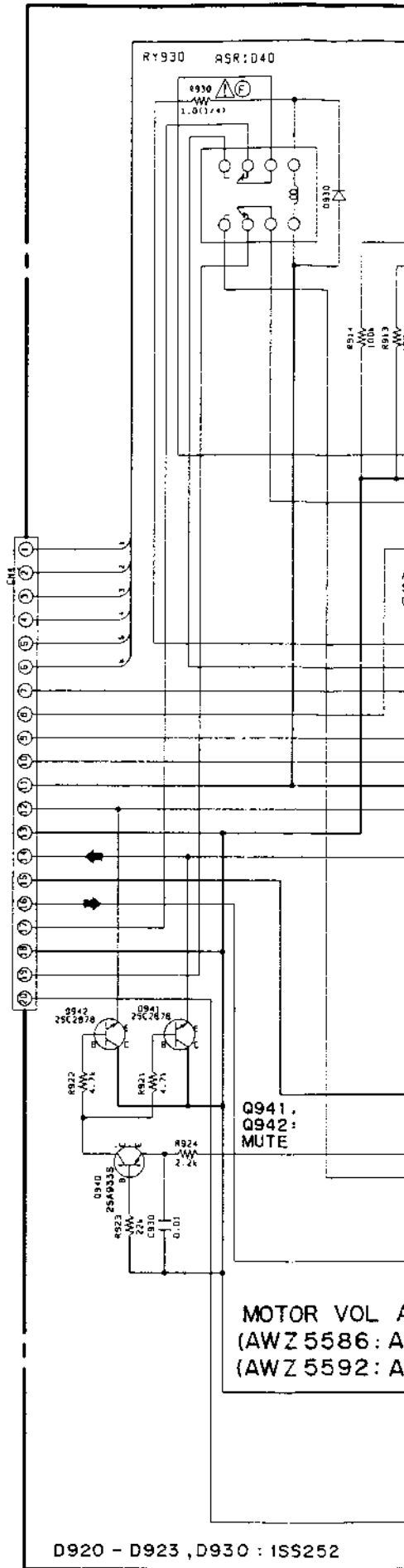
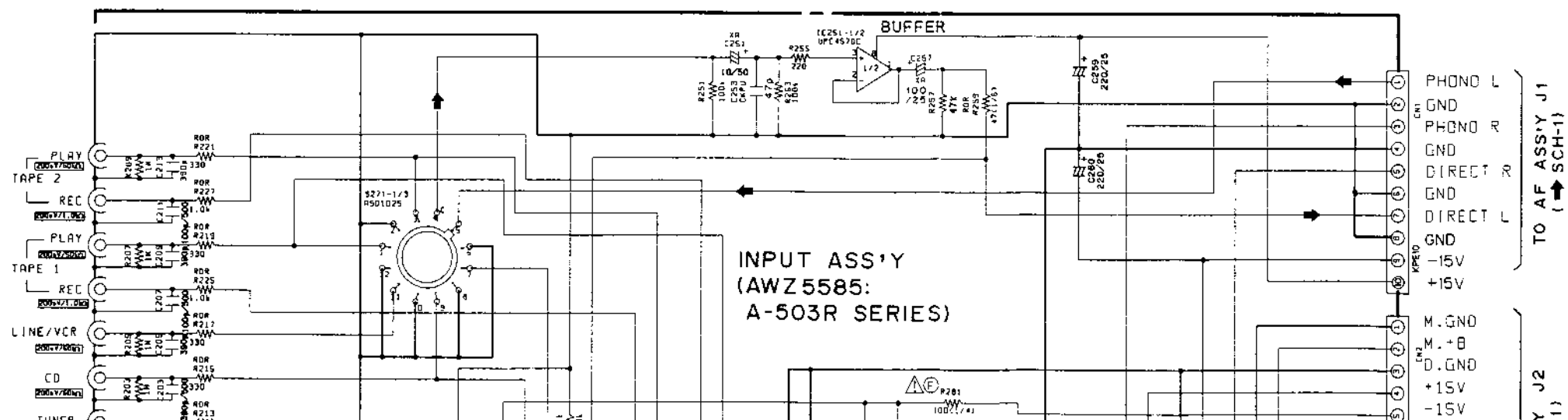
A



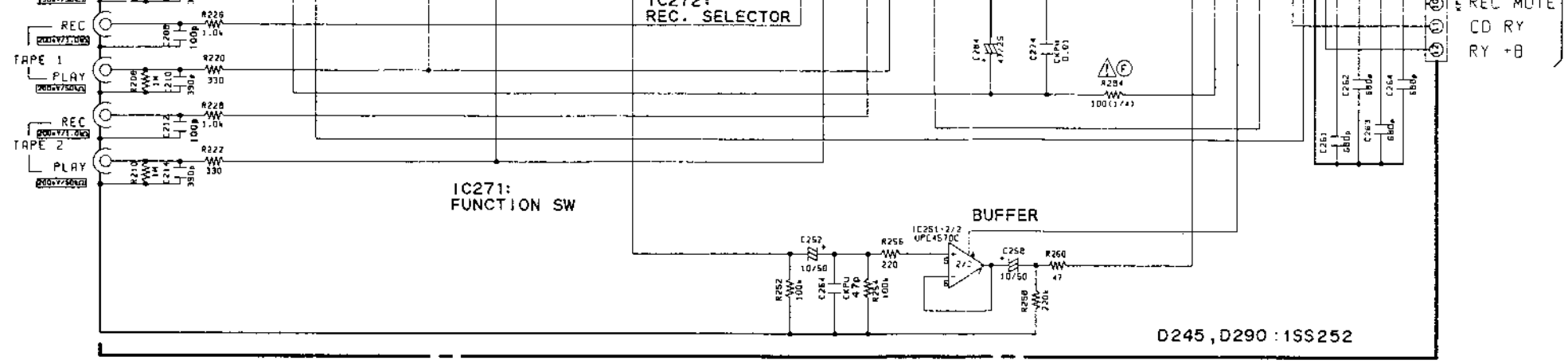
B

C

D

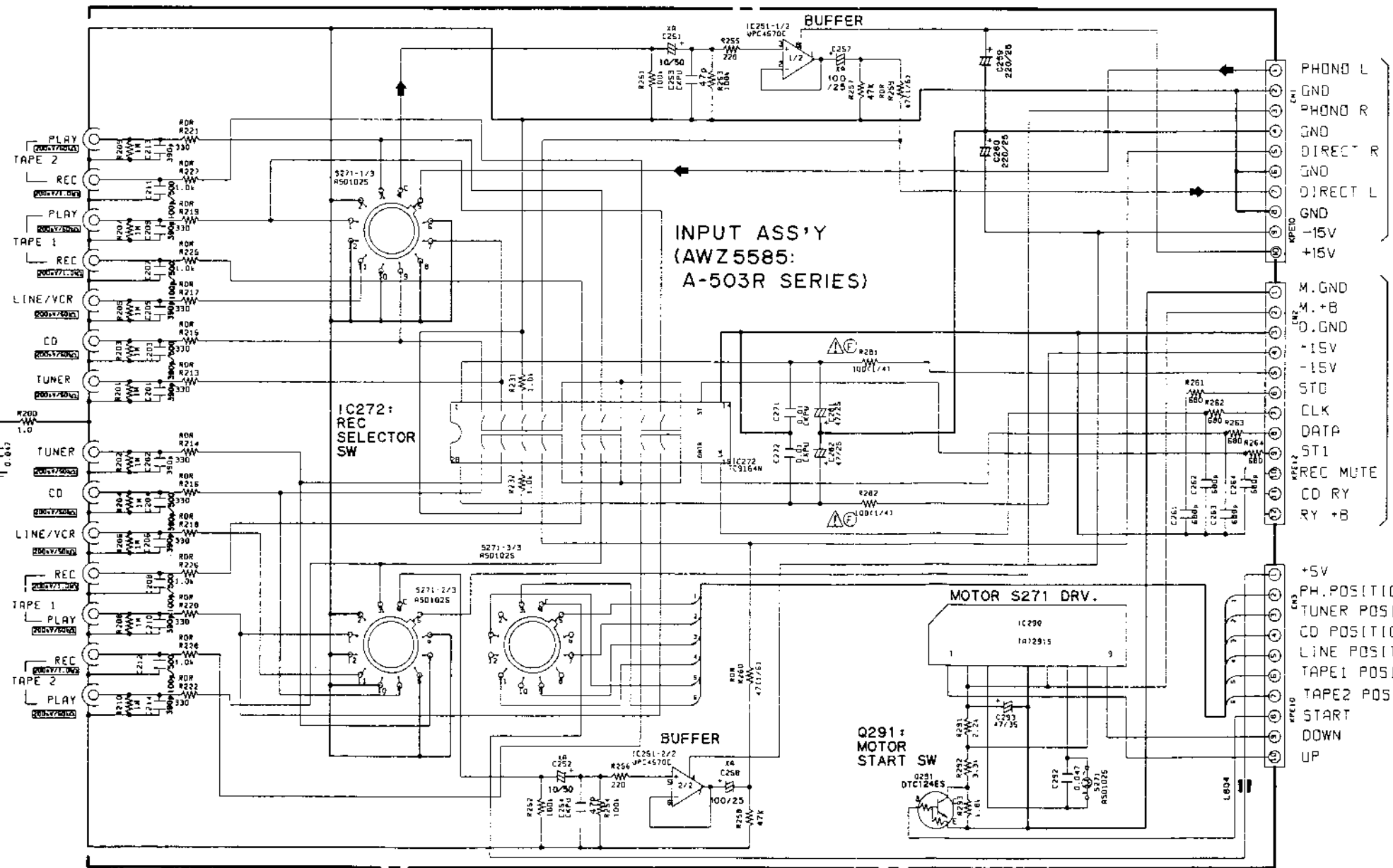
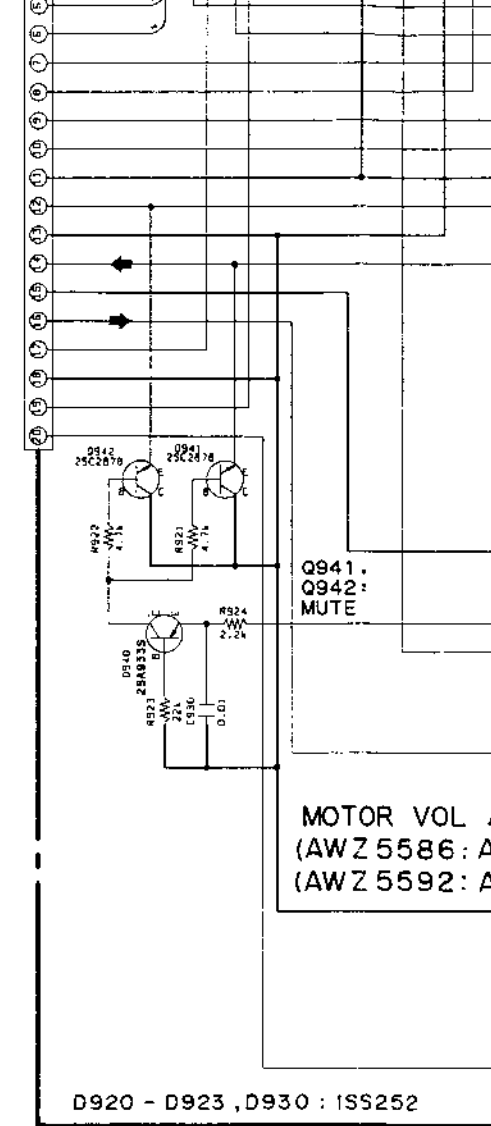


TRANS ASS'Y



TO AF ASS'Y CN4 (SCH-1)

- REC MUTE
- RY +B
- RY +B
- +15V
- 15V
- MUTING
- M.GND
- POWER IN R
- GND
- POWER IN L
- TONE GND
- NORMAL L
- DIRECT L
- GND
- DIRECT R
- NORMAL R



PHONO L
PHONO R
GND
DIRECT R
GND
DIRECT L
GND
-15V
+15V

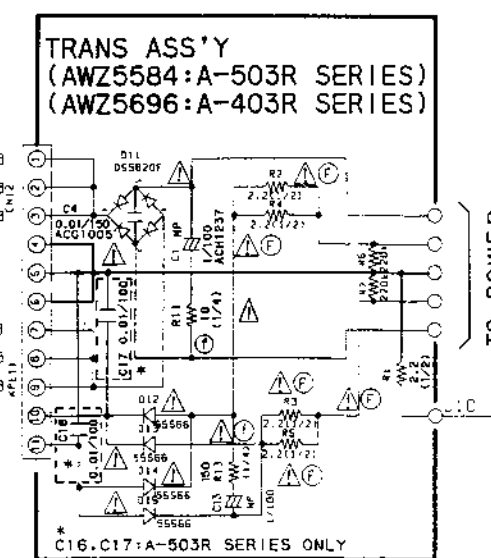
M.GND
+B
GND
+15V
-15V
STD
CLK
DATA
ST1
REC MUTE
CD RY
RY +B

+5V
PH. POSITION
TUNER POSITION
CD POSITION
LINE POSITION
TAPE1 POSITION
TAPE2 POSITION
START
DOWN
UP

TO AF ASS'Y J1 (SCH-1)

TO AF ASS'Y J2 (SCH-1)

TO CONTROL ASS'Y J3 (SCH-1)



SCH-2 INPUT ASSY, MOTOR VOL ASSY, TRANS ASSY

3. PCB PARTS LIST (FOR A-503R/HE AND A-403/HE)

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ 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 × 10 ¹	→	561	.....	RD118PM	5 6 1 J
47kΩ	→	47 × 10 ³	→	473	.....	RD114PS	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 × 10 ¹	→	5621	RN114PC	5 6 2 1 F
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Mark No.	Description	Parts No.	Mark	Mark No.	Description	Parts No.	Mark
LIST OF ASSEMBLIES					Q523,Q524	2SC2705	
For A-503R					Q551,Q552	2SC4793	
NSP	AF ASS'Y	AWK1831		Q605	DTC124ES		
	— AF ASS'Y	AWZ5580		Q606,Q751	DTC143ES		
	— SP SWITCH ASS'Y	AWZ5581		D150 (A-503R only)	1SS252		
	— CONTROL ASS'Y	AWZ5582		D513,D514,D521-D524	1SS252		
	— SHIELD ASS'Y	AWZ5583		D529-D532,D561-D563	1SS252		
NSP	INPUT ASS'Y	AWK1832		D621-D626,D756	1SS252		
	— TRANS ASS'Y	AWZ5584		D601	HZS12AL		
	— INPUT ASS'Y	AWZ5585		D525-D528 (For A-503R only)	HZS9A2L		
	— MOTOR VOL ASS'Y	AWZ5586		D525-D528 (For A-403R only)	HZS7B2L		
For A-403R					D713,D751-D755	S5566	
NSP	AF ASS'Y	AWK1834		COILS AND FILTERS			
	— SHIELD ASS'Y	AWZ5583		L561,L562 (1.5uH)	ATH1053		
	— AF ASS'Y	AWZ5588		L1,L2 (A-503R only)	ATX1012		
	— SP SWITCH ASS'Y	AWZ5589		L101-L104	LAU221K		
	— CONTROL ASS'Y	AWZ5590		TRANSFORMERS			
NSP	INPUT ASS'Y	AWK1835		Δ T751 (1.6VA)	ATT1193		
	— INPUT ASS'Y	AWZ5591		SWITCHES AND RELAYS			
	— MOTOR VOL ASS'Y	AWZ5592		RY561	ASR-111		
	— TRANS ASS'Y	AWZ5696		RY562 ,RY563 (For A-503R)	ASR-112		
				RY562 ,RY563 (For A-403R)	ASR-111		
				Δ RY751	ASR1036		
				RY150 (A-503R only)	ASR1040		
AF ASS'Y				CAPACITORS			
SEMICONDUCTORS				Δ C708,C754 (0.01/AC400V)	ACG1002		
IC101		M5220P		C751,C780 (0.01/AC150V)	ACG1005		
IC751		M5278L56		C702 (10000/50) (For A-503R)	ACH1078		
IC703		NJM78M12FAS		Δ C702 (6800/50) (For A-403R)	ACH1189		
IC701		NJM78M15FAS		Δ C701 (10000/50) (For A-503R)	ACH1196		
IC702		NJM79M15FA		Δ C701 (6800/50) (For A-403R)	ACH1190		
Q509,Q510		2SA1048		C551-C554	CCCSL101K500		
Q521,Q522		2SA1145		C503,C504	CCCSL221K500		
Q501,Q502		2SA1240		C513,C514,C523,C524	CCCSL270K500		
Q553,Q554		2SA1837		C509-C512	CCCSL470K500		
Q603		2SA933S		C119,C120	CCMSL680J50		
Q601,Q602,Q607		2SC1740S		C715	CEANP010M100		
Q513,Q514		2SC1845		C621,C622	CEANP47M50		
Q604		2SC2235		C101,C102,C115,C116	CEA S100M50		
Q621,Q622		2SC2240		C704-C706	CEA S100M50		
Q507,Q508		2SC2603					

Mark	No.	Description	Parts No.	Mark	Mark	No.	Description	Parts No.	Mark
	C117,C118,C603		CEAS101M25		SP SWITCH ASS'Y				
	C401,C604,C611		CEAS101M50		SEMICONDUCTORS				
	C703		CEAS102M35		IC431 (A-503R only)			NJM78M05FAS	
	C753		CEAS470M16		Q402			2SA933S	
	C709,C710,C752		CEAS471M25		Q401,Q472-Q477			2SC1740S	
	C711		CEAS471M35		Q478-Q480			DTC124ES	
	C105,C106,C529,C530,C601		CEAS471M6		D401,D403,D471-D474			1SS252	
	C605		CEAS4R7M50						
	C501,C502 (For A-503R)		CEEA100M50		D402			RD6.2ESB3	
	C501,C502 (For A-403R)		CEAS100M50		SWITCHES AND RELAYS				
	C521,C522 (For A-503R)		CEEA220M50		S401			SUL5LXXS	
	C521,C522 (For A-403R)		CASA470M10		CAPACITORS				
	C109,C110		CFTXA243J50		C471,C472,C474			CCMSL101J50	
	C111,C112		CFTXA823J50		C473			CEANP4R7M50	
	C561-C564		CFTYA104J50		C475			CEASOR1M50	
	C531,C532		CFTYA105J50		C402			CEAS100M50	
	C951-C954		CFTYA333J50		C431,C432 (A-503R only)			CEAS101M25	
	C113,C114,C505,C506,C533-C540		CKCYB222K50		C451,C452			CGMYX392M25	
	C130-C133		CKCYB391K500		RESISTORS				
	C515,C516,C527,C528		CKCYB471K50		R480			RD1/4PM472J	
	C610		CKCYB472K50		△ R451,R452			RS1LMF681J	
	C150,C500,C602		CKCYF103Z50		Other Resistors				
	C707 (A-503R only)		CKCYF103Z50					RD1/8PM□□□J	
	C100		CKCYF473Z50		OTHERS				
	C107,C108		CKMYB181K50		JACK			AKN1002	
	C103,C104		CKMYB221K50		CN8	CONNECTOR(11P)		KPE11	
	C525,C526		CMA050D500		CONTROL ASS'Y				
RESISTORS					SEMICONDUCTORS				
△	R561,R562 (0.33/5W)		ACN1087		IC301,IC302			NJM4558DXP	
	R752		RD1/2PM220J		IC801			PD5224A	
△	R565,R566		RD1/2PMF100J		Q801-Q807,Q841,Q851,Q852			DTC124ES	
	R150,R151 (A-503R only)		RD1/4PM101J		Q808,Q809 (A-503R only)			DTC143ES	
	R521,R522		RD1/4PM392J		D809,D810 (A-503R only)			1SS252	
	R501,R502		RD1/4PM470J		D839-D858,D861			1SS252	
	R612		RD1/4PM472J		D865-D870			1SS252	
	R503,R504,R523,R524		RD1/4PM563J		D808 (RED) (A-503R only)			AEL1065	
	R152,R153 (A-503R only)		RD1/4PM911J		D362,D801 (RED)			AEL1065	
△	R579		RD1/4PMF010J		D361 (ORANGE)			AEL1084	
△	R509		RD1/4PMF100J		D802-D807 (RED)			AEL1118	
△	R119,R120,R563,R564,R625		RD1/4PMF101J		COILS AND FILTERS				
△	R613-R615		RD1/4PMF221J		L801			LAU221K	
△	R621,R622,R631,R632		RD1/4PMF222J		L802,L803 (A-503R only)			ATX1008	
△	R527,R528		RD1/4PMF680J		SWITCHES AND RELAYS				
△	R610		RFA1/4PS100J		S800			ASD1024	
△	R529,R530,R551-R558,R703		RFA1/4PS101J		S301,S302			ASG1019	
△	R549,R550		RFA1/4PS221J		S808 (A-503R only)			ASG1034	
△	R513-R516		RFA1/4PS391J		S801-S806			ASG1034	
△	R707		RFA1/4PS471J		S807			ASG1052	
△	R559,R560,R575-R578		RFA1/4PS4R7J		CAPACITORS				
△	R704,R705		RS2LMF152J		C844 (0.022F/5.5)			ACH1246	
△	R709,R710		RS2LMF331J		C327,C328 (A-403R only)			CCCSL470J50	
Other Resistors					C323,C324			CCMSL390J50	
			RD1/8PM□□□J		C303,C304			CCMSL470J50	
OTHERS					C301,C302,C317,C318			CEAS100M50	
CN8104	PIN JACK(2P)		AKB1100		C325,C326,C341,C342			CEAS100M50	
	PIN JACK(4P)		AKB1124		SP SWITCH ASS'Y				
	SPEAKER TERMINAL 8-P		AKE1011		SEMICONDUCTORS				
CN8108	JACK		AKN-207		IC431 (A-503R only)			NJM78M05FAS	
					Q402			2SA933S	
					Q401,Q472-Q477			2SC1740S	
					Q478-Q480			DTC124ES	
					D401,D403,D471-D474			1SS252	
					D402			RD6.2ESB3	
					SWITCHES AND RELAYS				
					S401			SUL5LXXS	
					CAPACITORS				
					C471,C472,C474			CCMSL101J50	
					C473			CEANP4R7M50	
					C475			CEASOR1M50	
					C402			CEAS100M50	
					C431,C432 (A-503R only)			CEAS101M25	
					C451,C452			CGMYX392M25	
					RESISTORS				
					R480			RD1/4PM472J	
					△ R451,R452			RS1LMF681J	
					Other Resistors				
								RD1/8PM□□□J	
					OTHERS				
					JACK			AKN1002	
					CN8	CONNECTOR(11P)		KPE11	
					CONTROL ASS'Y				
					SEMICONDUCTORS				
					IC301,IC302			NJM4558DXP	
					IC801			PD5224A	
					Q801-Q807,Q841,Q851,Q852			DTC124ES	
					Q808,Q809 (A-503R only)			DTC143ES	
					D809,D810 (A-503R only)			1SS252	
					D839-D858,D861			1SS252	
					D865-D870			1SS252	
					D808 (RED) (A-503R only)			AEL1065	
					D362,D801 (RED)			AEL1065	
					D361 (ORANGE)			AEL1084	
					D802-D807 (RED)			AEL1118	
					COILS AND FILTERS				
					L801			LAU221K	
					L802,L803 (A-503R only)			ATX1008	
					SWITCHES AND RELAYS				
					S800			ASD1024	
					S301,S302			ASG1019	
					S808 (A-503R only)			ASG1034	
					S801-S806			ASG1034	
					S807			ASG1052	
					CAPACITORS				
					C844 (0.022F/5.5)			ACH1246	
					C327,C328 (A-403R only)			CCCSL470J50	
					C323,C324			CCMSL390J50	
					C303,C304			CCMSL470J50	
					C301,C302,C317,C318			CEAS100M50	
					C325,C326,C341,C342			CEAS100M50	

Mark No.	Description	Parts No.	Mark	Mark No.	Description	Parts No.	Mark
C307,C308 (A-503R only)		CEAS101M25		IC251		UPC4570C	
C307,C308 (A-403R only)		CEAS100M50		Q245 (A-403R only)		DTC143ES	
C321,C322		CEAS101M25		Q291 (A-503R only)		DTC124ES	
C845		CEAS2R2M50		D245,D290 (A-403R only)		1SS252	
C841,C843		CEAS470M16					
C319,C320		CEAS470M25		COILS AND FILTERS			
C309,C310		CFTYA153J50		L804 (A-503R only)		ATX1008	
C315,C316		CFTYA183J50		SWITCHES AND RELAYS			
C345,C346		CFTYA273J50		S271 (A-503R only)		ASD1025	
C347,C348		CFTYA393J50		RY245 (A-403R only)		ASR1040	
C311,C312		CFTYA823J50		CAPACITORS			
C340 (A-503R only)		CKCYF103Z50		C257,C258 (100/25) (For A-503R)		ACH1262	
C300,C305,C306,C842		CKCYF103Z50		C257,C258 (For A-403R)		CEAS100M50	
C846		CKCYF103Z50		C207,C208,C211,C212 (For A-503R)		CCCSL101K500	
C801-C820		CKMYB271K50		C207,C208,C211,C212 (For A-403R)		CCCSL101J50	
C875-C878		CKMYB681K50		C253,C254		CCPUSL470J50	
C349-C351 (A-503R only)		CKPUYF103Z25		C259,C260 (For A-503R)		CEAS221M25	
C313,C314		CQMA332J50		C259,C260 (For A-403R)		CEAS470M25	
RESISTORS				C281,C282		CEAS470M25	
R828		RA6T104J		C283,C284 (A-403R only)		CEAS470M25	
R811,R834		RA8T104J		C293 (A-503R only)		CEAS470M35	
R335,R336		RD1/4PMF101J		C251,C252 (A-503R only)		CEEA100M50	
VR301 (100k×2)		ACSI052		C251,C252 (A-403R only)		CEAS100M50	
VR302,VR303 (100k-20A×2)		ACSI058		C201,C202,C205,C206		CKCYB391K50	
Other Resistors		RD1/8PM□□□J		C209,C210,C213,C214		CKCYB391K50	
OTHERS				C203,C204		CKCYB391K500	
X801 CERAMIC RESONATOR(4.19MHZ)		ASS1018		C200		CKCYF473Z50	
REMOTE RECEIVER UNIT		AXX1023		C292 (A-503R only)		CKCYX473M25	
SHIELD ASS'Y				C261-C264		CKMYB681K50	
No service part				C271,C272		CKPUYF103Z25	
TRANS ASS'Y				C273,C274 (A-403R only)		CKPUYF103Z25	
SEMICONDUCTORS				RESISTORS			
D11		D5SB20F		△ R281,R282		RD1/4PMF101J	
D12-D15		S5566		△ R283,R284 (A-403R only)		RD1/4PMF101J	
CAPACITORS				Other Resistors		RD1/8PM□□□J	
C4 (0.01/AC150V)		ACG1005		OTHERS			
C1 (10000/56)		ACH1237		CN8204 PIN JACK(8P)		AKB1127	
C13		CEANP010M100		CN8205 PIN JACK(6P)		AKB1138	
C16,C17 (A-503R only)		CQPA103J100		CN3 CONNECTOR(10P)(A-503R only)		KPE10	
RESISTORS				CN1 CONNECTOR(10P)		KPE10	
R1-R5		RD1/2PMF2R2J		CN2 CONNECTOR(12P)		KPE12	
R11		RFA1/4PS100J		MOTOR VOL ASS'Y			
R13		RFA1/4PS151J		SEMICONDUCTORS			
Other Resistors		RD1/8PM□□□J		IC971 (For A-503R)		NJM5532D-D	
OTHERS				IC971 (For A-403R)		UPC4570C	
SCREW		ABA-298		IC970		TA7291S	
CN12 CONNECTOR(11P)		KPE11		Q940		2SA933S	
INPUT ASS'Y				Q941,Q942		2SK2878	
SEMICONDUCTORS				Q920,Q921		2SK246	
IC290 (A-503R only)		TA7291S		D920-D923,D930		1SS252	
IC271 (A-403R only)		TC9164N		SWITCHES AND RELAYS			
IC272		TC9164N		RY930		ASR1040	
CAPACITORS				CAPACITORS			
C977,C978,C983,C984 (100/25)				C977,C978,C983,C984 (100/25)		ACH1262	
(For A-503R)				(For A-503R)		CEAS100M50	
C977,C978,C983,C984 (For A-403R)				C981,C982		CCCSL101K500	
C981,C982				C975,C976		CCCSL151K500	

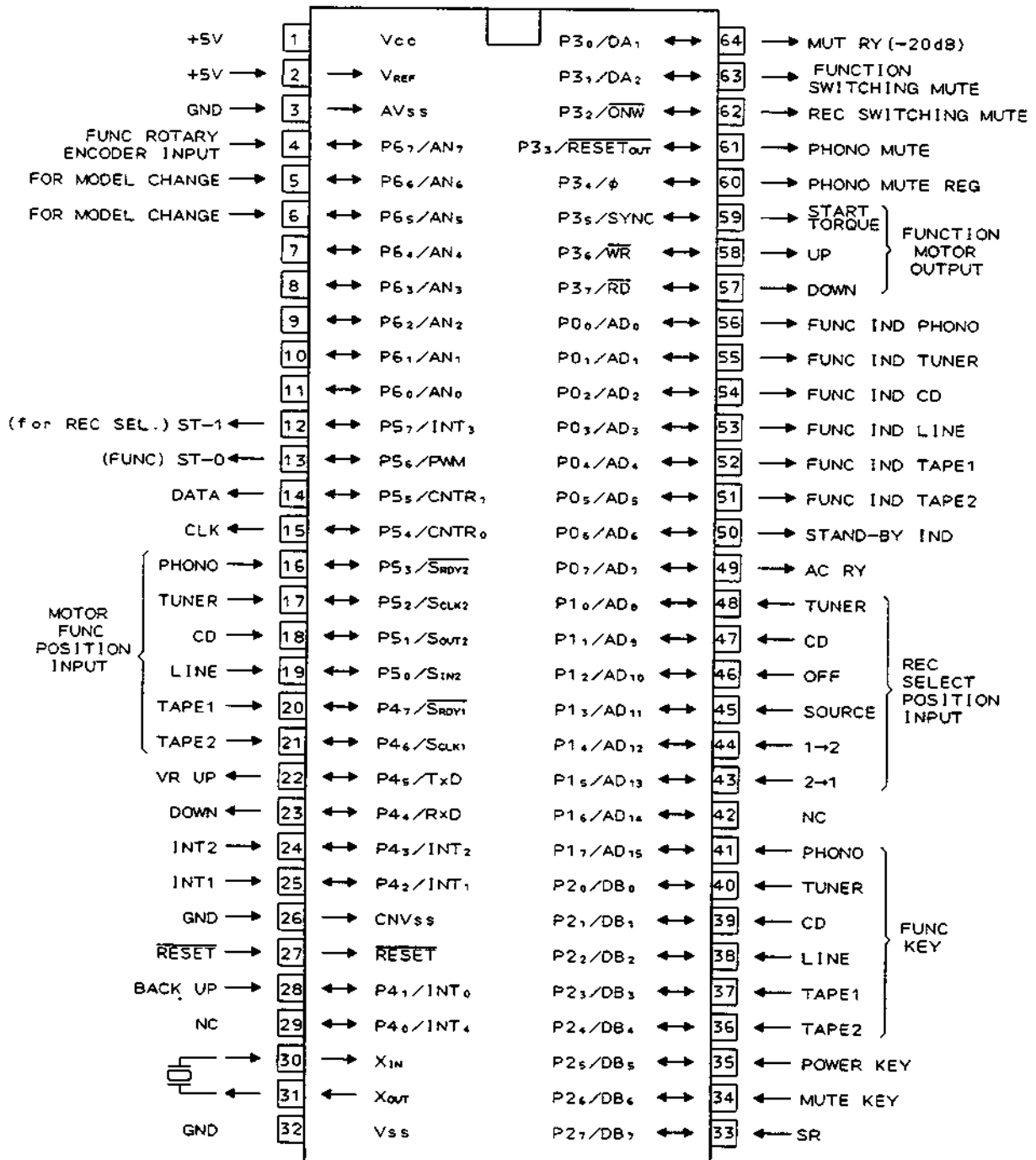
Mark No.	Description	Parts No.	Mark
C979,C980		CCCSL470K500	
C920,C921		CCMSL150J50	
C970		CEAS470M35	
C973,C974 (For A-503R)		CEEA100M50	
C973,C974 (For A-403R)		CEAS100M50	
C902,C923,C930		CKCYF103Z50	
C972		CKCYX473M25	
RESISTORS			
R925,R926		RD1/4PM221J	
R931,R932		RD1/4PM222J	
R977,R978 (For A-503R)		RD1/4PM272J	
R977,R978 (For A-403R)		RD1/4PM222J	
R981,R982 (For A-503R)		RD1/4PM332J	
R981,R982 (For A-403R)		RD1/4PM102J	
R979,R980 (For A-503R)		RD1/4PM391J	
R979,R980 (For A-403R)		RD1/4PM431J	
R920,R930		RD1/4PMF010J	
VR970 (20k×2, 30k×2) (For A-503R)		ACX1083	
VR970 (50k-A5×2) (For A-403R)		ACX1084	
	Other Resistors	RD1/8PM□□□J	
OTHERS			
CN6	CONNECTOR(12P)	KPE12	
CN5	CONNECTOR(9P)	KPE9	

4. IC INFORMATION

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

■ **IC801 : (PD5224A)**
 ● **AMP CONTROL μ - COM**

Pin Assignment



Pin Function

No.	Name	I/O	Function name	Function	Logic
1	V _{cc}		V _{cc}	Input voltage +5V	-
2	V _{int}	I	-	"H" Pull up	-
3	AV _{ss}	I	-	Digital GND	-
4	P67/AN7	I	F-EN	Function Rotary encoder input	Step V input
5	P66/AN6	I		For model change	"H"
6	P65/AN5	I		For model change	"H"
7	P64/AN4				
8	P63/AN3				
9	P62/AN2				
10	P61/AN1				
11	P60/AN0				
12	P57/INT3	O	ST	REC. SEL. SW(TC9164N) ST - 1	
13	P56/PWM	O	ST	FUNCTION REC. SEL. SW(TC9164N) ST - 0	
14	P55/CNTR1	O	DATA	FUNCTION AND REC. SEL. SW(TC9164N) DATA	
15	P54/CNTR0	O	CLK	FUNCTION AND REC. SEL. (TC9164N) CLK	
16	P53/SRDY2	I	F - PHONO	Motor FUNC PHONO POSITION INPUT	"H"
17	P52/SCLK2	I	F - TUNER	Motor FUNC TUNER POSITION INPUT	"H"
18	P51/SOUT2	I	F - CD	Motor FUNC CD POSITION INPUT	"H"
19	P50/SIN2	I	F - LINE	Motor FUNC LINE POSITION INPUT	"H"
20	P47/SRDY1	I	F - TAPE1	Motor FUNC TAPE1 POSITION INPUT	"H"
21	P46/SCLK1	I	F - TAPE2	Motor FUNC TAPE2 POSITION INPUT	"H"
22	P45/TxD	O	V - UP	VR UP	"H" (UP)
23	P44/RxD	O	V - DOWN	VR DOWN	"H" (DOWN)
24	P43/INT2	I	IN T2	Silent mode input (FUNCTION, POWER, MUTE, REC)	"H" (Release)
25	P42/INT1	I	INT1	Silent mode input (SR only)	"H" (Release)
26	CNV _{ss}	I	-	(to V _{ss})	-
27	RESET	I	RST	Reset terminal	"L" (Reset)
28	P41/INT0	I	BACK UP	BACK UP detection (Back up mode)	"L"
29	P40/INT4	-	-	-	-
30	X _{in}	I	XIN	Oscillation (4.19MHz)	-
31	X _{out}	O	XOUT	Oscillation (4.19MHz)	-
32	V _{in}	-	V _{ss}	Digital GND	-
33	P27/DB7	I	SR	Remote controller signal input	-
34	P26/DB6	I	MUT.K	Muting key input	"H" (ON)
35	P25/DB5	I	POW.K	Power key input	"H" (ON)
36	P24/DB4	I	T2.K	FUNCTION TAPE2 key input	"H" (ON)
37	P23/DB3	I	TLK	FUNCTION TAPE1 key input	"H" (ON)
38	P22/DB2	I	LLK	FUNCTION LINE key input	"H" (ON)
39	P21/DB1	I	CD.K	FUNCTION CD key input	"H" (ON)
40	P20/DB0	I	TU.K	FUNCTION TUNER key input	"H" (ON)
41	P17/AD15	I	PH.K	FUNCTION PHONO key input	"H" (ON)
42	P16/AD14	-	-	-	-
43	P15/AD13	I	T2→1	RECEV T2→T1 Copy Position input	"H" (ON)
44	P14/AD12	I	T1→2	RECEV T1→T2 Copy Position input	"H" (ON)
45	P13/AD11	I	SOURCE	Sel.SOURCE Position input	"H" (ON)
46	P12/AD10	I	OFF	Sel. OFF Position input	"H" (ON)
47	P11/AD9	I	CD	sel. CD Position input	"H" (ON)
48	P10/AD8	I	TUNER	sel. TUNER Position input	"H" (ON)
49	P07/AD7	O	AC RY	AC Primary Relay	"H" (ON)
50	P06/AD6	O	ST. IND	STANDBY IND	"H" (ON)
51	P05/AD5	O	T2.IND	FUNCTION IND TAPE2	"H" (ON)
52	P04/AD4	O	T1.IND	FUNCTION IND TAPE1	"H" (ON)
53	P03/AD3	O	LI.IND	FUNCTION IND LINE	"H" (ON)
54	P02/AD2	O	CD.IND	FUNCTION IND CD	"H" (ON)
55	P01/AD1	O	TU.IND	FUNCTION IND TUNER	"H" (ON)
56	P00/AD0	O	PH.IND	FUNCTION IND PHONO	"H" (ON)
57	P37/RD	O	F - DOWN	Motor FUNCTION DOWN	"H" (ON)
58	P36/WR	O	F - UP	Motor FUNCTION UP	"H" (ON)
59	P35/SYNC	O	F - MOTOR	Motor FUNCTION Start Torque	"L"
60	P34/φ	O	P - REG	PHONO POWER ON/OFF	"H"
61	P33/RESET OUT	O	P - MUT	PHONO MUTE except (FUNCTION PHONO)	"H"
62	P32/ONW	O	R - MUT	REC change MUTE	"H"
63	P31/DA2	O	F - MUT	FUNCTION change MUTE	"H"
64	P30/DA1	O	MUT - RY	Muting relay	"H"

5. FOR A-503R/HB, HEWZ, A-503R-G/HEZ AND A-403R/HEWZ

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ 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.

5.1 FOR A-503R/HB, HEWZ, A-503R-G/HEZ

CONTRAST OF MISCELLANEOUS PARTS

A-503R/HB, HEWZ, A503R-G/HEZ and A-503R/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.				Remarks
		A-503R HE	A-503R HB	A-503R HEWZ	A-503R-G HEZ	
	AF assembly	AWZ5580	AWZ5587	AWZ5580	AWZ5580	
Δ	AC power cord	ADG1049	ADG1144	ADG1049	ADG1049	
Δ	Fuse (FU2 T500mA/250V)	AEK-505	.....	AEK-505	AEK-505	
Δ	AC socket 3-P	AKP-502	.....	AKP-502	AKP-502	
	Rotary knob L (PLS)	AAB1343	AAB1343	AAB1343	AAB1355	
	Rotary knob S (PLS)	AAB1349	AAB1349	AAB1349	AAB1350	
	Power button (PLS)	AAD2421	AAD2421	AAD2421	AAD2450	
	Function button (PLS)	AAD2422	AAD2422	AAD2422	AAD2451	
	Push button (PLS)	AAD2423	AAD2423	AAD2423	AAD2452	
	Name plate	AAM1058	AAM1058	AAM1058	AAM1059	
	Screw	BBT30P060FZK	BBT30P060FZK	BBT30P060FZK	ABA-274	For bonnet side
	Spacer	.....	AHB1110	.....	.....	For packing
	Packing case	AHD2740	AHD2741	AHD2740	AHD2742	
NSP	Air cap	.....	AHG1087	.....	.....	For packing
	Panel base	AMB2135	AMB2135	AMB2135	AMB2156	
NSP	UL caution	.....	AAX-313	.....	.....	See P3.
	Top cover (PLS)	.....	AME1086	.....	.....	See P3.
	Front panel	ANB1820	ANB1820	ANB1820	ANB1822	
NSP	Rear panel	ANC2214	ANC2215	ANC2214	ANC2214	
	Bonnet case	ANE1438	ANE1437	ANE1438	ANE1433	
	Remote control unit	AXD1391	AXD1391	AXD1391	AXD1396	
	Battery cover	AZN2249	AZN2249	AZN2249	AZN2250	
	Operating Instructions (German)	.....	.....	ARC1472	.....
	Operating Instructions (English)	.....	ARB1485	.....	.....
	Operating Instructions (English/German/French/ Italian/Swedish/Dutch/ Spanish/Portuguese)	ARE1314	.....	.....	ARE1314	

AF ASSEMBLY

Although AWZ5587 and AWZ5580 are different in part number, they have the same service parts.

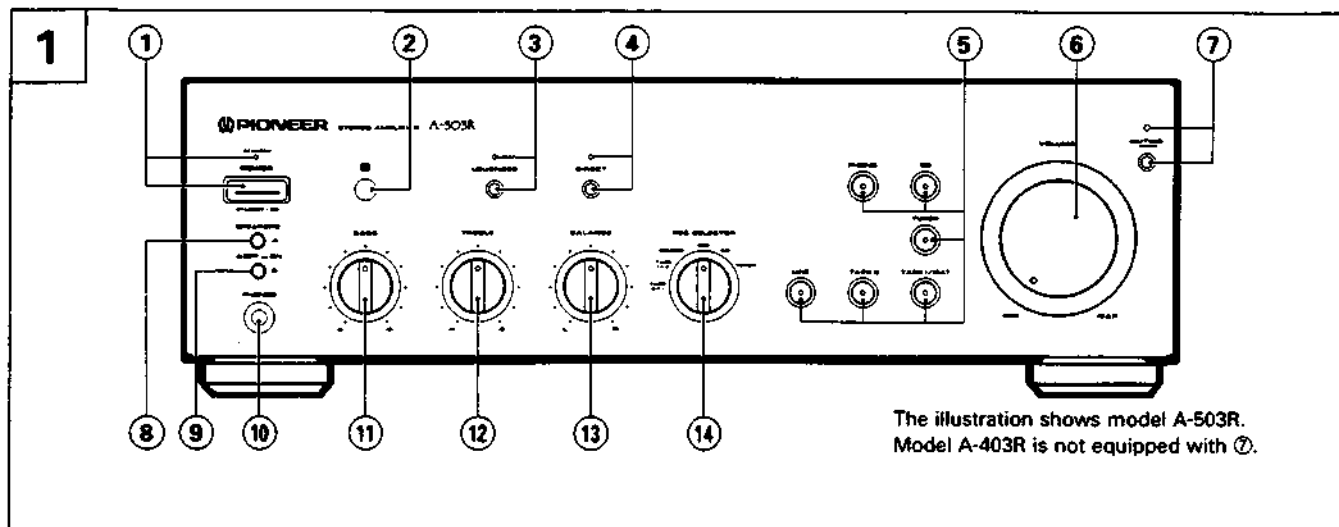
5.2 FOR A-403R/HEWZ

CONTRAST OF MISCELLANEOUS PARTS

A-403R/HEWZ and A-403R/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		A-403R/HE	A-403R/HEWZ	
	Operating Instructions (German)	.....	ARC1472	
	Operating Instructions (English/German/French/ Italian/Swedish/Dutch/ Spanish/Portuguese)	ARE1314	.....

6. PANEL FACILITIES



FRONT PANEL 1

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.

② Remote control sensor window

③ 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 a low volume level.

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.

④ 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) and adaptor terminals (ADAPTOR).

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.

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

TAPE 2 : For playback with a cassette deck connected to TAPE 2 terminals.

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

NOTE:

Circuit switching is performed by motor-driven rotary switches. Therefore, there is a slight time lag between pressing of the button and switching (A-503R only).

⑥ VOLUME control

Use to adjust the volume level.

NOTE:

This unit is equipped with a circuit that attenuates LOUDNESS and tone effects as volume is turned up.

⑦ MUTING button/indicator (A-503R only)

Use to temporarily lower sound volume.

On : The indicator lights: The sound volume is lowered to one-tenth (-20 dB).

Off : The indicator goes off: The sound will return to its previous volume.

⑧ SPEAKERS A selector button

Use this button to listen to the speaker system connected to SPEAKER A terminals.

ON (■) : Depressed position: Sound is heard from the speaker system.

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

⑨ SPEAKERS B selector button

Use this button to listen to the speaker system connected to SPEAKER B terminals.

- ON (■)** : Depressed position: Sound is heard from the speaker system.
- OFF (■)** : Released position: No sound is heard from the speaker system. Set to this position when listening with headphones.

⑩ PHONES jack

When using headphones, insert the plug into this jack.

⑪ 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.*
- *When the volume knob is positioned before the 11 o'clock position, the set tone control effect is obtained.*
When the volume knob is positioned past the 11 o'clock position, the effect becomes increasingly weaker.

⑫ 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.*
- *When the volume knob is positioned before the 11 o'clock position, the set tone control effect is obtained.*
When the volume knob is positioned past the 11 o'clock position, the effect becomes increasingly weaker.

⑬ 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 position and if the left side is louder, turn toward the R position.

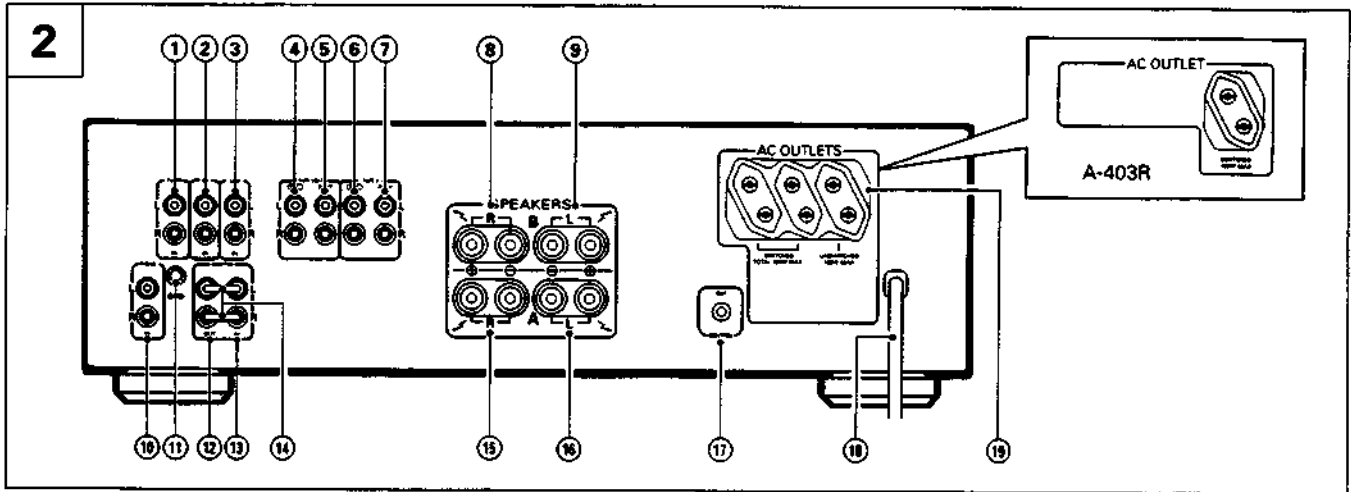
NOTE:

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

⑭ REC SELECTOR switch

When this switch is set to a position other than SOURCE or OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the settings of the input selector buttons and DIRECT button.


- TUNER** : To record from the equipment connected to TUNER terminals.
- CD** : To record from the equipment connected to CD terminals.
- OFF** : In this position, nothing from the REC terminals of TAPE 1/DAT and TAPE 2 is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.
- SOURCE** : To record from the equipment selected by input selector button.
- TAPE 1 ▶ 2** : To record (copy) from the cassette deck of TAPE 1/DAT terminals, to the cassette deck of TAPE 2 terminals.
- TAPE 2 ▶ 1** : To record (copy) from the cassette deck of TAPE 2 terminals, to the cassette deck of TAPE 1/DAT terminals.



REAR PANEL 2

- ① **TUNER terminals**
- ② **CD terminals**
- ③ **LINE terminals**
- ④ **TAPE 1/DAT REC terminals**
- ⑤ **TAPE 1/DAT PLAY terminals**
- ⑥ **TAPE 2 REC terminals**
- ⑦ **TAPE 2 PLAY terminals**
- ⑧ **SPEAKER B terminals (right channel)**
- ⑨ **SPEAKER B terminals (left channel)**
- ⑩ **PHONO terminals**
- ⑪ **Turntable ground terminal (GND)**
- ⑫ **ADAPTOR OUT terminals**

- ⑬ **ADAPTOR IN terminals**
- ⑭ **Shorting bars**
- ⑮ **SPEAKER A terminals (right channel)**
- ⑯ **SPEAKER A terminals (left channel)**
- ⑰ **CONTROL OUT jack**

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

- ⑱ **Power cord**
Connect this cord to an AC wall socket, or the AC outlet of an audio timer.

- ⑲ **AC OUTLETS**

7. SPECIFICATIONS

[A-503R]

Amplifier Section

DIN Continuous power output (both channels driven at 1 kHz)	
T.H.D. 1 %, 4 Ω	100 W + 100 W
T.H.D. 1 %, 8 Ω	70 W + 70 W
Continuous power output (both channels driven at 20 Hz to 20 kHz)**	
T.H.D. 0.05 %, 4 Ω	75 W + 75 W*
T.H.D. 0.03 %, 8 Ω	55 W + 55 W*
Dynamic power output (on EIA dynamic test signal)	
4 Ω/2 Ω	110 W/135 W
Total harmonic distortion**	
20 Hz to 20 kHz, 30 W, 8 Ω	0.01 %*

* The above values are applicable when AC 230 V power is supplied.

Input sensitivity/impedance	
PHONO (MM)	2.8 mV/50 kΩ
CD, TUNER, LINE, TAPE	200 mV/50 kΩ
PHONO overload level	
1 kHz, T.H.D. 0.1 %	150 mV
Output level/impedance	
TAPE REC	200 mV/1 kΩ
Frequency response	
PHONO (MM)	20 Hz to 20 kHz, ±0.5 dB
CD, TUNER, LINE, TAPE	5 Hz to 100 kHz, ±3 dB*
Tone control (volume control set at -30 dB position)	
BASS	±8 dB (100 Hz)
TREBLE	±8 dB (10 kHz)
Loudness contour (volume control set at -30 dB position)	+6 dB (100 Hz)/ +3 dB (10 kHz)
Signal-to-Noise ratio (IHF short circuit, A network)	
PHONO (MM, 5 mV input)	89 dB*
CD, TUNER, LINE, TAPE	107 dB*
Signal-to-Noise ratio (DIN, continuous power/50 mW)	
PHONO (MM)	72 dB/70 dB*
CD, TUNER, LINE, TAPE	95 dB/80 dB*
MUTING	-20 dB

Power Supply/Miscellaneous

Power requirements	a.c. 220 — 230 Volts, 50/60 Hz
Power consumption	500 W
Dimensions	420 (W) x 360 (D) x 125 (H) mm
Weight (without package)	8.4 kg

Accessories

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

NOTE:

Specifications and design are subject to possible modifications without notice, due to improvements.

*Measured with DIRECT button set to on.

**Measured by Audio Spectrum Analyzer.

[A-403R]

Amplifier Section

DIN Continuous power output (both channels driven at 1 kHz)	
T.H.D. 1 %, 4 Ω	75 W + 75 W
T.H.D. 1 %, 8 Ω	60 W + 60 W
Continuous power output (both channels driven at 20 Hz to 20 kHz)**	
T.H.D. 0.05 %, 4 Ω	50 W + 50 W*
T.H.D. 0.03 %, 8 Ω	40 W + 40 W*
Dynamic power output (on EIA dynamic test signal)	
4 Ω/2 Ω	85 W/95 W
Total harmonic distortion**	
20 Hz to 20 kHz, 20 W, 8 Ω	0.01 %*

* The above values are applicable when AC 230 V power is supplied.

Input sensitivity/impedance	
PHONO (MM)	2.8 mV/50 kΩ
CD, TUNER, LINE, TAPE	200 mV/50 kΩ
PHONO overload level	
1 kHz, T.H.D. 0.1 %	150 mV
Output level/impedance	
TAPE REC	200 mV/1 kΩ
Frequency response	
PHONO (MM)	20 Hz to 20 kHz, ±0.5 dB
CD, TUNER, LINE, TAPE	5 Hz to 100 kHz, ±3 dB*
Tone control (volume control set at -30 dB position)	
BASS	±8 dB (100 Hz)
TREBLE	±8 dB (10 kHz)
Loudness contour (volume control set at -30 dB position)	+6 dB (100 Hz)/ +3 dB (10 kHz)

Signal-to-Noise ratio (IHF short circuit, A network)	
PHONO (MM, 5 mV input)	85 dB*
CD, TUNER, LINE, TAPE	106 dB*
Signal-to-Noise ratio (DIN, continuous power/50 mW)	
PHONO (MM)	71 dB/67 dB*
CD, TUNER, LINE, TAPE	95 dB/71 dB*

Power Supply/Miscellaneous

Power requirements	a.c. 220 — 230 Volts, 50/60 Hz
Power consumption	440 W
Dimensions	420 (W) x 360 (D) x 125 (H) mm
Weight (without package)	6.7 kg

Accessories

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

NOTE:

Specifications and design are subject to possible modifications without notice, due to improvements.

*Measured with DIRECT button set to on.

**Measured by Audio Spectrum Analyzer.

